

HIGH FIDELITY

AUDIO • VIDEO • TEST REPORTS • MUSIC

CD CELEBRATION!

13 PORTABLE PLAYERS COMPARED
ARE "TOTALLY DIGITAL" CDs BETTER?
20 CD REVIEWS



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HIGH FIDELITY

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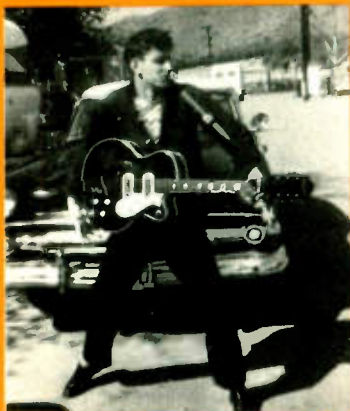
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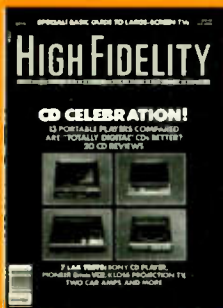
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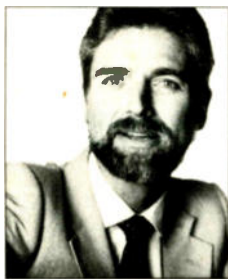
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Cover Photos: David Hedrich (equipment), Lindsay Silverman (lifestyles)

On the Cover: Portable Compact Disc players (clockwise from top left) JVC XL-R10K, Toshiba XR-P9, Sony D-77, Hitachi DA-P100

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A LITTLE TRAVELING MUSIC, PLEASE

SUMMERTIME, AND THE LISTENING IS EASY, ESPECIALLY IF you're one of the growing number of people who own portable Compact Disc players. What was a novelty only a year ago is fast becoming a near necessity for many who are used to the high-quality sound of their home systems. And as contributor Dawn Gordon notes in "Digits on the Move," the selection of portable CD player models and options available is much broader than it was a year ago. No question—the portable design has struck a responsive chord. Many people also use them as second CD players in their homes—in the bedroom, for example. Others buy one of the increasing number of CD car adapters and connect them into their car stereo systems.

In addition to the guide to portable players, our Compact Disc focus this issue includes reviews of 20 new CD releases and a thorough analysis by Technical Editor David Ranada of CD classification, whereby the origin and production of a recording is chronicled by a series of *Ds* (representing digital stages) and *As* (for analog ones) printed on the CD box. As David points out, numerous other factors, undomocoded by these codes, also contribute to the quality of a recording.

The flood of CD players has spawned a new generation of higher-power amplifiers. Many car stereo manufacturers are now offering models designed to outperform the relatively weak amp sections of all-in-one front ends. Evaluated in our test reports this month are two such units.

On the other end of the portability spectrum are large-screen TVs. These have been around for several years but are currently enjoying a surge in popularity. As author Robert Angus details in "Large-Screen TV Basics," a variety of designs exist, not all of which are right for every situation.

For our music coverage this month, we travel around the world. The CLASSICAL section stops off at London's Henry Wood Hall for a firsthand report by Edward Greenfield on the recording by Dame Kiri Te Kanawa and others of *South Pacific*. In BACKBEAT we hop the channel to Ireland, where Leslie Berman takes a look at four pop groups. And then it's on to Nashville, where RJ Smith finds that, though the mainstream is ailing, the outlying fringe has lots to offer. ■

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Drop the pedal and go...go...go
Goin' ridin' on the freeway of love
Wind's against our back
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In my pink Cadillac"

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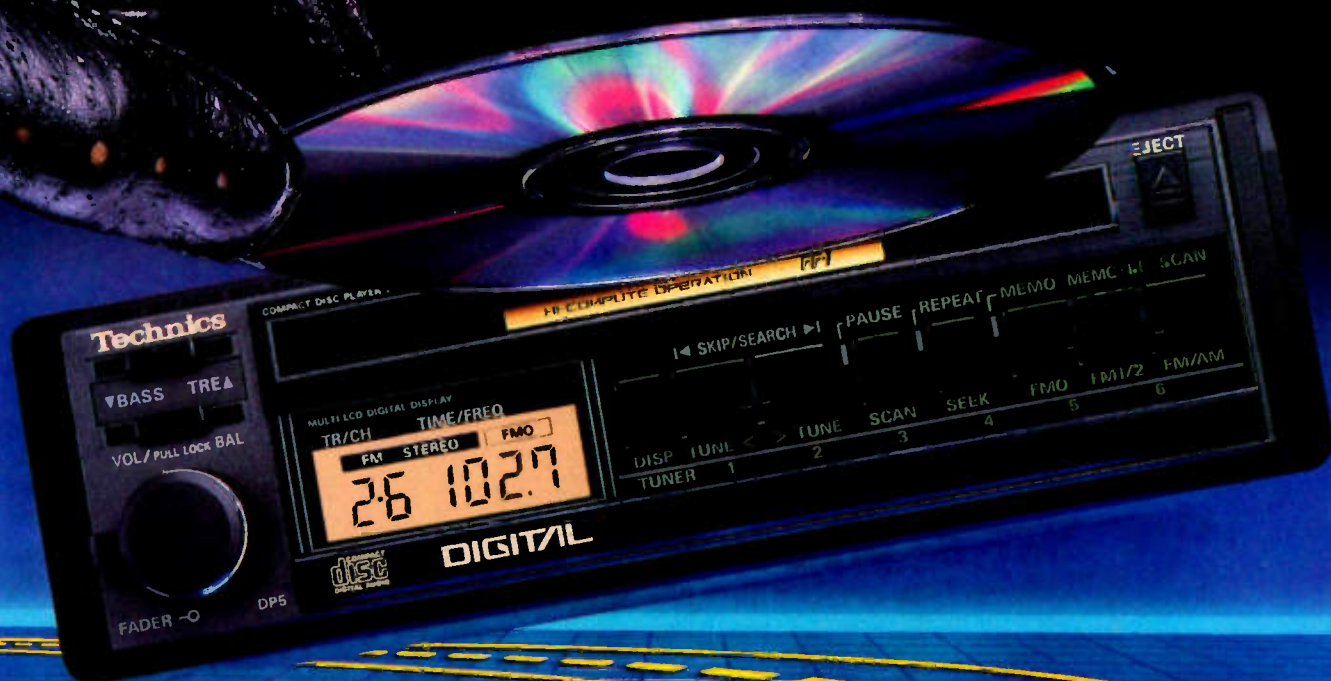
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suspension system to help ensure a flawless musical perfor-
mance no matter where the road may lead.

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If you're driven by perfection, make your next stop Technics.

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COPY CODING OPPOSED

READING "CURRENTS" IN YOUR APRIL ISSUE made me aware of CBS's proposed Copy Coding scheme for prerecorded discs and tapes, which would rely on a special IC built into new tape decks that would disable their recording function when it detected the coding in the incoming signal. This system poses a threat to many autophiles. I, for one, use my equalizer and cassette deck to record tapes for playback in my car. By cutting 3 dB at 60 Hz, I prevent much of the boominess often associated with mobile sound. I don't consider this practice "tape piracy," since I use my own records. If this coding system is adopted, will I be able to use a PCM processor to bypass the IC?

Ken Carnes
Fayetteville, N.C.

Presumably, future PCM processors also would be required to incorporate the chip. In any event, we don't think a PCM adapter would help you much in your car. These devices work only in conjunction with VCRs: Conventional audio cassette decks don't have the multi-megahertz bandwidth required to support digital recording. We agree, by the way, that what you are doing is not piracy and therefore

strongly oppose Copy Coding and other proposed measures to restrict home taping. Copying recordings to avoid paying for them is stealing, and we join the music industry in condemning it, but penalizing honest folk along with the guilty is not the answer.—Ed.

A BETTER MEMORY

YOUR TEST REPORT ON THE TECHNICS SH-8066 graphic equalizer/spectrum analyzer [April] says that unplugging or otherwise interrupting the supply of line current to the unit will erase the information in its programmable EQ memories. This is not altogether true: A backup capacitor inside the equalizer will keep them alive for as long as seven days. You can find this information on page 11 of the owner's manual, and as a user, I can verify that the memories will survive power outages less than a week long.

Christian C. Cain
Kokomo, Ind.

MORE ON KHRENNIKOV

I READ WITH INTEREST THE LETTERS AND EDITORIAL reply concerning Joel W. Spiegelman's "The Czar of Soviet Music" [March] in the May issue of HIGH FIDELITY. I quite

agree that most of your readers should be "able to read between the lines" of that interview. However, I am glad that James S. Lowery and Kenneth H. Wise registered protests—in case the Soviets think we can be so easily duped. In addition to the books mentioned—Solomon Volkov's *Testimony: The Memoirs of Dmitri Shostakovich*, Galina Vishnevskaya's *Galina*, and Helena Mathopoulis's *Maestro*—I recommend Boris Schwarz's *Music and Musical Life in Soviet Russia*, which contains a lot of information about Tikhon Khrennikov.

I realize that it is a difficult task, but I wish American music periodicals would give more information about the current state of music in the Communist countries. I am looking forward to Paul Moor's response to Khrennikov.

Judith Ann Miller
Dayton, Ohio

I AM DISGUSTED (BUT NOT SURPRISED) TO READ your reply to the Lowery and Wise letters in your May issue. To equate editorial insertions or comment with totalitarian censorship flies in the face of reason (especially in light of the disclaimer at the end of your

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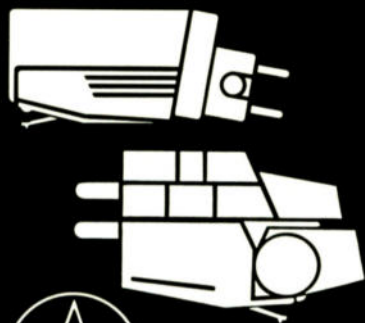
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"Letters" section about your "right" to edit contributions).

A concept's validity depends on its relation to the facts. Once a fact is established, there is no need to suspend judgment. Therefore, one must conclude that Mr. Spiegelman is guilty either of historical ignorance or of duplicity with the Soviet propagandist. Perhaps, like many, he just doesn't care. Why else would he let Khrennikov get away with spewing utter nonsense, and why does HIGH FIDELITY defend such? Must we "read between the lines" regarding your editorial integrity?

Michael Prossley
Sanford, Fla.

We edit letters to improve their spelling and grammar and to reduce them to publishable length; we don't do anything to alter a correspondent's tone or opinions. We also don't insert comments within the text of a letter, even when the claims being made are clearly false. That might not be quite the same as censorship, but it certainly would be very rude. Spiegelman conducted a friendly interview in which he raised and pursued a delicate question that he could just as easily have avoided. Khrennikov's interest in the matter is clear enough that we did not expect any

reader to take his comments at face value, and we see no reason why our allowing him to speak his piece should reflect badly on our editorial integrity.

P.S.: Paul Moor's response will appear in next month's issue.—Ed.

TENOR TUGS-OF-WAR

BERT WECHSLER GREETES TWO COLLECTIONS OF Jussi Björling performances [March] with the combined smiles of the entire Osmond family at the Thanksgiving table. Björling's vocal placement, like Beniamino Gigli's, was nearly ideal, but I disagree with Mr. Wechsler's remark that "after Gigli there is still no one but this Swedish tenor." In fact, Gigli and Björling shouldn't be compared too closely. Gigli sang with a golden tone, in an extroverted way; he was a brigand of musical line if not tonal formation. Björling's tone was more silver than gold, and his musical approach was efficient, businesslike, and sometimes even matter-of-fact and cold. Cold? How dare I! Yet listen to Björling in his RCA recordings of *Tosca* and *Rigoletto* for examples of icy and remote singing.

All this is not to be ogreish and demean Björling's splendid and pealing voice, but to put it in proper perspective. Even in his most successful complete recordings of *Aida*, *La Bohème*, *Madama Butterfly*, *Turandot*, *Pagliacci*, and *Cavalleria rusticana*, the competition is fierce, considering Giuseppe Di Stefano, Franco Corelli, Luciano Pavarotti, and especially Carlo Bergonzi. In each of the Björling recordings, I sense that the microphone was very close to, or inside of, his small silver throat, while other, more powerful singers on the same discs—Renata Tebaldi, Zinka Milanov, Leonard Warren—were placed back somewhere in Arizona under a rock!

If Mr. Wechsler finds Björling the most successful tenor since Gigli, without qualification, then I find Bergonzi the finest tenor in Italian opera since the immortal Enrico Caruso, with reservations. Caruso's extreme power, superior tone, and heartfelt sensitivity provide a most diverse and meaningful interpretation of almost every aria. In a different way, Bergonzi's highly polished mahogany voice and his matchless breath and phrasing deliver performances that are always honest and extremely well sung.

Listening to Caruso and Bergonzi, I wonder when we will no longer require tenors to look like Tom Selleck, do knee-jerk and sobbing renditions à la Gigli and Richard Tucker, or even sing in a clarion but somewhat remote and concertlike fashion, as Björling did.

Thomas R. Wilson
Westmont, Ill.

I HAVE ENJOYED PLACIDO DOMINGO'S WORK for 13 years and have watched him grow as an artist. However, he is not better than Lu-

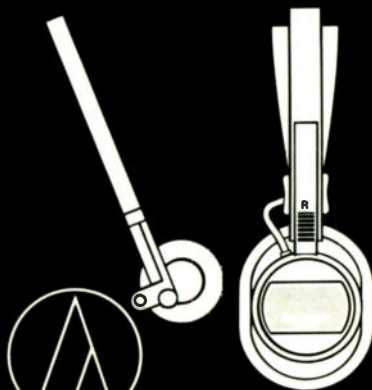
ciano Pavarotti, as James Wierzbicki seems to suggest ["The CD Spread," April]. Domingo has a big, rich sound, but his voice is not as beautiful as Pavarotti's. Furthermore, so much of Domingo's singing sounds the same: Everything is sung at the same volume, middle to full forte, and a lot of it sounds monochromatic. If Domingo is the "world's champion tenor," that world is limited to the heavier Italian and French repertory. When it comes to the lyric repertory, concert work, or songs, I cast my vote for the "cuddly guy with the beard."

Joseph Li Vecchi
Langhorne, Pa.

Classical Music Editor Theodore W. Libbey, Jr., replies: We all have our favorite trattorias, and we all have our favorite Italian tenors. In matters of taste, we may indeed dispute (to go against the old Roman proverb), but let's be grateful that the tenors Mr. Wechsler and Mr. Wilson have written about are all well represented on disc. As for preferring the "cuddly guy with the beard," I thought they were both cuddly guys with beards!

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

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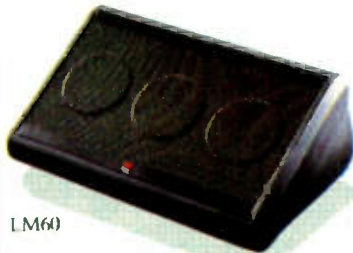


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S

New Approaches to Loudspeaker Basics



This month's featured product, the KEF 107 loudspeaker, enters the competition for HF's Product of the Year Awards.

WHEN WE REVIEWED THE KEF 104/2 LOUDSPEAKER (November 1985), we expressed astonishment at the number of innovations it embodied. The 104/2 was and is a fine speaker—so good, in fact, that we had difficulty reconciling its next-to-top-of-the-line status. But KEF has now rectified that oddity by introducing a new flagship, the Model 107, which combines the best features of the 104/2 with a wrinkle or two of its own.

Physically, the 107 resembles a slender tower—until you pop the bonnet off, revealing a sculpted midrange/tweeter "head" similar to that found on the Model 105.2. The head provides these two drivers with a small, rounded baffle that minimizes diffraction and other forms of cabinet interference with their sound radiation. Also, the head can be rotated to obtain the best stereo image for your seating arrangement.

The main carry-overs from the 104/2 are the coupled-cavity bass-loading system and the conjugate-load-matching crossover. The former is a novel technique that KEF says combines the advantages of bass reflex and acoustic suspension designs. Two 10-inch woofers are mounted face up at opposite ends of the cabinet, each one in its own sealed subenclosure. Between them is a cavity that vents into the room through a relatively large tuned port. The woofers are driven out of phase with each other so that they work the air in the shared space between them like an accordion. The result is said to be a unique combination of high sensitivity, extended low-frequency response (with a slow rolloff below resonance), and good damping at all frequencies. A rigid bar linking the magnetic structures of the two woofers cancels much of their vibration

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Most car stereo speakers have pole mounts. Jensen Classic speakers have the unitized array. This improved method of mounting the midrange and tweeter gives the woofer a larger working area, and better bass response than possible with other systems. The unitized array



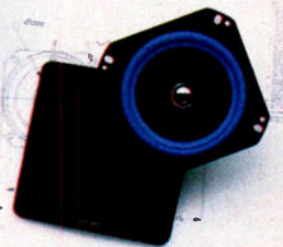
JTX-300 6" x 9" TRIAX® 3-Way Speakers

Power Handling: 150 Watts Peak, 80 Watts Continuous • Useable Frequency Response: 40 Hz–25 kHz • Sensitivity (1 Watt @ 1 Meter): 92 dB SPL • Impedance: 4 Ohm • Woofer: 6" x 9" Cone • Midrange: 2½" Cone • Tweeter: 2" Cone • Mounting Depth: 4"



JTX-365 6½" TRIAX® 3-Way Speakers

Power Handling: 120 Watts Peak, 60 Watts Continuous • Useable Frequency Response: 58 Hz–20 kHz • Sensitivity (1 Watt @ 1 Meter): 91 dB SPL • Impedance: 4 Ohm • Woofer: 6½" Cone • Midrange: 2" Cone • Tweeter: 1½" Cone • Mounting Depth: 1½"



JFX-140 4" Dual Cone Speakers

Power Handling: 60 Watts Peak, 30 Watts Continuous • Useable Frequency Response: 70 Hz–20 kHz • Sensitivity (1 Watt @ 1 Meter): 88 dB SPL • Impedance: 4 Ohm • Woofer: 4" Cone • Mounting Depth: 1½"

before it can reach the cabinet, where it might contribute to box coloration of the sound.

Conjugate load matching is KEF's method of smoothing the speaker's impedance curve so that it closely mimics a pure 4-ohm resistance. Eliminating reactive (capacitive and inductive) elements from the speaker load assures that the driving amplifier will be able to operate to its full potential.

Finally, the 107 comes with a K-UBE: a KEF Universal Bass Equalizer. This small box of electronics, which is designed for placement in a tape monitor loop or between preamp and power amp, has controls that enable the user to vary the woofer's cut-off frequency, damping, and response contour. For the 107, it includes a special equalization module that supplies the inverse of the speaker's natural low-frequency response, thereby maintaining flat output down to 20 Hz without any of the usual trade-offs in size or overall sensitivity.

Each Model 107 weighs 99 pounds and measures 13 inches wide by 46 inches high by 17½ inches deep. Price is \$3,900 per pair. For more information, write KEF Electronics of America, 14120-K Sullyfield Cir., Chantilly, Va. 22021.

ALPINE CAR CD PLAYER



ALPINE'S MODEL 7900 IS ITS FIRST CAR FRONT end to combine a CD player with an AM/FM tuner. The tuner section is a digital frequency-synthesis design with 12 FM and 6 AM presets. Rated usable FM sensitivity is 16.3 dBf (1.8 microvolts into 75 ohms), while 50-dB quieting sensitivity is given as 20.7 dBf (3.0 microvolts). Alternate-channel selectivity is 80 dB; capture ratio is 2.0 dB. AM sensitivity is 10 microvolts for a 20-dB signal-to-noise (S/N) ratio. Bass and treble controls provide ±10 dB of adjustment at 100 Hz and 10 kHz, respectively. Front and rear line-level outputs are provided, as are balance and fader adjustments.

The CD-player section has specs typical of standard home models. These include a frequency response of 5 Hz to 20 kHz, ±1 dB; unmeasurable wow and flutter; distortion of less than 0.005 percent at 1 kHz; and an A-weighted S/N ratio of more than 90 dB. It also has some of the standard playing con-

trols (track skip, scanning with audible program). The player uses a power loading system that automatically pulls the disc in. If the 7900 is connected to an Alpine GZ tape mechanism, activating the CD pause control will allow the tape to play.

Chassis size is 7 by 2 by 5¼ inches; nose-piece dimensions are 6¼ by 2 by ¼ inches. The system costs \$800. More information is available from Alpine Electronics of America, 19145 Gramercy Pl., Torrance, Calif. 90501.

BOSE REVISES 601 SPEAKER

THE BOSE 601 DIRECT/REFLECTING FLOOR-standing loudspeaker system has received a Series III revision, with major changes in driver and enclosure construction. The speakers each use two 8-inch long-excursion woofers in a ported enclosure (one woofer on a sloping top panel, the other near the bottom in front). Each woofer is housed in a separate compartment venting into the main cabinet, which itself is ported into the room through a back-panel slot designed to reduce port turbulence by a factor of ten compared with conventional designs. The 601 Series III incorporates a new version of the

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Power Handling: 90 Watts Peak, 45 Watts Continuous • Usable Frequency Response: 60 Hz–20 kHz • Sensitivity (1 Watt @ 1 Meter): 90 dB SPL • Impedance: 4 Ohm • Woofer: 6½" Cone • Tweeter: 2" Cone • Mounting Depth: 1¼"



JCX-200 6" x 9" COAX 2-Way Speakers

Power Handling: 150 Watts Peak, 80 Watts Continuous • Usable Frequency Response: 40 Hz–22 kHz • Sensitivity (1 Watt @ 1 Meter): 91 dB SPL • Impedance: 4 Ohm • Woofer: 6" x 9" Cone • Tweeter: 2½" Cone • Mounting Depth: 4"



JCX-245 4½" COAX 2-Way Convertible Speakers

Power Handling: 70 Watts Peak, 35 Watts Continuous • Usable Frequency Response: Flush Installation 65 Hz–20 kHz, Surface Installation 185 Hz–20 kHz • Sensitivity (1 Watt @ 1 Meter): 89 dB SPL • Impedance: 4 Ohm • Woofer: 4½" Cone • Tweeter: 2" Cone • Mounting Depth (Flush): 1¼"

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BOSE 601 SERIES III LOUDSPEAKER

Free Space driver array introduced with the Series II. In addition to providing a combination of direct and reflected sound, the array is said to provide a strong, stable center image regardless of listener position. The cabinet has a hardwood veneer with walnut finish. Its dimensions are 30 by 12¼ inches (front), 12½ inches deep. Price is \$1,026 per pair. Contact Bose Corp., 100 The Mountain Rd., Framingham, Mass. 01701.

SONY STEREO-TV TUNER



SONY'S ST-7TV MULTICHANNEL TELEVISION Sound (MTS) tuner not only decodes stereo television broadcasts and SAP transmissions but also expands reception to as many as 181 channels and can add remote-control capabilities to any TV set. Essentially a television tuner that demodulates audio and video from a broadcast or cable signal, the ST-7TV connects to a TV set or monitor (via RF or composite-video inputs) and to a stereo system. There are two antenna inputs and a cable connection.

Front-panel controls include antenna/cable switching, a mono/stereo button, SAP selection, and station preset buttons. The optional RM-U880 remote, which also can be used with several other Sony components, includes facilities for volume control and channel selection.

The ST-7TV costs \$300. Details can be obtained from Sony Consumer Products Co., Sony Corporation of America, Sony Dr., Park Ridge, N.J. 07656.

TWO AR SPEAKERS

TOPPING OFF ACOUSTIC RESEARCH'S CONNOISSEUR Series, the Models 50 and 40 are floor-standing three-way systems designed for use away from room boundaries. Both loudspeakers come with short pedestals with

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Peter Aczel, THE AUDIO CRITIC

350 watts/rms/chan. into 8 ohms, 20-20 kHz with less than 0.5% THD. And most importantly, the rating that is musically significant: 600 watts/chan. Long-Time Period Reserve Power with 750 watts/chan. Dynamic Headroom. Weight: 16 lbs.



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ACOUSTIC RESEARCH CONNOISSEUR 40 LOUDSPEAKER

spiked feet to raise the enclosures to the proper height (see photo of Model 40).

Driver complement of the Model 50 includes a 1-inch titanium-dome tweeter, a 6½-inch polypropylene-cone midrange in its own sealed subenclosure, and a 12-inch polypropylene acoustic suspension woofer. Impedance is rated as 4 ohms, and sensitivity is given as 90 dB SPL at 1 meter when

driven by 2.83 volts. Dimensions are 14¾ by 32 by 15¾ inches.

The Model 40 uses a 1-inch liquid-cooled co-polymer-dome tweeter, a 6-inch polypropylene midrange driver, and a 10-inch polypropylene woofer. Measuring 12¾ by 27½ by 13¾ inches, it is a 6-ohm system with an 88-dB SPL sensitivity rating.

Both speakers are finished in real oiled-walnut veneer. Price is \$1,500 per pair for the Model 50, \$1,000 per pair for the Model 40. For more information, contact Acoustic Research, 330 Turnpike St., Canton, Mass. 02021.

EPI VIDEO SPEAKER/CABINET

THE EPI VCS-2000 TAKES A NOVEL APPROACH TO integrating a collection of separate components into a self-contained audio-video system: It combines a pair of ported speakers, a TV stand, and a flexible shelved equipment cabinet. To complete the system, you just add a monitor, an audio amplifier, and signal sources. The speakers, which are at each end of the cabinet, comprise a 1-inch dome tweeter, a 4-inch midrange driver, and a 6-inch woofer located at the bottom of the enclosure. Crossover frequencies are given as




EPI VCS-2000 VIDEO SPEAKER/CABINET SYSTEM

200 Hz and 2 kHz, sensitivity as 88 dB SPL at 1 meter with a 1-watt input. The speakers have a special magnet configuration and shielding to prevent magnetic interference with the video picture.

Three wood-grain vinyl finishes are available: dark oak, light oak, and black ash. Shelf finish is black textured vinyl. The four shelves measure 18 inches wide by 14 inches deep; two of them are adjustable in height. The VCS-2000 has an overall size of 33 by 28½ by 15¾ inches, and it ranges in price from \$370 to \$400. For more information, contact Epicure Products, Inc., 25 Hale St., Newburyport, Mass. 01950.

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YAMAHA A/V AMPLIFIER

DESIGNED TO ACT AS THE CENTRAL CONTROL module in an audio-video system, the Yamaha AVC-50 can be used to power either front or rear speakers and provides video enhancement features, a surround-sound circuit, and remote-control capabilities. The unit has inputs and switching for two VCRs, one videodisc player, one auxiliary video



YAMAHA AVC-50 AUDIO-VIDEO AMPLIFIER

source (labeled TV), two analog tape decks, an audio tuner, one CD player, a magnetic phono cartridge, and one more audio source. Independent selection of picture and sound source is possible in both playback and recording modes, which have completely separate sets of selector switches, enabling you to hear or watch one source while recording another.

Video enhancement controls affect detail, sharpness, and video level. The sharpness circuit incorporates "luminance forecasting circuitry," which is said to anticipate any change in luminance and add reverse

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TDK. THE ART OF PERFORMANCE.

emphasis before and after the change. Yamaha says the circuit effectively eliminates blurring. Separate on/off record/playback selectors permit enhancement of both recording and playback. The second VCR input is on the front of the unit.

The AVC-50 offers Dolby Surround decoding in addition to several surround-synthesis options. Natural Surround works without delay circuitry on stereo sources to create an effect similar to Dolby Surround. Hall Surround adds variable delay (10 to 30 milliseconds) to the Natural Sound processing. For mono-only programs, there are simulated-stereo and simulated-surround modes.

The amplifier portion of the AVC-50 is rated at 73 watts (18½ dBW) into 8 ohms and 85 watts (19¼ dBW) into 4 ohms. Dynamic headroom is given as 2 dB. Although the device has no tone controls, it does supply high-filter and bass-extension switches. The infrared remote control handles source selection, volume, and muting and also can be used with several other Yamaha products. Price is \$449. For more information, write Yamaha Electronics Corporation, U.S.A., 6660 Orangethorpe Ave., Buena Park, Calif. 90620.

ONKYO CASSETTE DECK



THE ONKYO TA-2058 THREE-HEAD CASSETTE deck (\$480) offers an unusual number of features for a deck of its price. For example, the transport uses three motors: one for the capstan, another for the hubs, and the last to move the head assembly. The unit's automatic bias-setting control (Accubias) has a five-position preset switch to obtain responses of -2, -1, 0, +1, and +2 dB at 10 kHz after the Accubias calibration. Dolby B, C, and switchable HX-Pro are provided. The tape counter displays minutes and seconds of either elapsed time (of playback or recording) or remaining time.

The deck also has such "standard" features as automatic tape-type selection, two repeat modes (one track or an entire side), automatic five-second blank insertion, and automatic ten-second track auditioning. An optional remote control (the RC-5T) is available. The Onkyo TA-2048 (\$370) is a similar deck without the Accubias presets

and HX-Pro. For more information, contact Onkyo U.S.A. Corp., 200 Williams Dr., Ramsey, N.J. 07446.

NEC COMPACT DISC PLAYER

FOR THE UNUSUALLY LOW PRICE OF \$449, NEC's CD-500 Compact Disc player incorporates two-times oversampling digital filtering circuits and infrared remote control. The latter permits volume adjustment and direct cueing to any track. A 15-track programmed playback memory is provided, as



NEC CD-500 COMPACT DISC PLAYER

are several repeat modes. The unit has fixed and variable output terminals plus a headphone output with volume control. More information is available from NEC Home Electronics (U.S.A.), Inc., 1255 Michael Dr., Wood Dale, Ill. 60191-1094.

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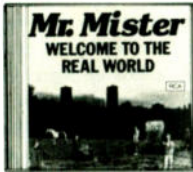


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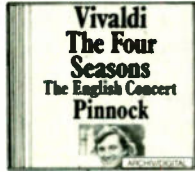
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Ella Fitzgerald: The Johnny Mercer Songbook • Too Marvelous For Words, Skylark, Dream, etc. Verve 163610

Brahms, 21 Hungarian Dances Claudio Abbado conducts the Vienna Philharmonic Orchestra. DG DIGITAL 115408

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Carmen (Highlights) • Film soundtrack. Migenes-Johnson, Domingo. Maazel conducts. Erato DIGITAL 154105

Phil Collins: No Jacket Required • One More Night, Susudio, Don't Lose My Number, etc. Atlantic 120771

Stars And Stripes Forever • The Philip Jones Ensemble plays 15 Sousa greats. London DIGITAL 115051

Mozart, Symphonies Nos. 40 & 41 (Jupiter) • James Levine with the Chicago Symphony. RCA DIGITAL 104810

Tears For Fears: Songs From The Big Chair • Everybody Wants To Rule The World, Shout, etc. Mercury 143666

Bach, Organ Works • Daniel Chorzempa plays the Toccata & Fugue in D Minor, others. Philips DIGITAL 115193

Daryl Hall & John Oates: Live At The Apollo • Apollo Medley, Everytime You Go Away, others. RCA 140625

Wagner, Orchestral Highlights From The Ring • Vienna Philharmonic Orchestra/Solti. London DIGITAL 115426

Kenny Rogers: The Heart Of The Matter • Morning Desire, Tomb Of The Unknown Love, title cut, etc. RCA 153995

The Cars: Greatest Hits Tonight She Comes, Drive, You Might Think, Shake It Up, others. Elektra 153702

The Canadian Brass: High, Bright, Light & Clear • Baroque gems for brass ensemble. RCA DIGITAL 144529

Mozart, Requiem • Schreier leads the Leipzig Radio Choir & Dresden State Orch. Philips DIGITAL 115039

Pavarotti: Mamma • 16 great Italian songs, arranged & conducted by Henry Mancini. London DIGITAL 115310

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Bach, Brandenburg Concertos Nos. 4-6 • The English Concert led by Trevor Pinnock. Archiv DIGITAL 125417

Rimsky-Korsakov, Scheherazade • André Previn conducts the Vienna Philharmonic. Philips DIGITAL 115415

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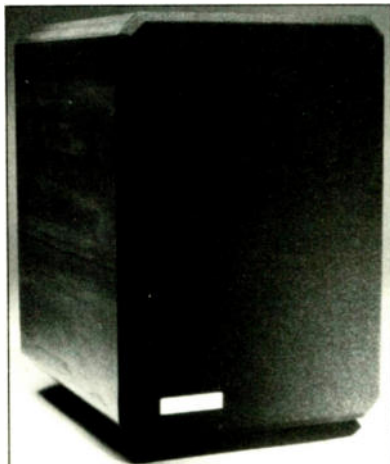
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J. Gordon Holt *Stereophile* July, 1985.



MAXIM III TWO-WAY SPEAKER SYSTEM

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C R O S S T A L K

A DIGITAL SOLUTION?

SO FAR, I'VE BEEN DISAPPOINTED WITH THE outcome when I've tried making live recordings on cassette decks. The results with an open-reel recorder are better, but the final cassette dubs for friends, family, and so on are nearly back to the all-cassette quality. Guitar, piano, and most vocalists sound fine, but soprano, violin, and trumpet get severely distorted on the high notes.

Since PCM equipment is available for use with VCRS, is there a practical way to employ it with a cassette deck? Do you expect a PCM processor specifically for use with cassette equipment to be marketed soon? And should PCM cassettes be able to solve our problems, given that we don't expect top studio quality?

Lee Everson
Clifton Springs, N.Y.

Present PCM adapters won't work with audio cassette recorders: They need the much greater bandwidth of video decks. Compact, 16-bit PCM cassette decks are expected on these shores early next year, and 8mm VCRs with companded 8-bit digital soundtracks are available now (see our review of the Pioneer VE-D70 in this issue). However, neither format is compatible with standard audio cassettes (they're not even compatible with each other). But you may not need PCM to clean up your highs. Before you invest in new equipment, try backing off on the recording level a bit and, particularly, moving the mike a little farther away from your soprano, violin, or trumpet. That alone may do the trick.

LEAVE THE DISHES

I HAVE MANY 78-RPM RECORDS THAT WERE stored flat and have become slightly "dished." How can I eliminate this warping so I can transfer the music to reels or cassettes?

Jock McMurray
Hastings, Pa.

If the dishing is only slight, don't try. The records should play well with the convex side up. When you turn them over, you may need to add a weight or friction hold-down to keep them from slipping on the platter. But with most pickups there should be no other problem. The alternative of carefully heating the discs between a pair of thick (1/4 inch) glass plates is tricky and, even when you're familiar with it, can damage the records if you're not cautious.

ROOM FOR MORE?

MY LISTENING ROOM MEASURES 20 BY 13 FEET, with a cathedral ceiling that is between 8 and 13 1/2 feet high. Acoustically, it is average-to-live. My Technics SA-311 amplifier is, I believe, rated at 38 watts per channel. It drives Genesis I speakers rated at up to 50 watts. I keep hearing of 100- and 150-watt systems,

and some 35-watt amps are advertised as great for dorm rooms and the like. Am I underpowered?

Irv Rosen
San Diego, Calif.

If you hear your amplifier overloading, or "clipping," the answer is yes. (Clipping manifests itself as distortion on signal peaks: harshness, muddiness, a squashed quality, or even clicking noises in some severe cases.) Otherwise, the answer presumably is no. The biggest single variable in the complex equation for determining the minimum amplifier power needed to fill a given room is the sonic taste of the listener. Other parameters, such as speaker sensitivity, usually have a "window of uncertainty" a few dB wide. But some listeners demand peak SPLs (sound pressure levels) of more than 110 dB, while others won't tolerate much above 80 dB—a spread of about 30 dB, which if expressed in watts would be a ratio of 1,000 to 1. If a 150-watt (21 3/4-dBW) amplifier is needed for the former loudness in a given room, the latter theoretically could be obtained with only 0.15 watt (-8 1/4 dBW) in the same room. That's why nobody can tell you how much power you really need. If you decide you want to upgrade, remember that you have to double the power (an increase of 3 dB) to get any significant audible benefit.

ALL WET?

I DISAGREE WITH YOUR COMMENTS [JUNE 1985] on dealing with record pops. I too had problems with pops and ticks when taping LPs, and I found that water, placed on the record with a Discwasher, works the best to suppress these noises. I was told that water reduces high-frequency response, but I found that taping the records on high-end cassettes, such as Maxell UD-XLII or XL-IIS or TDK SA-X, restores the brightness that the wet-playing removes.

Ron Pontal
East Islip, N.Y.

You have stepped squarely on one of our prejudices: Two wrongs don't make a right. Wet playing is wrong, in our view (despite some very strong opinion in its favor, particularly in Europe), because our tests have indicated that although the water damps (no pun) tip motion, suppressing ticks and pops along with some program highs, it also appears to conceal higher rates of groove damage than occur in otherwise comparable dry playing. And using a mismatch between a "hot" tape and a recorder that is underbiased for it to boost highs artificially is wrong both because you can't control it and because it implies a loss in midrange headroom (among the most important of tape specs for high-quality results) vs. the same tape with correct bias. You can prevent pops and ticks from developing by keeping your records clean.

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

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DAD DADAISM

ON THE BACK OF MANY COMPACT DISC BOXES, YOU will find printed a three-letter code in a small rectangle, in which each letter is either an *A* or a *D*. The Society of Professional Audio Recording Studios, which pioneered this labeling system, calls it the SPARS Consumer Clarification Code. An identical scheme was independently developed by Polygram and is used on its discs. What is the Code for? I'll let SPARS do the talking: "The only way you [the CD buyer] can ascertain the amount of digital technology used in producing the product is to be aware of the recording history. The crucial factor is how many times the sound waves are stored in an analog form. . . . The quality of recordings made utilizing digital technology will convince you of the benefits of this new and exciting recording breakthrough."

It's supposed to work like this. The first letter indicates what kind of tape recorder was originally used to capture the music: *A* for analog and *D* for digital. The letter in the second position tells in which "domain" the mixdown and editing stages were conducted, and the third letter describes the mastering process. Apparently, to be convinced of the benefits of digital recording, the CD shopper is to maximize the number of *D*s, a digital three-of-a-kind (DDD) being the most desirable. I even know a few people who will buy only those CDs with DDD emblazoned on the back, thinking, by filtering out any vestiges of analog processing, that they are assembling a record collection of unassailable sonic virtue. Unfortunately, even though the Code is a laudable attempt to impart valuable information to the consumer, it has five loopholes pointing up how wrongheaded these listeners' attitudes are.

First, *every* CD that has been and will be made is digitally mastered: The medium is by definition a digital one. A *D* in the third position is redundant when labeling a CD, and it adds nothing to your knowledge of the disc's sound quality. Even the worst-sounding CDs qualify for a third-position *D*. I have yet to see a cassette or LP employing the code, but in these cases the last letter would always be an *A*. (SPARS, it seems, recognizes only five of the eight possible codes: DDD, ADD, AAD, ADA, and DDA. The remaining three—AAA, DAA, and DAD—represent plausible recording scenarios yet are not mentioned in the SPARS literature.)

A *D* in the second position does not guarantee sonic purity. Digital editing and mixing can take several forms, some of which can degrade the sound, though perhaps not audibly unless done incorrectly. Soon there will be all-digital equalizers, reverb units, and signal processors that, in the wrong hands, will have the same potential to ruin sound quality as their analog equivalents. Recordings that use these devices during the mixdown stage will still qualify for second-position *D*s. On the other hand, classical mu-

sic may benefit from a *D* here, because digital editing can be far more subtle than its analog counterpart, depending on the skill of the editor.

A *D* in the first position also does not automatically mean better sound. True, a digital recorder will not add wow or flutter to the signal, it will generate negligible amounts of distortion, and its frequency response will be almost ruler-flat at all input levels. But the initial indicator—whether *A* or *D*—says nothing about some far more crucial aspects of master-tape sound quality. One letter cannot convey the number, type, and placement of the microphones used, the number of recorder tracks the microphones fed, or the various kinds of sonic folding, spindling, and mutilating that have been applied via signal processors. The code ignores these most critical parts of the "recording history."

An *A* in either of the first two positions might give to some the impression that the grade of the CD's sound is inferior. Not necessarily. Some—probably most, numerically—of the best-sounding recordings have been analog-mastered and analog-mixed. And some of the most wretched sonics I've ever heard emerge from a stereo system originated in DDD discs issued by companies that should have learned decades ago how to make superior recordings.

This brings me to the fifth point. While the only sure method of telling if a CD sounds good is to hear it, knowing how it sounds is less important, at least to me, than what is being sounded: the music. A CD should be bought first for the music it contains and second for its sound. There is no way, for example, that a Jascha Heifetz, Wilhelm Furtwängler, Fritz Reiner, George Szell, Arturo Toscanini, Bruno Walter, Beatles, Glenn Miller, or Elvis Presley CD will ever merit the coveted DDD—all their recordings were made on analog systems. These artists' CDs may not sound state-of-the-art, but that does not diminish their musical value or their right to be in a record collection.

In shopping for a CD, I would pay less attention to the Clarification Code and more to the music. What little information the Code provides is nice to know, but it is also important to realize that the Code is not an infallible guide to sonic riches, mainly because it leaves out much of the recording history. Far more helpful to the CD aficionado would be a revival of auditioning facilities in record stores. I've already run across multiplayer listening consoles in Europe and Japan. The provision of such equipment for hearing a disc before purchase would remove the burden of establishing sound quality from the possibly misleading Code and place it on the listener (where it belongs), who would also be able to evaluate a disc's musical worth. To rephrase the ads of a New York clothing store, an educated consumer will be a record shop's best customer. ■

IN THE PURSUIT OF PERFECTION, TECHNICS MOVES TWO STEPS CLOSER.

A high-performance digital filter. A fine-focus single-beam laser. Both in the new Technics compact disc players.

Musical perfection. It's the promise of the compact disc. To fulfill that promise the new Technics SL-P300 incorporates two significant advances.

A high-performance digital filter to deliver unsurpassed sound. An improved FF1 fine-focus single-beam laser system. It has the strength and accuracy to "read" through most fingerprints, scratches and even imperfections in the disc itself.

For programming convenience, the FF1 laser can move across a disc in less than a second. And, of course, the SL-P300 also has an infrared, wireless remote control. To play any selection. In any order. From almost anywhere in the room.

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Compact Disc Player SL-P300

FF1



Matthew Polk's Awesome Sounding SDA-SRS & SDA-SRS 2



SDA SRS
\$1395 ea.

SDA SRS 2
\$995 ea.

Digital Disc Ready

Matthew Polk, the loudspeaker genius, with his Audio Video Grand Prix winning SDA-SRS and latest technological triumph — the extraordinary SDA-SRS 2.

"The Genius of Matthew Polk Creates The Second Awesome Sounding Signature Edition SDA!"

Polk Audio's Extraordinary New SDA-SRS 2 is Here!

Now the genius of Matthew Polk brings you the awesome sonic performance of the SDA-SRS in a smaller, more moderately priced, but no less extraordinary loudspeaker, the SDA-SRS 2.

"Spectacular...it is quite an experience"

Stereo Review

Matthew Polk's ultimate dream loudspeaker, the SDA-SRS, won the prestigious Audio Video Grand Prix Speaker of the Year award last year. Stereo Review said "Spectacular...it is quite an experience" and also stated that the SRS was probably the most impressive new speaker at the 1985 Consumer Electronics Show. Thousands of man hours and hundreds of thousands of dollars were spent to produce this ultimate loudspeaker for discerning listeners who seek the absolute state-of-the-art in musical and sonic reproduction.

Matthew Polk has, during the last year, continued to push his creative genius to the limit in order to develop a smaller, more moderately priced Signature Edition SDA incorporating virtually all of the innovations and design features of the SRS without significantly compromising its awesome sonic performance. The extraordinary new SRS 2 is the successful result. Music lovers who are privileged to own a pair of either model will share Matthew Polk's pride every time they sit down and enjoy the unparalleled experience of listening to their favorite music through these extraordinary loudspeakers, or when they demonstrate them to their admiring friends.

"Exceptional performance no matter how you look at it"

Stereo Review

Listening to any Polk True Stereo SDA* is a remarkable experience. Listening to either of the Signature Edition SDAs is an awesome revelation. Their extraordinarily lifelike three-

dimensional imaging surrounds the listener in 360° panorama of sonic splendor. The awe inspiring bass performance and dynamic range will astound you. Their high definition clarity allows you to hear every detail of the original musical performance; while their exceptionally smooth, natural, low distortion reproduction encourages you to totally indulge and immerse yourself in your favorite recordings for hours on end.

Julian Hirsch of Stereo Review summed it up well in his rave review of the SDA-SRS: "The composite frequency response was exceptional...The SDA system works...The effect can be quite spectacular...We heard the sound to our sides, a full 90° away from the speakers...As good as the SDA feature is, we were even more impressed by the overall quality of the Polk SDA-SRS...The sound is superbly balanced and totally effortless...Exceptional low bass. We have never measured a low bass distortion level as low as that of the SDA-SRS...It is quite an experience! Furthermore, it is not necessary to play the music loud to enjoy the tactile qualities of deep bass...Exceptional performance no matter how you look at it."

The awe-inspiring sonic performance of the SDA-SRS 2 is remarkably similar to that of the SRS. Words alone can not express the experience of listening to these ultimate loudspeaker systems. You simply must hear them for yourself!

"Literally a new dimension in sound"

Stereo Review

Both the SDA-SRS and the SDA-SRS 2 are high efficiency systems of awesome dynamic range and bass capabilities. They both incorporate Polk's patented SDA True Stereo technology which reproduces music with a precise, life-like three dimensional soundstage which is unequalled and gives you, as Julian Hirsch of Stereo Review said, "literally a new dimension in sound". Each beautifully styled and finished cabinet contains 4 Polk 6½" trilaminate polymer drivers, a planar 15" sub-bass radiator, 2 Polk 1"

silver-coil polyamide dome tweeters and a complex, sophisticated isophase crossover system.

Like the SDA-SRS, the SRS 2 incorporates: 1.) time compensated, phase-coherent multiple driver vertical line-source topology for greater clarity, increased coherency, lower distortion, higher power handling, increased dynamic range and more accurate imaging. 2.) a mono-coque cabinet with elaborate bracing and MDF baffle for lower cabinet read-out and lower coloration. 3.) progressive variation of the high frequency high-pass circuitry for point-source operation and wide vertical dispersion. 4.) the use of small active drivers in a full complement sub-bass drive configuration coupled to a large 15" sub-bass radiator for extraordinarily tight, quick and three-dimensional mid and upper bass detail combined with low and sub-bass capabilities which are exceptional. The speakers are beautifully finished in oiled oak and walnut.

Other superb sounding Polk speakers from \$85. ea.

No matter what your budget is, there is a superb sounding Polk speaker perfect for you. Polk's incredible sounding/affordably priced Monitor Series loudspeakers start as low as \$85 ea. The breathtaking sonic benefits of Polk's revolutionary True Stereo SDA technology are available in all Polk's SDA loudspeakers which begin as low as \$395. each.

"Our advice is not to buy speakers until you've heard the Polks"

Musician Magazine

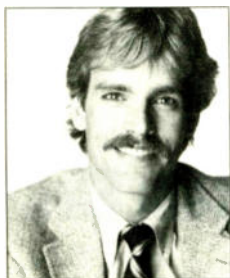
The experts agree: Polk speakers sound better! Hear them for yourself. Use the reader service card for more information and visit your nearest Polk dealer today. Your ears will thank you.

polkaudio
The Speaker Specialists®

1915 Annapolis Road, Baltimore, MD 21240

*U.S. Patent No. 4,489, 432 and 4,497, 064. Other patents pending.

Where to buy Polk Speakers? For your nearest dealer, see page 64.



B Y
J A Y C.
T A Y L O R

DASHBOARD DEMOCRACY

IF YOU'VE BEEN SHOPPING FOR A NEW CAR LATELY, YOU must have noticed that just about every one on the dealers' floors has some kind of radio already installed. If you're an average American, chances are that whatever Detroit or Tokyo has provided for audio entertainment will be just fine. Besides, the salesmen say the radios are "free" because you're buying a turbo ram inductor package along with the tinted glass and power steering. But just in case your mother forgot to tell you, there is no such thing as a free lunch, especially with factory-installed radios.

Sonically speaking, a HIGH FIDELITY reader can't be considered an average American. Are you really satisfied with the standard radio that seems to be an inescapable part of the automotive purchase you're considering? I usually am not, especially when factoring in what a typical system adds to the sticker price of a new vehicle. I tend to think of a car audio system as part of a long-term investment, one that I intend to keep as long as I own the car.

Because it's "standard equipment," you may not realize how much a built-in radio costs. Perhaps you don't feel guilty pitching the supplied AM unit in the trash in order to put in one of your own—but it'll cost you approximately \$50, closer to \$100 if it's digital. Throwing out a factory-installed AM/FM stereo will run you about \$150 (analog tuning), and it's anywhere from \$200 to \$275 for an ETR (electronically tuned digital receiver). An undesired AM/FM cassette-receiver will set you back between \$300 and \$375. Now, can you afford to buy two stereo systems, one from the factory plus the one that you really wanted all along?

"What about the delete option?" you ask. Assuming it's available on the car of your choice, this alternative provides a credit for not having a radio installed at the factory. The last three words are the key here: Once the car is at the dealership, the delete option is no option at all. If a dealer agrees to remove an existing radio, he's going to have to put it into another car and pawn it off on a shopper less savvy than you. Currently there are no provisions for him to return it to the factory.

Though most Ford, GM, and AMC vehicles can still be special-ordered without an unwanted radio, Lee Iacocca has seen fit to equip 33 out of 41 Chrysler models with nondeletable systems. But the worst part of the deal is that 30 of the 33 are furnished with only AM/FM radios (21 automobiles) or plain AM ones (nine vehicles). In other words, if you want a Chrysler, you're likely to pay twice for the privilege of listening to cassettes—once for Mr. Iacocca's radio and again for your own cassette-receiver. This doesn't mean the other domestic manufacturers are

blameless: The fact that the radios are often optional or deletable doesn't mean they aren't already in place in nine out of ten cars in a given showroom.

In theory, you may be able to bargain for the removal of a built-in system from a "deletable" vehicle. One possible approach is to make your best offer on the car in question, then find a similar one on the lot without a radio and insist that the transaction hinges on a further price reduction equal to the value of the unwanted radio. Point out that the removed radio could easily be transferred to the unequipped car, and for all but the fastest moving models, chances are you've got a deal.

Imports, particularly of the Japanese variety, are a different story—not better, just different. Thanks to import quotas, the Japanese are making efforts to get more for each car that does reach the U.S. Strategies include providing premium stereo systems, frequently with cassette decks, equalizers or amplifiers, and multispeaker installations as standard equipment. If you like the sound of these offerings, fine: They save you the trouble of having a system put in at a later date, plus they enable you to finance your new tunes over four or five years. If not, they're an unavoidable expense of unwarranted proportions. Worse, supply and demand makes buying a popular model a take-it-or-leave-it proposition.

Fortunately, there's a movement afoot to restore your freedom to choose the car stereo system best suited to your own musical tastes and budget. A legislative lobbying effort, dubbed Dashboard Democracy, is being conducted on your behalf by the Car Audio Specialists Association (CASA). On a state-by-state basis, CASA is working to gain acceptance of its own two delete options: One enables a customer to have a preinstalled radio removed at the dealership in return for full credit, and the other makes it possible for the dealer to return the extracted device to the manufacturer for credit.

This is no small undertaking, considering the strength of the automobile-manufacturer lobby. The proposed legislation needs strong support from auto-audiophiles if it's going to become law in your state. Wouldn't you really rather have all the choices available the next time you buy a new car? For a free brochure on original-equipment removal policies and a consumer opinion form, send a self-addressed, stamped, business-size envelope to: Car Audio Specialists Association, 2101 L St. N.W., Washington, D.C. 20037. Or call (202) 828-2279 for further information on what you can do to save Dashboard Democracy. ■

Jay C. Taylor is Car Stereo Products Manager for Crutchfield.



**THE ONE HIGH-END AUDIO SYSTEM
GOOD ENOUGH TO PLAY IN EVERY ROOM.**

The finer your audio system, the more you should enjoy it. So why confine your listening pleasure to just one room?

Now Kyocera's Full System Remote components let one system drive up to three sets of speakers in different rooms—and let you control everything from any room!

With up to three remote sensors and a wireless controller, you can adjust volume, choose tracks on the Compact Disc player, tune AM or FM stations, even record cassettes without ever leaving your chair. Just as important, Kyocera Full System Remote components are greatly improved versions of the same Receivers, Cassette Decks, and CD Player that earned Kyocera its high-end reputation.

So don't settle for an audiophile system that only plays in one room when you can own the one audiophile system that plays in three.



 **KYOCERA**

Built right from the ground up.

The Pioneer® SD-P40 is not a projection television. It is a projection *monitor*. The first of its kind.

And in one masterstroke, all—not some, but *all*—of the compromises associated with projection television have been eliminated.

In fact, the SD-P40 is not merely far

For the first time, a true skin tone is achieved in the presence of a vivid green. At last, color compromise is eliminated.

The exceptional performance of the Pioneer SD-P40 is the result of several major technological advances developed by Pioneer engineers over the last 3 years.

PIONEER INTRODUCES THE WORLD'S FIRST PROJECTION MONITOR.

superior to *any* other conventional projection system, it is also superior to all but a few direct-view monitors.

450 LINES. AND THAT'S THE BEGINNING.

The horizontal resolution on the SD-P40 is more than 450 lines.

The brightness is more than 300 footlamberts. It is actually brighter than any direct-view system.

The contrast has a dynamic range more than twice that of conventional projection systems.

THE END OF BIG-SCREEN COMPROMISE.

Ambient light, one of the great problems in projection video, is no problem at all. In fact, there is less deterioration in contrast due to ambient light than in direct-view systems.

Focus, so much a problem in conventional projection systems, is sharp to the edges of the screen. Further, the picture is equally bright regardless of what angle you are viewing it from.

Blacks, so often grey on conventional systems, are rich while holding detail.

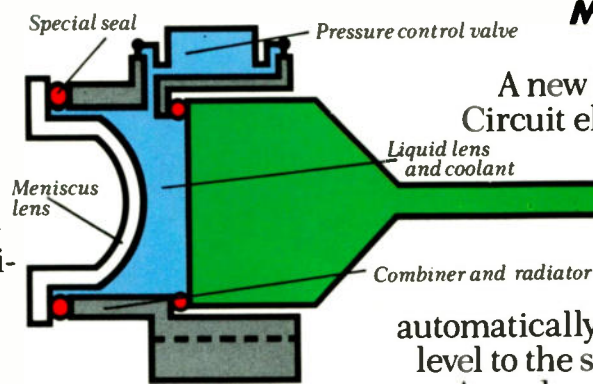
The fuzziness you're so used to seeing around white lettering and objects at high brightness, known as "blooming," is eliminated.

Color values are exceptionally accurate.

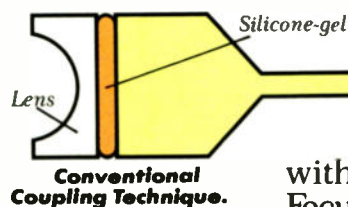
AN UNPARALLELED LENS. A REVOLUTIONARY LENS SYSTEM.

The lens itself is the largest projection lens ever developed for private use—with a maximum bore of 160 mm.

Perhaps even more significant is Pioneer's development of the world's first liquid-cooled optical-coupling system. Far superior to conventional silicone gel or air coupling systems, the "Liquid Lens" is clearly the most accurate, efficient projection lens system ever devised.



The "Liquid Lens" Technique.



Conventional Coupling Technique.

MAJOR ADVANCES IN CIRCUITRY.

A new High-Voltage Stabilizing Circuit eliminates anode voltage drop, preventing darkness in white areas and focus loss.

A new Black-Level Stabilizer Circuit automatically sets the optimum black level to the signal source.

A newly created Dynamic Focus Circuit guarantees sharp focus to the edges of the screen.

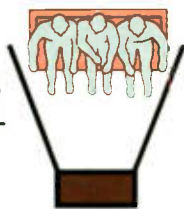
And new High-Focus CRTs utilize not one but three electron lenses. These, combined with a newly developed Linear Tracking Focus System, result in a focal performance superior to conventional CRTs.

THE HEART OF A SOPHISTICATED AUDIO/VIDEO SYSTEM.

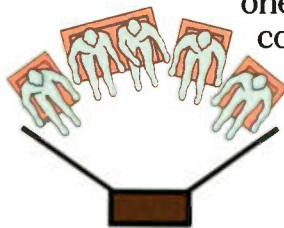
Inputs are provided for a LaserVision player

and two videocassette recorders, in addition to 139 cable-capable channels with 10-key direct access. There's an MTS decoder for stereo/SAP broadcasts, and a simulated-stereo processor. There's a built-in high-powered 12W + 12W amplifier, with two built-in 6 $\frac{5}{16}$ -inch speakers. There's a monitor output, and a TV output. There's even a variable audio output that lets you control volume through your hi-fi system by remote control.

In fact, the entire system is controlled by



Conventional seating



Our seating

Finally, you can sit anywhere.

one 54-function System Remote control (which will also control Pioneer LaserDisc™ and VCRs bearing the SR symbol).

We could go on and on. Suffice it to say, all you have to do is see the Pioneer SD-P40 once, and you will suddenly understand the difference

between the world of projection televisions and the only projection monitor in the world.

 **PIONEER®**



 PIONEER

T E S T R E P O R T S

Report preparation supervised by Michael Riggs, David Renada, Robert Long, and Edward J. Foster. Laboratory data (unless otherwise indicated) is supplied by Diversified Science Laboratories.

Sony CDP-55 Compact Disc Player



Technics SU-V10X Integrated Amplifier



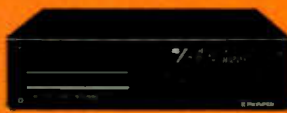
ADS PS-5 Car Power Amplifier



Linear Power 1002 Car Power Amplifier



Pioneer VE-D70 8mm Digital-Audio VCR



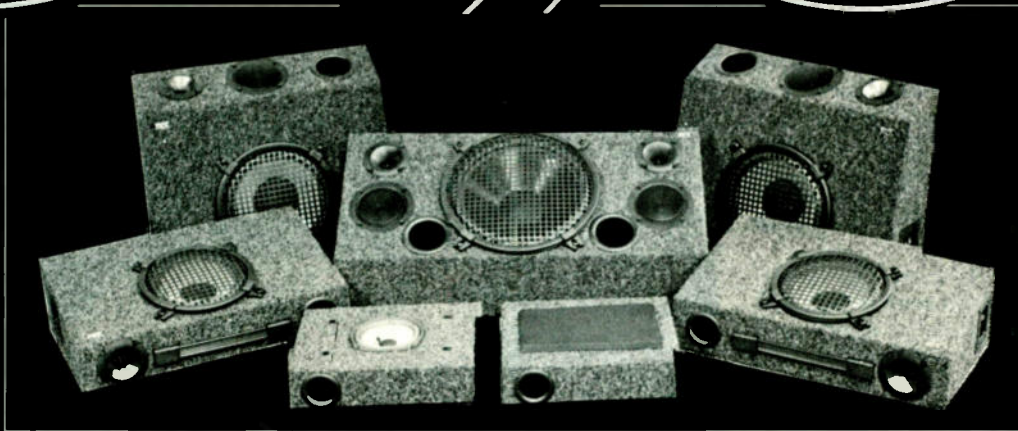
Jamo CBR-200 Loudspeaker



Klar's new Novabeam 100 projection monitor is the first consumer video component to incorporate detail-enhancing Terodja Image Processing. Reports follow. ►

PHOTOGRAPHS BY NICK BASILION

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Why be content with just hearing your music when you can feel it too with ROAD THUNDER SPEAKER SYSTEMS FROM MTX.

Road Thunder Speakers are really portable home hi fi systems uniquely designed to fit in most vehicles without cutting holes!

Feel your new compact discs and cassettes through the efficient, high power, MTX woofers featured in every cabinet.

MTX's exclusive 10 year limited warranty insures performance and durability that will outlast the lifetime of even the toughest vehicles.

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Auto Sound of Virginia in Richmond, VA;
Audio Video Components in Nashville, TN.*



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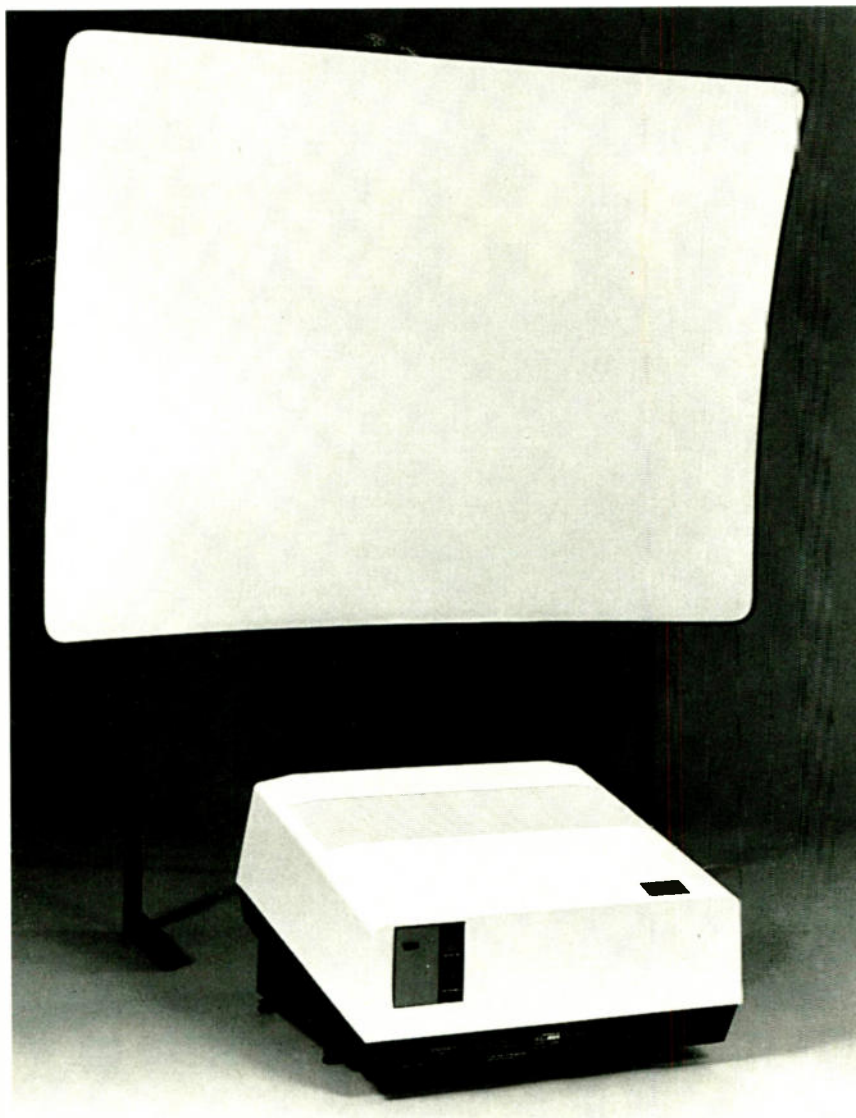
Kloss Novabeam 100 Front-Projection Monitor

DIMENSIONS: PROJECTOR—26 BY 16½ INCHES (FRONT), 28 INCHES DEEP; SCREEN—DEPENDS ON PROJECTOR SELECTED, 5-, 6½-, AND 10-FOOT VERSIONS AVAILABLE (MEASURED DIAGONALLY). **PRICES:** PROJECTOR PLUS 5- OR 6½-FOOT HIGH-GAIN CURVED SCREEN, \$3,845 (PROJECTORS AND SCREENS ALSO AVAILABLE SEPARATELY); PROJECTOR FOR WALL OR 10-FOOT LOW-GAIN FLAT SCREEN, \$3,595. **WARRANTY:** "LIMITED," ONE YEAR PARTS AND LABOR ON CHASSIS AND SCREEN; THREE YEARS PARTS AND LABOR FOR NOVABEAM TUBES IN DOMESTIC USE; ONE YEAR PARTS AND LABOR FOR TUBES IN COMMERCIAL USE. **MANUFACTURER:** MADE IN GERMANY FOR KLOSS VIDEO CORP., 640 MEMORIAL DR., CAMBRIDGE, MASS. 02139.

NO NAME IS MORE CLOSELY ASSOCIATED with projection TV than that of Henry Kloss, the peripatetic inventor and entrepreneur who, single-handedly or conspiring with others, has founded no fewer than four major home-entertainment companies: Acoustic Research, K.L.H. (he being the "K" thereof), Advent, and Kloss Video. In fact, Kloss founded Advent to realize his dream of home projection television and launched Advent's speaker line in large part to support video research. Although that company did introduce the world's first home projection set (the Videobeam) in 1973, the product category didn't really take off until well after Kloss formed his latest company, Kloss Video, in 1977.

The twin "Achilles' heels" of front-projection TV have been inadequate brightness and inadequate resolution, or, more exactly, inadequate *apparent* resolution. But there has always been a limit to how much light a TV-tube phosphor can emit before it saturates (at which point a further increase in electron-beam current doesn't cause a commensurate increase in light output). And still simpler physics dictates that the greater the area that the phosphor's light has to cover, the dimmer the picture will be. As for resolution, it's important to realize that the visual impact of projection TV comes from having the picture subtend a wider-than-normal viewing angle—a situation that also makes more obvious the limited bandwidth and visual noise (snow and film grain) of poor program material.

"Efficient" viewing screens help increase image brightness by reflecting more light back to the viewer, but the real key to Kloss's early (and current) success was his invention of the Novatron picture tube. In a single assembly, the Novatron integrates electron gun, phosphor screen, and projector optics. The light that is emitted by the phosphor is



reflected by an internal mirror and then passes through a lens that doubles as the tube's faceplate. With the internal surface of the lens and the entire mirror in a vacuum, there's little chance for dirt to contaminate the optics and reduce light output. Only the external face of the tube is subject to contamination. Plastic lens caps are supplied with the Kloss projector to keep the tubes clean when they're not in use.

Thanks to the Novatron, Kloss's projection TVs have had the reputation of being

the brightest front-projectors around, and now the Novabeam 100's Faroudja Image Processing System is likely to win them the picture-definition award as well. Since the box accompanying this review explains the Faroudja system in some detail, we'll just say here that the circuit improves apparent picture definition, both horizontally and vertically, *without* greatly increasing video noise.

The Novabeam 100 is available in three versions, essentially identical except for the (CONTINUED ON PAGE 31)

BEFORE YOU BUY INSURANCE, EXAMINE THE EVIDENCE.

An Independent Insurance Agent represents several companies. So your Independent Agent can help you select the right coverage at the right price because there are more policies from which to choose. The evidence is clear.

An agent who works for one company can only offer you the policies that his company sells.

**THE MORE-THAN-ONE-COMPANY
INSURANCE AGENT.**

You'll find the Independent Insurance Agent nearest you in the Yellow Pages.



If you think the human ear
is a remarkable instrument,



consider this.

It's Casio's new FM Stereo Card. The first radio of its size to deliver sound of a quality that does justice to the human ear.

In fact, the Stereo Card's dual earphones deliver a rich, full sound that'll be music—and news—to both your ears. While its wafer-thinness and

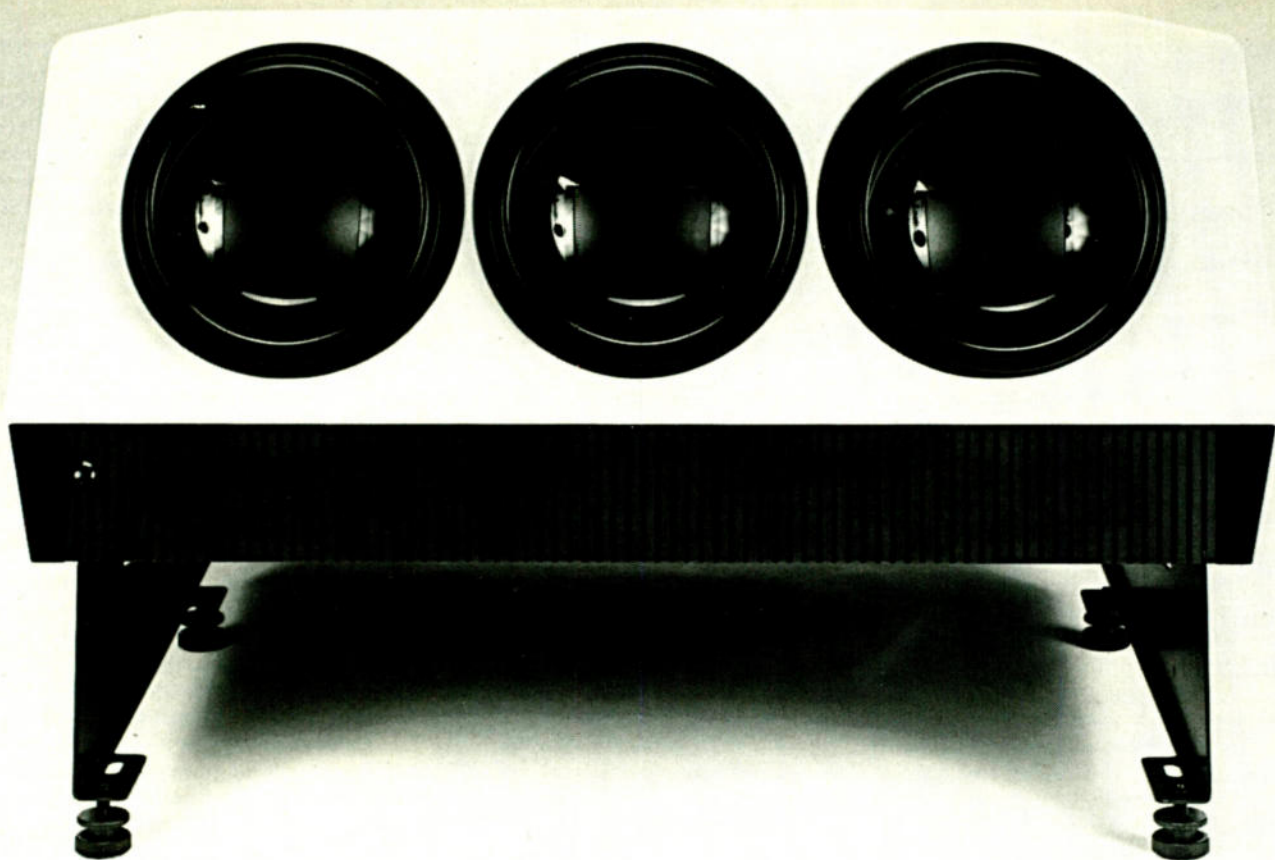
feather weight will make it standard accompaniment wherever you go.

And wherever that is, you'll never have to worry about finding batteries for it. The Stereo Card has a fully integrated power supply that includes powerful NiCd batteries and a recharger which plugs into any standard AC

outlet. All for \$49.95.

The Casio Stereo Card. Because two remarkable instruments deserve another.

CASIO
Where miracles never cease



FRONT VIEW OF THE NOVABEAM 100 PROJECTOR, SHOWING SEPARATE TUBES FOR RED, GREEN, AND BLUE. THESE GENERATE COLOR IMAGES UNIMPAIRED BY DOT-PITCH LIMITATIONS.

(CONTINUED FROM PAGE 28) size and type of screen they use. Kloss offers 5-foot and 6½-foot (measured diagonally, as always) high-gain curved screens, or you can project a 10-foot image on a wall or low-gain flat screen. The Novabeam is also equipped with all hardware needed for floor or ceiling mounting of the projector, and the Kloss-supplied screens come with both stands for floor mounting and the brackets needed to hang them on the wall.

You can set up a floor-standing system by yourself in a couple of hours; professional assistance is recommended for a ceiling-mount installation. An internal adjustment is required to invert the picture when projecting from the ceiling, and the weight of the projector (80 pounds) and the need to run electrical and signal lines to it suggest that a ceiling mount is *not* a job for the casual do-it-yourselfer.

The Novabeam 100 offers two NTSC composite-video inputs (each with a stereo pair of audio inputs) plus an RGB input for use with computers and the like. Normally, you'd select the source and direct nearly all other aspects of operation via buttons on the remote, although each control is duplicated on the projector, and tone controls are available only there. Once you've adjusted the picture to your liking with the detail, color, hue, brightness, and contrast keys, you can save the settings by pressing SET PRESET on the projector. The remote's preset button then calls up the standard settings whenever

desired. The unit has its own stereo power amplifier (not evaluated by us), which is rated to produce 10 dBW (10 watts) per channel into 4 ohms.

We tested the Novabeam 100 in what is probably its most popular configuration: floor-mounted with a Kloss 6½-foot high-gain curved screen. With this arrangement, the tube-to-screen distance is 8 feet, thus placing the rear of the projector approximately 11 feet from the back of the screen. This clearly is not a setup for a small room.

Although a Kloss technician arrived with the Novabeam 100 and set it up for us, we'd judge a floor installation to be relatively straightforward—well within the capabilities of the average consumer. Projector-to-screen distance is critical but quite simple to establish. Once you've attached the "feet" to the projector and screen and have the two approximately where you want them, you connect two ends of an alignment string to hooks on the back of the screen and then jockey the projector around until a plastic marker in the middle of the string lines up with a dot on the top of the projector. Next, you pivot the projector so that the picture is horizontally centered on the screen and then double-check the position with the string.

After this, you must "statically converge" the three beams. Pressing TEST on the remote causes red, blue, and green crosshairs to appear in the center of the screen and converts the color, hue, brightness, and contrast keys on the remote into

HORIZONTAL RESOLUTION	> 330 lines
INTERLACE	perfect
OVERSCAN	
horizontal	≈ 6%
vertical	≈ 8%
CENTERING	
horizontal	perfect
vertical	up ≈ 2.5%
BLOOMING	none

red- and blue-tube horizontal and vertical alignment controls. These are used to superimpose the red and blue crosshairs on the green one to form a pure white cross. That's all there is to it. Normally, once you've converged the projector, there's no need to repeat the alignment unless you move either the projector or the screen. But it's comforting to know that you can check convergence—and touch it up if necessary—whenever you like and without test instruments.

The above procedure "statically" converges the three beams in the center of the screen. There also is an exceptionally full complement of *dynamic* convergence controls within the projector and a built-in crosshatch generator to aid in adjusting convergence over the entire screen area. These controls are for service use only, but we were very impressed with their ease of adjustment (there is much less interaction among the various controls than in a conventional TV set) when the Kloss technician went through a complete convergence alignment. And

FAROUDJA IMAGE PROCESSING

THE KLOSS NOVABEAM 100 IS THE FIRST HOME TV set to include Faroudja (Fa-roo-jah) Image Processing, a circuit developed by Yves Faroudja for professional TV broadcasting and production. Unlike conventional home-video image enhancers, which operate only along the horizontal axis and often end up emphasizing video noise (snow) as much as picture detail, the Faroudja system operates along both the horizontal and vertical axes and is designed to sharpen picture detail without noticeably increasing noise or outlining high-contrast areas in cartoonlike fashion. It does this by restricting its emphasis mainly to the middle shades of brightness rather than operating throughout the luminance range.

When the circuit detects a sudden change in brightness, suggesting the edge of a detail that might require enhancing, it first checks the brightness level and the magnitude of the change. If the brightness change is large—say, from almost full-black to almost full-white—the circuit does not alter it. To do so would only drive the picture from blacker-than-black to whiter-than-white and overemphasize the detail. If the brightness change is very small, a

characteristic of snow, the circuit also leaves it unchanged. Only details within the middle range of brightness—real picture material—are heightened.

Unlike simple detail enhancers, which often are unsophisticated high-frequency peaking circuits ("sharpness" controls), the Faroudja emphasis is applied by a "side-chain" operating in parallel with the main signal path. In the NTSC system, after the luminance signal is separated from the chroma carrier, it is delayed briefly to keep it in step with the demodulated chroma information. The Faroudja side-chain operates in parallel with that delay, adding the extra emphasis as needed.

Along the vertical axis, the system operates in a similar manner, providing enhancement as a function of brightness change. To detect differences in luminance from one scan line to the next, the video information is delayed by a charge-coupled device (CCD) delay line. This allows a comparison of one horizontal line of video information with the previous line on a "point by point" basis. Detected luminance-level changes in the vertical direction are then processed by an enhancement circuit. **Edward J. Foster**

whereas we would have judged the overall convergence good to very good as the monitor was received, after complete alignment it was truly excellent. To make the more fair, we then relocated the projector and screen ourselves and reestablished convergence employing only the user ("static") controls. The result was still very good to excellent.

Horizontal and vertical overscan were minor, and of course, the picture was perfectly centered horizontally because we had adjusted the projector and screen for that condition. A slight vertical shift probably could have been corrected by adjusting the projector's front feet, but we left them as the Kloss technician had set them. Horizontal and vertical geometric linearity were excellent in the sense that straight lines remained straight along both axes. However, the curved screen causes the overall picture to appear slightly out of square. There was no blooming over the full ranges of the brightness and contrast controls, and the transient response was first-rate, with very little ringing after a black-to-white transition.

Black retention, gray-scale linearity, and chroma differential gain (variation of color saturation with changes in brightness) are difficult to judge on a projection set because they are influenced by ambient lighting and

viewer location to a greater extent than they are on direct-view monitors. Room light reflecting from the screen tends to reduce contrast and produce a somewhat washed-out picture. The natural tendency then is to increase brightness and contrast to compensate, and this affects black level and gray scale. In judging performance, we have tried to take these characteristics into account and have assumed that the viewer would be in a relatively good position in a dimly lit room. Suffice it to say that these attributes have never been the forte of any projection monitor, and to the extent that the Novabeam 100 is lacking in these areas, it is less so than other front-projection sets we have seen.

Projection TV also has its strengths. One of these, at least potentially, is resolution. In a conventional color picture tube, three separate electron beams strike a repeating pattern of three phosphors applied to the inside

of the picture tube. These emit red, green, and blue light, which the eye combines into a single perceived color. The minimum size of a dot on the screen is therefore determined by the "pitch" (spacing) of the three-color phosphor pattern. Often this is too coarse to permit the full resolution of which the NTSC system is capable (about 330 lines).

There are no such dot-pitch limitations with the Novabeam 100, since the primary-color images are generated by completely independent tubes. Resolution is therefore limited only by the bandwidth of the video electronics and the system's ability to maintain vertical interlace, focusing, and convergence over the screen area. Diversified Science Laboratories' tests indicate that, when used with the Kloss curved screen, the Novabeam 100 system meets all these criteria and has resolution limited only by the bandwidth of the NTSC system. And though we did not specifically test it, we have seen the unit perform exceptionally well with computer-generated signals fed directly into the RGB input. Such signals possess video bandwidths exceeding those of normal TV images.

Color accuracy is excellent overall, probably because of the green phosphor, which is noticeably more saturated (in the color sense) and less lime-colored than is usually the case with a direct-view picture tube. However, this green phosphor, though offering better color accuracy, has a longer persistence than the red and blue phosphors. As a result, a moving image is trailed by a slight green ghost as the outputs from the red and blue tubes decay while the green remains. DSL also found raster purity inferior to that of a conventional direct-view screen—not so much for color blotching as for "vignetting," a drop-off in light level towards the periphery of the picture.

We found the Novabeam 100 to be quite viewable in a normally lit room, but its impact is much greater if the viewing area is darkened. With a good video source (a Laserdisc, for example) and a Dolby Surround sound system, the results are outstanding—the best genuinely large-screen projection TV we've seen. We are particularly impressed with the Faroudja Image Processing System, which sharpens the picture dramatically with no discernible side effects. Quite simply, it outperforms any other image processing system we've tested to date. It does its job so unobtrusively that you don't realize it's working until you switch it off (via TEST) and view what then *appears* to be an artificially softened picture. We can't give it higher praise than that! ■



BACK PANEL OF THE NOVABEAM 100 PROJECTOR, WITH STEREO AUDIO AND VIDEO (COMPOSITE AND RGB) INPUTS AT LEFT AND LINE- AND SPEAKER-LEVEL AUDIO OUTPUTS AT RIGHT

Sony CDP-55 Compact Disc Player



DIMENSIONS: 17 BY 3 1/4 INCHES (FRONT), 10 1/2 INCHES DEEP PLUS CLEARANCE FOR CONNECTIONS. AC CONVENIENCE OUTLET: ONE UNSWITCHED (100 WATTS MAX.). PRICE: \$400. WARRANTY: "LIMITED," ONE YEAR PARTS AND LABOR. MANUFACTURER: SONY CORP., JAPAN; U.S. DISTRIBUTOR: SONY CORPORATION OF AMERICA, 1 SONY DR., PARK RIDGE, N.J. 07656.

SONY'S MIDDLE-OF-THE-LINE HOME Compact Disc player, the CDP-55, offers state-of-the-art performance and a cannily chosen array of features at a pleasingly moderate price. It is distinguished by one aspect: ease of use.

Right out of the box this becomes apparent: There are no laser-pickup locking screws to be removed or loosened. This trait, almost unique to Sony CD players, indicates considerable confidence in the stability of the transport alignment through the hard knocks of shipping and installation, to say nothing of normal use. Hookup is simple, too. The back panel has just one pair of gold-plated pin jacks for the player's fixed-level line output. An unusual and useful touch is an unswitched AC convenience outlet. Even more unusual is the statement (in the spare but clear owner's manual) that the polarized two-prong power plug should be oriented in a wall socket so as to "drive the CD player and other components in the system 'in phase' by aligning the AC power cord polarities with AC outlet polarities." What this means is that proper "alignment" of power plug polarities is critical to minimizing system hum, an especially desirable goal in light of the low noise levels generated by CD players. Also provided on the rear panel are a multipin subcode-output jack to hook up as yet unannounced accessories (which will probably include such devices as subcode-graphics and CD-I decoders).

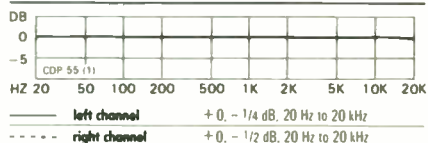
To someone even remotely familiar with CD player controls, the front panel of the

CDP-55 is virtually self-explanatory. Only two buttons are in any sense out of the ordinary: SHUFFLE and AUTO SPACE. The former stands for Shuffle Play, a type of programmed playback in which the player itself does the selection by randomly mixing the order of tracks. Each track is played only once, in whatever sequence, until the entire disc has been heard. Shuffle Play can create some interesting juxtapositions when applied to a pop disc (pop releases usually being meticulously—sometimes even artistically—planned in their song sequences). Auto Space inserts a three-second pause between tracks in both direct and programmed playback modes, regardless of the original spacing. This is useful for making cassette dubs that will be played back on decks with blank-seeking autosearch features. Three repeat modes are provided: single track, whole disc, and A-B segment.

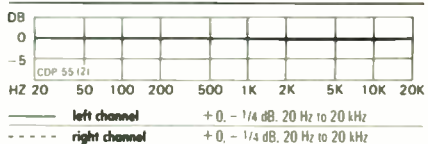
The standard-control array has distinctively large play and pause buttons. At the far right are smaller pairs of buttons for track skipping (and track selection in programmed playback), index-point skipping, and scanning. The last is unusual, at least compared with the audible-scan controls on most new CD players. It has but a single speed, and a rather rapid one at that. We actually preferred the CDP-55's arrangement to the too-slow-then-too-fast scanning available on other models. When using the latter, we are often just about to reach our goal when the scanning races ahead and we end up overshooting. Cueing then becomes a process of successive approximation. With Sony's medium-fast scan control, at least we didn't have to worry about the extra speed kicking in when least expected or needed. As with other Sony players, scanning can be further accelerated by first placing the player in pause, though the sound is turned off in this

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

FREQUENCY RESPONSE WITHOUT DE-EMPHASIS



FREQUENCY RESPONSE WITH DE-EMPHASIS



CHANNEL SEPARATION (at 1 kHz) 100 dB

CHANNEL BALANCE (at 1 kHz) ± 0 dB

S/N RATIO (re 0 dB; A-weighted)
 without de-emphasis 101 dB
 with de-emphasis 105 dB

HARMONIC DISTORTION (THD + N; 40 Hz to 20 kHz)
 at 0 dB < 0.01%
 at -24 dB ≤ 0.05%

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

LINEARITY (at 1 kHz)
 0 to -70 dB no measurable error
 at -80 dB -1/4 dB
 at -90 dB +2 3/4 dB

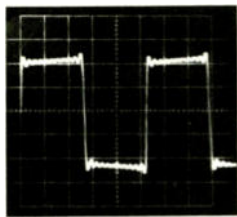
TRACKING & ERROR-CORRECTION
 maximum signal-layer gap ≥ 900 μm
 maximum surface obstruction ≥ 800 μm
 simulated-fingerprint test pass

MAXIMUM OUTPUT LEVEL
 line output 2.13 volts
 headphone output 7.21 volts*

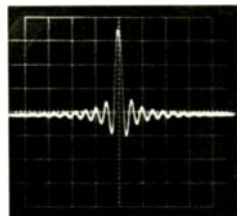
OUTPUT IMPEDANCE
 line output 1,600 ohms
 headphone output 225 ohms

*Into an open circuit, 0.94 volt into 50 ohms (equivalent to 17.7 milliwatts)

SQUARE-WAVE RESPONSE (1 kHz)



IMPULSE RESPONSE



mode.

Speed also characterizes the rest of the CDP-55's playback controls, even though they are not quite as quick on the draw as those on the top-of-the-line Sony units (which are the fastest in the industry). Only five seconds elapse between the time PLAY is pressed (with a disc in an open drawer) and the instant the music first emerges. Going from one track to a nonadjacent one with the front-panel controls requires repeated presses of the track-skip buttons, but by using the supplied infrared remote control one can directly enter track-number cues. Jumping from one track to another using the remote takes no more than 3½ seconds, regardless of the number of tracks on the disc

(we tested this with discs containing the maximum 99 tracks). After getting used to such near-instant access, slower players seem distinctly poky.

Programmed playback is easy, too. Just make a selection using the track-skip buttons and press PROGRAM. CLEAR can be used to eliminate selections from the playback sequence either individually or all at once, and CHECK will replay the chosen track numbers and playing times in the fluorescent display. The time control switches the digit section of the display to show elapsed track time, remaining track time, or remaining disc time, and it operates in both direct and programmed playback modes. In the latter, the remaining disc time is that of the programmed sequence. The numbers of the track and index point being played are shown at all times. The remote control, in addition to providing a numerical keypad, duplicates all the front-panel controls except for PROGRAM, CLEAR, CHECK, AUTO SPACE, and the drawer open/close and power switches.

Under the fingers, the CDP-55 has a substantial feel uncommon in players of this price. Each of the front-panel buttons has a slight snap action, giving positive feedback that a command has been received. The buttons themselves are metal, not plastic. The opening and closing of the disc drawer is almost silent: a slight whir of the drawer motor and a well-damped thump as the drawer locks into position. And though they are probably no sure indication of player quality, it's difficult not to use these loading and unloading noises as a gauge, just as one seeks a similar reassuring solidity to the close-

ing of a car door.

A look inside reveals, as is common with today's full-size players, mostly empty space. In addition to the disc mechanism, there is one circuit board measuring 6½ by 8½ inches that holds all but the display and some of the power-supply circuitry. Among the integrated circuits on the main board is the unit's 96th-order (576 dB per octave!), two-times oversampling digital filter. It—along with the multiplexed-output, 16-bit digital-to-analog converter (DAC)—is responsible for the CDP-55's symmetrical impulse response and the even, low-level ringing on a 1-kHz square wave.

The DAC is probably also responsible for the very low distortion figures, most of which are below our measurement cutoff. The digital filter causes some interesting ripples in the player's high-frequency response. These ripples are inaudible because they represent a less than ±0.05-dB variation superimposed on an equally inaudible ¼- to ½-dB response droop in the extreme treble. The other figures (de-emphasis error, channel separation, channel balance, tracking ability, and S/N ratio) also illustrate state-of-the-art performance. The sound quality, as might therefore be expected, leaves nothing to be desired.

Sony has released several components that have had "55" in their model designations. The STR-V55 receiver, TCK-55 cassette deck, and TSX-55 turntable all proved (with good reason in every case) unusually popular. The price, performance, and speedy, convenient operation of Sony's CDP-55 give every sign that this numerological tradition will continue. ■

T E S T R E P O R T S

Technics SU-V10X Audio-Video Integrated Amplifier

DIMENSIONS: 17 BY 5½, INCHES (FRONT PANEL), 14 INCHES DEEP PLUS CLEARANCE FOR CONTROLS AND CONNECTIONS. **AC CONVENIENCE OUTLETS:** ONE SWITCHED (50 WATTS MAX.), TWO UNSWITCHED (200 WATTS MAX. TOTAL). **PRICE:** \$675. **WARRANTY:** "LIMITED," TWO YEARS PARTS AND LABOR. **MANUFACTURER:** MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD., JAPAN; **U.S. DISTRIBUTOR:** PANASONIC CO., DIVISION OF MATSUSHITA ELECTRIC CORPORATION OF AMERICA, 1 PANASONIC WAY, SECAUCUS, N.J. 07094.

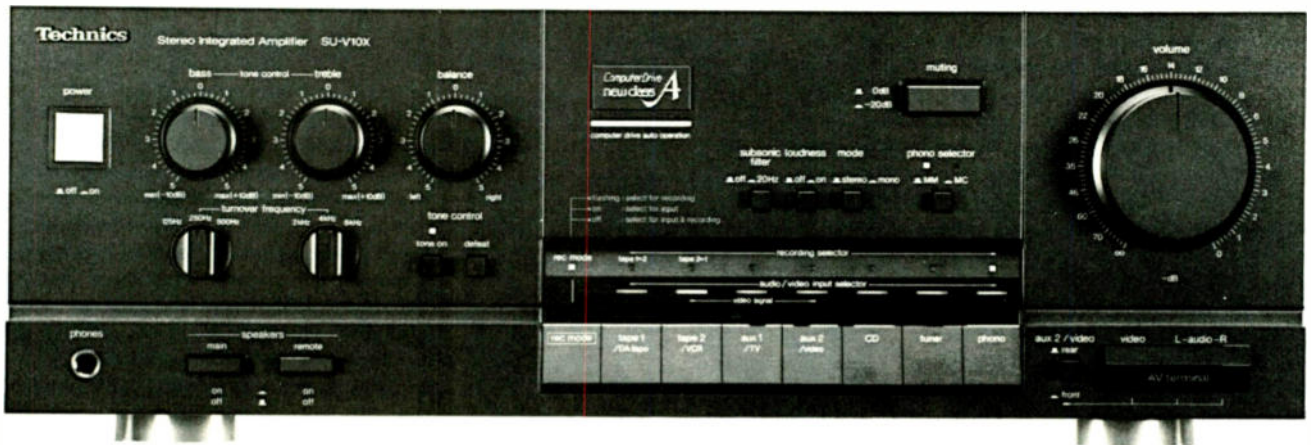
THE SU-V10X IS A HEFTY, HIGH-PERFORMANCE (Computer Drive New Class A, to use Technics's trade style) integrated amplifier designed to accommodate both audio and video sources. Video signals are handled as such (that is, in composite

rather than RF form) via pin jacks. Signal processing (outside of the variable-turnover bass and treble controls) is not built in, but back-panel jumpers between preamp and power sections permit adding an audio processor, whereas picture processing can be included (less flexibly, in terms of switching) in your video hookup scheme. Which is to say that the SU-V10X's keynote is not gadgetry but performance.

There are a total of seven selector buttons on the front panel, marked for phono, tuner, CD, Aux 1/TV, Aux 2/video, Tape 1/digital-audio processor, and Tape 2/VCR. Each has an associated stereo pair of

audio-input jacks on the back panel. (A mono TV-sound signal is accommodated by feeding it to either channel and setting the front-panel mode switch to MONO.) Tape 1 and Tape 2 have output (recording) pairs as well. Aux 1/TV, Aux 2/video, and Tape 2/VCR have video inputs. The audio and video inputs for Tape 2/VCR are duplicated (behind a trim plate) on the front panel, near a switch that chooses between the front and back sets—making this, in effect, a third tape input. Video output from any selected audio-video source is via a single back-panel jack.

The very fact of combined audio-video



switching complicates the designer's job, and Technics has risen to the challenge with a solution we haven't seen in any previously tested model. The amp has one set of selector buttons, which handles both monitoring and recording selection. Though evidently microprocessor-controlled, they "remember" their settings and return to them at turn-on.

Among these are two operating modes, distinguished by the presence or absence of a steady light in the recording-mode pilot nearby. When it's out, the recording output automatically carries the same signal as the monitor output to the amplifier section; if you switch sources, both signals follow the command. Pressing the recording-mode button causes the pilot to start blinking. If you then press it a second time, the pilot goes out and the controls revert to the same-source mode. But if you instead press a selector button, only the recording source will change and the pilot will burn steadily.

From then on (or until you push the mode switch twice), pressing a selector will change the listening but not the recording source. Your recording will continue undisturbed no matter what you listen to. If you want to change recording source, press the mode button once, so the pilot blinks, and make your choice. Because there are separate source indicators for "input" (actually, monitor) and recording, it's easy to see what's going on.

Dubbing modes come on automatically. When you choose Tape 1 as the source, it automatically feeds Tape 2, and vice versa. In the recording mode, you can switch the monitor output back and forth to compare source to copy without affecting the dub. However, you can't similarly switch between the two sets of Tape 2 inputs (front- and back-panel); to that extent, they don't behave like separate tape connections.

Nor is there provision for simulcasts as such. That is, you can't choose video from one source and stereo sound from your FM tuner. For that purpose, you'll either have to reconnect signal leads or use a second tuner to feed simulcast switching in another component in your system. Over the long term,

this should not be a limitation, assuming that stereo TV eventually will take over the function now served by simulcasts (though progress in that direction admittedly is slower than some had at first expected).

The phono section has two modes, switchable at the front panel: for moving-coil and for fixed-coil (moving-magnet or moving-iron) cartridges. As usually is the case, the moving-coil response is somewhat less flat, rolling off a little in the very deep bass (almost 2 dB at 20 Hz) and a hair at the extreme top of the range (1/2 dB at 20 kHz). By contrast, the fixed-coil mode rolls off discernibly only in the extreme bass and is down only about 1/2 dB at 20 Hz. Both curves are very good at worst; the fixed-coil response certainly rates as excellent.

The fixed-coil mode is flatter, too, in the infrasonic range—meaning that it may need more filtering to control spurious signals from warps. The built-in high-pass filter is quite gentle, which keeps it from being particularly effective in this respect even though its action starts at a relatively high frequency: Response begins rolling off very gradually from above 100 Hz, reaching 3 dB down at 34 Hz and dropping at a rate of approximately 6 dB per octave below that point.

Other phono preamp characteristics compare well with those of competing high-performance models. Noise, sensitivity, headroom, and input loading all are fairly typical; if not average for this class of equipment, they depart from it by only insignificant margins. In fact, one could say the same for the entire preamp section. The tone-control circuitry, however, is definitely a cut above average.

Turnover of the BASS is switchable to nominal frequencies of 125, 250, and 500 Hz. In each case, these figures are very close to the ± 3 -dB points with the control at maximum rotation. The slopes continue for about 3 octaves below the turnover frequencies and then shelf, at 10 dB of maximum boost or cut for full control rotation. Calibration is from +5 to -5; actual increments between marked integer steps (the knobs themselves are infinitely adjustable) are quite even, and there is minimal overshoot

All 8 ohm power measurements made with the output load switch in the high-impedance setting 4 and 2 ohm measurements made with the switch in the low-impedance setting

RATED POWER (8- or 4-ohm load)

20 3/4 dBW (120 watts)/channel

OUTPUT AT CLIPPING (at 1 kHz; both channels driven)

8-ohm load 21 1/2 dBW (140 watts)/channel
4-ohm load 21 1/2 dBW (140 watts)/channel

DYNAMIC POWER (at 1 kHz)

8-ohm load 22 1/4 dBW
4-ohm load 22 1/4 dBW
2-ohm load 23 3/4 dBW

DYNAMIC HEADROOM (re rated power; 8- or 4-ohm load)

+1 1/2 dB

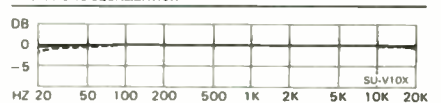
HARMONIC DISTORTION (THD; 20 Hz to 20 kHz)

at 20 3/4 dBW (120 watts) $\leq 0.028\%$
at 0 dBW (1 watt) $< 0.01\%$

FREQUENCY RESPONSE

+0, -1/4 dB, 18 Hz to 31 1 kHz
+0, -3 dB, < 10 Hz to 122 kHz

RIAA PHONO EQUALIZATION



fixed-coil +0, -1/2 dB, 20 Hz to 20 kHz,
-2 1/2 dB at 5 Hz
moving coil +0, -1 3/4 dB, 20 Hz to 20 kHz,
-8 1/4 dB at 5 Hz

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

	sensitivity	S/M ratio
aux input	15.5 mV	83 dB
fixed-coil phono	0.27 mV	77 1/2 dB
moving-coil phono	17.5 μ V	75 3/4 dB

PHONO OVERLOAD (1-kHz clipping)

fixed-coil phono 195 mV
moving-coil phono 13 mV

INPUT IMPEDANCE

aux input 87k ohms
fixed-coil phono 47k ohms, 230 pF
moving-coil phono 220 ohms

OUTPUT IMPEDANCE (to tape)

from aux input source + 100 ohms
from phono inputs 660 ohms

DAMPING FACTOR (at 50 Hz; re 8 ohms)

88

CHANNEL SEPARATION (at 1 kHz)

91 1/2 dB

INFRASONIC FILTER

-3 dB at 34 Hz, \approx 6 dB/octave

at frequencies above the effective range (some boost settings produce a slight mid-range attenuation, and vice versa). In other words, the BASS is unusually well engineered for predictable tone alteration.

The TREBLE, with marked turnovers of 2, 4, and 8 kHz, is similarly remarkable and exactly complementary in its behavior. Both bass and treble controls have center detents, but you need not rely on them for flat response because there's also a tone-defeat switch. The LOUDNESS, whose action was almost identical at all of Diversified Science Laboratories' test settings of the volume control, boosts the bass below about 100 Hz by somewhat less than 10 dB in relation to the treble above about 1 kHz, with a smooth transition in the range between these frequencies. We liked its effect, as such things go, but consider this an individual-judgment call. There also is a "muting" switch that reduces output by a nominal 20 dB (actually, 18 dB, as measured by DSL).

Which brings us to the part of the design in which Technics evidently takes particular pride: the power section. It is unusual in having a back-panel speaker-impedance switch. Its low position accommodates models rated at 4 to 6 ohms when one pair of speakers is used alone or 8 to 16 ohms when two pairs are operated simultaneously; the high position is for 8-ohm speaker pairs used alone or 16-ohm pairs driven simultaneously. The purpose of this switch is to tailor the behavior of the amp's protection circuitry to the load in use, presumably making it more aggressive for low impedances, which pose a greater threat to the output transistors.

The power amplifier fairly bristles with proprietary Technics circuits, each with its own special name. New Class A circuitry has been around for a number of years. It is one of several "sliding bias" designs that seek to combine the low distortion of Class A operation with the efficiency of Class B by varying

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
1.0	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
16.0	12	500	27
20.0	13	630	28
25.0	14	800	29

the bias across the output transistors according to signal level.

A more recent refinement is what Technics calls Synchro-Bias, said to further reduce crossover, or switching, distortion in very low-level signals. Also included is Power Linear Control, which is designed to maintain low distortion in the face of difficult loudspeaker loads, and Computer Drive, which adds a final tweak to the biasing based on the instantaneous temperature of the output transistors.

Feeding the final power stages is a Linear Gain predriver operational amplifier that is said to isolate the input circuit from the load inconsistencies imposed by the vagaries of loudspeaker impedance variations. The en-

tire amplifier is enclosed in what Technics calls a Linear Feedback loop, using both positive and negative feedback to reduce distortion and increase damping factor.

Don't be put off by all the fancy terminology. Under whatever names, the SU-V10X is a well-designed amplifier delivering excellent listening quality and impressive bench measurements. DSL pegs distortion, which is essentially limited to the third harmonic, at below our 0.01-percent reporting threshold at the 0-dBW (1-watt) test level and only a tad above it (still much too meager to be of any importance) at full rated output.

That rating is 20 $\frac{3}{4}$ dBW (120 watts), which is considerable. The curiosity here is that continuous power (clipping) is the same $\frac{3}{4}$ dB above the rating whether it's measured at the amp's low-impedance setting with a 4-ohm load or at the high-impedance setting into 8 ohms. Dynamic power also measures the same at 8 and 4 ohms (and another $\frac{3}{4}$ dB higher than the continuous power) but is 1 $\frac{1}{2}$ dB greater into 2 ohms (for which the 4-ohm switch setting is used). Thus, the 2-ohm maximum output on short, pulsed signals comes to 23 $\frac{3}{4}$ dBW (240 watts).

This arguably is the most imposing audio-video product we have reviewed. It's by no means the most complicated (several receivers vie for that title); on the contrary, its simplicity is among its most attractive virtues. The controls are well laid out and both smooth and positive in feel, consistent with the sturdy overall construction. But best of all is that the SU-V10X can control the basic functions of an audio-video system without compromising audio performance relative to what one would expect from traditional components far less suited to the purpose. And because it isn't loaded with nonessential video-related features, it's a good bet as a fine audio-only (for now) central component in a system that may eventually be expanded to encompass video as well. ■

T E S T R E P O R T S

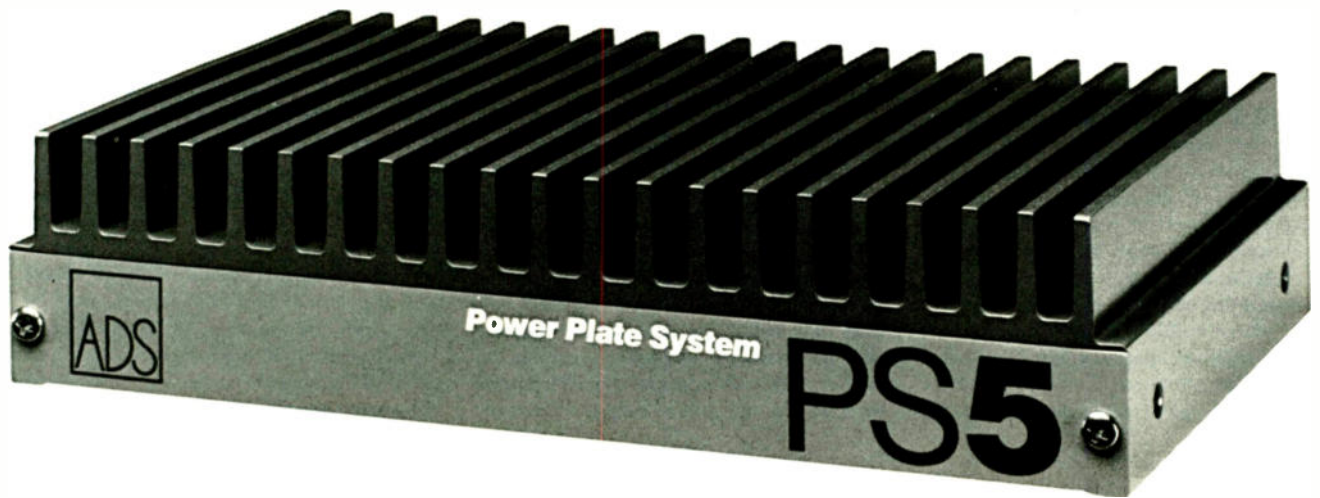
ADS PS-5 Car Power Amplifier

DIMENSIONS: 8 BY 5 $\frac{1}{4}$ INCHES (BASE), 1 $\frac{1}{4}$ INCHES HIGH. **CONNECTIONS:** CHASSIS SCREW SOCKETS FOR BATTERY, SWITCHING, GROUND, AND SPEAKER LEADS; CHASSIS PIN CONNECTORS FOR SIGNAL INPUTS. **FUSES:** 15-AMP CHASSIS PLUG-IN. **PRICE:** \$270. **WARRANTY:** "LIMITED," ONE YEAR PARTS AND LABOR. **MANUFACTURER:** MADE IN JAPAN FOR ADS, ANALOG & DIGITAL SYSTEMS, INC., ONE PROGRESS WAY, WILMINGTON, MASS. 01887.

ANALOG AND DIGITAL SYSTEMS FIRST justified its name to us when, some years ago, a delegation from HIGH FIDELITY visited the hotel suite of founder Godehard Guenther during a Consumer Electronics Show. He demonstrated prototype all-digital car stereo electronics that, in combination with the company's existing high-performance minispeakers, represented a

technological blockbuster. Nothing like it was yet available for the car, and precious little in home electronics even resembled it. That particular system never went into production, but before long ADS went on to become a major player in the top-quality car stereo sweepstakes.

The PS-5 power amp, compact as it is, breathes the air of quality and attention to



detail that has kept the company in that position. The output and DC-supply connections are flush chassis fittings that accept bared wires and clamp them in place with set-screws accessible through holes between the heat-sink fins above them. The amp's hardware kit includes a screwdriver for these screws and for the similarly mounted input level controls. The plug-in flat fuse should prove much easier to replace than most in the awkward spots where car amps tend to be installed. It's all very neat and thoughtful.

In addition to +12-volt and ground terminals, the DC connections include one ("remote") for switching. Many front ends provide for such a connection—intended to carry a control signal, rather than power. If your front end has a built-in amplifier, the appropriate trigger connection may be labeled for a power antenna, which works the same way. Failing that, you could run this connection from the car's ignition (which at least will turn off the amp whenever the engine, and therefore the generator, is off), perhaps with an added switch so that you can turn off the amplifier even when the ignition is on.

There are two operating modes, chosen at a switch next to the input jacks. The bridged mode increases power by more than 3 dB (that is, more than doubles it) into 4 ohms, according to ADS's specs, but in

mono. The actual power generated in stereo is more than typical car-receiver amps can achieve, even with bridging, from a regular 12-volt power supply. To obtain the voltages necessary for higher power, ADS uses a DC-to-DC converter with a switching rate above 30 kHz in a floating-rail design. The amp's chassis is small enough that two could be mounted in the space occupied by many other models, making bridged operation more appealing (and practical) than it might otherwise be, but only the unbridged stereo mode is rated for use with 2-ohm loads. We believe most owners will use it as a stereo amp, and we tested it primarily that way.

ADS rates power in several ways. First are broadband (20 Hz to 20 kHz) ratings comparable to those for home gear except for the use of a 4-ohm (instead of 8-ohm) load. By our deadline, we had seen only preliminary specs, so some minor changes may appear in the final product literature. Meanwhile, the broadband ratings are 30 watts (14¾ dBW) per channel in stereo, 80 watts (19 dBW) bridged. In addition, there's a broadband stereo spec into 2 ohms: 35 watts (15½ dBW) per channel. These are remarkably complete and conservative specifications in a field that typically avoids reference to what used to be called power bandwidth—that is, the frequency range over which an amp can deliver half as much power

All data measured in the stereo (unbridged) mode with a 4-ohm load and maximum gain setting

RATED POWER (4-ohm load)	14 3/4 dBW (30 watts) / channel
OUTPUT AT CLIPPING (at 1 kHz; both channels driven)	
4-ohm load	16 3/4 dBW (47 watts) / channel
DYNAMIC POWER (at 1 kHz; 4-ohm load)	16 1/2 dBW
DYNAMIC HEADROOM (re rated power; 4-ohm load)	+1 3/4 dB
HARMONIC DISTORTION (THD; 20 Hz to 20 kHz)	
at 14 3/4 dBW (30 watts)	≤ 0.025%
at 0 dBW (1 watt)	≤ 0.016%
FREQUENCY RESPONSE	
	+0, -1/4 dB, 16 Hz to 30.3 kHz
	+0 -3 dB, <10 Hz to 143 kHz
S/N RATIO (re 0 dBW; A-weighted)	85 3/4 dB
SENSITIVITY (re 0 dBW)	47 mV
INPUT IMPEDANCE	26k ohms
DAMPING FACTOR (at 50 Hz; re 4 ohms)	510
CHANNEL SEPARATION (at 1 kHz)	88 dB

as at midband.

Most of ADS's competitors rate their amps only at 1 kHz. Not to be outnumbered, so to speak, ADS offers those specs as well: 45 watts (16½ dBW) per channel stereo, 110 watts (20½ dBW) bridged, both into 4 ohms; 55 watts (17½ dBW) per channel in stereo into 2 ohms. The point, perhaps, is that the 1-kHz figures exceed the broadband ratings by so little: 2 dB at most, meaning that even the most demanding music can be played almost as loud with this amp as a midrange-heavy run-of-the-record-mill piece. With electronics that hide truly poor design behind the 1-kHz spec, this might not be true.

Another way of looking at the same information is via the response and distortion tests. For car stereo, the PS-5 is astonishing in the breadth and flatness of its response. The "±3-dB" points (the traditional limits of nominally flat response, representing half-power output) are at 143 kHz and at some frequency below (presumably well below) the 10-Hz limit of our measurement. This implies that distortion should stay low toward the frequency extremes of the audio band proper, and it does. At 0 dBW (1 watt), harmonic distortion is negligible in any terms—barely above our 0.01-percent re-



BACK PANEL OF THE ADS PS-5 CAR POWER AMPLIFIER

porting threshold, and even then only near the edges of the audio band. At rated power, it is just marginally higher: less than 0.01 percent at 1 kHz and greatest (a mere 0.025 percent) at 16 kHz.

Although the third-harmonic distortion product predominates in these tests, no higher harmonics were discernible, and the quantities are so small in any case as to represent essentially distortion-free performance. Moreover, the 50-Hz damping factor is unusually high. Such an amp would do credit to any home receiver, though the 30-watt rating would seem minimal there. In a car, where multiple speakers are the rule and the listening space is relatively small, it is more than adequate. The reason for the big difference between the spec and the clip-

ping power in our data column is that we have reported what ADS considers its "real" spec: the broadband one. (There's only a 1/4-dB difference between ADS's 1-kHz rating and DSL's 1-kHz measurement, which is what you would expect.)

The lab testing was done with the input sensitivity controls at maximum, which provides quite a bit of gain. For standard line-level outputs (nominally, 1-volt peak levels), you may want to set the sensitivity controls toward the other end of their 25-dB adjustment range, depending on the behavior of the front end's volume and loudness controls. The owner's manual provides a procedure for arriving at an optimum setting. Actually, ADS says you can drive the input directly from the power output of an auto-

motive receiver or crossover, though the manual offers some important caveats about such a hookup, including a recommended pad to prevent overload of the PS-5's inputs by a too powerful source.

If you have a big, well-padded van and want to use the PS-5 as the total stereo power source for gut-wrenching rock, you may consider it underpowered (in which case, you can use more than one and add extra speakers or choose the bridged mode). Viewed from any other perspective, this is a superb car amp. Handsome in both sound and appearance and crafted with unusual care (right down to its owner's manual), it is typical of the ADS equipment we've examined and among the models against which others must be measured. ■

T E S T R E P O R T S

Linear Power 1002 Car Power Amplifier



DIMENSIONS: 9 1/4" BY 6 INCHES (BASE), 3 INCHES HIGH. **CONNECTIONS:** 1 1/2-FOOT BARED WIRES (WITH SPECIAL CHASSIS CONNECTORS) FOR BATTERY, POWER SWITCHING, GROUND, AND SPEAKER LEADS; CHASSIS PIN CONNECTORS FOR SIGNAL INPUT. **FUSE:** 15-AMP FOR WIRING INTO BATTERY LINE. **PRICE:** \$300. **WARRANTY:** "LIMITED," TWO YEARS PARTS AND LABOR IF INSTALLED BY AUTHORIZED DEALER; OTHERWISE, ONE YEAR PARTS AND LABOR. **MANUFACTURER:** LINEAR POWER, INC., 11545 D AVE E., AUBURN, CALIF. 95603.

ALTHOUGH NEITHER LINEAR POWER NOR its Model 1002 amplifier can be called a newcomer, this is the first opportunity we've had for a full-scale test of any of the company's products. The 1002 is described as the workhorse of a line that, since its beginning in 1975, has concentrated on automotive power amps and crossovers, with equalizers added more recently. The unit's power rating falls squarely in the middle of

the range presently available from Linear Power, which says it is the largest car amplifier company in the world.

The 1002 is rated, home-equipment style (but into 4-ohm, rather than 8-ohm, loads), at 50 watts per channel from 20 Hz to 20 kHz with no more than 0.05 percent total harmonic distortion (THD). Rather confusingly, Linear Power also refers to the 1002 as a "100 watt" amplifier, evidently adding together the ratings for the two channels. (This is a common practice in the car stereo industry, but one that would violate Federal Trade Commission rating rules were this a home product.) At 1 kHz, Diversified Science Laboratories obtained a steady-state power measurement of a bit more than 50 watts. When putting out more than 17 1/4 dBW (53 watts), the output waveform

doesn't begin clipping so much as showing signs of oscillation at the extremes of the voltage swing. We're not sure why this should be, though it's possible the amp's protective circuitry, which seemed unusually sensitive to the grounding in the test setup, has something to do with it. If so, the more straightforward hookup of a car installation, where no lab instruments need be attached, may deliver a little more clean power than the test results imply. In any event, the amp produced a full 2 dB of headroom above the steady-state rating in the dynamic power test.

Distortion stays close to the 0.05-percent spec through most of the frequency range but rises to the neighborhood of 0.1 percent at 10 kHz and above. This is still low enough and at a high enough frequency to be inaudi-

Automotive Electronic Rust Control

The \$264.00 Answer



It's amazing. Cars can last up to 8 years longer using solid state circuitry to control rust. As ridiculous as it might sound, rust is, in fact, a result of an electrochemical reaction more commonly known as oxidation. The most widely used method of "rust proofing" is the spray on petroleum based coatings. The barrier they provide may be effective to shield your car from the damaging effects of salt, water, acid rain, etc., however, to protect the painted surface of your car where stone chips, scratches and little nicks begin to show up, spray on coatings fail to offer any attention.

SKEPTICAL?

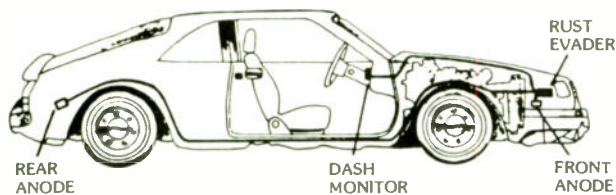
So was I. When I first installed a Rust Evader 4 years ago, I said, "Only time will tell." Now, after 4 hard winters, living in Central Pennsylvania, the results of the impressed current method of controlling rust are clear. My Honda is absolutely free of rust. It's hard to believe! There was no sort of spray on coatings used, only a Rust Evader installed under the hood and two anodes placed on opposite ends of the car.

SO WHY HAVEN'T CAR MANUFACTURERS USED THIS TECHNOLOGY?

The truth is if your car lasts too much longer than your payment book...well, that's the point...There is no incentive for the world auto makers to preserve the body of their cars.

LESS THAN AN HOUR

Installation of a Rust Evader can be compared to that of an AM radio and two speakers. Simply connect the red wire to your cars battery, the black to ground, run one lead to an anode in front of the car under the hood and the other to the anode in the trunk. Each unit comes with installation instructions and very detailed explanations of every step. Should you run into a problem, call the service department for assistance.



Rust Evader™

"CREATE A CLASSIC"

EXAMINE A RUST EVADER RISK FREE

Rust Evader Corp uses only the best available components when assembling and each unit is double tested to ensure it's working properly. They are the originators of this automotive application of Cathodic Protection and have spent 12 years researching and developing the Rust Evader before making it available to you. If you're not 100% satisfied, simply return the unit in it's original box within 30 days for an immediate refund.

THE TORTURE TEST - Ogden, UT

At the Great Salt Lake Mineral & Chemical Corp., where they mine salt, it is not uncommon for a stone chip to eat completely through inside of 3 months time. Rust Evader offered hope to a company that runs trucks through brine 50 times more concentrated than sea water. They are doubling the life of their fleet trucks!

THE BEST RUST INSURANCE YOU CAN BUY!

The principle of impressed current rust protection is not new. It has been used for years to protect underground pipelines, ocean going vessels, reinforcement bars for bridges, all kinds of high-cost equipment in the shipping, petroleum and construction industries. This electronic rust control device protects your car's body panels as well as painted outer surfaces against corrosion that can turn small stone chips into ugly, scabby rust spots. It fights hidden corrosion in body parts subjected to stress, or vibration, in highly vulnerable welds and joints, in panels that are bent, nicked or scratched. The system draws a low current flow from your car battery, 24 hours a day. Operating your car 50 miles a week will maintain your battery's full potential since the Rust Evader only draws as much current as your car's clock.

STILL NOT CONVINCED?

Pick up the telephone and call now. 1-800-458-3474. After all, consider your alternative...Were you satisfied with the results of your last spray on rustproofing job?

THE CLINCHER

Not only will Rust Evader enhance the beauty of your new or used car, it can also be removed and reinstalled on a new car should you decide to trade up. The \$264.00 answer... Rust Evader electronic corrosion control...it works!

SHOW IT OFF - FREE

For a limited time, Rust Evader Corp. will include their optional dash monitor as part of the deal. This regularly priced \$84.00 unit displays an LED bar graph of the amount of current being delivered to the car body and is a constant reminder that the system is working to fight rust and corrosion. The reason for throwing it in...we're hoping others will see it operating and in doing so, pass the word about Rust Evader.

To order your Rust Evader and receive the free dash monitor with instructions and mounting hardware call toll free or send your check for just \$264.00 (we pay the shipping, PA residents add 6% sales tax). Card holders can take advantage of our payment plan. We'll bill you just \$64.00 now and charge your Visa or Mastercard \$52.00 for the next 4 months. Now you can have the most sophisticated and effective autobody protection ever offered to the consumer direct from the manufacturer. Made in U.S.A.

3 Year Warranty

30 Days Money Back Guarantee

Rust Evader is built to last...Projected Service Life is 15 years. Each Rust Evader comes with a 3 year repair or replacement warranty. Rust Evader gives you everything to gain and nothing to lose, except rust. Delivery within 7 days by UPS or Parcel Post



OPTIONAL DASH MONITOR

Rust Evader™

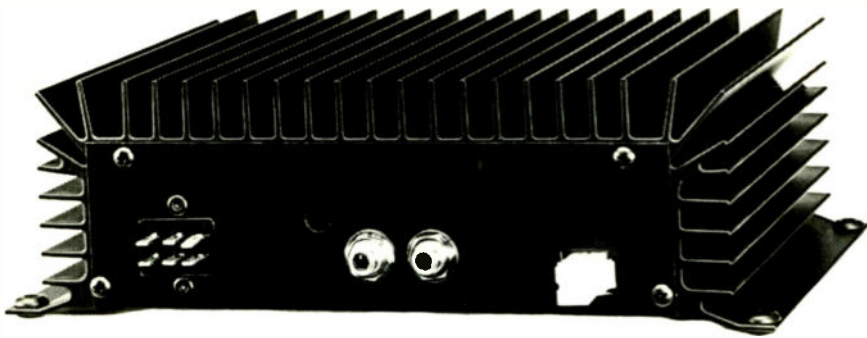
Rust Evader Corp.

CALL TOLL-FREE 1-800-458-3474

In PA Call 814-944-8700

9:00 - 5:00 P.M. EST.

P.O. Box 651, 2000 7th Ave., Altoona, PA 16603



BACK PANEL OF THE LINEAR POWER 1002 CAR POWER AMPLIFIER

All data measured with a 4 ohm load and, except as specified, maximum gain setting.

RATED POWER (4-ohm load)	17 dBW (50 watts)/channel
OUTPUT AT CLIPPING (at 1 kHz; both channels driven)	
4-ohm load	see text
DYNAMIC POWER (at 1 kHz; 4-ohm load)	19 dBW
DYNAMIC HEADROOM (re rated power; 4-ohm load)	+2 dB
HARMONIC DISTORTION (THD; 20 Hz to 20 kHz)	
at 17 dBW (50 watts)	≤ 0.11%
at 0 dBW (1 watt)	≤ 0.10%
FREQUENCY RESPONSE	
	+0, -1 dB, 20 Hz to 21.2 kHz
	+0, -3 dB, < 10 Hz to 43.7 kHz
S/N RATIO (re 0 dBW; A-weighted)	
at maximum gain	63 3/4 dB
at minimum gain (-32 dB)	77 3/4 dB
SENSITIVITY (re 0 dBW)	23 mV
INPUT IMPEDANCE	5.1k ohms
DAMPING FACTOR (at 50 Hz; re 4 ohms)	80
CHANNEL SEPARATION (at 1 kHz)	66 dB

ble, however, even though the third harmonic (rather than the relatively benign second) dominates the distortion products. There also is some residue of the DC converter switching rate (27.1 kHz) in the output, but it's 52 dB below a 0-dBW output—

and its frequency is beyond the audible band anyway.

Input sensitivity is adjustable over a 32-dB range. For most of the tests, the lab kept it at maximum, which may provide sufficient gain even for DIN-level preamp outputs. The comprehensive owner's manual suggests using a line amp between front end and 1002 if you can't achieve adequate levels with the head unit's volume at maximum. Sensitivity may be reduced—and signal-to-noise (S/N) ratio thereby improved from the already excellent 63 3/4 dB at full gain—to match the more usual 1-volt-maximum output levels implied by the 1002's RCA pin-jack inputs. The minimum sensitivity setting is intended for use with the speaker-level outputs of a front end that has no preamp outputs.

The power harness, which connects to the 1002 with a special six-pin plug, has three leads. One attaches to the car's electrical system via an in-line fuse-holder, supplied separately. A second lead carries on/off triggering signals from a power-antenna or accessory connection on your front end, or, if necessary, from the car's ignition

switch. The third is for ground. A four-conductor chassis plug fastens to a short speaker-lead harness, supplying hot and ground connections for each speaker of a stereo pair. There is no built-in provision for bridging. (A mono switch on Linear Power's separate XO-1 crossover automatically bridges any of the company's power amps connected to the XO-1's subwoofer output.)

Particularly useful in the manual is a frank discussion of noise and methods for reducing it. This is a subject that most companies duck, evidently not wanting to admit that you may have to do more than drill a few holes and hook up some wires to get a satisfactory installation with their products. On the contrary, says the Linear Power manual, "Unwanted noise is the worst single problem encountered in automotive amplifier installations. . . . The hookup method with the least noise in one vehicle may be the noisiest in another." That bit of bullet-biting wins our respect.

It's encouraging to see more and more companies designing and specifying for the car in ways that, at least in some aspects, follow the lead of home components. Linear Power has based its reputation on that approach. At the same time, the manual shows that the company also recognizes that the two environments—home and car—are quite different. The wide temperature range that automotive amps must withstand is another salient difference, and the 1002's dual protection, from excessive heat as well as current, is an index of this. And though the amp's performance does not reach the pinnacle achieved by today's home components, it is more than good enough for its application and substantially better (and more muscular) than the power section of any all-in-one front end. ■

• T E S T R E P O R T S

Pioneer VE-D70

8mm Digital-Audio Videocassette Recorder

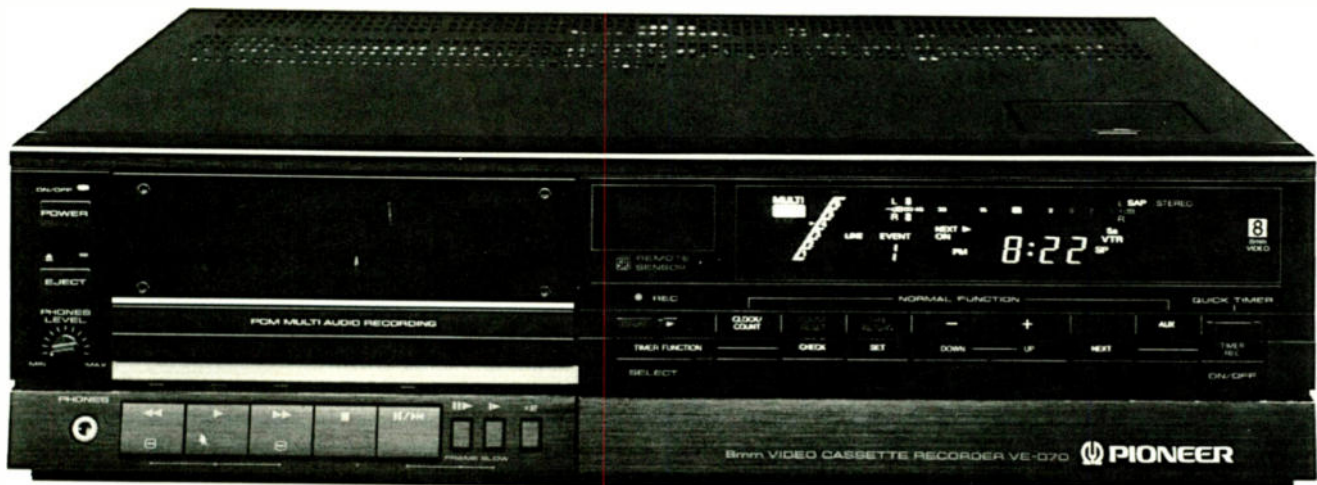
DIMENSIONS: 14 1/4 BY 3 3/4 INCHES (FRONT), 13 INCHES DEEP PLUS CLEARANCE FOR CONNECTIONS. **PRICE:** \$1,450. **WARRANTY:** "LIMITED," ONE YEAR PARTS, 90 DAYS LABOR. **MANUFACTURER:** PIONEER ELECTRONIC CORP., JAPAN; U.S. DISTRIBUTOR: PIONEER ELECTRONICS (U.S.A.), INC., 5000 AIRPORT PLAZA DR., LONG BEACH, CALIF. 90815.

WHEN THE 8mm VIDEOCASSETTE RECORDER standard was formulated, provision was made for three types of audio recording: monophonic linear recording along one edge of the tape, mono AFM recording (similar to Beta and VHS Hi-

Fi, but with just one channel), and PCM (digital) stereophonic recording on a portion of tape reserved especially for it. Of the three, only the AFM mode must be included in every 8mm VCR. To date, no one that we know of has made an 8mm VCR with edge-track recording, and the Pioneer VE-D70 is the first we've reviewed that takes advantage of the PCM stereo potential. In fact, in a special audio-only mode, the VE-D70 can give you six independent stereo digital soundtracks on a single tape—which, in theory, permits

fitting as much as 24 hours of music on a single videocassette!

The VE-D70 is a front-loading tabletop VCR with most of the features you would find in a VHS or Beta deck. Its tuner is stereo-ready and includes SAP (Separate Audio Program) capability. Stereo and SAP lamps indicate the presence of such broadcasts. The stereo program is automatically recorded on the PCM tracks; you have a choice of taping a mono mix of the main channels or the SAP channel on the AFM



track.

The tuner covers VHF channels 2 through 13, UHF channels 14 through 69, and 125 CATV channels. You can tune any channel directly using the ten-key pad and channel button on the wireless remote, or you can use up/down buttons to scan through the channels you have preset into memory. The presetting controls, an antenna/cable F-connector input to an aux input, which can be used with any device (such as a computer) that generates an NTSC RF signal. Or it can be used in conjunction with an adjacent converter-out connector to form a descrambler loop for switching a pay-TV decoder box in and out of the system. You preset the aux input for the output channel of the descrambler or other device with a tuning control under the top cover.

A button (on both the VCR and the remote) enables you to switch from the main antenna/cable F-connector input to an aux input, which can be used with any device (such as a computer) that generates an NTSC RF signal. Or it can be used in conjunction with an adjacent converter-out connector to form a descrambler loop for switching a pay-TV decoder box in and out of the system. You preset the aux input for the output channel of the descrambler or other device with a tuning control under the top cover.

The VE-D70 has two operating speeds: SP, which provides a maximum recording time of two hours, and LP, which halves the tape speed to yield as much as four hours of recording (at the expense of some loss in video quality). In the audio-only mode (called PCM-Multi by Pioneer), each of the six tracks can run two or four hours, for a total recording time of 12 or 24 hours.

During PCM-Multi playback, the channel up/down buttons change function so that you can use them to jump from track to track at will. These buttons also are used when setting the tuner's clock and three-week/six-event programmable timer. A separate "quick timer" control enables you to start recording immediately from whatever channel the tuner is currently on and begins a 30-minute countdown to turnoff. Repeated presses increase the length of the count-

down to as much as five hours in half-hour increments. The clock display can be switched to show time remaining on the tape or to a conventional tape-counter function, and the deck can be made to rewind to the point on the tape where the counter reads zero.

Among the controls normally hidden behind a flip-down door is a PCM mode switch, which chooses between taping digital audio with video and audio-only PCM-Multi recording. The latter has two suboptions that determine how the tracks are laid down during unattended recording. In the parallel mode, the tape is rewound to the beginning before each unattended recording session (except the first), so that each program (except possibly the first) starts at the beginning of the tape. In the serial mode, the programs are recorded sequentially on the same track.

AUDIO DUB enables you to rerecord music or commentary onto the PCM track without affecting the video. (Naturally, this doesn't work on the AFM track, which is mixed in with the video.) With a pair of sliders, you can adjust PCM recording level; AFM recording level is set automatically, an option you also can choose for the PCM track by setting the sliders to minimum. Consequently, when fading out a PCM recording, you must be careful not to reduce the slider settings too far or you'll switch on the automatic level control (ALC).

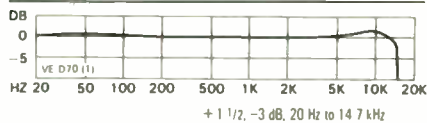
The VE-D70 has two miniature microphone jacks for live recording. When just one microphone is used, connected to the left input, its signal is recorded on both left and right PCM channels and on the AFM track. If the microphone is hooked up to the right input, its signal is recorded on the right PCM track while the left *line* input is recorded on the left PCM track and a mix of the two goes on the AFM track. Connecting microphones to both jacks gives a stereo PCM recording and a mono mix on the AFM track.

The transport controls—all of which are duplicated on the remote—lie just below the videocassette compartment. With the exception of a double-speed play button, a FRAME

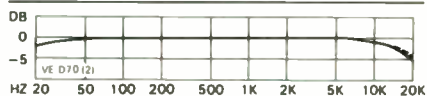
VCR SECTION

Except where otherwise indicated, the recording data shown here apply to both speeds—SP and LP. All measurements were made at the direct audio and video outputs, with test signals injected through the direct audio and video inputs. For digital recording, the 0 dB reference input level is the voltage required to produce 3 percent third harmonic distortion at 315 Hz. For AFM audio recording, it is 10 dB above the voltage at which the automatic level control (ALC) produces 3 dB of compression at 315 Hz. The 0-dB reference output level is the output voltage from a 0-dB input.

DIGITAL RECORD/PLAY RESPONSE (-20 dB; stereo)



AFM RECORD/PLAY RESPONSE (-20 dB; mono)



SP	+0, -3 dB, 20 Hz to 16 kHz
LP	+1/4, -3 dB, 20 Hz to 17 kHz

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

	digital	AFM
SP	91 1/4 dB	72 1/4 dB
LP	91 1/4 dB	71 1/4 dB

INDICATOR CALIBRATION (315 Hz)

for 0-dB input	> +5 dB
for -10-dB input	-2 dB

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

digital	≤ 1.37%
AFM	≤ 2.87%

CHANNEL SEPARATION (315 Hz; digital)

	64 1/2 dB
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INDICATOR "BALLISTICS"

Response time	0.8 msec
Decay time	≈ 200 msec
Overshoot	0 dB

FLUTTER (ANSI weighted peak; R/P)

digital	± < 0.01%
AFM	± 0.01%

SENSITIVITY (for 0-dB output; 315 Hz)

	mike	line
digital	1.1 mV	350 mV
AFM	7.6 mV	4.570 mV

AUDIO OUTPUT LEVEL (from 0-dB input; 315 Hz)

digital	1.02 volts
AFM	0.56 volts

AUDIO INPUT IMPEDANCE

line input	62k ohms
mike input	21k ohms

VIDEO RECORD/PLAY RESPONSE

	SP	LP
at 500 kHz	-1 1/4 dB	-3/4 dB
at 1.5 MHz	-2 1/4 dB	-4 3/4 dB
at 2.0 MHz	-6 1/4 dB	-12 dB
at 3.0 MHz

SHARPNESS CONTROL RANGE

at 500 kHz	+1 1/4, -2 dB
at 1.5 MHz	+2 1/4, -3 3/4 dB
at 2.0 MHz	+2 1/2, -4 dB
3.0 to 4.2 MHz	no measurable effect

LUMINANCE LEVEL

SP	3% high
LP	4% high

GRAY-SCALE NONLINEARITY (worst case)

SP	≈ 5%
LP	≈ 10%

CHROMA LEVEL

	≈ 4 1/2 dB low
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CHROMA DIFFERENTIAL GAIN

	≈ 5%
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CHROMA DIFFERENTIAL PHASE

	≈ ± 0°
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MEDIAN CHROMA PHASE ERROR

	+ 5°
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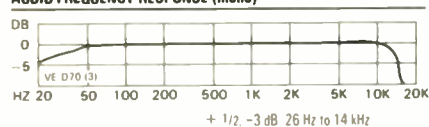
* See text

** Too low to measure

TV TUNER SECTION

All measurements were taken at the direct audio and video outputs

AUDIO FREQUENCY RESPONSE (mono)



AUDIO S/N RATIO (mono; A-weighted)

best case (no chrominance or luminance)	57 1/4 dB
worst case (multiburst pattern)	20 3/4 dB

RESIDUAL HORIZONTAL-SCAN COMPONENT (15.7 kHz)

	-61 dB
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AUDIO OUTPUT LEVEL (100% modulation)

	0.5 volt
--	----------

AUDIO OUTPUT IMPEDANCE

	2,200 ohms
--	------------

VIDEO FREQUENCY RESPONSE

at 500 kHz	+ 1.4 dB
at 1.5 MHz	+ 1.4 dB
at 2.0 MHz	+ 1.4 dB
at 3.0 MHz	-1 dB
at 3.58 MHz	-2 1/2 dB
at 4.2 MHz	-9 1/4 dB

LUMINANCE LEVEL

	standard
--	----------

GRAY-SCALE NONLINEARITY (worst case)

	≈ 5%
--	------

CHROMA DIFFERENTIAL GAIN

	≈ 28%
--	-------

CHROMA DIFFERENTIAL PHASE

	≈ ± 3°
--	--------

CHROMA ERROR

	level	phase
red	-2 1/2 dB	0°
magenta	2 1/4 dB	0°
blue	2 dB	0°
cyan	-2 1/2 dB	0°
green	2 1/2 dB	0°
yellow	-2 1/2 dB	0°
median error	2 1/4 dB	0°
uncorrectable error	+ 1.4 dB	+ 0°

ADVANCE (which is independent of the PAUSE and advances the picture one frame at a time or continuously if you hold it down), and a separate SLOW MOTION (at one-fifth normal speed), these are entirely conventional.

As with half-inch VCRs, you cannot keep the VE-D70 paused indefinitely; after seven minutes of freeze-frame, the deck resumes normal playback. The fast-wind controls work in conjunction with the PLAY so that you can quickly scan the picture forward or backward by pressing the appropriate button during playback. And if you stop the tape and then press PLAY while holding down REWIND, it rewinds completely and begins to replay from the beginning. (This feature is not available on the remote.)

Although Pioneer warns that the special effects may result in a monochrome picture that may roll or split horizontally if the recording is at standard speed, we experienced no such difficulties with our sample. We would agree, however, that the special effects performed somewhat more satisfactorily on LP tapes than on SP ones.

The VE-D70's back panel sports two sets of audio and direct-video outputs and three control jacks for connection to other Pioneer video products. The Control 1 input and output presumably daisy-chain control signals between products with Pioneer's "SR" mark. The Control 2 input is specifically dedicated to automatic assemble editing when used with a Pioneer Beta-format VCR. Also on the back panel (and on the remote) is an SR A/B selector, which changes the infrared coding scheme so that other Pioneer products will not respond to the VE-D70's remote (and vice versa).

On Diversified Science Laboratories' test bench, the VE-D70's SP video recording performance was a close match to that of a good conventional (not Super Beta or VHS HQ) half-inch VCR. Frequency response was just a trifle more than 6 dB down at 2 MHz, implying a horizontal resolution of almost 160 lines. In the LP mode, response was down 4 3/4 dB at 1.5 MHz and 12 dB at 2 MHz for an estimated resolution of about

REPORT POLICY

EQUIPMENT REPORTS ARE BASED ON LABORATORY MEASUREMENTS AND CONTROLLED LISTENING TESTS. UNLESS OTHERWISE NOTED, TEST DATA ARE PROVIDED 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.

140 lines. To some extent, picture resolution can be improved with the SHARPNESS, which has maximum effect from 1.5 to 2 MHz, where it's most needed. And, fortunately, turning up the SHARPNESS does not increase video noise dramatically.

Luminance level (brightness) is almost perfect at both speeds, and the gray-scale linearity is very good. Chroma level (color saturation) is somewhat low (a typical occurrence), and there is a slight chroma phase (hue) error, but it's not noticeable in the picture. Chroma differential gain and phase (variation of color saturation and hue with changes in scene brightness) are very well controlled.

DSL measured audio performance on both the monophonic AFM track and the stereophonic PCM tracks. Probably because of the pre-emphasis used in the AFM system, together with the lab's relatively high reference recording level, distortion on the AFM track rose sharply above a few kilohertz (from 0.17 percent at 1 kHz to 4.8 percent at 10 kHz). Reducing the recording level 10 dB, to 20 dB below the reference, brought the total harmonic distortion (THD) down to less than 0.43 percent throughout the measurement range (50 Hz to 10 kHz). Frequency response was wide and smooth at both speeds.

A-weighted noise, at slightly more than 70 dB below the reference level, is not quite up to the performance of a Beta or VHS Hi-



MOST OF THE SECONDARY CONTROLS ARE GROUPED TO THE RIGHT SIDE OF THE VCR. BELOW THE STATUS DISPLAY, WHICH, AMONG OTHER THINGS, INDICATES WHICH TRACK IS BEING PLAYED OR RECORDED IN THE PCM-MULTI MODE.

Fi system, but it is darned good for an "auxiliary" audio recording mode! Maximum peak flutter just barely exceeded our ± 0.01 -percent reporting threshold.

In the PCM mode, A-weighted noise was 20 dB lower still, and flutter (as expected) was below measurement limits. Distortion, at 10 dB below the reference level, is less than 0.5 percent from 50 Hz to 1 kHz. At higher frequencies, however, it rises very sharply—not because spurious harmonics are being generated, but because of intermodulation products and aliasing. The power summation of this contamination reached almost 1.5 percent at 5 kHz, 3 percent at 6.3 kHz, and 20 percent at 15 kHz.

Dropping the level by 10 dB, to an indicator reading of -2 dB (which is about where you probably would let signal peaks hit anyway), increased low-frequency distortion slightly but substantially reduced the amount of high-frequency garbage. At this level, distortion did not exceed 1.5 percent from 50 Hz to 10 kHz. Nonetheless, at 15 kHz, the intermodulation reached 13 percent, suggesting that a steeper antialiasing filter would be helpful.

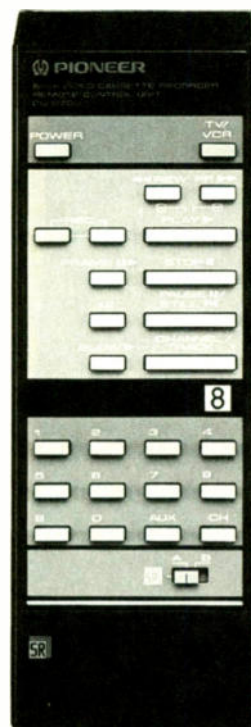
The net of this is that you should avoid "pushing" the PCM recording system too hard. As long as you keep the levels out of the red—as Pioneer suggests—and the source material is not too heavily endowed in the upper register, the performance will be quite good and you'll still have about 80 dB of dynamic range. Fortunately, the VE-D70's recording-level indicators respond very quickly, and though the decay time is somewhat faster than average, the readings persist long enough for the eye to follow.

Frequency response varies somewhat

with level (perhaps because of the compander used to obtain wide dynamic range from an 8-bit digital encoding scheme), but at our standard measurement point, 20 dB below the reference level, it is within $+1\frac{1}{2}$, -3 dB from below 20 Hz to approximately 14.7 kHz, where it begins plummeting in response to the sharp filters required by the 31.5-kHz sampling rate of the 8mm PCM system. This is about as much bandwidth as you really need; we were, however, a little surprised at the small peak just before the cutoff, which makes the response less flat than that of the best analog tape decks we've tested and of the VE-D70's own AFM track.

With all the hoopla over 8mm PCM recording, you might not expect anything special from the tuner in a PCM-equipped VCR. In fact, though, the one in the VE-D70 is excellent. Video frequency response holds up to beyond 3.58 MHz (implying a potential resolution of more than 300 lines in a direct connection from tuner to monitor), luminance level is right on the money, and grayscale linearity is nearly perfect. Chroma differential phase is very low, and the absolute chroma phase is perfect. Chroma level is a trifle low, but not worrisome, and the chroma differential gain of 28 percent is restricted entirely to the brightest scenes, where it's least noticeable. Audio frequency response matches that of the PCM recording system quite closely, and with normal TV pictures, the signal-to-noise (S/N) ratio is quite good.

We're impressed with our first 8mm stereo-PCM product. We think you will be, too. In SP operation, its performance is virtually indistinguishable from that of a good, standard-grade half-inch VCR, and in the admittedly more convenient LP mode, it's



THE VE-D70'S WIRELESS REMOTE CONTROL DUPLICATES MOST OF THE FRONT-PANEL FUNCTIONS AND ADDS A NUMERIC KEYPAD FOR DIRECT TUNING.

nothing to be ashamed of either. The tuner performs very well and proved quite sensitive in our fringe-area tests. And we expect you will be quite pleased with the audio reproduction of which the VE-D70 is capable, especially given the availability of PCM-Multi, which should prove very handy for (literally) all-day listening. We can't say that the sound quality is up to Compact Disc standards, but it's far better than that of a run-of-the-mill cassette deck. ■

T E S T R E P O R T S

Jamo CBR-200 Loudspeaker

DIMENSIONS: 15 $\frac{1}{4}$ BY 34 $\frac{1}{2}$ INCHES (FRONT), 16 $\frac{1}{2}$ INCHES DEEP (MAX.). **PRICE:** \$1,198 PER PAIR. **WARRANTY:** "LIMITED," FIVE YEARS PARTS AND LABOR. **MANUFACTURER:** JAMO, DENMARK; U.S. DISTRIBUTOR: JAMO HI-FI U.S.A., INC., 425 HUEHL RD., NORTHBROOK, ILL. 60062.

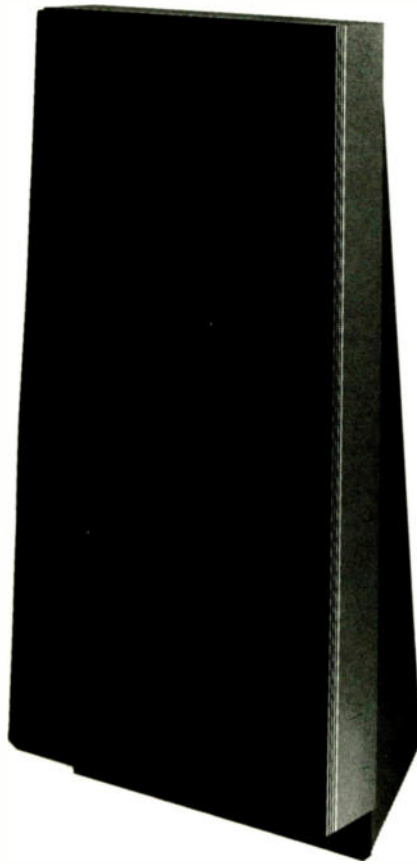
DISTINCTIVELY STYLED (AS BEFITS A PRODUCT of Danish origin), the floor-standing CBR-200 loudspeaker heads up Jamo's latest CBR line. The initials stand for Center Bass Reflex—the company's proprietary approach to woofer loading. It places the bass driver in the center of the reflex port, which is said to result in symmetrical

pressure on the back of the cone, thereby lowering distortion. The woofer in this case is 10 inches in diameter; above it in a vertical array are a 5-inch cone midrange driver and a 1-inch dome tweeter. Crossovers are nominally at 540 Hz and 3.8 kHz, and there are independent cut-only level controls for the two high-range drivers, mounted between them on the baffle. In addition, the tweeter has an electronic protection circuit that when triggered lights a red LED next to that driver's level dial.

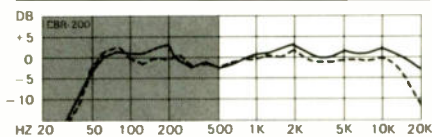
The cabinet's somewhat unconventional appearance is not just for looks: Jamo's engi-

neers lavished great attention on the enclosure with the goal of maximizing performance. Most obvious is the front baffle's backward rake, which serves two purposes. The first is to help achieve phase linearity by aligning the drivers' acoustic centers in the same vertical plane. The second is to contribute to the overall asymmetry of the enclosure and thereby help forestall the development of standing waves within the cabinet.

Another resonance-fighting element in the design is the baffle itself, which is made of a special, highly inert substance (called



ROOM RESPONSE CHARACTERISTICS



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

SENSITIVITY (at 1 meter; 2.8-volt pink noise) 93 dB SPL

AVERAGE IMPEDANCE (250 Hz to 6 kHz) 13.1 ohms

APPROXIMATE TWEETER CONTROL RANGE (re "flat")

+0, -15 dB above 8 kHz

APPROXIMATE MIDRANGE CONTROL RANGE (re "flat")

+0 -10 dB, 1.2 to 3 kHz

NCC, or Non-Coloration Compound) cast under high pressure in a sandwich between two layers of vacuum-molded polystyrene. Jamo says the resulting panel combines exceptional rigidity with a very high degree of internal damping. Using a molded baffle also enabled the designers to come up with a diffraction-fighting shape (and surface pattern) without regard to the fabrication constraints that more conventional materials would impose. The CBR-200 is available in a walnut, dark gray, or white finish and has a removable cloth grille. Amplifier connections (bared wire) are to color-coded spring clips on the back panel.

Diversified Science Laboratories tested the speaker in the position Jamo recommends, against the wall behind it and away from side walls. Since full-up is the nominally flat position for the level controls, the lab used that setting for its measurements. The

resulting room-corrected one-third-octave response curves are impressively flat, remaining within a narrow ± 3 -dB range from the 50-Hz band to about 13 kHz off-axis and all the way out to 20 kHz on-axis. However, the off-axis response is somewhat the smoother of the two.

DSL also measured the effects of the driver level controls, which proved to be unusually smooth and well behaved in their actions—more like preamp tone controls than what we usually see on speakers. At its full-cut setting, the tweeter control starts rolling off the response at about 3 kHz, and output is down about 15 dB at 8 kHz, where the response shelves. Maximum attenuation is 20 dB at 20 kHz. The midrange control introduces a dip of as much as 10 dB at 2 kHz (its center frequency) and extending, at maximum cut, from 500 Hz to 4 kHz. Interestingly, the shape and position of the dip make it almost exactly inverse to a slight prominence in the speaker's measured response with the controls set "flat."

The CBR-200's impedance ranges from a maximum of 31 ohms at the port resonance (around 20 Hz) to a minimum of 5.8 ohms at 2.6 kHz with both level controls turned all the way down. With the controls set flat, the low is 6.7 ohms at 4 kHz, with the impedance rising gently from there to 9.3 ohms at 20 kHz. Apart from the port resonance, there are peaks of 21 ohms at 68 Hz (woofer resonance) and 23 ohms at 7.8 kHz, separated by a dip to 6.8 ohms at 150 Hz. The speaker's moderate impedance and high sensitivity should make it an easy load

for an amplifier to drive.

Power handling also appears quite good. On our 300-Hz pulse test, the CBR-200 took the full output of the lab's amplifier (equivalent to 27 dBW, or 512 watts, peak into 8 ohms) with no sign of discomfort, delivering a calculated SPL (sound pressure level) of 120 dB. And distortion is low for a loudspeaker, averaging less than $\frac{1}{2}$ percent from 50 Hz to 10 kHz (our upper measurement limit) at a moderately loud 85 dB SPL, and just 1 percent at a very loud 100 dB SPL (our maximum test level). There is a peak in the distortion around 1.6 kHz at all test levels, ranging from approximately $\frac{1}{4}$ percent at 85 dB SPL to $\frac{2}{5}$ percent at 100 dB SPL, but it was not apparent in listening. On the other hand, distortion is surprisingly low in the deep bass, where the numbers are among the best we've seen lately from a speaker.

We arranged the CBR-200s in our listening room according to Jamo's instructions and settled down to a very enjoyable experience. With the driver level controls set flat, the balance is slightly crisp and forward, which is not unpleasant, but not exactly to our taste, either. However, we found that backing off a dB or two on the midrange control tames this quality. The result is a smooth, clean, transparent sound particularly noteworthy for its tight, well-defined bass. Imaging is precise and stable—a credit, perhaps, to Jamo's unusually careful and elaborate cabinet design. This is, in fact, one of the speaker's most appealing aspects.

The CBR-200 combines high performance and high style in an attractive, if somewhat costly, package. If this speaker is within your budget, it warrants a serious look and listen. ■



THE MIDRANGE AND TREBLE DRIVERS ARE SEPARATED BY THEIR LEVEL CONTROLS AND THE PROTECTION CIRCUIT'S OVERLOAD LED.

DIGITS **ON THE** **MOVE**

BY DAWN GORDON

A BUYING
GUIDE TO
PORTABLE
COMPACT
DISC
PLAYERS



FIRST THERE WAS THE PORTABLE TRANSISTOR RADIO, THEN THE PORTABLE TV set, ("tummy television"), and then the personal-portable cassette player. Now the latest in entertainment electronics—the digital Compact Disc player—has also become personal and portable. Sony started the ball rolling with its D-5 unit, but several other manufacturers have since jumped on the portable-CD bandwagon. In fact, these products now account for the largest segment of the CD player market. And with good reason, for in

addition to their portability (in varying degrees), they have proven to be convenient, relatively inexpensive, well equipped with features, and, in general, as good-sounding as full-size home Compact Disc players.

That last attraction has been a key to the success of portable CD players, as they give up virtually nothing in audible performance compared with even the most expensive home models. Although such refinements as oversampling digital filters have yet to appear in many portable models, the hearable benefits of these advanced technologies are tiny—if indeed they exist at all. On the test bench, portable players sometimes appear less qualified for ultra-high-fidelity status. With certain units, there may be a gentle rolloff of

the highest frequencies, slightly less stereo separation than in home models (but still much more than adequate), and slightly higher noise and distortion levels. Some of these performance characteristics result from portability, others from the use of less expensive circuit or construction techniques. However, most of these "inadequacies" look far worse on paper than they sound to the ear, particularly when the player is actually used as a portable.

Indeed, sauntering along the street while listening to truly high-fidelity sound from a CD player slung over your shoulder is one of the most pleasant aspects of portability. But in shopping for a portable unit, you must take on added responsibilities. If you foresee yourself ever using

Dawn Gordon writes frequently about audio, video, and computers.



SONY D-77 WITH AM/FM RADIO (TOP) AND D-55 WITH FM ONLY



SANYO CDP-10



TOSHIBA XR-P9



TECHNICS SL-XP7

the machine outside of a home-component setup, you should pay attention to several aspects of player performance and design that are not normally of concern when looking for a home model, such as tracking ability during player vibration, player weight, battery weight, carrying case bulk, and control positioning. And as always, you should be familiar with the different features, accessories, and options offered by different manufacturers. To aid the portable-CD shopper, many of these characteristics are listed in a chart accompanying this article. The chart was compiled from information supplied by the manufacturers.

SHAKE-DOWN CRUISE

EVEN IF YOU DON'T ALREADY HAVE A HOME Compact Disc player, you should take along a favorite recording on CD when shopping for a portable model. One of the first things you should listen for when playing your disc is sonic stability during player movement. Ideally, a unit will not skip, stick, emit clicks, or (worst of all) stop playing as you move or jar it. Although not even the most sturdy model can withstand a jogger's gait without some mistracking, most players in their carrying cases should be able to tolerate the vibrations induced by a brisk walk. You can test for stability by tapping the unit on the sides and gently shaking it in various directions. After a while, it won't be difficult to tell which player performs best. Unfortunately, the judgments you reach in shake-down tests are most applicable only to the specific samples you test: Other samples of the same model may perform slightly differently. If possible, buy the sample that best passes your tests. Of course, if you plan to keep the player stationary as a permanent part of your home-component setup, a thorough set of bump-and-grind tests will be unnecessary.

Even though portable CD players are very light compared with, say, most portable VCRs, they are heavier than most personal-portable cassette players, ranging in weight from less than 1 lb. to 1½ lbs. While ½ lb. usually won't make a big difference in carrying comfort, an add-on battery package could increase the player's weight by as much as 2 lbs. And the bulk of the battery package could make the player disproportionately more uncomfortable to wear than that added weight would suggest. For these reasons, it's always important to examine the player and its battery housing together to see if the whole is sufficiently light. Also make sure that the carrying case is comfortable to wear and well balanced on its strap.

Two types of battery configurations are available: the rechargeable *pack* and the battery *case*.

The former commonly is preferred, as it can be recharged over and over again with the (usually) supplied AC adapter, is more convenient to use, and may be less expensive in the long run. You usually can get from 3 to 4½ hours of operation before recharging.

A battery case, on the other hand, is simply a snap-on or clip-on container that holds standard alkaline cells and, depending on the player, may even take standard-size rechargeable nickel-cadmium cells. The "cellular" approach has its own advantages: It can offer as much as nine hours of continuous use with some players, and if you are traveling in areas that lack suitable line current for your AC adapter, it's the only way to go. If you plan to use your player in a car, you might want to find out if a car-battery adapter cable is available for the unit you wish to buy. (For more information on battery types and use, see the accompanying sidebar, "Battery Choice.")

Keep in mind that a portable CD unit isn't always a complete package. In some instances, a battery pack or case is supplied with the player as a standard accessory; in others, it's an option (indicative, perhaps, of the popularity of portable players as home-only units). An optional battery pack should add no more than \$60 to a player's price. A battery case, whether standard or optional, usually does not include the batteries themselves.

DIRECT DIALING

LIKE THEIR BIG STAY-AT-HOME BROTHERS, PORTABLE Compact Disc players are capable of some quite intelligent access functions in addition to the basic tasks. All models can skip forward and backward to the previous and next selections, and most provide audible search as well. Track- or disc-repeat also is available on most players, but only some will replay between two arbitrarily selected points (A-B repeat). Programmed playback is found on many units. Several Sony models even have a feature called "Shuffle Play" that randomly mixes up the track order on a disc so that you never know which selection will be played next. To help you use these features, all portable players have a liquid-crystal display (LCD), some of which are more useful and appropriately located than others.

When carrying a player over your shoulder, all the features in the world will not simplify its use if you can't get at the control buttons easily or see the LCD because it is covered by the carrying case. Examine the control layout to see if all the important functions are easily accessible when the player is in its case and slung over your shoulder.

Remember to verify precisely what comes with the player before you buy. Many units do not include a carrying case or headphones. On the other

PORTABLE CD PLAYERS

MODEL	DISPLAYS & INDICATORS	AUDIBLE SEARCH		REPEAT	PROGRAMMABLE TRACKS	SPECIAL FEATURES	ACCESSORIES & OPTIONS	BATTERY LIFE	SIZE ¹ & WEIGHT	PRICE ²
JVC XL-R10K	Current and total tracks; memory recall showing programmed tracks; total, elapsed, and remaining disc time; repeat; low battery	Yes	Yes	15	High filter; mates with JVC PC-W310 and PC-X20 Digi-Compo stereo systems	AC adapter/charger, audio cord; optional nicad battery pack, headphones, car adapter	3 hrs.	5 by 1 1/2 by 5; 15.9 oz.	\$280	
Hitachi DA-P100	Current track; elapsed disc time; pause	Yes	Yes	None	Built-in battery compartment (6 AA); tone control	AC adapter, audio cord; optional carrying case, headphones	2 1/2 hrs.	7 1/2 by 1 1/2 by 6 1/2; 4.1 oz. with batteries	\$348	
Magnavox CD-9510	Current track; elapsed and remaining disc time; repeat; pause; skip; low battery	Yes	Yes	10	Oversampling digital filters	AC adapter, audio cord, optional battery case/carrying pouch (6 alkaline C), headphones	3 1/2 hrs.	7 1/2 by 1 1/2 by 5; 24 oz.	\$300	
Panasonic SL-NP3	Current and total tracks; total, elapsed, and remaining disc time; repeat; low battery	Yes	Yes	None	High filter	AC adapter/charger, audio cord; optional nicad battery pack (\$60), headphones, car adapter	3 hrs.	5 by 1 1/4 by 5; 16 oz.	\$260	
Pioneer PD-C75	Current track; elapsed disc time	Yes	No	None	High-speed audible search; automatic power off when door is opened, fits into Pioneer CK-W700 and CK-R500 Portable Component Systems	Snap-on battery case/carrying case (6 alkaline or nicad C); optional AC adapter, audio cord, headphones	5 hrs. with alk.	5 by 1 1/2 by 5 1/4; 25 oz.	\$350	
Quasar CD-8936	Current and total tracks; memory recall showing programmed tracks; total, elapsed, and remaining disc time; repeat; low battery	Yes	Yes	15	High filter	AC adapter/charger, audio cord; optional nicad battery pack, headphones, car adapter	3 hrs.	5 by 1 1/4 by 5; 18.3 oz.	\$300	
Sanyo CDP-10	Current track; elapsed disc time; play-back mode	Yes	Yes	16	Dual headphone jacks	AC adapter; optional nicad battery pack/carrying case, headphones	3 hrs.	5 by 1 3/4 by 7 1/4; 18 oz.	\$250	
Sony D-SSPL	Current track; elapsed and remaining disc time	Yes	No	None	—	AC adapter, audio cord, clip-on battery case (6 C), carrying strap, headphones	3 1/2 hrs.	5 by 1 1/2 by 5 1/4; 21 oz.	\$280	
Sony D-75	Current track; elapsed and remaining disc time	Yes	Yes	16	A-B repeat and "Shuffle Play" (see text)	AC adapter, audio cord, slimline lead-cell battery pack, carrying case and strap	4 1/2 hrs.	5 by 1 by 5; 17 oz.	\$300	
Sony D-55	Current track; elapsed and remaining disc time	Yes	Yes	16	A-B repeat and "Shuffle Play" (see text); stereo FM tuner	AC adapter, audio cord, clip-on battery case (8 AA), carrying case and strap, headphones	4 hrs.	5 by 1 1/4 by 5; 18 oz.	\$330	
Sony D-77	Current track; elapsed and remaining disc time	Yes	Yes	16	A-B repeat and "Shuffle Play" (see text); AM/stereo-FM tuner	AC adapter, audio cord, slimline lead-cell battery pack, car connecting pack, carrying case and strap, headphones	4 1/2 hrs.	5 by 1 by 5; 17 oz.	\$370	
Technics SL-XP7	Current and total tracks; memory recall showing programmed tracks; total, elapsed, and remaining disc time; repeat; low battery	Yes	Yes	15	High filter	AC adapter/charger, audio cord; optional lead-cell battery pack (\$50), headphones, car adapter	3 hrs.	5 by 1 1/4 by 5; 18.3 oz.	\$300	
Toshiba XR-P9	Current track; elapsed and remaining disc time; programmed tracks	No	Yes	16	10-key infrared remote operation when used with AC adapter/stand	Remote-control sensor and handset, AC adapter/stand, audio cord, snap-on battery case (9 C), carrying case	9 hrs.	5 by 1 1/2 by 7; 17 oz.	\$300	

¹Dimensions in inches, width by height by depth.

²Manufacturer's suggested retail price. Discounts may vary from region to region and from store to store.

BATTERY CHOICE

Selecting batteries—or, more accurately, dry cells—to power your portable equipment is one of the simplest choices in audio: Just follow the equipment manufacturer's recommendations. It is also one of the most difficult choices: There are no industry-wide standards for rating the capacities of dry cells, so unless you plan to do some tests, you are at the mercy of the cell manufacturers' performance claims. But understanding some basic principles of battery selection and the differences between cell types can help you choose the most economical one for your application.

Three characteristics dominate battery performance: the voltage and the current that the cell is able to produce and the load or drain that the equipment places on the battery. With portable Compact Disc players, battery voltage is relatively unimportant because most, if not all, vital player functions are controlled by a crystal oscillator that is insensitive to battery-voltage changes (within limits, of course). In fact, some players change the voltage they receive from an array of dry cells to several completely different levels by means of a tightly regulated internal DC-to-DC converter circuit; as long as the voltage falls within the converter's acceptance range, the unit will operate properly. In contrast, many inexpensive personal-portable cassette players have no motor speed control, so their speed may vary with voltage changes resulting from cell wear or the use of a variety of different battery types.

Battery output current and equipment power drain are therefore the determining factors in choosing batteries for portable CD players. Cell types differ significantly in their ability to deliver current. The least expensive variety, standard carbon-zinc cells, are best at delivering low currents intermittently (so that the battery can recover a bit of capacity between uses). Alkaline cells, both normal and high-capacity types, and rechargeable nickel-cadmium (nicad) cells are much better for loads demanding more current and sustained operation, but are not proportionally better than carbon-zinc cells in low-current, on-again/off-again devices (like flashlights).

How do you tell if your portable component is a high-current device? Look for any electric motors and

what they have to move. An FM-radio headset will be less of a drain than a cassette unit; in turn, a cassette player is far less demanding than a Compact Disc player, which has to keep a relatively heavy disc spinning at a tightly regulated rate between 200 and 500 rpm for more than an hour at a time. A CD player also has quite a bit of very-high-frequency digital circuitry gobbling up still more energy—not to mention tracking and focusing motors and the optical system with its laser diode. That's why manufacturers uniformly recommend alkaline or nicad cells for their portable CD players. In a pinch, you can use carbon-zinc cells. They won't damage the equipment, but they may be very short-lived. Alkaline cells can last five to six times as long as carbon-zinc cells in a CD player. The latter, even if fresh, may not be able to get you through a single disc.

The most economical path is probably the rechargeable nicad route, though at least one CD player manufacturer is using sealed rechargeable lead-acid cells similar to those found in car batteries. Properly used, nicads can be recharged several hundred times before their capacity becomes significantly limited. This ability more than compensates for their initially higher cost.

Some additional hints:

- Use your "spent" batteries in an ultra-low-current application. Though a battery may no longer be able to drive a portable CD player, it may still be able to muster enough juice to power a small clock or an LCD calculator for months.
- Discard any cell as soon as it shows signs of leakage, whether or not it still seems good.
- To decrease self-discharging effects, store batteries in your refrigerator in moisture-proof containers. Guard against temperature cycling (going back and forth between cool and warm).
- Recharge nicads if not used for two months or more.
- Follow the battery manufacturer's recommendations for recharging nicads. Use a suitable charger.
- Never try to charge alkaline or carbon-zinc cells. The results can be disastrous: explosions, fire, injury.

David Ranada



PANASONIC SL-NP3 WITH SUPPLIED ACCESSORIES: CASE, AC ADAPTER, AND CONNECTING CORD



PIONEER PD-C7

hand, nearly all have an AC adapter for stationary home operation and an audio cord for connecting the player to a component system. And a few players do offer the works.

If you want still more, manufacturers are continuing to add features. Sanyo's CDP-10 has dual headphone jacks, for those times when you'd like a friend to join in the music. Units from JVC and Pioneer can be mated to certain of their boom-

box portable systems, while the Sony D-55 includes a built-in stereo FM tuner (the D-77 adds AM as well). And Toshiba's XR-P9 can be converted into a full-featured home unit by means of a combination AC adapter/stand that angles the player upward. This model even supplies wireless remote control via a clip-on sensor and a handset, whose numerical keypad also offers random-access operation. ■

THE CBS COMPACT DISC CLUB HAS THE MUSIC YOU WANT TAKE ANY 2 FOR \$1 WITH MEMBERSHIP



- 339200. Stevie Wonder—In Square Circle. #1 album. (Tamla)
- 339044. Mozart: Symphonies 40 & 41 (Jupiter). Kubelik, Bavarian Symphony (Digital-CBS Masterworks)
- 337402. The Manhattan Transfer—Vocalese. Top 10 album. (Atlantic)
- 341677. Schubert Symphonies Nos. 2 & 8. Barenboim, Berlin Phil. (Digital-CBS Masterworks)
- 342592. Motown R&B Grammy Performances Of The 60's and 70's (Motown)
- 324822. Ravel: Bolero; Rhapsodie Espagnole; etc. Maazel, Orchestre de France (Digital-CBS Masterworks)
- 340414. ZZ Top—Afterburner. Top 10 Sleeping Bag; more. (Warner Bros.)
- 340281. Inxs—Listen Like Thieves. This Time; more. (Atlantic)
- 336669. Sting—The Dream Of The Blue Turtles. #1 Compact Disc. Top 10 Album. (A&M)
- 335844. Ozzy Osbourne: Ultimate Sin. Top 10. (CBS Assoc.)
- 319541. Elton John—Greatest Hits. Daniel; Crocodile Rock; more. (MCA)
- 340398. Simple Minds—Once Upon A Time. Alive And Kicking; Sanctify Yourself; more. (A&M Virgin)
- 340323. Sade—Promise. #1 Smash. (Portrait)
- 263293. Bolling: Suite For Flute & Jazz Piano—Rampal, Bolling (Columbia)
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- 341297. Prokofiev: Symphony No. 1 (Classical); Love For Three Oranges Suite—Lorin Maazel cond. (Digital-CBS Masterworks)
- 323261. Lionel Richie—Can't Slow Down. All Night Long; Stuck On You; Hello; etc. (Motown)
- 335547. Berlioz: Symphonie Fantastique. Barenboim, Berlin Phil. (Digital-CBS Masterworks)
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- 322024. Huey Lewis & The News—Sports. Bad Is Bad; etc. (Chrysalis)
- 314443. Neil Diamond's 12 Greatest Hits, Vol. 2. You Don't Bring Me Flowers (with Barbra Streisand); etc. (Columbia)
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- 316604. Tchaikovsky: 1812 Overture; Marche Slave; Beethoven: Wellington's Victory. Lorin Maazel, Vienna Phil. (Digital-CBS Masterworks)
- 321380. Barbra Streisand's Greatest Hits, Vol. II. The Way We Were; You Don't Bring Me Flowers; etc. (Columbia)
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BY ROBERT ANGUS

“IF

YOU HAVE TO ASK
how much it costs,

you probably can't afford it,” said financier J. P. Morgan about yachts. But the subject just as easily could have been large-screen television—in which case he might have added, “If you have to worry about where to put it, you probably don't want it badly enough.”

Many consumers, however, in an effort to find a home video experience rivaling the impact and intensity of the cinema or a live musical or theatrical event, do want a big-picture set, and badly. About 266,000 Americans took the plunge last year, spending more than \$480 million on large-screen units from various manufacturers. The Electronics Industry Association, the trade group that keeps track of such things, predicts that about 20 percent more units will be sold this year than last. In fact, videophiles were confounding the experts during the first two months of 1986 by pushing sales a whopping 43 percent ahead of those for the same period last year, making large-screen TVs one of this year's hottest products.

Although purists differ on just how large “large-screen” really is, most concede that it starts at 30 inches and runs up to 15 feet, measured diagonally as required by the Federal Trade Commission. The wide variety originates in the different methods of obtaining a large image, some of which are more practical for certain picture sizes. Manufacturers of the smallest large-screen models simply use an outsize and expensive picture tube, as Sony and Mitsubishi do in what actually are, respectively, 35-inch and 54-inch direct-view TV sets. The next size usually involves projection of an image onto the back of a glass screen in the 3- to 4-foot range. And if you're after a *really* big picture, you can project the image onto the front of a screen, much as you once might have shown home movies or 35mm slides. If you opt for the last, you have two choices: one-piece and two-piece projectors. The former are less expensive—in fact, they are among the most reasonably priced of all projection types—but they also produce smaller (usually about 4½-foot) pictures than their two-piece brethren. The latter offer the largest available pictures.

Robert Angus is an avid videophile and a frequent contributor to this magazine.

LARGE- CHOICES EXPLAINED SCREEN FOR VIDEOPHILES SEEKING TV THE BIG PICTURE. BASICS

PHOTOGENIC

SCREEN SIZE ISN'T THE ONLY THING THAT BIG-picture fans look for: Image quality ranks right up there, too. Meaningful differences between large-screen TV systems do exist and are often immediately apparent. It takes but a single test instrument—the human eye—to tell much of what you need to know about whatever model you're considering.

It's important, however, that you make fair and realistic comparisons. View the sets under the same conditions (ambient light level, apparent screen size, and program material), using the units' factory-standard settings. Try to adjust the ambient light level to that in your home. Be aware of the standard criteria for judging any video monitoring system—color accuracy, color range, contrast range, geometric distortion, video noise level, and resolution—and attend to them along with those characteristics more specifically relevant to large-screen sets.

For example, picture brightness is one of the most important considerations, as is the acceptable viewing angle, for these determine where you will be able to put the system. Some units, viewed in almost anything



SONY'S KPR-36XBR 36-INCH REAR-PROJECTION SET LOOKS MORE LIKE A LARGE DIRECT-VIEW TV.

other than total darkness, produce pale, washed-out images—and if you're not sitting directly in front of the screen, you're not likely to see much of anything. There's also the matter of accurate color convergence: whether the red, green, and blue images making up a color TV picture meet precisely not only in the center of the picture but in

the corners and along the edges, or whether the images look like color comics printed slightly out of register. Because of inferior optics, or misalignment in construction or setup, you may see fuzziness in the picture corners, even though the image in the center of the screen is sharp.

MANY REAR-PROJECTION SETS AREN'T MUCH LARGER THAN OLD 25-INCH CONVENTIONAL TV SETS AND MAY NOT BE AS DEEP.

All these criteria can help you decide which large-screen technology is right for you. For instance, if you want a big picture and are willing to darken your viewing area somewhat, a front-projection set is your best bet. If you lean toward high brightness together with the widest possible viewing angle and are willing to settle for a less than huge screen, your best choice is a large-screen direct-view receiver, of which we're going to be seeing more in the months ahead.

BRINGING UP THE REAR

COMPARED WITH BIG DIRECT-VIEW MONITORS, rear-projection sets provide pictures that aren't that much larger, yet their prices are comparable or even lower and their cabinets may actually take up less room. A rear-screen projector may look like an overblown conventional TV set, but it isn't, and it can't be judged by the same standards. For one thing, its picture is likely to be considerably less bright, particularly for viewers who are not sitting directly in front. Also, colors may seem altered or washed out, and images may become fuzzy toward the edges of the screen. The reason why lies in the way these projection sets are built.

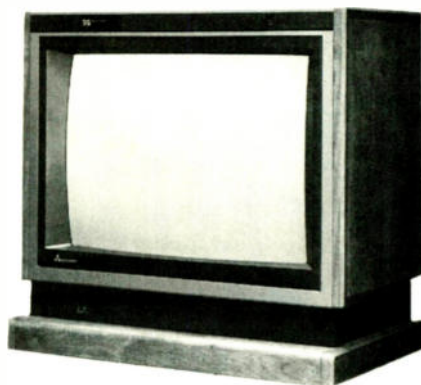
In a direct-view monitor, three electron guns—one for each primary color—trace the picture line-by-line on red, green, and blue phosphors deposited on the inside of a single picture tube. In a projection set, the three guns trace the picture on three separate tubes, each dedicated to one of the col-

ors. When the red, green, and blue images converge at the screen, a full-color picture is formed.

Theoretically, the larger or brighter each tube, the brighter the resulting picture on the screen. But the images from the tubes don't reach the screen directly: First, they

pass through lenses whose job is to focus the output from each tube onto the screen so that the colors will appear sharp and precisely in register. Next, the images are reflected by one or more mirrors to direct the picture from the tubes inside the cabinet onto the vertical screen. (The secret of most rear-projection systems' compact size is vertical mounting of the picture tubes, rather than the horizontal mounting used in direct-view sets.) The screen you view is made of pebbled glass or plastic that incorporates thousands of tiny lenses. These "lenticular" screens are designed to direct and disperse the light in the most efficient way for the intended viewing angle. Each of these projection steps diminishes the brightness of the image. For example, each mirror can cost 4 to 6 percent of picture brightness, and the lenses can filch still more, all the while adding their own detail-smearing optical distortions.

If it has been a year or two since you've looked at a rear-projection system, you're



THE MITSUBISHI CK-3501R, A DIRECT-VIEW SET, USES A SINGLE 35-INCH PICTURE TUBE.

likely to notice some improvements over earlier models. Pictures are usually brighter now, thanks to the use of bigger and better tubes and improved optical systems. Some rear-projector manufacturers are coupling their lenses to the tubes by means of silicone gel or a similar substance to improve picture contrast and brilliance. Lenticular rear-projection screens now pass more of the image while dispersing it over a wider angle to reach viewers seated well out to the sides. Whereas some older screens offered acceptable images only for those seated within a 60-degree angle directly in front of the set (that is, 30 degrees to each side of the screen's central axis), most new models claim viewing angles of as much as 120 degrees—more than enough for most home viewing situations. Best of all, the latest rear projectors are about 20 percent less expensive than the models they have replaced.

FRONT-RUNNERS

THEN THERE ARE THE FRONT PROJECTORS: THE units designed to put you in the Big Picture and the kind you see in bars and at teleconferences. The one-piece and two-piece front-projection formats operate in much the same way: Three precisely aligned picture tubes project separate red, green, and blue images through lenses or lens/mirror combinations onto the front of an opaque screen. The difference between the two formats is largely one of personal preference

SOME UNITS, VIEWED IN ALMOST ANYTHING OTHER THAN TOTAL DARKNESS, PRODUCE PALE WASHED-OUT IMAGES.

and convenience: Should the screen and projector be a single piece of equipment, or should they be separate? When not in use, at least some single-piece models fold up into a bulky enclosure that looks like a rear projector. For correct convergence of the separate primary-color images at the screen of a two-piece model, its projector and screen must be held in fairly precise alignment (to within a fraction of an inch). Violation of this prime requirement is one of the two reasons pictures from two-piece projectors sometimes look so bad (the other being the presence of too much ambient light).

Generally speaking, these front-projection units are monitors only, which means that you must buy your TV tuner separately. The one in your VCR will do just fine, or you can use just about any brand of tuner you like with any other brand of projector. Henry Kloss, founder of Kloss Video and the man who fathered the large-screen home set while he was at Advent, says he doesn't include tuners in his \$2,500-and-up models because technological change is likely to



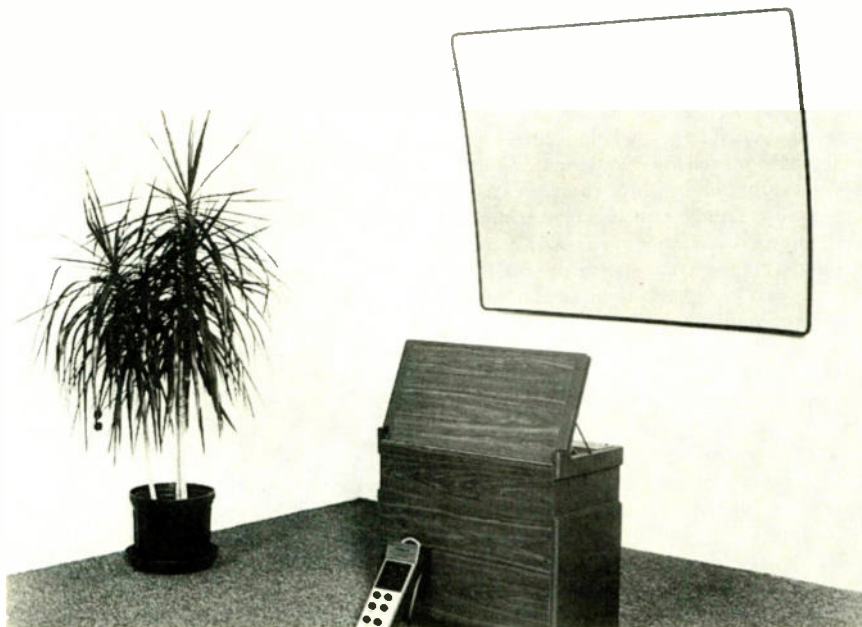
THE BARCODATA FRONT PROJECTOR FROM INFLIGHT SYSTEMS, MAKERS OF AIRLINE PROJECTION SETS

render tuners obsolete quickly, while the projector is unlikely to undergo radical change in the foreseeable future. By way of example, he cites the introduction of multi-channel television sound (MTS) last year.

The screens of two-piece front-projection systems are significantly larger than the others we've been discussing, which means that the light from the picture tubes must cover a greater area. That in turn means the pictures usually are much less bright—low enough in level, in fact, to require a dimmed or darkened room, particularly if they're projected onto a flat screen. Manufacturers have discovered that a concave screen provides a brighter picture because the curved reflective surface is shaped to concentrate the available light on the (of necessity) somewhat restricted viewing area. Accordingly, most two-piece units are designed for specifically shaped, specially reflecting screens. Others can project an image onto any flat vertical surface, including a wall. Most walls are fairly bad reflectors, however, and even a screen meant for home movies or slides would offer a brighter picture.

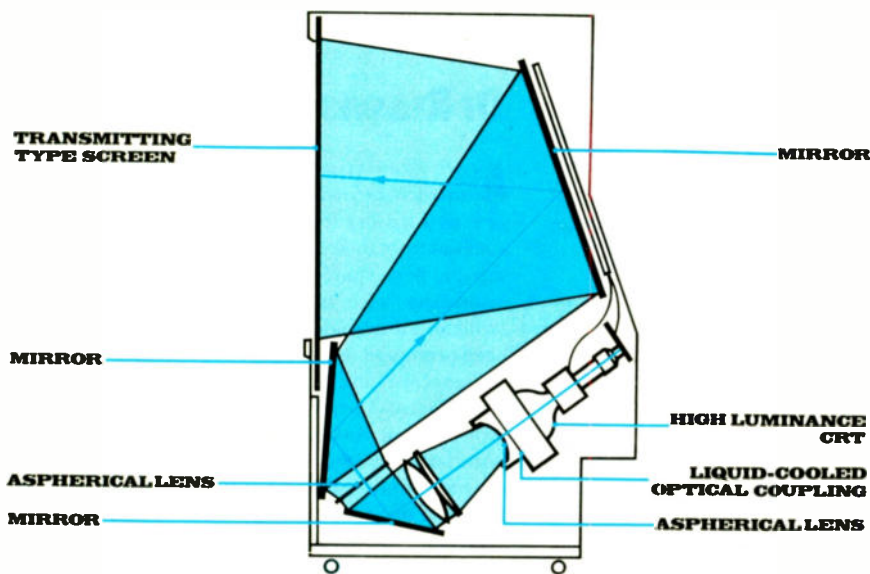
HOUSING SHORTAGE

FOR BIG-PICTURE AFICIONADOS WHO HAVE come to terms with the price tag (or who, like Mr. Morgan, don't have to worry about it),



THE KLOSS NOVABEAM MODEL 2 BOUNCES ITS IMAGE FROM A MIRROR ONTO THE SCREEN.

LARGE-SCREEN TV BASICS



REAR-PROJECTION SETS RELY ON A COMBINATION OF MIRRORS AND LENSES.

ROBERT V. DELEVANTE, JR.

THE LATEST REAR PROJECTORS ARE ABOUT 20 PERCENT LESS EXPENSIVE THAN THE MODELS THEY HAVE REPLACED.

the next question is, Where do I put it? Henry Kloss moved a grand piano out of the living room of his Cambridge, Massachusetts, home to make space for his (and the world's) first home projection unit. "If you really want it, you'll find the room," he advises would-be buyers.

In fact, many rear-projection sets aren't much larger than old 25-inch conventional TV sets and may not be as deep, which means that they're likely to fit into an average city apartment. Two-piece front-projection models, on the other hand, require room not only for the screen but also for the projector, an unobstructed light path between the two, and space behind the projector from which to view the huge image. One way of making these demands more manageable is to mount the projector on the ceiling, but if that's not practical and you can't otherwise accommodate all the necessary hardware, you may have to go for one of the big direct-view sets or a rear-projection system.

In the early days of television, there was a rule of thumb that you needed one inch of picture size for every foot you sat away from the screen. "That was in the days of 12-inch

screens," Kloss scoffs. "Today, people who watch 25-inch screens are comfortable sitting no farther away than 12 feet, which disproves that adage. In any case, this is a matter of putting the cart before the horse. The fact is that you probably want the biggest picture you can get, no matter where you may sit."

WATCHING INTENTLY

THERE SPEAKS A MAN WHO HAD MADE A DEFINITE commitment to video. Because of the funds and space a large-screen television system demands, your selection also will reflect the importance of video in your life. You must answer some critical questions. First, how large a picture do you want? can you afford? can you fit into your viewing room? Only you can decide the acceptable tradeoff between picture brightness and size. Will your household accept dedicating

a room substantially to video, either by virtue of the equipment's size or because the image must be viewed in subdued light? Do you also want such things as surround sound, MTS, and other performance- or convenience-oriented features? Will the system be used in conjunction with program sources other than broadcast or cable television, such as VCRs, videodisc players, teletext decoders, satellite receivers, or video games? If you opt for a front projector, will it be one-piece or two? Curved or flat screen or on-the-wall projection? Should the projector (and perhaps the screen) hang from the ceiling or simply rest on the floor along with the furniture? How many people are likely to be viewing at any one time, and where will they be sitting?

The answers to these and similar questions will help determine whether you're going to end up with a big-screen direct-view set, a larger-screen rear projector, or a gigantic-screen no-holds-barred front projector that may require its own room for optimum viewing conditions. To many serious videophiles, however, the best-possible viewing conditions are desirable regardless of the screen. They feel that watching TV is like concentrated listening to music: You shouldn't be reading or working a crossword puzzle at the same time. It doesn't matter that you may have to watch in a partially or totally darkened room, because the picture is what counts. And that picture can be the most exciting and involving that video has to offer, enhancing the viewing experience in much the same way that a high fidelity component system enhances listening to music. After all, Kloss calls his baby "hi-fi for the eye."



PIONEER'S SD-P40 40-INCH REAR-PROJECTION SET USES LIQUID-COOLED PICTURE TUBES.

UNADULTERATED BERRY

*I bet you don't drink or dance
 Could start a real romance
 I bet you wouldn't think a kiss
 Could turn me on like this
 Well let me tell you like it was
 Yes it did, yes it does*

"Betty Jean"

DESPITE *NEWSWEEK*'S RECENT LUMPING OF CHUCK Berry with other brown-eyed handsome men in an article about r&b reissues, everyone knows that Berry (almost single-handedly) invented rock 'n' roll. *Chuck Berry: Rock 'n' Roll Rarities*, MCA's first rerelease compilation from its newly acquired Chess catalog, includes enough hits to be salable and enough outtakes to prove that spontaneity is essential to the form (Chess CH2C 92521 [2 LPs]), also available in a two-cassette package; distributed by MCA).

From the first verse of "No Particular Place to Go," a song Berry wrote in 1964 about how seat belts kill necking, these classic originals jump off the grooves. I mean that, in big and small ways, this guy had vision. His lyrics, besides being poetic and sophisticated, capitalize on the theory that less is more, an aesthetic spelled out quite clearly in reference to one "Betty Jean" (above). Berry's formula was so basic that it was hard for him not to repeat himself. But check out "Bye Bye Johnny" (sequel to the timeless "Johnny B. Goode") to see how unusual Berry's sense of the ordinary can get: His "bye, bye" wails sound more African than American. This from a thirty-year-old black guy who didn't want to play the blues.

Although he wrote about everything from divorce to drug busts, Berry's half-dozen hit singles sold precisely because they celebrated good times; in addition to divining a new musical form, he foresaw that the baby-boom generation would have it all. Other *Rarities* highlights include previously unreleased versions of "Little Queenie" and "Sweet Little Sixteen" plus "I Wanna Be Your Driver," a surprisingly menacing piece of aggression from 1964, especially compared with the Beatles' 1965 "Drive My Car."

The occasion of *Rarities* gives me an excuse to mention the *Chuck Berry* videotape, which was filmed with Tina Turner at the Roxy in Los Angeles in 1982 (Passport Music Video VPB 29006, available on VHS and Beta; distributed by Jem). Tina hadn't figured out how to be subtle yet, and Chuck wasn't about to be upstaged. He and "my wife's daughter" Ingrid Berry, though, are amazing in a sexy but not incestuous duet of "Reelin' and Rockin'." In 1971, I saw Berry perform at a St. Louis high school gymnasium, where it was clear that ad-libbing and being offhand are part of his charm. Few great artists can live up to their reputations so casually. For the Roxy video, Berry probably just hopped a plane to L.A., hired a pickup band, and went to work, as always. The tracks on *Rarities* may not be perfect, but Berry didn't record them for posterity. Then again, he didn't have to.

Georgia Christgau



E D I T E D

B Y

G E O R G I A

C H R I S T G A U

A N D

T E D

L I B B E Y

OF REISSUES AND NEW VENTURES

AS WE KNEW IT WOULD, THE COMPACT DISC HAS provided record companies with the excuse to give us a history lesson by resurrecting important material from their catalogs. The mining of this treasure has been spurred by the desire to recognize anniversaries, such as the 100th this past January of Wilhelm Furtwängler's birth, but most of all it has been prompted by the incredible appetite of the Japanese record buyer for historical reissues.

Tadaatsu Atarashi, of Japanese Philips, was recently in New York to promote his label's first major historical-reissue series on CD, taken from Dutch Radio transcription acetates of live performances from 1939-40 by the Concertgebouw Orchestra under Willem Mengelberg. These acetates were later fixed on glass, and last year the individual glass sides were digitally remastered at Philips's Baarn headquarters. Atarashi then edited the transfers, without using equalization or compression, to produce the finished CD masters. The 14-disc series will include Beethoven's nine symphonies, Schubert's Eighth and Ninth Symphonies and incidental music from *Rosamunde*, Brahms's *Ein deutsches Requiem* and First Symphony, Franck's Symphony in D minor, Mahler's Fourth, Richard Strauss's *Don Juan*, and Bach's *St. Matthew Passion* (in a performance from Palm Sunday, 1939).

In other news, Alexis Weissenberg's new affiliation with Deutsche Grammophon has begun auspiciously with two fine recordings devoted to selected Scarlatti sonatas and Debussy piano works (both reviewed in this month's "CD Spread"). The pianist's next project for DG, with Seiji Ozawa and the Boston Symphony, is the recording of all the piano/orchestral music of Chopin: the two concertos, the *Fantasia on Polish Airs*, *Krakowiak*, and the *Andante Spianato and Grand Polonaise*.

On a beautiful Saturday morning in April, DG's production team took over Symphony Hall and began the Chopin project with a three-hour session devoted to the E minor Concerto, which Weissenberg had performed with the Bostonians the day before. The first takes were a bit difficult, as producer Werner Meyer and his two engineers struggled to get the balance right, and on hearing the playback, Ozawa got angry at himself for having given several of the Boston violinists the day off. Repositioning of the main microphones and some adjustments to the levels took care of most of the problems, and by the playback of the second takes (this time, of the full first and second movements), everyone was satisfied with the overall sound picture—especially with the beauty of the piano tone that had been captured by a combination of floor mikes and the mains overhead. During the remainder of the session, the first and second movements were each recorded a second time straight through, and several retakes were done to cover missed notes or small blemishes in ensemble.

The recording of the *Fantasia* had to be postponed until November because the orchestra had not yet learned the music.

Ted Libbey

THE CD SPREAD

MINI-REVIEWS OF THE LATEST COMPACT DISCS

BY ROBERT E. BENSON, THOMAS L. DIXON, K. ROBERT SCHWARZ, BERT WECHSLER, JAMES WIERZBICKI, AND BILL ZAKARIASEN

LEGENDARY SCHNABEL BEETHOVEN CYCLE

YET ANOTHER BEETHOVEN PIANO CONCERTO cycle, and amid the ferocious competition, this latest arrival suffers from certain debits. The sound, while charming in an antique way, is not competitive. The playing of the London Symphony Orchestra (Concertos Nos. 1, 2, and 5) and the London Philharmonic Orchestra (Concertos Nos. 3 and 4) is also hardly the norm these days. Malcolm Sargent, the conductor, though more than adequate, is never subtle, nor does he make anything like a statement about the music on his own part. So what, if anything, tips the scale in favor of this over other cycles?

The answer is, this cycle has the greatest Beethoven player of our century, Artur Schnabel, as its soloist, playing in his finest possible form. Of course, he was to do almost all the works again in later years, with improved sound and at least equal accompaniments. Yet these early performances remain his greatest achievement, and until the cycles of Leon Fleisher, Wilhelm Kempff, or Artur Schnabel (with Josef Krips) appear on CD, they have no competition whatsoever. So sit back with CD ease and enjoy Beethoven played as no other artist of our time has known him and made him known . . . a standard for the ages. Playing time for Concertos Nos. 1 and 2: 65:53. (Arabesque Z 6549.) Playing time for Nos. 3 and 4: 64:37. (Arabesque Z 6550.) Playing time for No. 5 plus Andante in F, K. 57 ("Andante favori") and Polonaise in C, Op. 89: 51:25. (Arabesque Z 6551.) T.L.D.

BROADCAST "FRAU" FROM BÖHM'S VINTAGE YEARS

THERE IS NO QUESTION OF THE AUTHORITY OF this performance, taken from 1977 Vienna State Opera presentations. Karl Böhm was the conductor for Richard Strauss's *Die Frau ohne Schatten*, and Leonie Rysanek (The Empress), Walter Berry (Barak), and James King (The Emperor) were long considered prime interpreters of their roles. The participation of Birgit Nilsson (The Dyer's Wife) automatically conjures up many magnificent operatic memories, although not of her singing this part!

All Straussians will wish to own this set.

But why didn't Deutsche Grammophon go back to the early '70s Salzburg Festival performances when everyone involved was in good voice (with Christa Ludwig outstanding as The Dyer's Wife)? The present analog recording also misses much of the warmth of the Vienna State Opera House. Documentation on this three-CD release is detailed, with a complete libretto and sufficient indexing to permit you to find just the part you may want. Keep in mind that there may be, at some time in the future, two new recordings of *Frau*, one conducted by Wolfgang Sawallisch, the other by Sir Georg Solti. Playing time: 175:03. (Deutsche Grammophon 415 472-2.) R.E.B.

SHORT ELGAR WORKS FROM BOURNEMOUTH SINFONIETTA

THIS IS A WONDERFUL COLLECTION OF ELGAR miniatures highlighted by the premiere recording of *Soliloquy*, the only completed movement of a projected suite for oboe and orchestra intended for the composer's good friend, Leon Goossens, who is heard here as soloist. The orchestration of *Soliloquy* is by Gordon Jacob, but it could well be Elgar's own. You'll recognize many familiar tunes on this CD, in these tasteful readings by the Bournemouth Sinfonietta conducted by Norman Del Mar. The *Three Bavarian Dances* perhaps could use a larger sound than the Sinfonietta supplies, but these performances are effective in their own way. (Additional selections: *Chanson de matin*, *Chanson de nuit*, *Sérénade lyrique*, *Salut d'amour*, *Dream Children*, *Contrasts* from *Three Characteristic Pieces*, *Woodland Interlude* from *Caractacus*, and *Two Interludes* from *Falstaff*.) The analog recording dates back to 1976, but the sound quality is outstandingly good. Playing time: 50:42. (Chandos CHAN 8371.) R.E.B.

MAHLER SYMPHONIES FROM SOLTÍ'S CHICAGO CYCLE

WITH THESE ISSUES OF THE SIXTH AND SEVENTH symphonies, Sir Georg Solti's Mahler cycle for London is complete on CD, a series that when it is good is very good, but not without some disappointments. The entire cycle is marked by glorious orchestral playing by the Chicago Symphony Orchestra, but some interpretations are hard-pressed,

particularly that of Symphony No. 2.

The performance of Symphony No. 6 is utterly magnificent, perhaps a bit too demonic for some listeners, but fabulous in its way. Recorded in 1970 in Chicago's Medinah Temple at the same time as the previously issued Symphony No. 5, the sound on the master tapes was thought by the engineers to be too dry. Although the exact process remains a mystery, it is rumored that the tapes were taken to Vienna and in some way additional reverberation was added. However it was done, the result is a resounding success, with a warmth I find preferable to most of London's recent CSO recordings. Symphony No. 7 was recorded a year after the Sixth, in a virtuoso performance that has the tight, clear sound of many of Solti's efforts for this label.

Neither of the two new sets is a bargain in playing time. Both the Sixth and Seventh—along with the filler, Yvonne Minton's expressive singing of the *Lieder eines fahrenden Gesellen* and four songs from *Des Knaben Wunderhorn*—could have been accommodated in a three-CD package rather than in two double-disc sets. Still, even at top price for the playing time, the Solti Sixth, especially, is a recording to treasure, its analog sound superior to the sound of the majority of modern digital recordings. Playing time for Symphony No. 6 and *Lieder eines fahrenden Gesellen*: 92:49. (London 414 674-2.) Playing time for No. 7 and the *Wunderhorn* selections: 93:48. (London 414 675-2.) R.E.B.

SCARLATTI ALBUM FROM WEISSENBERG ON DG

ROUGHLY 20 YEARS AGO, VLADIMIR HOROWITZ took time out from his normal virtuoso exploits to offer us a magnificent disc devoted entirely to a personal selection of Scarlatti sonatas. It was a well received recording, indeed a classic. But how many times since then has the average piano lover actually listened to a whole recital of Scarlatti, from one end to the other? Now this new arrival provides just the opportunity for a change.

Alexis Weissenberg has made a marvelous selection of these masterpieces, the vast majority of which (if my guess is accurate) will be unfamiliar to all but the most devoted Scarlattians. (They are K. 8, 13, 20, 87, 107,

109, 132, 184, 193, 233, 247, 450, 481, 531, and 544.) His choice is inspired, in that each sonata works at least as well on the piano as it would on the harpsichord. This is an unlikely item for Weissenberg's first recording with a new company (its companion is the Debussy disc below), especially coming from an artist who is regarded by many as only a virtuoso pianist. He is that, but—as this recital proves beyond doubt—he is also one of the most searching musicians of our day.

Perhaps the most surprising aspect of Weissenberg's performances is that amid the subtle pianistic miracles he achieves in sonata after sonata, there emerges an overall sense of Olympian calm and repose. The piano, as always, is his most obedient servant, but the genius of Scarlatti comes through as that of the essentially Spanish master of the dance, one who was able also to convey profound emotions and passions. Another expert Scarlatti interpreter, Wanda Landowska, would surely have found all these performances fascinating, and they offer a remarkable testament of deep spiritual maturity. Playing time: 60:02. (Deutsche Grammophon 415 511-2.)

T.L.D.

WEISSENBERG'S SECOND DEBUSSY COLLECTION

EARLIER IN HIS CAREER, ALEXIS WEISSENBERG recorded a Debussy recital (for RCA) that was widely acclaimed. His new effort duplicates exactly that disc's repertory—*Suite bergamasque*, *Children's Corner*, *La Fille aux cheveux de lin*, *L'Isle joyeuse*, *La plus que lente*, and *Étude No. XI (Pour les arpèges composés)*—and offers an addition, *Estampes*. The playing seems so much the same that one is quite surprised to discover, after listening to both performances, that he now plays every work faster than before. Be that as it may, the earlier verdict stands: Weissenberg, in his distinctive way, provides for our era the same level of mastery of Debussy that Walter Gieseking offered a previous generation. Thankfully, many of the Gieseking recordings remain available, so that anyone interested can investigate and enjoy both artists' interpretations.

This disc, together with the Scarlatti recital above, serves to launch Weissenberg's new affiliation with Deutsche Grammophon with a great, if unusual, flourish. The engineers have done him proud, capturing his unique, sculptured piano sound with a depth and atmospheric warmth never matched by Angel EMI or RCA. In summary, except for Gieseking (who is so different), this Debussy playing is virtually unmatched, if not unmatchable. Playing time: 58:15. (Deutsche Grammophon 415 510-2.)

T.L.D.

"CARMINA BURANA" IN A PERFORMANCE FROM CHICAGO

EVEN JAMES LEVINE'S MOST VICIOUS DETRACTORS would have to admit that there's one piece he was born to conduct: Carl Orff's *Carmina Burana*. The work's relentless

rhythms, sassy exuberance, and tintinnabulous orchestration are just the things that are up Levine's alley, and on his new Deutsche Grammophon recording featuring the Chicago Symphony Orchestra and Chorus, he doesn't disappoint in the slightest. It's safe to say that for better or worse (depending on the listener's musical taste), *Carmina* has never before fared so well on disc. However, Levine's performance isn't all bluster: What's especially winning is his sense of fun (most explicit in the tavern scene), although he lets the lyric outpourings of the "Spring" and "Court of Love" sections resound with full measure.

As expected, the Chicago Symphony sets its own standard as to how this score should be played, and the Margaret Hillis-trained chorus is as perfectly responsive as ever. Concerning the vocal soloists, soprano June Anderson and tenor Philip Creech at least match their recorded predecessors, and Bernd Weigl actually surpasses any other baritone I've heard in this piece (what a high A he delivers!). By the way, all singers correctly use the Germanic pronunciation of the Latin text instead of its Vaticanized counterpart (*Cantiones Profanae*, remember?). The CD sound has state-of-the-art clarity and presence, but as usual, this format pays special dividends in the softest passages. If by any weird chance you actually don't have a recording of *Carmina Burana*, this is the one to get. Even if you have a dozen of them, it's certainly worth investigating—the piece has never sounded better. Playing time: 62:02. (Deutsche Grammophon 415 136-2.)

B.Z.

REICH AND ADAMS TOGETHER AGAIN

STEVE REICH'S AND JOHN ADAMS'S MOST EXUBERANT, immediately appealing compositions are combined on this exceptional disc. Reich's *Octet* (1979), that lean, energetic masterpiece in which his melodic language first blossomed, appears here in its orchestral guise as *Eight Lines*. The chamber orchestra arrangement lacks the pungent, exhilarating austerity of the ensemble version, still available on CD in Reich's own performance (ECM 1168); nor can Ransom Wilson's Solisti New York come close to matching the precision of Steve Reich and Musicians. Wilson's performance of *Vermont Counterpoint* (1982), a work for multitrack taped flutes and live soloist, is jaunty and incisive, capturing all the jazzy playfulness of the deftly intertwining canonic lines. Note that Angel has enlarged the original LP's pairing of *Eight Lines* and *Grand Pianola Music* by adding *Vermont Counterpoint* (from DS 37340), thereby expanding the CD to a generous 59:06 length.

John Adams's *Grand Pianola Music* (1982) has generated more than its share of controversy since its premiere, primarily because of the parodistic, deliberately banal "Tune" that Adams introduces in the last movement. Yet its exquisite, shimmering orchestration

and disarming concoction of hyper-Romanticism, Beethovenian piano arpeggios, marching band sounds, and pop combine to create a stunning, if irreverent, work. Aside from a few intonation problems in the winds, Solisti's performance is a credible one. And Angel's recorded sound—astoundingly clear without ever turning strident—is perfectly suited to both Reich's and Adams's music. (Angel EMI CDC 47331.)

K.R.S.

MOZART AND SALIERI, VIA RIMSKY-KORSAKOV

LIKE SO MUCH ELSE, THIS ALL BEGAN WITH Pushkin. His brief play about Mozart and Salieri was later parodied in Peter Shaffer's *Amadeus*, both in the original, stage version and the grandiose fairy tale that is the film. In 1897, however, Rimsky-Korsakov set Pushkin's lines, honestly, as a 45-minute operatic masterpiece named *Mozart and Salieri*—a work whose glories continue to unfold with repeated hearings. There was a Russian recording, with the towering Mark Reizen as Salieri and Ivan Koslovsky as an insinuating Mozart, that the present recording does not surpass; still, one need not offer any apologies about having this one available on CD. Baritone Pavel Gerdjikov is a most commanding Salieri, and tenor Avram Andreev sings the part of Mozart sympathetically. Stoyan Angelov, at the head of the Bulgarian National Choir and Radio Orchestra, conducts with loving understanding, and the recorded sound is rich. Playing time: 44:42. (Fidelio 1827. Distributed by Qualiton Imports, 39-28 Crescent St., Long Island City, N.Y. 11101.)

B.W.

VIRTUOSO TRUMPET WORKS BRILLIANTLY PLAYED

THE LP VERSION OF TRUMPETER STEPHEN Burns's debut album came out about a year ago on the recently launched Music Masters label (MMD 20074) under the aegis of the New York-based Young Concert Artists, Inc. The same product's reincarnation on CD is billed as a Musical Heritage Society recording, and its publisher is the English outfit called Academy Sound and Vision, Ltd. But all that really matters is that this is an appealing introduction to the considerable talents of a young American artist. Though in the concert hall Burns has proved himself as much at home with the contemporary repertory as with more traditional fare, here he concentrates exclusively on music from the late 17th and early 18th centuries (sonatas for trumpet and strings by Purcell, Corelli, Baldassare, and Torelli; a Suite in D by Jeremiah Clarke; and an arrangement—by Geoffrey Bergler—of John Stanley's famous *Trumpet Voluntary*). Technically, sonically, musically, and stylistically, Burns's playing is nothing short of brilliant, and under the soloist's direction the nine-piece accompanying ensemble offers very solid support. Playing time: 43:07. (Academy Sound and Vision, Ltd. CD DCA 528. Distributed by Musical Heritage Society.)

J.W.

CLASSICAL

A recording session with Kiri Te Kanawa, and other subjects



DAME KIRI (SECOND FROM LEFT) FLANKED BY PRODUCER LUBBOCK, CBS'S JOSEPH F. DASH AND CHRISTINE REED, AND CONDUCTOR TUNICK

COURTESY CBS

"SOUTH PACIFIC" TAKES SHAPE IN THE NORTH ATLANTIC

BY EDWARD GREENFIELD

DAME KIRI TE KANAWA WAS LOOKING flustered. "Someone has composed this to confuse me," she said, referring not to the latest avant-garde offering, craggy in its vocal demands, but to a deceptively smooth soliloquy in Rodgers and Hammerstein's *South Pacific*, which she has now completed for CBS.

Last year, Deutsche Grammophon made industry history by casting Leonard Bernstein's musical, *West Side Story*, from operatic strength; now, the same lineup of heroine and hero, Kiri Te Kanawa and José Carreras, promises a crossover album of similar attractions, whatever the custodians of Broadway authenticity might say.

The sessions for *South Pacific* were in

Henry Wood Hall, the church that ten years ago was turned into a rehearsal and recording venue for London's orchestras. The players—as near the full complement as made no difference—were the London Symphony Orchestra, and the conductor was a specialist in the genre of the musical, Jonathan Tunick, who had had to reorchestrate the piece from scratch when no one could find the original theater score. When it came to Dame Kiri pitching a note that she found tricky, he was ever eager to help. He simply changed his orchestration to give her a clearer cue, in a way he hardly could have done with Mozart, Beethoven, or Wagner.

Though the session I attended was a slow one, with only a few minutes of recording

completed in an hour and a half, it was a happy one. As her contribution to *West Side Story* demonstrated—and as was shown in the film that was made round those recording sessions—Dame Kiri has from girlhood been devoted to the musical. Portraying Nellie in *South Pacific*, she may not by nature be a Mary Martin figure, but during the takes she came much closer to that than to being a grand prima donna. In the "good time was had by all" department, CBS printed special tee shirts for the cast to wear at the sessions. A photographer did the rest, so that this Dame of the British Empire was revealed in a shirt sporting the motto, "There Is Nothing Like a Dame." She loved the photos.

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Where Dame Kiri was a little fazed by the seeming simplicity of her soliloquy, Carreras sailed through a similar passage of his own with no tremor of uncertainty whatever. The movie of the Bernstein recording of *West Side Story* brought out some "aggro" in the Carreras sessions, but I predict that the film on the *South Pacific* project will show him in better form. Carreras's worst hang-up came when a new take was about to start and he felt a sneeze coming on. He simply held his nose and all was well. In any case, the director of the film, Jonathan Fullord, is determined to make his *South Pacific* documentary as different as possible from the *West Side Story* one: more creative, perhaps with additional dream sequences.

Having cameramen present throughout the taping added to the problems of the recording producer, Jeremy Lubbock (who is British but has been working in Los Angeles for the last eight years), and of the engineer, Tony Faulkner. But by the time of the one session with Carreras and Te Kanawa together, things were working smoothly. Lubbock and conductor Tunick have worked with Barbra Streisand, and that obviously helped to make the sequences with a comparable star, Sarah Vaughan (CBS's choice as Bloody Mary), a high spot in the five days of recording. Vaughan was unique and unforgettable, as everyone told me she would be. Everything else has been done on the highest professional level, too, with Mandy Patinkin as Lieutenant Cable, and even London's premiere choir, the Ambrosian Singers (under its chorus master, John McCarthy), providing choral contributions. There were only 50 minutes of music in the original-cast album of *South Pacific*. This one will have more, but the big question is whether the recording will stretch to a second Compact Disc.

It was a very different choral session with André Previn when, as the first project for the Royal Philharmonic Orchestra's own record label, he rerecorded Sir William Walton's oratorio, *Belshazzar's Feast*, with massed forces (including twin supplementary brass bands) at Watford Town Hall to the northwest of London. The RPO is the orchestra that has greatly improved its finances through the pop success of the "Switched-on Classics" series, among other things. Previn, the new music director, naturally wanted to make the first recording for the RPO label. *Belshazzar's Feast* has long been a favorite of his, and it looks as though in his future RPO discs he will concentrate on similarly

large-scaled choral works, though not more than one a year.

In his first year after taking on the RPO post, Previn has made no fewer than 15 recordings with the orchestra, including a new complete *Nutcracker* ballet for Angel EMI and Brahms's *Ein deutsches Requiem* for Telarc. *Belshazzar's Feast* involved the Brighton Festival Chorus under its chorus master, Laszlo Heltay—the RPO's regular choral collaborators—though with Watford as the venue it was a problem for the singers to come up from Brighton, a town some 60 miles south of London. Early on there also were difficulties with the ensemble, but that only made it the more electric when, at the concluding sessions, the oratorio's big "alleluia" choruses of rejoicing were recorded. With characteristic cunning, Previn made sure to get the culminating five minutes right before taping the preceding, less demanding, section. His fill-up on the planned LP is a suite from Walton's music for the Laurence Olivier Shakespeare film *Henry V*, recorded with half a session to spare.

The RPO claims that it is the first orchestra in the world to have its very own record label, and one of the beauties of the scheme is that the players will benefit from royalties on the sales, just like the solo artists. The second conductor to go before the microphones was Sir Yehudi Menuhin, president of the RPO, who directed suites from Handel's *Water Music* and the *Music for the Royal Fireworks*. Projects in the pipeline involve such favorite conductors as Yuri Temirkanov, Kurt Masur, Sir Charles Mackerras, and Sir Charles Groves. Naturally, Ian McClay, the orchestra's managing director, does not want to upset other record companies, which are always potential employers; for that and other reasons, issues on the RPO label will be limited to three or four discs a year.

Meanwhile, for several other labels it has been a season of opera in general and of Verdi in particular. Decca/London has recorded the company of La Scala, Milan, for the very first time, in a new *Aida*, the label's first since the Herbert von Karajan version of 1959 with Renata Tebaldi and Mario Del Monaco. This one has Maria Chiara in the name part, with Ghena Dimitrova turning from her usual dramatic soprano repertory to the character mezzo role of Amneris. Luciano Pavarotti is the Radamès, Leo Nucci the Amonasro, and Paata Burchuladze the Ramfis. The Decca recording team tried a different location from the Scala company's usual hall, and it is delighted with the results.

Lorin Maazel conducts, and the whole project is based, with various cast changes, on the recent Scala production.

Burchuladze also appears in an incidental role—Padre Guardiano—in DG's new *La forza del destino*, being made in London with Giuseppe Sinopoli directing the Philharmonia Orchestra. Rosalind Plowright sings Leonora, Carreras is Alvaro, and Renato Bruson is Carlo, with Juan Pons as Melitone. This is the recording that was begun last year at sessions originally set up by EMI for a Riccardo Muti version with the Philharmonia, a plan that was then frustrated.

Decca engineers have also been busy with Verdi in Bologna. Riccardo Chailly has conducted *Macbeth* with Leo Nucci in the name part and Shirley Verrett as Lady Macbeth. Luis Lima sings Macduff. As principal conductor-elect of the Concertgebouw Orchestra, Chailly has been recording for Decca a Franck coupling: the *Symphony in D minor* and the *Symphonic Variations* with Jorge Bolet as soloist. And, with the Radio Symphony Orchestra of Berlin, Chailly has taped a Zemlinsky album, pairing *Die Seejungfrau* and *Psalm xiii*.

Choral works being recorded include the next in John Eliot Gardiner's Bach series for DG Archiv, the *St. John Passion*, in sessions linked to a live performance at London's Queen Elizabeth Hall. Similarly linked to a live performance is Carlo Maria Giulini's account of the Fauré Requiem for DG, with the Philharmonia Chorus and Orchestra. The soloists are Kathleen Battle and Andreas Schmidt. Meanwhile, in Philadelphia, Muti has been presiding over Berlioz's *Roméo et Juliette* for Angel EMI with Jessye Norman, John Aler, and Simon Estes as the principals.

Following up its success with Bernard Haitink's Glyndebourne-based release of Mozart's *Don Giovanni* two years ago, Angel EMI has been recording *Così fan tutte* with Haitink and the London Philharmonic Orchestra and a cast that includes Carol Vaness as Fiordiligi, Delores Ziegler as Dorabella, John Aler as Ferrando, Dale Düsing as Guglielmo, Claudio Desderi as Don Alfonso, and Lillian Watson as Despina. This time, the sessions are at Abbey Road.

Finally, and proving that there really is nothing like a Dame, Kiri Te Kanawa has added a new operatic role to her recorded repertory. In Munich with Sir Colin Davis and the Bavarian Radio Symphony Orchestra, she has taped for Philips the role of Marguerite in Gounod's *Faust*, with Francisco Araiza in the name part and Evgeny Nesterenko as Méphistophélès. ■

DONIZETTI:**"Ugo, Conte di Parigi."**

Price, Arthur, Kenny, Jones, du Plessis, Harry; Geoffrey Mitchell Choir, New Philharmonia Orchestra, Francis. Michael Williamson, prod. Opera Rara OR 1 (A, 3). (Opera Rara, Ltd., 25 Compton Terrace, Canonbury, London N1, U.K.)

DONIZETTI:**"Gabriella di Vergy" (1838);****Scenes from "Gabriella di Vergy" (1826).**

Andrew, du Plessis, Arthur, Tomlinson, Davies, Winfield, Harry, Jones; Geoffrey Mitchell Choir, Royal Philharmonic Orchestra, Francis. Don White and Patric Schmid, prods. Opera Rara OR 3 (A, 3).

DONIZETTI:**"Maria Padilla."**

McDonall, du Plessis, Jones, Clark, Caley, Earle, Kennedy, Davies; London Symphony Orchestra, Francis. Patric Schmid, prod. Opera Rara OP 6 (A, 3).

IF YOU THINK YOU HAVE KEPT UP WITH THE Donizetti revival simply because you're now familiar with *Parisina*, *Maria di Rohan*, and *Gemma di Vergy* in addition to old standards like *Lucia di Lammermoor*, *Don Pasquale*, and

L'elisir d'amore, you're mistaken. Thanks to London-based Opera Rara, an organization that searches out, edits, performs, and records neglected 19th-century operas, you have three more with which you ought to become acquainted—and beautiful, interesting works they are.

Ugo, Conte di Parigi is the earliest of the three. Composed for the La Scala season of 1831–32, it suffered by comparison with Bellini's *Norma*, which was first presented 11 weeks earlier. The casts were identical—Giuditta Pasta, Giulia Grisi, Domenico Donzelli. *Ugo* was withdrawn after only five performances, but the reason seems to have been the libretto rather than the music: The Milanese censors had brutalized the plot, leaving the characters practically without motivation. The story deals with Bianca's love for Ugo despite her engagement to the king. Ugo, however, is in love with Bianca's sister, Adelia, and she returns his love. The villainous Folco arouses the king's suspicions and ignites Bianca's jealousy, which eventually leads to her suicide. We never quite learn the reasons for Folco's shenan-

RARE DONIZETTI FROM BRITAIN



SOPHIE BAKER

CONDUCTOR ALUN FRANCIS ELICITS EXCELLENT PLAYING FROM EACH OF THE THREE ORCHESTRAS THAT PERFORM ON THESE OPERA RARA ISSUES.

gans, and he disappears from the opera about halfway through. What we are left with is some pretty glorious music, and if we have long since stopped complaining about the librettos of *Il Trovatore* and *La Gioconda*, there should be no problems here.

Janet Price sings Bianca, and she's a real treasure. A perfect trill, sparkling top, fireworks with class and taste, and an emotional commitment worthy of the best bring her Bianca vividly to life. A bit more heft in her lower voice would put Price in the forefront of today's bel canto/spinto sopranos. As Adelia, Yvonne Kenny matches Price note for note and trill for trill, particularly in the sisters' very *Norma*-like duet. Mezzo-soprano Della Jones brings polish to the trouser role of the king, and soprano Eiddwen Harrhy proves herself a valuable addition as the king's mother.

Christian du Plessis snarls musically through the part of Folco, convincing us that even if we don't know why he's behaving the way he is, at least *he* does. Maurice Arthur, who scoops and whines most of his top notes in the title role, is the weak link. Alun Francis leads the New Philharmonia Orchestra with zest worthy of early or middle Verdi, and the Geoffrey Mitchell Choir is first-rate throughout.

The rarest of these operas is *Gabriella di Vergy* (no relation to *Gemma di Vergy*, recorded several years back by CBS Masterworks), which is a reworking of a story Donizetti first set in 1826 for his own pleasure. A completely mutilated version of the score was performed in 1869, 21 years after his death. In an attempt to find the true score, Opera Rara's Don White and Patric Schmid went to the University of London's Sterling Library and discovered instead the manuscript of an 1838 adaptation, which had not only never been performed but was not even known to exist. Dating, as it does, from Donizetti's most creative period (between *Roberto Devereux* and *Poluto*), it is a great find.

The story is grim: Gabriella is forced to marry Fayel, although she still loves Raoul, whom she believes to be dead. When Raoul shows up, very much alive, Gabriella remains faithful to Fayel, but she and Raoul profess their mutual love. Fayel overhears this and challenges Raoul to a duel. Fayel kills Raoul in the duel and brings the victim's still-warm heart to Gabriella in a vase. Understandably, she dies of shock, but not before cursing Fayel: "Beware, you madman, beware you monster/The hand of God is reaching out for you/May it fall upon your abominable head/And overcome you with hatred and squalor." Clearly not an opera for the kiddies.

The music, fortunately, is far more palatable; indeed, much of it is top-drawer mature Donizetti with set pieces that allow the action to continue and cabalettas that are dramatic and flamboyant rather than merely flamboyant. Of particular note are the wonderful duet of Gabriella and Fayel that closes the first act, the duet for the two men in

Format Key

- Ⓛ LP
- Ⓜ Cassette
- Ⓢ Compact Disc
- Ⓥ Videocassette
- Ⓦ Videodisc
- Ⓞ Open reel

RECORDING INFORMATION

(A) analog original

(D) digital original

Large symbol beneath title indicates reviewed format. Small symbols following catalog number of reviewed format indicate other available formats (if any).

Catalog numbers of all formats of a particular recording usually are identical except for differing prefixes or suffixes. Catalog numbers of formats other than the reviewed format are printed only if their basic numbers differ substantially from that of the reviewed format.

Arabic numeral in parentheses indicates number of items in multi-item set. Unless otherwise indicated, all multi-LP sets are in manual sequence.

sixths and thirds, the touching ensemble at the end of Act II, and Gabriella's emotion-packed final scene.

Milla Andrew makes a fine impression as the unhappy heroine and seizes her opportunities to sing both long-lined and florid music with abandon. Christian du Plessis, the Fayel, carries much of the work's weight, and he carries it well. He uses his soft-grained baritone superbly throughout; at the opera's start, his control of the line is impressive, and after jealousy takes over, he is properly menacing. Bass John Tomlinson makes the most of the aria and cabaletta belonging to the role of Philip, while Maurice Arthur, still without the most ingratiating voice in the world, brings great energy to the part of Raoul. Alun Francis again is the conductor. He coaxes beautiful woodwind playing from the Royal Philharmonic Orchestra and keeps the levels of both sadness and fury high. Once more, the Geoffrey Mitchell Choir is an asset to the performance.

Side 6 of this album offers three excerpts from the 1826 version of the work. Here, Gabriella is sung by Eiddwen Harrhy and Raoul (originally a *travesti* role), by Della Jones. Both ladies perform this extraordinarily florid, almost Rossinian, music brilliantly.

Mana Padilla, the latest of the three operas in order of composition, received its premiere at La Scala in December of 1841, making it the 68th of Donizetti's operas. To put it in perspective, it appeared one year after his *La Favorite* and a year and a half before Wagner's *The Flying Dutchman*. There isn't a dull note in the piece, nor an unsatisfying moment, despite some of the old-fashioned (for Donizetti, at the time) set pieces. Like Verdi's *Ernani*, which was to appear a mere 15 months later, it is bursting with musical energy.

The libretto by Gaetano Rossi (who later collaborated with Donizetti on *Linda di Chamounix*) involves Maria Padilla, secret wife of

Don Pedro of Spain. Her father, thinking that she is merely the king's mistress, challenges him, is imprisoned and beaten for this, and goes mad. The original idea was to have Don Pedro publicly acknowledge Maria as his queen just before he was to marry Blanche of France, after which, exonerated, Maria was to commit suicide. As usual, however, the Milanese censors would not permit a royal suicide and insisted that the libretto be rewritten so that Maria would die of an excess of joy! This is apparently the ending that was originally performed. It has since been lost, and the variation that Donizetti and Rossi created—wherein Maria is recognized as queen, her father regains his sanity, and everyone lives happily ever after—has been recorded here.

In addition to a stunning duet for Maria and Inez (her sister), a mad scene for tenor, and a baritone *romanza* accompanied by flute, there are ensembles and an aria-finale that would leave almost anyone standing in the aisles. Maria is cut from the same cloth as Elizabeth and Anne Boleyn, and the role calls for the kind of voice that Donizetti found so appealing, with flexibility and strength at both ends and indignant fire in the middle. Lois McDonall comes close to making it on all counts, and if she's missing the greatness that Montserrat Caballé could have brought to the part, who isn't? Della Jones sings Inez with great warmth and feeling, and Graham Clark, as Don Ruiz, Maria's crazed father, sounds properly distraught. Once again, Christian du Plessis is superb—this time in the pivotal role of Don Pedro, where he is flexible, nasty, and dazzling all the way up to an A natural. The smaller parts are all well-taken, and conductor Francis gets great playing from the London Symphony Orchestra. The Geoffrey Mitchell Choir, with plenty to do, does it splendidly.

Despite the absence of international star names in any of the casts of these recordings, there is not a hint of provincialism in the performances. The recorded sound is excellent throughout, with the exception of a bit of end-of-side overload at times. Moreover, each boxed set is gloriously presented and includes a complete Italian-English libretto along with a second illustrated booklet providing copious notes on performance history and musical merits and an account of the rediscovery of each opera. The care with which each of these recordings has been undertaken is evident and welcome—the larger record companies can learn a great deal from Opera Rara—and the repertory is essential to the collections of 19th-century-opera lovers. *Rara* indeed! *Robert Levine*

COPLAND:

Billy the Kid; Rodeo (complete ballets).

St. Louis Symphony, Slatkin. Marc Aubort and Joanna Nickrenz, prod. Angel EMI 4DS 37357 (D). ⓁⓄ

THESE HANDSOMELY RECORDED, INCISIVELY played performances of Aaron Copland's two most popular compositions are uncut:

They are the complete ballets, in other words, rather than the shorter suites later prepared by the composer for concert use. The cuts in *Rodeo* amount to about five minutes of music (including a clever barroom piano interlude composed by Leonard Bernstein at Copland's request), the removal of which serves to tighten up the musical argument. The cuts in *Billy the Kid* are another matter entirely. Copland's suite contains, by his own reckoning, "about two thirds of the original ballet score," and the restoration of the missing passages here makes *Billy the Kid* a much more substantial work, a popular counterpart to such explicitly serious products of Copland's middle period as *Appalachian Spring* or the *12 Poems of Emily Dickinson*.

Leonard Slatkin and the St. Louis Symphony are in superb form throughout: St. Louis may not be one of America's "big five" orchestras, but you couldn't prove it by this fine recording. Richard Freed's liner notes, in keeping with the barbarous custom at Angel these days, are ruthlessly and senselessly abridged on cassette. *Terry Teachout*

ELGAR:

Violin Concerto, in B minor, Op. 61.

Ⓛ Kennedy; London Philharmonic Orchestra, Handley. Andrew Keener, prod. Angel EMI CDC 47210 (D). Ⓛ AE 34474. ☐ 4AE 34474.

ELGAR HAS NEVER PROVED AS "EXPORTABLE" A composer as one might expect. For American audiences, there can be an unrelentingly stodgy, Victorian streak to his work. Yet his finest creations—among them the *Enigma Variations* and the Cello Concerto—are free of sentimental excess and combine Brahmsian warmth and structural rigor, Wagnerian chromaticism, and a peculiarly British modality in an unmistakably personal style.

The Violin Concerto (1910) is not as consistently inspired. Despite gorgeous passages, it can turn long-winded and saccharine. Consequently, one must walk a fine line in order to communicate this piece convincingly: The abundance of emotion requires a soloist who will throw himself into Elgar's world with unrepentant Romanticism yet always beware of overwhelming the music with too much feeling.

Violinist Nigel Kennedy, not yet thirty years old, is just such a performer. A student of Yehudi Menuhin in England and Dorothy DeLay in New York, Kennedy has been building a reputation as an effusive artist in the grand Romantic manner (readers may recall his superb recording of the Elgar Violin Sonata, Chandos ABRD 1099). In the concerto, his interpretation is nothing short of miraculous. To convey this music is to embrace it with abandon, and that he does, filling its melodies with lush portamentos, fluctuating rubatos, and a sumptuous yet varied tone. Yet he is able to leave the bombast behind, molding phrases in a refined and poetic manner. Like his teacher Menuhin, he knows how to use hesitations in tempo to stretch a phrase to its utmost without ever disrupting its flow. And like Menuhin, he can

communicate the music behind even the most ephemeral virtuosic passagework.

Kennedy is fortunate to have Vernon Handley and the London Philharmonic Orchestra as partners in this venture. Elgarians to the manner born. Throughout the concerto, Kennedy and Handley display a remarkable unanimity of approach, despite the many changes of tempo and mood.

British critics have been overwhelmingly enthusiastic about this disc; it won *Gramophone's* coveted "Recording of the Year" award in 1985. I concur with that magazine's estimation of the performance, but I cannot agree with its opinion of the engineering. Though the orchestral tone seems well suited to Elgar—rich, somber, never flashy or brilliant—the violin is distant and muffled. Aiming for a "natural" ambience, the engineers succeeded only in obscuring the violin within the mass of orchestral sound. Do not be deterred, however, from buying this disc: Kennedy's Elgar is not likely to be surpassed for years to come. *K. Robert Schwarz*

HAYDN:

Solo Cantatas: *Miseri noi . . . Funesto orror**; *Arianna a Naxos†*; *Berenice, che fai**.

Ⓛ Bártfai-Barta; McGegan†; Savaria Symphony Orchestra, Petró*. András Székely, prod. Hungaroton HCD 12432 (D). ☐ ☐ (Distributed by Qualiton Imports, 39-28 Crescent St., Long Island City, N.Y. 11101.)

HAYDN:

The Seven Last Words of Christ (oratorio version).

Ⓛ Kincses, Takács, Korondy, Gregor; Budapest Chorus, Hungarian State Orchestra, Ferencsik. János Mátyás, prod. Hungaroton HCD 12199 (A). ☐ (2). ☐ (2).

IN HIS LATE YEARS, HAYDN PRODUCED MASTERWORKS in a variety of forms, and though many of these are now infrequently performed, none are more consistently neglected than the vocal pieces. He was a far more astute opera composer than posterity has deemed him to be, and his skills at vocal characterization and dramatic planning are especially evident in his solo cantatas. The three that Hungaroton has selected—*Miseri noi . . . Funesto orror* (1786), *Arianna a Naxos* (1790), and *Berenice, che fai* (1795)—are stunning, opera-inspired scene complexes, consisting of accompanied recitatives and composite arias. Haydn lavished some of his most ravishing music on these works, which display the rich orchestration, long-breathed lyricism, expressive chromaticism, and startling contrasts so characteristic of his late style.

No easy task awaits those who would perform these cantatas: They require a soloist with vocal agility, a wide range, and interpretive power. Although soprano Éva Bártfai-Barta strains in her upper range, turns indistinct in her lower, and occasionally tends toward the sharp side of pitches, she displays a dramatic flair that more than compensates for her shortcomings. Her vibrant spirit is complemented by her sensitivity of phrasing and by the ease with which she shades vocal

Critics' Choice

The most noteworthy releases reviewed recently

BACH:

Sonatas and Partitas for Solo Violin, B.W.V. 1001-6.

Mintz. Ⓛ Deutsche Grammophon 413 810-2, May.

BERIO:

Sinfonia; Eindrücke.

The New Swingle Singers, Orchestre National de France, Boulez. Ⓛ RCA Erato ECD 88 151, June.

CANTELOUBE:

Songs of the Auvergne (18).

Gomez; Royal Liverpool Philharmonic Orchestra, Handley. ☐ Angel 4AE 34471, May.

FAURÉ:

Requiem; Cantique de Jean Racine.

Ashton, Varcoe, Scott; Cambridge Singers, City of London Sinfonia, Rutter. ☐ Collegium COLC 101, Apr.

HANDEL:

Solomon.

Watkinson, Argenta, Hendricks, Rodgers, Jones, Rolfe Johnson, Varcoe; Monteverdi Choir, English Baroque Soloists, Gardiner. ☐ Philips 412 612-4, June.

HAYDN:

Symphonies Nos. 94 and 96.

Academy of Ancient Music, Hogwood. ☐ Oiseau-Lyre 414 330-4, June.

MAHLER:

Symphony No. 5.

Philharmonia Orchestra, Sinopoli. Ⓛ Deutsche Grammophon 415 476-2, June.

REICH:

The Desert Music.

Reich, chorus, members of the Steve Reich Ensemble, members of the Brooklyn Philharmonic Symphony Orchestra, Thomas. ☐ Nonesuch 79101-1, Apr.

ROSSINI:

Overtures (8).

Orpheus Chamber Orchestra. ☐ Deutsche Grammophon 415 363-4, Apr.

TIPPETT:

Sonatas for Piano, Nos. 1-4.

Crossley. Ⓛ CRD 1130/31, June.

RECITALS AND MISCELLANY

THE RECORD OF SINGING, VOL. 3.

Various vocalists, orchestras, and accompanists. Ⓛ Seraphim IM 6143, May.

timbres. In *Aranna a Naxos*, a work that survives only in a score for voice and keyboard, Nicholas McGegan provides the virtuosic fortepiano accompaniment.

Less successful is Hungaroton's recording of *The Seven Last Words of Christ*, an odd hybrid that exists in Haydn's own orchestral, string quartet, and oratorio versions. The last is heard here, and though all four soloists are commendable, the Budapest Choir proves sloppy in intonation and coarse in tone, especially in the upper reaches. Part of the problem seems to be the indistinct engineering of the original 1980 analog recording, a far cry from the brilliant, lifelike digital sonics of the cantata recordings (from 1982). Nonetheless, all involved vividly communicate the gripping emotional content of the work, which ranges from solemn pathos to grim, unrestrained fury.

K. Robert Schwarz



VIOLIST KIM KASHKASHIAN: BREATHTAKING VIRTUOSITY

CHRISTIAN STENGER

punctilious indications not to give the mute "e" endings a syllable of their own. Mady Mesplé, a light lyric soprano, stands out in the *Cinq mélodies populaires grecques*, and José van Dam's rich, dark baritone, sensitive musicianship, and high intelligence all add up to superb realizations of the *Don Quichotte à Dulcinée* trilogy and the *Deux mélodies hébraïques*. Felicity Lott gives definitive performances of the *Trois poèmes de Stéphane Mallarmé* (rarely heard not only because they require piccolo, flute, clarinet, bass clarinet, and string quartet, in addition to piano, but also because of Ravel's tentatively playing footsie with dodecaphony) and of the *Deux épigrammes de Clément Marot*. But why, oh why, did she not record the latter with harpsichord instead of piano? Jessye Norman makes *Si morne!* even more morbid than its almost ludicrously morbid poem, but in the *Chansons madécasses* she almost blows you out of the room—not by volume but by sheer musical intensity and power, combined with the seething, burnished beauty of that marvelous voice.

If you love Ravel, don't let this album slip past you, for its like will not soon come our way again.

Paul Moor

SATIE:

Secrete*!; Lent!; Réverie du pauvre!; Heures séculaires et instantanées!; Trois Gymnopédies!.

① Graf*, Bärtschif. Accord 149152 (D). (Distributed by Harmonia Mundi, U.S.A.)

MY HEART LEAPT UP WHEN I RECEIVED ADVANCE notice of this release, for it suddenly occurred to me that in all my musical peregrinations I had only once had the opportunity to hear a live performance of this legendary symphonic drama (in Munich in 1953, conducted by Ernest Bour) and had never even heard of a recording of it. Unfortunately, my heart leapt most of the way back down when I received the Compact Disc and discovered that Accord (a French firm, at that) had chosen not to record the version for singers with chamber orchestra but the alternative for a single voice with piano—a compromise. Both Kathrin Graf, a capable soprano with middling good diction (warning: no text provided), and Werner Bärtschi, a nimble, sensitive pianist, discharge their assignments creditably, but it adds up, really, to an opportunity missed.

Socrate shows, together with the rarely heard *Messe des pauvres*, the other side of the Satie who wrote those charming little piano pieces with eccentric, campy titles. Taking his text from three dialogues of Plato (including that hymn to ancient Greek pederastic love, *The Symposium*), the work's three parts present a portrait of Socrates, a dialogue between Socrates and Paedrus strolling beside the Illisus, and Socrates's suicide under orders from the state. If you don't know this work, you have a gap in your knowledge of our century's music.

Meanwhile, as the SCHWANN record and tape guide shows, there is a Candide L.P. of

d'Archi on Deutsche Grammophon and by Arthur Grumiaux, Georges Janzer, and Eva Czako on Philips, which are now withdrawn and with which I am not familiar, are reported to be more consistently straightforward. But this is a fine recording nonetheless, and it exhibits a better blend of string tone between the three players and more depth and subtlety of expression than the version by Isaac Stern, Pinchas Zukerman, and Leonard Rose that also appears on CBS.

The sound on the Kremer/Kashkashian/Ma recording is colorful and spacious. It is more reverberant than seems natural, but not enough to be disturbing or unclear.

Thomas Hathaway

RAVEL:

Songs (complete).

① Bacquier, Berganza, Van Dam, Lott, Mesplé, Norman, Baldwin; Orchestre du capitale de Toulouse, Ensemble de chambre de l'Orchestre de Paris, Plasson. Eric Macleod, prod. Angel EMI DSCX 3965 (D, 3). (3)

RAVEL FANS WILL WELCOME THIS THREE-LP SET as an unparalleled bonanza. I myself, an unreconstructed Ravel freak since even before his death in 1937, thought I knew his complete works through and through, but I'd never heard of several songs included here (the Greek folksong *Tripatos*; *Manteau de fleurs*; *Chanson écossaise* from *Chants populaires*, a harmonization of Robbie Burns's *Banks and Braes of Bonny Doon* [!]; and others), let alone had a chance to listen to or even read through them. Eric Macleod, this unique album's artistic director, deserves not only high praise but also heartfelt thanks.

He has distributed the works judiciously among the artists, all of them superior. Teresa Berganza sings a passionate *Shéhérazade* and the sultriest, sexiest *Vocalise-étude en forme de habanera* I've heard since that of the great Soviet Armenian alto Zara Dolukhanova, whose *humming*, in the middle section, almost melted the fillings in your teeth. Gabriel Bacquier contributes excellent *Histoires naturelles*, but, for purists, spoils the cycle—at least in part—by cavalierly ignoring Ravel's

MOZART:

Divertimento in E flat, K. 563.

① Kremer, Kashkashian, Ma, James Mallinson, prod. CBS IM 39561 (D). (3)

GIDON KREMER, KIM KASHKASHIAN, AND YO-YO MA play this poignant music with sensitivity, restraint, and a beauty and homogeneity of tone that make this the best of the few recordings of the work currently available.

The performance is particularly ennobled by the contributions of Kashkashian and Ma. Kashkashian's virtuosity is breathtaking: In the first movement, she executes the runs and passages with security and boldness. Equally impressive is the way she supports the others when the music calls for it, without drawing attention to herself or becoming submerged. What stands out most of all, however, is the powerful impact of her sustained phrasing in passages like the "maggore" section of the fourth movement. Her playing here is overwhelming in its tonal splendor, seriousness of purpose, and freedom from any sentimentality.

Ma's playing is remarkable for its rhythmic buoyancy and warm tone and for the way he provides the underpinning for the others, which he does self-effacingly without disappearing as a presence among them. He does not dominate, and in this respect he resembles Emanuel Feuermann more than he does Pablo Casals (in any other regard, his playing is unique and resembles no one's).

Kashkashian and Ma appear to have had a calming effect on Kremer's usual style, which is to agonize over every nuance. To the extent to which his playing still hovers anxiously over the others', the performance is flawed: In a passage traded from one instrument to the next, where Ma and Kashkashian play subtly, Kremer may pick at the phrase by swelling now one note and holding onto now another. He is always the soloist, even when the violin part merely ornaments the principal line below, and on occasion he draws the other two along with him into making the expression overblown.

The performances by the Trio Italiano

Socrate by that outstanding Viennese ensemble, Die Reile, conducted by Friedrich Cerha (Candide 31024). For the time being, I would stick with it, even though it may not match the sonic excellence of this Accord Compact Disc. *Paul Moor*

SCHUMANN:

Symphonies: No. 1, in B flat, Op. 38 ("Spring"); No. 4, in D minor, Op. 120.

Vienna Philharmonic Orchestra, Bernstein. Deutsche Grammophon 415 274-2 (D). 

SCHUMANN:

Symphony No. 3, in E flat, Op. 97 ("Rhenish"); Concerto for Piano and Orchestra, in A minor, Op. 54*.

Frantz*; Vienna Philharmonic Orchestra, Bernstein, Deutsche Grammophon 415 358-2 (D). 

MANY PEOPLE, PERHAPS EVEN SOME CRITICS, will react negatively to these performances. Their identity is already well known, and their ranks include a few musicians of note. They are the people who fancy that Schumann's first name is (or ought to be) Felix, Johannes, Ludwig, Antonín, Pyotr, or even Anton!

Those who have known all along that Schumann's first name is Robert, and that his marvelous symphonies are somewhat difficult to perform, know also that Leonard Bernstein established his supremacy in these works way back in the mid-1950s with a recording of the Second Symphony, accompanied by a 10-inch disc offering commentary. After that, Bernstein recorded the whole cycle, performances marked by their total identification with the composer's peculiar lyric mastery and let down only by less than admirable orchestral playing and crude recorded sound. A close to definitive set nonetheless.

Now Bernstein comes around again with accounts that are equal to, yet different from, his earlier efforts. The new versions lack perhaps some of the zest of two decades ago, but they are altogether more ripe, firm in conviction, and overwhelmingly convincing. On these two Compact Discs, the only minus that registers is Justus Frantz's overly placid treatment of the Piano Concerto. He certainly commits no errors, but he offers no individual impulse or inspiration.

But what of the Second Symphony, performed in Vienna in early November 1985 but not yet released? [Deutsche Grammophon appears to be holding up release of the Second so as not to supersede too quickly Giuseppe Sinopoli's account, also with the Vienna Philharmonic, released two years ago.—Ed.] There is no reason to believe that the maestro's mastery will be any less persuasive, even if the Second Symphony is, as many claim, the most difficult of all four to bring off. Indeed, having heard a performance some years ago by Bernstein and the Boston Symphony, I feel certain that the reaction will be what that audience's was then: not commonplace applause, but roars of enthusiasm. *Thomas L. Dixon*

SCHUMANN:

Works for Piano.

 Rosen. Klaas Posthuma, prod. Nonesuch 79062-1 (D, 3).  (3).



Ten Impromptus on a Theme of Clara Wieck, Op. 5 (first ed.); Davidsbündler tänze, Op. 6 (first ed.); Carnival, Op. 9; Sonata No. 1, in F sharp minor, Op. 11; Kreisleriana, Op. 16 (first ed.); Poems for the Piano (first version of the Phantasie in C major, Op. 17).

AFTER SEVERAL HEARINGS OF THIS ABUNDANT serving of masterpieces, the fact that most of these performances are of first editions rather than the more commonly heard versions simply did not carry for me the emotional or scholarly punch that it might for some. But if Charles Rosen proves anything to this critic (that is, to an ardent Schumann lover but not a Schumann scholar), it is that there is ample room for both versions.

I probably would not select any of these fine performances as a first choice for interpretation. However, Rosen does lead me to an unexpected revelation: With his playing on these discs, as on so many others he has offered in recent years, he comes just about as close as is possible (or necessary) to being our present-day successor to the great Egon Petri . . . one of the finest "catholic" pianists of the first half of this century. I can't think of a much higher compliment. This set should find a secure place on the shelf of any Schumann lover as well as anyone truly interested in the top levels of scholarly keyboard artistry. *Thomas L. Dixon*

STRAUSS, R.:

Symphony in D minor; Interlude; Kampf und Sieg.

 Hong Kong Philharmonic Orchestra, Schermerhorn, Teije van Geest, prod. Records International 7003-1 (D).  (Distributed by Harmonia Mundi, U.S.A.)

THE HONG KONG PHILHARMONIC'S ENTERPRISING recording policy of delving into the last unknown recesses of the symphonic repertory now presents us with three world premieres by Richard Strauss. The Symphony in D minor (not to be confused with the F minor work, Op. 12, of 1884), the ambitious product of a not yet sixteen-year-old lad, brought Strauss lively applause when it was first performed, though the composer did not deem it worthy of an opus number and wisely allowed it to drop into oblivion. It is an impressive accomplishment, surprisingly mature in technique, but it does not show any marked individuality of utterance or idiom and remains at best a curiosity. The two inner movements, being more concise, are the most enjoyable.

Kampf und Sieg originated in 1892 as one in a series of *tableaux vivants* (a genre much favored in late-19th-century music, one that gave birth to such evergreens as *In the Steppes of Central Asia* and *Finlandia*) to honor the ancestors of the Grand Dukes of Weimar. It is battle-and-victory music of a rather obvious and noisy kind, which found good use 33 years later in the film version of *Der*

Rosenkavalier, when Strauss needed music to characterize the Feldmarschall, who did not figure in the operatic version.

Before deciding this record is not worth looking into, you should hear *Interludio*—just under six minutes of stunning music, the kind to puzzle all your musical friends with. In 1930, Strauss worked on a highly personal adaptation of Mozart's *Idomeneo*, still practically unknown in those days, hoping to give the opera a new lease on life. He rewrote much of the music and added this symphonic interlude as a conclusion to Act II, where it serves as an expression of the people shattered by the appearance of the sea monster. Incorporating just one short but unforgettable quotation from Idomeneo's aria "*Torna la pace al cuore*," Strauss wrote a slow movement as deep and brooding, as full of lovely harmonies and bold modulations, as any piece from his mature years. It sounds like a lost page from *Daphne*, and no Strauss lover should miss it! Both the performances and the recording are excellent.

Harry Halbreich

VILLA-LOBOS:

Choros Nos. 8 and 9.

 Hong Kong Philharmonic Orchestra, Schermerhorn, Teije Van Geest, prod. Hong Kong 7002-1 (D).  (Distributed by Harmonia Mundi, U.S.A.)

OF VILLA-LOBOS'S 12 EXTANT *CHOROS* (NOS. 13 and 14 are considered lost, though according to some sources they were never written down), six (Nos. 6 and 8-12) call for a large orchestra. Of these, only two have never before been recorded. The present release aptly fills the gap, and excellent performances they are.

Choro No. 8 is one of Villa-Lobos's masterpieces; it is hard to understand why we had to wait until now to get a recording of it, especially since the score has been available for at least 50 years. Written in 1925, with parts for two pianos (one treated as a soloist, the other joining the augmented percussion section, which includes a wealth of native Brazilian instruments), this 18-minute piece shows the composer at his most uncompromisingly modernistic, exploiting violent dissonant clashes and aggressive rhythms and achieving an overall tension that is electrifying. It is one of his tautest and most disciplined statements and surely deserves a place next to the better-known Nos. 6 and 10. *Choro* No. 9, of 1929, is less concentrated, more lyrical, and more relaxed, and though its melodic wealth and extrovert lyricism deprive it of the formidable impact of No. 8 at first hearing, it is a piece that grows on you.

Villa-Lobos's complex and rich fabric cries out for the most sophisticated sound quality, which is exactly what it gets here. With an excellent performance of No. 12 available on the Belgian Ricercar label (which may prove difficult to find in the U.S.), what we need now are up-to-date recordings of the remaining orchestral *Choros*.

Harry Halbreich

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MARIA CALLAS:

Maria Callas Live!

Collos. Various choruses, orchestras, and conductors. Fonfare DFL 8010X (A). (Distributed by Harmonia Mundi, U.S.A.)

BELLINI: Norma: Costa diva . . . Ah! bello o me ritorno. DONIZETTI: Lucia di Lammermoor: Il dolce suono . . . Ardon gl'incensi (Mod Scene). PONCHIELLI: La Gioconda: Suicidio! ROSSINI: Semiramide: Bel raggio lusinghier. VERDI: Macbeth: Vieni! l'affretta! Accendere! Nabucco: Ben io t'inveni . . . Anch'io dischiuso un giorno; La Traviata: Addio del passato.



THE EXCLAMATION POINT AFTER "LIVE" reflects the note-writer's belief that these recordings of the 1950s not only "preserve Maria Callas's performances in her healthiest vocal estate" but are superior dramatically to "her tamer" commercial studio recordings, where she lacked the stimulus of an audience to evoke that last drop of histrionic intensity.

The actual stimulus for Callas's "unique dramatic fervor" was not the audience but the music. Her response to that stimulus made her studio recordings—which I never heard called "tame" before, even in quotation marks—as unique as her stage performances. Often, it was before the studio mike, in fact, that she was able to avoid pushing her high notes to the point of occasional unattractiveness, as she was not always able to do in the opera house, even in the 1950s.

Moreover, her accompaniment in the studio, by orchestras like the Philharmonia, provided her with the support she seldom received in the opera house, where ragged and unrhythmical playing—heard on this record in "Bel raggio lusinghier" and "Costa diva"—was a hindrance. And in the studio, under conductors like Victor De Sabata, Tullio Serafin, Herbert von Karajan, and Vittorio Gui, Callas did not engage in what the unwitting note-writer correctly calls the histrionics that sometimes marred her performances outside. In the present performances of "Ardon gl'incensi" and "Addio del passato," for example, she pulls the music out of shape for a dramatic effect that she may have been able to sustain in person but

that seems excessive without that presence.

The jacket of this album does not name theaters, choruses, orchestras, or conductors (*Macbeth* may have originated from La Scala, conducted by De Sabata, and *La Traviata* may have been conducted by either Carlo Maria Giulini or Von Karajan). The sound varies with the source, being sometimes compressed, other times more agreeably open. In general, the high frequencies are shrill and distorted. There is a disturbing amount of pre-echo in some selections, presumably from print-through on the pirate tape copies used. Without having heard them, my inclination would be to purchase the more comprehensive collections on Angel EMI and Fonit-Cetra, which I would expect to sound as good as or better than this limited one.

Thomas Hathaway

HELEN-KAY EBERLEY:

American Girl: Arias for Soprano.

Eberley, Isaac. Helen-Kay Eberley, prod. Ebsko 1007 (A) [17261/2 Sherman Ave., Evanston, Ill. 60201.]

BARBER: Vanessa: Do not utter a word. COPLAND: The Tender Land: Thank you, thank you all. FLOYD: Susannah: Ain't it a pretty night; Come back, oh summer. HOBY: Summer and Smoke: No, I haven't been well. MENOTTI: The Medium: Bravo! And after the theatre, supper and dance; The Old Maid and the Thief: Steal me, oh sweet thief. MOORE: The Ballad of Baby Doe: Willow, where we met together; Gold is a fine thing.



THERE IS ONE MAJOR FLAW TO THIS RECORDING, but it has nothing to do with production, surfaces, program notes, or performance: This lovely singer deserves to be supported not by a lonely piano but rather by the National Philharmonic Orchestra of London, led by that most expert crafter, Charles Gerhardt, a conductor who could provide her with the romantic orchestral tapestry her art so fully merits. The fact that economics limited this enterprise, however, should not deter any potential buyer, for this is a marvelous collection of some of the most hauntingly affecting operatic arias by American composers. Indeed, the entire recital is a gem of vocal art, with delights of the already known and the hardly known awaiting anyone curious or wise enough to make the investment. A genuine find! Thomas L. Dixon

BACKBEAT

Country used to be a music of the dispossessed. If you look hard enough, you'll find it still is.



JON INGREDEN

A LOT OF MEKONS (ABOVE): THEY MAY BE A PUNK BAND, BUT THEY THANK "COWBOY JOE'S RADIO RANCH" IN THEIR LINER NOTES.

LOST HIGHWAY

B Y R J S M I T H

IN HUNDREDS OF PARTICLEBOARD CUBICLES scattered around the bowels of Nashville, the yeomanry are grinding it out. Hunched over pianos, making marks on paper, they're doing what thousands like them have done for some 30 years. And for many years to come, the tunes will continue to be ground out like sausages.

Things are far from well in Music City, however, and from the pieceworkers and part-time pickers right up to the fat cigar boys, everybody knows it. The royalty is getting older, and its strategists have unwisely ceded the youth market to rock 'n' roll. More crucially, sales are in steep decline: Hit records are selling perhaps one third of what they were a decade ago. The current crisis in

Nashville isn't just about the waning market for familiar product, the thick strings and other pop adjustments, the easy-chair ballads and lowest-common-denominator lyrics that once served the town so well. The audience itself is thinning out. Though the music still flows, the tradition is dying.

But if people aren't buying like they used to, they're at least passively listening like never before. According to the Country Music Association, at the time the system was entering its splendor, the early '60s, there were fewer than 100 country radio stations. Today, there are over 2,000. They must be doing someone some good: *Big Trucks* magazine recently praised country deejays as "people who have no doubt kept you compa-

ny in the cab during some long hours when maybe all that stood between you and a dangerous rest was the sound of someone else's voice and the latest popular music." But the sad fact is that most country radio has become as ahistoric and homogeneous as Nashville and not different enough from "a dangerous rest." It has simply institutionalized the shallowness of the Music City method.

And yet if the mainstream is in trouble, there is no shortage of solid, satisfying new blood. Semitraditionalists like the Judds, Reba McEntire, and Ricky Skaggs offer a rootsy directness and no-frills arrangements that the orthodoxy has been quick to claim as its own. Which, not incidentally, is just fine

with all the artists. Unlike the "outlaws" of the '70s (Waylon and Willie and Tompall Glaser, for example), performers who made a big thing about the defects of the Nashville system, the present crop of individualists is happy to let the industry work for them. They don't make an issue of their musical differences.

By far the most talented of this crew is the former rancher and current agent's dream, George Strait. One of the few artists whose sales are steadily increasing, the establishment has done quick work finding a niche for him: Strait has garnered "Male Vocalist of the Year" laurels from both the Country Music Association and the Academy of Country Music. Perhaps nothing so much illustrates the lack of a rebellious streak in the newcomers as the first Strait records, where, along with the swinging, there were also tunes comfortably "country-politan" (an ultracommercial '70s sound exemplified by Kenny Rogers). Strait doesn't seem quite sure which direction to go in: urban-cowboy professionalism or good ol' Western swing and ballads. Perhaps he never made up his mind, but let the failure of country-politan decide things for him. Because when the sound flopped after a few fat years, it seemed to give Strait the courage to develop the plainer, bluesy soulfulness that would make him a superstar.

Meaning that instead of being just one more brick in wall, his latest, *Something Special*, lives up to its title. Strait picks his songs the way Bill Buckley chooses his words: Not a tune goes to waste. There are a few Western swing invites to the dance floor, and fiddler Johnny Gimble and Strait's Ace in the Hole band aren't shrugging. But the pick of the record is a handful of dolorous ballads on which *everything* comes down to Strait's voice, a gift that does not fail him. It's hard to imagine the miniature that is "Lefty's Gone" being improved upon. He sings of standing in the October rain at a Dallas fair to hear Lefty Frizzell, of listening to him on the jukebox for the first time and instantly trying to imitate him. You can hear the chesty, Stygian sadness of Frizzell all over this record, but you also accept the sadness and soul as truly Strait's own.

Strait is a careful, image-conscious performer—a little bland, if truth be told. If one of the virtues of country's latest stars is their reconnection with everyday feelings, sometimes the everydayness of them becomes daunting. At best, their music avoids the facile gloss of Nashville lyrics, but it also ignores a lot of routine behavior that wouldn't make it in polite company. True, John Anderson has a nasty little song on *Eye of a Hurricane* about a man driven crazy by love, and you can hear a chainsaw revving up in the background. More often, the lack of unhealthy, unwholesome, or otherwise aberrant conduct on these records can be discouraging.

One man who likes George Strait plenty, and who is no stranger to aberration, is disc



HASIL ADKINS: ELVIS PRESLEY VIA A WEST VIRGINIA SHACK

COURTESY NORTON RECORDS

jockey Paul Aaron. His *Cowboy Joe's Radio Ranch* originates at public radio station WKCR in New York. Life changed for Aaron one day years ago at a Colorado State vs. University of Wyoming basketball game, when the Wyoming marching band played the Western anthem "Ragtime Cowboy Joe." In many ways, Aaron says, his radio show is just an excuse to play what instantly became his obsession: He has over 70 versions of "Ragtime Cowboy Joe," a collection that grows all the time. On a given show he may spin a few sides the Sons of the Pioneers cut in the '30s, then a tape of modern cowboy music somebody sent from Arizona, interspersed with interviews with rodeo stars. A regular feature, as it happens, are his attacks on the homogeneity of many big-city country stations. "I get too involved with it, sometimes. It's a hopeless battle. The music doesn't mean anything, and all the deejays

are predictable, patterned. There's no emotion." Many stations ignore country music's history, he says, and have become slaves to restrictive playlists. That's ironic, Cowboy Joe adds, "because shit-kicking music supposedly represents a freedom and openness, a laissez-faire thing. But I still have faith. I think as people become more exposed to the alternatives, have the opportunity to know what else is out there, they will, I hope, expect and ask for something that's a little more down to earth."

Dwight Yoakam would fit handsomely into Aaron's expanded sense of the playable. He's a comer who has gone from nonperson status to the on-deck circle in little more than a year—the time it took for his independently produced EP *Guitars, Cadillacs, Etc., Etc.* and honky-tonk voice to garner a lot of attention. His Warner Bros./Reprise debut (also titled *Guitars, Cadillacs, Etc., Etc.*) adds a few more tunes, but essentially duplicates the EP. "It Won't Hurt" (when he falls off his chair) is a barroom funk that should be covered by a classic juke-joint singer, say Webb Pierce. And "South of Cincinnati" has a neat lyric about lovers separated by more than the Mason-Dixon line. The album's mingling of standard themes with a rocking, almost Creedence-like band might turn a few heads in Nashville—where Yoakam briefly stopped about ten years ago, before the rigidity of the place encouraged him to ship off to L.A.

Anybody who hefts the classic "Honky Tonk Man" first track on his first record *better* have a few things in order, and Yoakam gets away with it. Yet if he's got his mind on the honky-tonks, he's also playing rock clubs, and this interesting crossover involves production and a guitar sound that are built for rock, not country, radio. As a singer, he's a little frustrating; he was born with a precious natural resource—his larynx—and though he hasn't quite figured out how to phrase or project a personality, give him time. A country audience surely will, if he finds out how to reach them.

The music of Strait and Yoakam was originally made by and for the dispossessed: itinerant workers, folks displaced from the country, or those who simply wandered into the city, either for good or for a Saturday night. It's about loneliness and chance encounters, bright lights and bubbles and beers. If the English band the Mekons don't play honky-tonk, they sure sound dispossessed, toying with the characteristic themes and sounds as they worry that there's no place on earth for them.

The Mekons' *Fear and Whiskey* may thank *Cowboy Joe's Radio Ranch* in the liner notes, but it's a punk record, melancholy and self-lacerating. The Mekons were punks in England ten years ago, and punks they remain (though "they" are hard to pinpoint, since approximately 70 members have passed through this buzzing hive of Bohemian collectivity since the beginning). Fixing to have

(CONTINUED ON PAGE 79)

Selected Discography

GEORGE STRAIT

Something Special.

MCA 5605; 1985. □

DWIGHT YOAKAM

Guitars, Cadillacs, Etc., Etc.

Reprise 25372-1; 1986. □ (Distributed by Warner Bros.)

THE MEKONS

Fear and Whiskey.

Sin 001; 1985. (Distributed by Dutch East India Trading, 81 N. Forest Ave., Rockville Centre, N.Y. 11570.)

Crime and Punishment.

Sin 002; 1986.

HASIL ADKINS

Out to Lunch.

Norton ED 201; 1986. (Box 646, Cooper Station, New York, N.Y. 10003.)

Haze's House Party.

Norton LULU 001; 1986.

ACROSS THE



MICRODISNEY: THESE CORK FELLOWS PLAY THE BEST POP EVER TO HAVE EMERGED FROM IRELAND.

FEELICIA COHEN. COURTESY ROUGH TRADE

GREAT DIVIDE

RUEFLEX:**Flowers for All Occasions.**

⊙ Mike Glossup, prod. MCA 5733. □

THE POGUES:**Poetry in Motion.**

⊙ Elvis Costello, prod. MCA 36015.

CLANNAD:**Mecall.**

⊙ Steve Nye, prod. RCA NFL 1-8063. □

MICRODISNEY:**The Clock Comes Down the Stairs.**

⊙ Jamie Lane, prod. Rough Trade 10012-1. (Distributed by Big Time, 6777 Hollywood Blvd., 7th fl., Hollywood, Calif. 90028.)

NEVER BEFORE HAVE SO MANY IRISH PERFORMERS been so visible in London, where they have to be noticed if they're going to make it in Europe, or anywhere else for that matter. Most surprising is the popularity of North-

ern Ireland's Ruefex, whose pacifism and caustic anti-NORAIID political single "Wild Colonial Boy" recently caught the ear and imagination of the previously indifferent English press, which had ignored the band for eight years. Ruefex's lyrics, written by Belfast-born drummer Paul Burgess, are love songs to his hometown and his culture. It's all there in the rhythm and phrasing of his rough poetry, but nowhere more plainly than in the open spaces of "Wild Colonial Boy," a biting and provocative sketch of American-Irish armchair warriors. In a few terse stanzas, Burgess limns the far-from-the-action IRA supporter who "can jig and reel and dance/Well, in between the killing/That's what all us Irish do." The song is specific in its condemnation of those American sons of Ireland who raise money for guns to

keep the fires burning on Belfast's Shankill Road. But it also rebukes the Irish expatriate mentality that perpetuates a nostalgic and sentimental view of Ireland. It is that mythical country, Burgess implies, that draws misguided and partisan political support.

Most Irish popular culture—for example, contemporary traditional musicians like the Dubliners—reinforces the picture of the stereotypical citizen, poor but cheerful in the face of adversity. This character emerges wherever Irishmen congregate, reminiscing with late-night renderings of sentimental songs. Ruefex replaces these images with tough and tender portraits and parables set to the raw backdrop of postpunk short-of-thrash noise.

The Pogues, fused from ragtag ends of punk bands and the Irish instrumental

sound of North London's pub scene, use being Irish as a point of departure. Songwriter-vocalist Shane MacGowan fastens an angry and cynical wit upon souped-up but familiar songs such as Ewan MacColl's "Dirty Old Town" and upon drinking, brawling, workaday stock characters as found in "Sally MacClenane." Then he draws parallels between these parodies of Irishmen and the real thing. Unlike Ruefex, whose rough-and-tumble energy is willfully amateurish, the Pogues, augmented now to eight members (a few of whom are English) for the new four-song EP *Poguetry in Motion*, have always stretched their musicianship to its limits. This stuff, like much of London's current wave, leans toward reggae and Irish traditional—opposite but not opposing directions. As the members have grown more proficient they've added harmony and counterpoint that embellishes the emotional tone and temper of their words.

While the Pogues self-consciously embrace the Irish folk idiom, Clannad (Gaelic for family), the popular quintet comprising the Brennan brothers, sister Maire, and their twin uncles, is gradually working away from its history. Its roots are in folk-rock, sibilant Gaelic lyrics, and harp solos, but its future is in film and TV scores, especially since 1982's "Theme from Harry's Game" (composed for the BBC series) became a fluke hit. Clannad's brand of Irish music, featuring Maire's arch-top vocals and her brothers' smooth interpretations of myth, legend, and history, suits the television-viewing, science-fantasy-reading, AOR-listening audience that has grown up with the band.

The warm and pleasant sound of *Macalla*, which includes a charity track and a duet with U2's Bono, evokes equal parts Moody Blues and any respectable if uninspired Euro-pop synth outfit. *Macalla* still reflects Clannad's rural Donegal beginnings, best evidenced by "Caislean Oir," an echoing, near-choral Gaelic chant. But the group's becoming more mainstream, especially since its members have been busy scoring the English legend of Robin Hood (all 30 episodes) and have moved to Dublin. Their cosmopolitan crossover sound, however, accurately communicates the aspirations of their audience—both hometown friends and city contemporaries.

On the far end of the spectrum is Microdisney, from Cork, the best pop band ever to have emerged from Ireland. Its fanciful and offbeat lyrics set to danceable, memorable tunes are deceptively artless. Hidden in the slightly mournful vocals of "Horse Overboard" (from *The Clock Comes Down the Stairs*) and "Sun" (my favorite tune from 1984's *Everybody Is Fantastic*) are some deft rhyming couplets, real and imaginary modern tales, and turns of phrase that never beat you over the head with their cleverness. The best songs combine the group's infectious music, humor, and lack of melodrama. Microdisney's inclusion in this Irish wave is almost accidental. *The Clock Comes Down the Stairs*

Format Key

- Ⓛ LP/EP
- Ⓜ Cassette
- Ⓛ Compact Disc
- Ⓜ Videocassette
- Ⓛ Videodisc
- Ⓛ 12-inch single
- Ⓛ Open reel

Large symbol beneath title indicates reviewed format. Small symbols following catalog number of reviewed format indicate other available formats (if any).

Catalog numbers of all formats of a particular recording usually are identical except for differing prefixes or suffixes. Catalog numbers of formats other than the reviewed format are printed only if their basic numbers differ substantially from that of the reviewed format.

Arabic numeral in parentheses indicates number of items in multi-item set.

touches on various political issues, and it charts, almost conversationally, a full range of personal concerns. But the self-deprecating wit and lilt of Sean O'Hagen and Cathal Coughlan are lifted straight from the national character. In fact, this might be the band that bridges the Old World and the new Ireland most effectively.

Leslie Berman

THE ROLLING STONES:

Dirty Work.

Ⓛ Steve Lillywhite and the Glimmer Twins, prods. Rolling Stones OC 40250. ⓂⓁ (Distributed by Columbia.)

WITH *DIRTY WORK*, THE ROLLING STONES CLEAN up. Think about their new CBS contract, for a mere \$28 million. Look at the album cover: No hallucinogenic distortion, no exploitative images of women—just neatly spiffed rockers reclining on a modular couch. Sex and drugs are out of the picture, but this deft, strident album rocks nonetheless.

The Stones, most of whom are over forty, have finally liberated themselves from debauchery; in fact, Mick Jagger's lyrics grapple with being middle-aged. In "Back to Zero," which voices apprehension about the nuclear threat, the omnipotent attitude of adolescence has been replaced by a fearful acknowledgement of other people's power: It's not his future that Jagger's worried about as much as his children's. He also has discarded his poor-kid-in-a-rich-man's-house facade. "Winning Ugly," "Hold Back," and "Dirty Work" deal directly with the ambition that got him where he is, as well as the ambiguities of being on top. Fusing a slick bass line, AOR synths, and choral hoots that belong in a Baptist church, "Winning Ugly" uses a locker-room analogy to reflect on the pleasures and perils of playing dirty. "I want to win that cup and get my money, baby," Jagger proclaims lustfully, fully conscious of the defeated team's despair.

The Stones have always been notorious deployers of misogynist marketing. At the height of the mid-Seventies feminist movement, they advertised *Black and Blue* with a

billboard of a battered woman, bound and gagged; last year's *Undercover* sprawled a nude model (sans head) across its sleeve. But for every "Under My Thumb," there has been a "Wild Horses"; for every "Hey, Ne-grita," an "Angie." The Stones' hearts of gold have always glimmered beneath their whore exteriors. The love songs here sketch reality as a combination of lust, compassion, and frustration—yet this complexity sacrifices none of rock's urgency. "Had It with You" thrusts as directly as "Let Me Go." *Emotional Rescue*'s hard-nosed shove-off, but it recaps an angry moment taken out of the context of a long, passionate relationship. "One Hit (to the Body)" expresses surprise at how often sex connects with the heart. And the most tender sentiment comes from badboy Keith Richards. "Sleep Tonight," beautifully textured with acoustic piano and rich gospel harmonies, offers undemanding caresses to an exhausted lover.

Still, these guys know as well as anyone that content doesn't sell records. Groove does. Over the years, they've added a lot of trumps—reggae, funk, soul, gospel—to their co-opted blues hand. It's all laid down here with a conviction reminiscent of *Exile on Main Street*. But unlike that excellent album, *Dirty Work* isn't blurred by drugs and alcohol. The Stones credit co-producer Steve Lillywhite with disciplining them to tighten arrangements. Keyed by Charlie Watts's ever stark pulse, "Back to Zero" rolls easily from island sway to pop bounce. The title cut and "Had It with You" build off typical Stones riffs, but in each the band jumps from verse to chorus, Keith Richards's/Ron Wood's tangling guitars coming alive behind Bill Wyman's sure, swift plunks. Time may no longer be on their side, but the Rolling Stones remain on the cutting edge.

Rosemary Passantino

IRMA THOMAS:

The New Rules.

Ⓛ Scott Billington and Irma Thomas, prods. Rounder 2046. ⓂⓁ

ON HER STUNNING STRING OF SIXTIES HITS, Irma Thomas conveyed a woman's sensibility with a girl's voice. Though woefully underrecorded since then, she has aged more gracefully than any other New Orleans artist from that era. *The New Rules* is her most mature album ever in both sound and stance.

Thomas offers that rare combination of a note-perfect singer who is also a daring improviser. It's not just that she takes chances and delivers: She even makes it sound easy. Her voice has deepened over the years but has taken on more gospel inflections, too, allowing her today to swoop and soar like an Aretha Franklin or an Etta James. On "I Gave You Everything" she powers her way across the top of a funky New Orleans syncopation; on "Yours Until Tomorrow" she insinuates herself into the band's sound as if her voice were just another instrument. Then she cuts loose, leaving the others behind without sacrificing a bit of control. On

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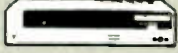







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"One More Time" she is crying, testifying; on "Good Things Don't Come Easy" she moves easily between two roles, mother and daughter. The jazz-flavored torcher "Gonna Cry 'til My Tears Run Dry" saddles her with an overly schmaltzy piano, but her late-night melancholy almost nullifies it.

Most of the time, though, she has no such problems with the band. Thomas herself co-produced these songs of hard-earned wisdom and came up with something about halfway between the second-line r&b of her classic days and the disco-influenced soul of her unjustly maligned 1979 effort *Safe with Me*. Working with guitar hooks courtesy of Guillermo Ladit and Leroy Aych and a bass that won't quit from Chester "Chuck" Henry, this band can kick through uptempo soul numbers like the title song or soothe out on any one of several memorable ballads.

"I Need Someone" probably best serves the modern Irma Thomas. This is a cautionary tale of mutual hope and betrayal, and Thomas is unflinching without sacrificing her tender side. There is simply no reason why she shouldn't be getting widespread recognition and airplay, especially in this era of radio programming known as "quiet storm," which refers to voice-oriented black adult pop. Because Thomas represents the form at its very best.

John Morthland

BANGLES:

Different Light.

David Kahne, prod. Columbia CK 40039. THIS COMPACT DISC HAS GIVEN ME GREAT pleasure for several weeks now, and "Manic Monday," the clarifying, ubiquitous first hit (certainly not the last), shows why. The arrangements, both instrumental and vocal, are deft and economical without being shy. Susanna Hoffs, who was also the lead voice on '84's "Hero Takes a Fall," has a youthful, nasal innocence that echoes Veronica Bennett, the Ronnie of the Ronettes. And the backing vocals are outstanding (all four Bangles sing well!), constituting a second lead that is able to move the music or the narrative along as necessary.

The next single, and my favorite, is Jules Shear's lovely "If She Knew What She Wants." Hoffs's lead vocal trades off line-by-line with the other voices in an aching pop facsimile of call and response. The bridge, a descending, tremoloed twelve-string run, adds a smart Hollies/Beatles/Byrds flashback to a song that was destined to be a hit anyway. Such attention to detail makes *Different Light* wear especially well. The dark coloration of guitarist Vicki Peterson's vocal on the witty "Walk Like an Egyptian," a percolating chug-and-clang track redolent of incense and peppermints, is set off perfectly by "oh weh oh"s from Hoffs and bassist Michael Steele. And I can't resist the heady mixture of pure pop and sterner stuff check-by-jowl, as in "Return Post" or "Let It Go."

Opinions vary as to whom the Bangles most recall from the mid-Sixties Golden Age. For my money it's the Hollies, who



SUSANNA HOFFS OF THE BANGLES: THIS AIN'T NO RETRO.

combined a bright pop orientation with memorable three-part harmonies and chiming guitars. Opinions also vary as to what the ultimate fruits of retro-rock are, but by me this ain't retro. Rather, the Bangles and producer David Kahne make extremely effective use of the work of honored forebears (cf. those selfsame Hollies and Doris Troy's classic "Just One Look") in a contemporary context, benefiting from an expanded historical palette, gorgeous studio craft, and more good voices than Fleetwood Mac. Now I'm just waiting for a smash remake of "Look Through Any Window."

A note on the sound is in order, since I took care to listen to the Compact Disc before I heard the LP. I'm neither a sophisticate nor a snob—I love my scratched 45s—but the difference, particularly in the dimensionality and tonal richness of the vocals on the CD, is astonishing. The simplest analogy is the difference between a 14-foot and a 9-foot ceiling. Of course, it is harder to read the CD lyric sheet.

Jeff Nesin

THE ORDINAIRES:

The Ordinaires.

The Ordinaires and Roman Baran, prods. Dossier ST 7509. (192 Sixth Ave., 4R, New York, N.Y. 10013.)

NINE INSTRUMENTS STRONG (CELLO, BASS, drums, and dual saxes, guitars, and violins) and sounding like a Portsmouth Sinfonia with chops (or a Mothers of Invention sans lyrics and contempt), the New York-based Ordinaires play what I've come to think of as Bohemian Art Music: a jokey synthesis of the longhair and the idiomatic that developed when enough Lower East Side new-music types decided it was no fun making records they wouldn't dream of playing at their own parties. Despite BAM superstar Laurie Anderson's mini-mass following, the most steadfast audience for this stuff is us critics, who in addition to being smart-aleck boho eclectics ourselves are the only people well versed enough to process all the external signifiers in a typical performance. Here, for example, is a list of the names I jotted down while listening to the Ordinaires' debut LP: Ornette Coleman, the Velvet Underground,

Glenn Branca, Philip Glass, Hüsker Dü, the Peking Opera, the Fabulous Flames, the Kronos String Quartet . . .

Just remember, though, that while critics are guilty of any number of transgressions, enjoying ourselves to excess usually isn't one of them. The Ordinaires resemble all of the above and none of the above, and their sound is so buoyant and jaunty that cranking up the volume finally makes more sense than indexing their sources. At just over five minutes, "Ramayana," drummer Jim Thomas's adaptation of an Indian raga, is the only track that drags. Brevity is a keynote on the other tracks: This band hits you with so much so fast that they have to be careful not to wear out their welcome. Tenor saxophonist Kurt Hoffman's wraparound anthem "The Last Song" is the album's most lyrical stroke, and Hoffman is also responsible for "Spring" and "Precious Flower," two detours into the pastoral that contrast nicely with the urban blare of alto saxophonist Fritz Van Orden's "Gridlock" and "Industry" and Hoffman's own polyrhythmic square dance "Nature." Despite its populist underpinnings, this isn't pop. It's Bohemian Art Music, made for dancing; in a utopian society, composers, performers, and critics would be out there on the floor with the rest of the rabble.

Francis Davis

JACKSON BROWNE:

Lives in the Balance.

Jackson Browne, prod. Asylum 9 60457-1.

IN AN INTERVIEW A FEW YEARS BACK, JACKSON Browne acknowledged the difficulties of tackling the big subjects, how even the best songwriting reduces complex issues to "just a song." On *Lives in the Balance*, Browne ignores his own advice and takes on Ronald Reagan, the military-industrial complex, the domino theory, imperialism, etc. That he succeeds so well is the result of a carefully rendered decision about how to make music that flies in the face of a reactionary national mood. *Lives in the Balance* pitches its tent somewhere between the acceptable mainstream face of *Born in the U.S.A.* and the bludgeoning one-world attack of Little Steven's *Voice of America*.

Lives sets Browne's intelligent singing against music that is likewise precise, articulate. The kicker here is the words, which rage almost uncontrollably hot against the music's measured, L.A. studio cool. The effects of Browne's 1985 visit to Nicaragua (he has since produced some of its New Song artists) can be heard in the anger of the title track. "Lawless Avenues" makes an inspired point paralleling senseless battles fought on the barrio's mean streets with the wasted Vietnam War. "For America" puts a spin on the new nationalism by waving the flag upside down. And throughout, Browne calls out those who send others to do their fighting.

The rocker in me wants Browne to cut loose just once; a vow of defiance and determination like "Till I Go Down" virtually de-

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mands it. But he never does, probably because others do it better. And maybe he knows to stay away from the battleground of today's hit-crazy radio, where some of Bruce Springsteen's and John Cougar Mellencamp's finest songs have been annexed by the decade's cultural imperialists.

This record proves Browne's original opinion was correct: The killing problems he addresses go far beyond the scope of a recording. As listeners we often expect too much from rock 'n' roll, but we have learned to accept a lot less than we're given here. For lives in the balance, Jackson Browne offers a steady hand in the difficult task of swinging the pendulum the other way. *Wayne King*

MICHAEL JONZUN:

Money Isn't Everything.

⊙ Michael Jonzun, prod. A&M SP 5111. ⊙

HE'D RATHER DO IT HIMSELF, WOULD MICHAEL Jonzun. Since emerging out of Boston with the Jonzun Crew a few years back, he has moved closer to frontman with each new release. Today he's virtually the whole show—which ain't bad, given that he's basically a producer and barely a singer or an instrumentalist.

This is not to suggest he hasn't accomplished plenty. Jonzun is exacting, requiring that every *dit dit dit* be just so, and his trademark of echoing electro-drums may be a tad obvious, but he can also slip a hard funk groove onto the radio without compromising it. He's the kind jive in an old-fashioned way, which means he knows the value of a good novelty song. And though Jonzun wouldn't dream of entering a studio that's anything less than state-of-the-technology, he's also something of a classicist, able to integrate a sweet Fifties vocal style with a hard Eighties funk band sound.

On *Money Isn't Everything*, smart arrangements partially obscure the fact that "Burn-in' Up" and "Games People Play" are mundane, uninspired reworkings of overplayed themes. The title track is even more deftly assembled, with each instrument stepping out of the tight ensemble to provide brief snatches of melody or embellishment against a backdrop of exploding drums. "Love at First Sight" has the feel of an oldies vocal-group record, even though Jonzun is far too studied a ballad singer. (At times, as on "I'm Still in Love," he sounds unbelievably drecky.)

The two real highlights are the insistent "That Girl's So Fine," which rides on a fat, rolling bass and thumping drums, and "The World Is a Battlefield," another solid rhythm groove, over which Jonzun gets, for once, credible urgency in his voice and teeth in his lyrics. Those two tracks close out Side 1, which is far superior to the flip. However much he might think otherwise, Jonzun still doesn't pull off a whole album. His best work remains *Lights Out* [see September 1984 review], which he coproduced for Peter Wolf, who had a few ideas of his own. Jonzun doesn't need a producer for himself, but he

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does need a collaborator of some sort. Bet he turns out an engaging greatest-hits album in a couple of years, though.

John Morthland

**FORCE M.D.'S:
Chillin'.**

Robin Halpin, prod. Tommy Boy TBLP 1010.
(Distributed by Warner Bros.)

THE FORCE M.D.'S, A YOUTHFUL QUINTET DISCOVERED harmonizing on the Staten Island ferry three years ago, merge the unaffected, innocent spirit of '50s street-corner singing with the brash, swaggering confidence of '80s hip-hop. Although they began with a debt to Frankie Lyman and the Teenagers (complete with letter sweaters), they've wisely distanced themselves from that concept on their second album.

Still, the group's forte remains ballads, and these are the prime ingredient that makes *Chillin'* so enjoyable. The single "Tender Love," prominently featured in the film *Krush Groove*, has won pop and MOR attention with its teasing, haunting piano introduction, gentle refrain, and serene harmonizing. Like many doo-wop groups, the Force M.D.'s lack a distinctive lead voice; thus their byplay and interaction are pronounced and intriguing, designed to compensate for the absence. The rising, sweeping exchanges of "Here I Go Again" keep the song from becoming one more teary-eyed bit about unrequited love, and "One

Plus One" has some silly but engaging choruses about chasing and enticing one's mate of choice. For fans of outrageous situations and challenges, "Force M.D.'s Meet the Fat Boys" and "Uh Oh!" will be especially rewarding; on the former, the kings of bluster go one-on-one with our boys, with hilarious results.

So far the Force M.D.'s have proved they can evolve and adapt without warping the techniques responsible for their success. Assuming they maintain their enthusiasm and don't get their hearts broken too often, they seem destined to expand and sustain their appeal as a youth ensemble with enough music muscle to hook fans outside their already established constituency.

Ron Wynn

**PRINCE AND THE REVOLUTION:
Parade.**


Prince and the Revolution, prods. Paisley Park
25395-1. (Distributed by Warner Bros.)

A SQUIGGLY BASS LINE, A FRIGIDIFIED DRUM track, and a guitar hook with an alligator's bite: "Kiss" is Prince's return to his roots, kind of. Its title has the directness of "Head"—homeboy wants to be diddled, although he's a little tamer now, his long-lost falsetto returning to insist, "Gotta not talk dirty, mama, if you want to impress me." Like "When Doves Cry" from *Purple Rain*, "Kiss" offers up textures that stand in stark, funky contrast to everything else on the radio. After a year when everybody from new-

comers the Jets to grayboy Phil Collins copped "the Prince sound," you can bet that somebody's listening to "New Position," where His Royal Badness declares, "You've got to try my new funk." I just wish he took more of his own advice.

Too many of the tracks on *Parade*, music from the film *Under the Cherry Moon* (due this month), are nothing more than ornate exhibitions. "Venus de Milo" is a standard movie love theme, and the only thing to relish about "Mountains" is its intricate drum program. Back on 1980's *Dirty Mind*, a foundation like this would have evolved into big fun to rock the house. On a Prince record, I don't need the pretentious "Christopher Tracy's Parade," flushed with horns, strings, and woodwinds, *Sgt. Pepper* re-born. Or the oh wow, "Life Can Be So Nice" sentiment, or the off-key Joni Mitchell-isms of "Sometimes It Snows in April." I can't remain loyal to such royal dribble. "When Doves Cry" was his last spare, driving tour de force, but the rest of *Purple Rain* was lush, and maybe working on that somewhat autobiographical flick clouded his vision: Most of the follow-up album, *Around the World in a Day*, the quirkiest record he has made, was written by his father, John L. Nelson.

But back to *Parade*. Prince shoots his "new spunk" all over a skittish "New Position," which segues seamlessly into the hip-grinding "I Wonder U." The highlights, however, are "Anotherloverholenyohead,"



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a propulsive groove laced with an irresistible female chorus, and the sonic charmer "Girls & Boys," featuring gutsy baritone sax ejaculations complete with solo. Using a sharp snare roll as a springboard, a marvelously stripped-down track featuring Sheila E. on drums, and an anxious vocal, "Girls & Boys" remains focused in both direction and purpose: to keep the body up. At 5:30, though, it's too short. It has one of those endings that says, "You want the rest, come see the show!"

After the backlash his fans dealt him last year when his overzealous bodyguards behaved rudely after the American Music Awards, and when he himself snubbed the "We Are the World" session, I thought Prince would have released more hard music like this to win back good favor. While I still admire his defiance of industry wisdom, he's no longer a symbol of teenage lust and rebellion. To me, Prince will always be a bikini-clad party-upper with adolescent desires: having a good time and getting laid. On *Parade* he approaches these feelings, but he's no longer in touch with them. Ain't getting old a drag? *Havelock Nelson*

JOE JACKSON:

Big World.

David Kerstenbaum and Joe Jackson, prods. A&M SP 6021. 

JOE JACKSON'S AMBITION HAS ALWAYS BEEN more laudable than its fulfillment, from his early Naugahyde-punk pop to his more recent serious-songwriter stylings. Like each release since the 1980 rhythm exploration *Beat Crazy*, his new album feels compelled to announce itself as a groundbreaking coup that seriously puts the artiste's popularity at risk. This year's shtick is a three-sided album (no jokes about the silent fourth side being his most eloquent work ever, okay?) recorded live directly to two-track during a series of performances earlier this year in New York. And like lots of Jackson's earlier ploys, *Big World* has its purely musical payoffs. The stripped-down band, reminiscent of the one on his debut *Look Sharp!*, applies a lean muscularity to melodies that have the elegant twists and turns Jackson has been perfecting since *Night and Day*. Even as the tunes shift from slightly funky rock ("Right and Wrong") to Arabic wail (the title track) to tango ("Tango Atlantico"), the crisp playing of the band makes them all of a piece.

Reinforcing its creator's will to fit together a global pop out of spare parts (and consistent with the album's notes and lyrics printed in six languages), *Big World* makes stops from the Falklands to China, taking in American success ("Wild West") and shifting Cold War alliances ("Forty Years"). But though the distances Jackson travels may signify outreach, he still thinks as superficially as a tourist, even (or especially) when he's singing about prototypically crude American tourists themselves in "The Jet Set." "Fifty Dollar Love Affair," a lament by a sailor on shore leave sung as a French café bal-

lad, ends up feeling as schematic and dutiful as a snapshot, an exercise meant to pass the time until Jackson's attention clicks to the next scene. Worse, instead of tossing off these songs like the sketches they are, Jackson the singer bears down on them with the same inflexible petulance he has used throughout his career, regardless of the subject. The tone of his voice often communicates moral superiority: When he asks in "Right and Wrong," the best track here, "Right and wrong—do you know the difference?," the unavoidable message is that Jackson does, his audience doesn't, and he's here to tell them. This from a man who had trouble coming up with an answer to the (infinitely more profound) question, "Is She Really Going Out with Him?" *Mark Moses*

JAZZ

JANE IRA BLOOM AND FRED HERSCH:

As One.

Jane Ira Bloom and Fred Hersch, prods. JMT 850003. (Distributed by Polygram Special Imports.)

JANE IRA BLOOM HAS RECENTLY EMERGED AS someone with a personal voice on the soprano sax, which makes her—along with Sam Rivers, Anthony Braxton, and Steve Lacy—one of the notable exceptions. Just managing to escape the influence of John Coltrane and his disciples (and epigones) is an achievement. 1983's *Mighty Lights* (on Enja), where she and pianist Fred Hersch were joined by bassist Charlie Haden and drummer Ed Blackwell, was a revelation; buoyed by such classy support, Bloom took off, her tone cool and full, her improvis thoughtful and aggressively original. Hersch's tasteful Bill Evans-influenced solos were the glaze on the doughnut.

The latest album from Bloom and Hersch is a series of duets that display, as the title suggests, the empathy of long-standing improvisational cohorts. But like many efforts by modernists working during a period when no particular jazz style seems more urgent than any other, *As One* is bound to strike some listeners as uneven. Not that every track isn't informed by the same high level of technique (if not inspiration), but someone who finds the plunking, thumping, and Doppler effects of the experimental collage "inside" to be engrossing may be put off by the trite Jarrett-like pastels of Hersch's "A Child's Song" (and vice versa . . . though you can see where my sympathies lie). Usually, an eclectic approach is better integrated. Here, with the most commercial and most avant-garde impulses herded into separate cuts, you may figure that at least one of them has to be a goof.

The best work on *As One* falls somewhere between these two extremes. Bloom's "Desert" makes judicious use of space and disorienting textures to evoke the isolation and alien landscape suggested by the song's title (and here, where the structure is loose, the

"as-oneness" of the duo is most evident). Hersch's "Janeology" is pointillistic bop (the model is Thelonious Monk's "Evidence"). Bloom's "Waiting for Daylight" is a fairly conventional piece with a lovely, expectant melody that serves Hersch particularly well—his delicately woven strands never become cloying. The duo seems inhibited by the responsibility of interpreting other people's songs. Wayne Shorter's "Miyako" and Alec Wilder's "Winter of My Discontent" are only pleasant.

Despite the questions that such a potpourri prompts, *As One* is a good album—for those already intrigued by Bloom. Those who are wondering what all the favorable press is about would do well to seek out a copy of *Mighty Lights*. *Richard C. Walls*

SHADOW VIGNETTES:

Birth of a Notion.

Shadow Vignettes Productions, prod. Sessoms 0001. (Shadow Vignettes Productions, P.O. Box 6812, Chicago, Ill. 60680.)

DENNIS GONZÁLEZ-JOHN PURCELL 8TET:

Little Toot.

Dennis González, prod. Daagnim 13. (Distributed by New Music Distribution Service, 500 Broadway, New York, N.Y. 10012.)

THE NEOCON MOVEMENT GIVES HOPE TO MUSICIANS rediscovering a balance between individual expression and group interaction. For as well as harnessing the buildup and release of musical tension, that balance is at the heart of the fecund, democratic spirit and joyous swing of jazz. Shadow Vignettes' *Birth of a Notion* and the Dennis González-John Purcell 8tet's *Little Toot* are excellent examples of forward-looking yet traditionally rooted records by what could be called modern-day territory bands.

Shadow Vignettes, composed largely of AACM members, is led by Chicagoan Edward Wilkerson, who also plays with the Ethnic Heritage Ensemble. True to the post-Muhai Richard Abrams/Art Ensemble of Chicago style, Wilkerson's compositions for this 24-piece band are eclectic, humorous, and imagistic. His writing and arrangements layer squealing obbligatos, careering riffs, and instrumental voicings. Yet amidst the detail, his contrapuntal lines and spare funk vamps create a breezy, compelling sound. And his concern for thematic development allows for a great deal of free blowing that never loses sight of the original point. Shadow Vignettes also gives Wilkerson the opportunity to indulge his love of a good yarn by performing in the ten-minute video short of the *Birth of a Notion* track "Honky Tonk Bud." (*Honky Tonk Bud* is available on VHS and Beta videocassettes from Urban Legend Films, 646 W. Webster, Chicago, Ill. 60614.)

The story concerns the FBI sting of a small-time drug dealer. Over a two-note bass line, John Toles-Bey recites the tried-and-true bad man tale, which is a variation on the legends of Stagolee or Killer Joe. The world may not need another deification of the black man as outlaw, but the composi-

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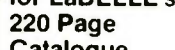
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tion's incremental development—from tremulous horns and ominous stalking rhythm to dazzling, taut solos poking through jaunty call-and-response passages—makes for a detective-show theme worth hearing. And worth seeing—the scene where the band members/jury find the defendant guilty as charged before jumping off into wailing shout choruses is priceless. Elsewhere, Wilkerson tips his hat to Duke Ellington on the bouncy “Strollin’,” where he uses *sanza* and strings to state the theme, and on the big band flag-waver “The Names Have Been Changed,” a swirling mix of oompahs and stomping drums.

For *Little Toot*, trumpeter Dennis González (cofounder of the Dallas Association for Avant-Garde and Neo-Impressionistic Music, or Daagnim) draws on the more hypnotic lyricism of hymns for his compositions. “Hymn for Rivers” and “Hear Our Prayer” are based on spirituals. On the former—a funky, hip-shaking dedication to reedist Sam Rivers—González contrasts Henry Franklin’s stumbling bass line and John Purcell’s peppery sax with stretched harmonies by a four-man horn section. “Hear Our Prayer” features vocalist Pat Peterson’s moans of rapture as González and Purcell evoke the feverish pitch of an amen postlude with furious instrumental glossolalia. González, whose own playing ranges from cranky and muted to warm and open, also covers a traditional mariachi, “*Dos Cosas*,” which loses its carnival flair when Purcell solos to an undisturbed straight-four rhythm.

Though Shadow Vignettes and the González-Purcell 8tet recall early styles, their taste for the “public domain” enriches contemporary jazz the same way regional music used to. That was before the emergence of bebop as “modern jazz.” These groups are evidence that the evolution continues in the hinterlands.

Don Palmer

HELEN MERRILL:

The Complete Helen Merrill on Mercury.

Kiyoshi Koyama, reissue prod. Polygram 826 340-1 (4).

ALTHOUGH SHE'S OF EASTERN EUROPEAN DESCENT, for me Helen Merrill will always be the ultimate WASP jazz singer. The basics of the black vocal tradition that inform the work of everyone from Ella Fitzgerald to Anita O'Day never left a mark on Merrill. She hardly embellishes a melody, let alone indulges in outright improvisation or, perish the thought, scatting. There isn't a stray blues or gospel inflection in her gossamer delivery. And though love and heartbreak are her story 90 per cent of the time, she keeps a tight lid on the drama. If repression were an art, Merrill would be its diva.

Behind the ice-queen mannerisms lie the subtle phrasing and rhythmic assurance of a master jazz musician. Merrill's low-key but insistent swing paid off during her years with Mercury (1954–59), represented by this collection, when she was cast in the dual role of jazz singer and sophisticated chanteuse. She



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adapted, of course—not surprising, considering that first-rate ballads made up the fare in both settings. The dreck ratio is amazingly low on *The Complete Helen Merrill on Mercury*, which includes her five Emarcy albums and a handful of singles and previously unissued takes.

If the jazz sides are superior, it's mainly because of the fast company Merrill kept in the studio. The opposites-attract rapport between her and trumpeter Clifford Brown made her eponymous debut an instant classic; the long coveted *Dream of You* may be as fine. Arranger Gil Evans's presence is everywhere. “Where Flamingos Fly,” “By Myself,” and “People Will Say We're in Love” are brilliant extensions of his earlier Birth of the Cool-era charts. His writing for strings on “He Was Too Good to Me” and “I've Never Seen” makes them sound like bebop horns, yet Merrill stays on even footing throughout. She almost sounds bubbly.

When supported by less colorful arrangements and sidemen, Merrill retreats into herself still more. This Garbo-like stand-offishness only lends itself to heightened romanticism. Merrill's confidential purr adds a sexy luster and a bittersweet edge to some memorable three-handkerchief mash notes, including “I'll Be Around,” “End of a Love Affair,” and “Spring Will Be a Little Late this Year.” No surprises—just gorgeous, understated singing. How Merrill connects with a listener by withholding rather than revealing emotion is still a mystery to me. I guess there's a little bit of WASP in all of us.

Steve Futterman

ALVIN BATISTE, JIMMY HAMILTON, JOHN CARTER, AND DAVID MURRAY: Clarinet Summit, Vol. 2.

Bob Cummins, prod. India Navigation IN 1067.

LIKE ITS PREDECESSOR FROM 1984, *CLARINET Summit, Vol. 2* is as unlikely as it is irresistible. If you've never thought of this instrument as a good vehicle for expressive improvisation, you owe it to yourself to check out these guys.

The obvious analogy is to the World Saxophone Quartet, but those four men are all modernists; this unit summons up the entire history of recorded jazz, starting with the formative New Orleans days when the clari-

net dominated. Jimmy Hamilton is the Duke Ellington virtuoso who firmly established the instrument elsewhere. The traditional/progressive Alvin Batiste is currently the leading exponent of Crescent City clarinet. John Carter, who until ten years ago played the saxophone, is best known for conducting some of Ornette Coleman's most inventive classical works. And David Murray is the Mr. Inside/Mr. Outside of contemporary jazz. His bass clarinet provides fat, hovering backdrops and a faint though firm rhythmic pulse that's sensed more than it's actually felt.

Of the three B flat clarinetists, Batiste and Carter are each featured on their own lengthy compositions, and Hamilton gets the spotlight on a series of short pieces. Batiste's sometimes pretentious ambitions have often outstripped his abilities, and to some extent, this fluttering version of “Clariflavors” is no exception. The take on the first *Summit* album is both less gimmicky and significantly shorter. Carter's “Solo and Ballad for Four Clarinets” is a lighter, softer variation on Ornette's own spiring and squealing sax explorations.

But the real highlights are the ensemble pieces (none longer than 2:58) written by either Hamilton or Ellington. “Creole Love Call” is both creamy and steamy, Hamilton soloing so sweetly as he evokes the turn-of-the-century ambience that initially inspired Duke. “Mood Indigo” is somber and lingering, “Night Blue Mist” pensive and romantic, the four men locking in and moving forward together without missing a step. And Hamilton's duet—it must be with Batiste—on “Satin Doll” offers seemingly endless exotic variations on the melody, with the two players weaving in and out of each other, meshing briefly, then going their own ways again. They make the much ridiculed clarinet sound like an instrument for the ages.

John Morthland

GENE BERTONCINI AND MICHAEL MOORE:

O Grande Amor.

Gene Bertoncini, prod. Stash ST 258. □

GLADYS CARBO:

Another Summer.

Gladys Carbo, prod. Modl 2-2235. (P.O. Box 479, Stockbridge, Mass. 01262.)

NO ONE CAN ACCUSE GUITARIST GENE BERTONCINI and bassist Michael Moore of being faddish. *Close Ties*, their last record, included jazz versions of pieces by Ravel, Bach, Rachmaninoff, and Gershwin. Now, some 20 years after the bossa nova hit the Top 40, the duo, with Brazilian drummer Edison Machado, has made an album of songs by Antonio Carlos Jobim, Baden Powell, and Clare Fischer. And on the EP *Another Summer*, they accompany Cuban-born singer Gladys Carbo on four originals in the same tradition.

Perhaps they were motivated by the chance to work with Machado, who (according to Bertoncini) invented the bossa nova (CONTINUED ON PAGE 79)

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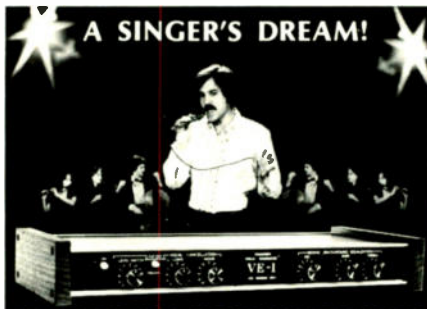
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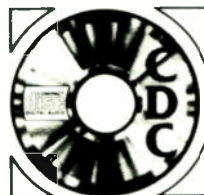
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(CONTINUED FROM PAGE 76) beat. He's a light, tasteful drummer who adds a loose springiness to even the most wistful numbers. Not that Moore and Bertoncini need a drummer to swing, or even for variety, as they have previously demonstrated. In their buoyant version of Gershwin's "Prelude No. 2" from *Close Ties*, for example, they play the winsome melody almost straight, and then unexpectedly make it pop and sway. They seem able to make any material their own.

On *O Grande Amor*, Bertoncini and Moore play Jobim's airy tunes with the same respect and exuberance. Both are superior improvisers with an unusually vivid sense of form, yet they seem to take the title of Clare Fischer's "Let Go" literally, playing outside of the chord structure for a chorus or so. Throughout, Moore demonstrates his remarkable ability to sustain a melody: His solo on "Rio Pindare" moves to some gentle double-stopped notes and fades shyly as Bertoncini

emerges from the shadows. These performances will not start another fad, but they are wholly satisfying in themselves.

Moore and Bertoncini, who have performed with Carbo, are joined by pianist John Sauer and percussionist Jim Saporito on the bittersweet *Another Summer*. Carbo keeps her deep, powerful voice under wraps, but her restraint is rewarding; in the Gilberto Gil tradition, she creates a kind of hush around her lyrics. And she is an admirable songwriter as well. "Another Summer," dedicated to her parents, is about aging (the lyrics include a line, "They were young lovers a thousand years ago," which my parents, at least, wouldn't appreciate), and "My Song" is about a failed love affair. The most impressive track, however, is "Contigo Aprenderi," by Mexican composer Armando Manzanero. Carbo has a penchant for unhappy subjects, but she makes them sound rich and sensuous. She deserves the chance to make an LP.

Michael Ullman

LOST HIGHWAY

(CONTINUED FROM PAGE 66) the world for lunch in '77, they now find themselves hanging onto its edges for dear life: trivialized, made fun of, broke, drunk, and with no revolt in sight. Where once they laughed at people who told them to shut up, the Mekons aren't so sure anymore that those people don't have a point—but they can't shut up, like the crank on a barstool who doesn't care if anybody is listening.

"Darkness and doubt followed me around," somebody sings on *Fear and Whiskey*, and that's what fades in and out of both it and the new *Crime and Punishment*, as sure as their off-key twang and violin. As a finale to the first record, the band offers a bent, felt version of Hank Williams's "Lost Highway." Country's romance of the road, of the open spaces, has collapsed, and its promises are mocked, mocked because they can't be dismissed. As the Mekons flail at their instruments they are flailing at themselves, wondering what's wrong with them that they can't find peace.

Hasil Adkins is even more of an outsider than the Mekons, but he doesn't seem to mind—he's still right at home in his West Virginia shack. His *Out to Hunch* LP and *Haze's House Party* EP get as wild in their very particular way as Eddie Cochran ever did. Proof once again that Elvis changed lives: It's as if, after hearing those early Presley singles, Adkins went totally nuts, and he hasn't come back yet. Thank God he had the presence of mind to turn on the tape machine every once in a while to record his strange hillbilly boogie.

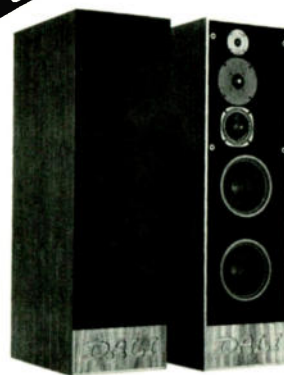
Adkins is a one-man band, stompin' on some kind of drum assemblage as he whacks out much very fast, very slovenly guitar. Musically he's reckless enough to make the Replacements sound like studio cats—get too

close to the stomp of "No More Hot Dogs" or the drum solo on his version of "Rockin' Robin" and your molecular structure might come undone. As for the mind of the man, well, let's just say the EP's "Sex-Crazy Baby" is so salacious you feel unclean. When Elvis unloosed a whoop of liberation, it made you want to whoop with him; when the Haze does likewise, you want to lock the door. Oh, but you'll be rocking, too. These two records, spanning Haze's tapes from the '50s to the '80s, would have the effect on a Nashville heavy that the microwave had on the cat. And with Adkins reportedly recording some fresh stuff, and definitely playing gigs, who knows, somebody might actually hear some of this.

There is more avant, fringe, *out there*, and otherwise non-Nashville c&w available, if you're patient enough to look for it. Guitarist Bill Frisell, an ECM jazzster at heart, savors a pedal-steel-like twang and languorous tempos that show he's soaked up some of the tradition; Eugene Chadbourne's psychedelic-bebop-rockabilly guitar extravaganzas, which he sends out on records and cassettes with dizzying regularity, are way gone, kind of like Carl Perkins in outer space (and on a shoestring).

They are not exactly direct descendants, but folks like Frisell and Chadbourne, the Mekons and Adkins and Yoakam, are some of the best country around. Nashville talent scouts are out there bird-dogging for the next George Strait, you can bank on it, and if they find him or her it's to their credit. But as a viable creative system, Nashville doesn't even exist. And as an economic system, policing its sound to squeeze out a few more bucks, it deserves to be paved over. You can find great country music today, but not with a map to Music City. ■

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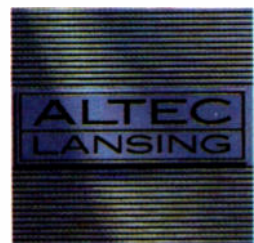
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