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THE MAGAZINE OF AUDIO, VIDEO, CLASSICAL MUSIC, AND POPULAR MUSIC

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**PRODUCT
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A TAPE DECK SO ADVANCED IT HAS A FEATURE THAT FINDS NOTHING.

We call it
Blank Search.
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doubt call it the
best thing to happen to recording since
magnetic tape.



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And there's more wizardry where that



came from. Like Index Scan, Music Search, Blank Skip and a Real Time

Counter that reads out the amount of tape left in meaningful minutes and seconds instead of meaningless inches. In other words, features that will revolutionize the way you record and listen to tapes.

But don't thank us.

Thank the little brain that made it all possible. A tiny microprocessor that makes the CT-9R more than a tape deck, it makes it smart.

Smart enough to make your music easier to listen to. Even smart enough to make your music sound better, with Automatic Bias Level Equalization.

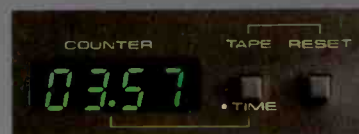
What Auto B.L.E.

means, to those without a degree in electronics, is that the tape deck automatically analyzes the tape being used (no easy task with over 200 different tapes on the market) and then adjusts itself for optimum recording with that tape. Improving the quality of your recordings faster than you can say "wow and flutter."

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Let you spend a lot less time looking for your music.

And a lot more time listening to it.



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Because the music matters.



AUDIO

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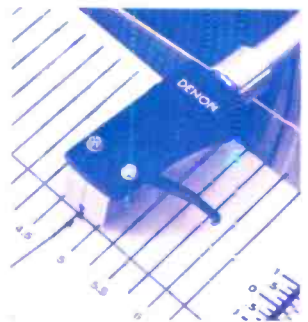
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TILL WELL FREEZES OVER

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OR IS IT
MEMOREX**



Letters

Left-handed Compliment

On page 33 of your September issue, is that a "high fidelity" picture of the Sherwood ST-903 turntable?

Ignacio Betancourt
New York, N.Y.

I was intrigued by the photo of Sherwood's ST-903 turntable, apparently the world's first record-playing device for the left-handed. The accompanying text, however, failed to point out the mechanics of this long-needed innovation, and certain functional parameters invite speculation. Assuming the usual clockwise record rotation, has Sherwood modified the tonearm to enable reverse installation of the cartridge? Alternatively, counterclockwise rotation would result in the stylus following the record groove in a centripetal manner from center to perimeter. Ordinary records would therefore be heard from end to beginning, which seems less than ideal. Perhaps there would be an accessory device that taped the program as played with the sound muted; for listening, the tape would be played in reverse. Even better, of course, would be a specially encoded "left-handed" record, in which the program is cut in a counterclockwise direction.

I do hope that the industry will agree on the technical specifications for such a system. It would indeed be unfortunate for all concerned if several mutually incompatible formats were to be developed for a left-handed record player.

William P. Leighton
New York, N.Y.



The photo of Sherwood's very fine, conventionally designed turntable was reversed in the camera room. A correct picture appears above. We must say, however, that the error has revealed considerable marketing and engineering ingenuity among HF readers.—Ed.

One Set Sold!

I would like to thank Kenneth Furie for his excellent review of the CBS recording of Jaromir Weinberger's opera *Schwanda* (July). Originally from Saarbrücken, Germany, where my father played French horn in the opera house, I still remember the sensation *Schwanda* caused. It was much admired by the musical world in the late Twenties and early Thirties. With the beginning of the war, the opera was forgotten (save for the polka, which continues to delight music lovers

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.

all over the world).

When I purchased the CBS set, the salesman yelled from his heart to be heard by all his colleagues: "One set sold!" I do hope that Mr. Furie's fine and interesting review will contribute to a great many purchases of *Schwanda* and stimulate interest again in this unjustly forgotten opera.

William Gunther
Bronx, N.Y.

Maybe, Maybe Not

Rereading "Simon & Garfunkel, Maybe" [May] brought back history, but a history that should be laid to rest. I am now forty-seven, and if their message seems dated and a trifle mawkish to me,



I can only imagine how it seems to my high-school students. From the few things I hear, Simon & Garfunkel are at best anachronistic. Why can't they, like the Marschallin in *Der Rosenkavalier*, look into the mirror and say: "It is time"?

It isn't just the wrinkles and the hairlines that say that their time has come; their sense of perception (so beautifully demonstrated in their past songs) should tell them that they are history. Gentlemen, take your places.

Edward M. Silva
Berkeley, Calif.

Reverse Cure

Your article on phono hum ["Retsoff's Remedies," August] failed to mention a very common cause of low-level hum, especially in newly installed or rearranged systems: the power cord being plugged into the AC outlet "backwards." The cure is simply to reverse the plug.

Raymond Kostanty
Wood-Ridge, N.J.

Mr. Retsoff replies: Good point, and certainly worth a try, although it may or may not help. Occasionally a ground loop is set up by the position of the plug in the AC socket. Reversing the plug eliminates the loop and does away with the hum. Modern units with polarized plugs should not have this problem.

No Tubes Is Bad News

Lack of a reliable source of high-quality vacuum tubes has delayed Sidney S. Smith in responding to inquiries about his package of modifications for the Marantz Model 7 preamplifier (May, "Letters"). A new source of tubes now appears to have been found, however, and interested readers should expect to hear from Mr. Smith shortly.—Ed.

illinois audio



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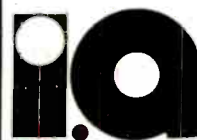
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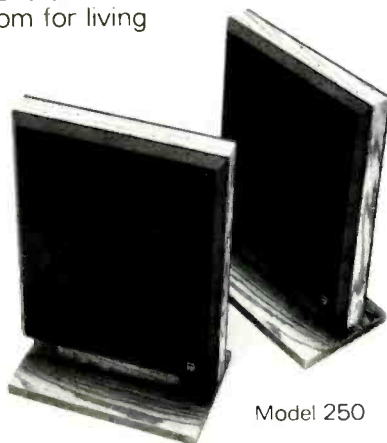
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Cover photo: Robert Curtis

ADVERTISING

New York: ABC Leisure Magazines, Inc., 825 7th Ave., 7th Floor, New York, N.Y. 10019. Telephone: (212) 265-8360. Seymour Resnick, Advertising Director, Raymond Foster, Associate Advertising Director, Richard A. Frank, Eastern Advertising Manager, George Dickey, Record Advertising Manager, Yetta Peltzman, Classified Advertising Manager, Robert Maddocks, Director of Graphics, Kathleen Davis, Director of Production, Janet Cermak, Advertising Production Manager, Cecelia M. Giunta, Administrative Assistant.

Midwest: ABC Leisure Magazines, Inc., 415 South Ioka Avenue, Mt. Prospect, Ill. 60056. Telephone: (312) 398-7580. William P. Gordon, Midwest Advertising Manager.

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

National Reps: Kathleen Charia, Kathleen G. Charia Associates, 21000 W. Fourteen Mile Road, Birmingham, Mich. 48010. Telephone: (313) 642-3482. Bill Good, Sr., Good Magazines, Inc., 50 East 42nd Street, New York, N.Y. 10017. Telephone: (212) 682-0385. Peter McCann, The McCann Group, 333 N. Michigan Avenue, Chicago, Ill. 60601. Telephone: (312) 782-4492.

Tokyo: Japan Advertising Communications, Inc., New Ginza Bldg., 7-3-13 Ginza, Chu-ku, Tokyo 104, Japan. Telephone: (03) 571-8748. Shigeru Kobayashi, President.

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A unique solution to a serious turntable problem: Technics introduces turntables with the P-Mount system.

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Just plug any P-Mount cartridge into a Technics straight, low mass, high performance tonearm, and tighten one locking screw. With Technics, your records are now virtually immune to the groove wear, poor channel separation and distortion caused by improper cartridge-to-tonearm mounting.

And Technics standardized all key specifications with manufacturers of P-Mount cartridges: cartridge weight, external dimensions, connector shape, stylus position and more. So you have a wide range of cartridges to choose from.

The P-Mount plug-in cartridge system. Just one of the many advances you'll find in the new line of sophisticated Technics turntables. From belt-drive to direct-drive to quartz-locked.

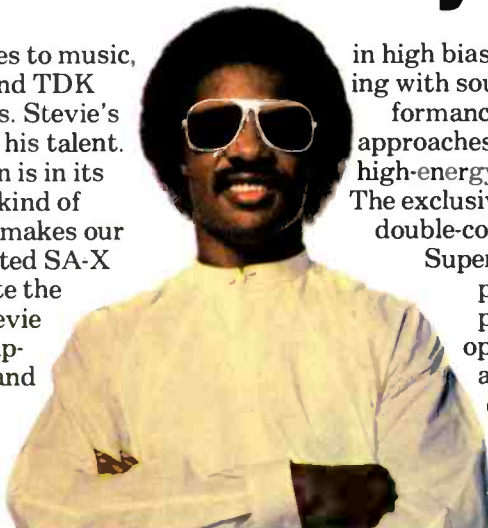
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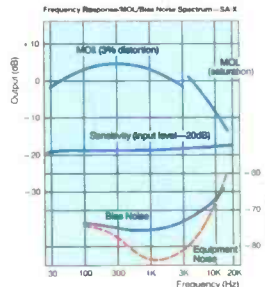
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levels without distortion or saturation. Last, but not least, TDK's Laboratory Standard Mechanism gives Stevie unsurpassed cassette reliability, for a lifetime.

TDK SA-X—it's the machine for Stevie Wonder's machine. Shouldn't it be the machine for yours?

TDK
THE MACHINE FOR YOUR MACHINE

High Fidelity News

New equipment and developments by the Editors



A Preamp Plus

Exceptional operating and control flexibility are the hallmarks of Soundcraftsmen's new CX-4200 combination preamp/equalizer with built-in CX disc-decoding circuitry. The unit's dual octave-band graphic equalizer features low-noise precision-wound inductors and offers ± 15 dB of boost or cut in each band. In addition, the equalizer section employs Soundcraftsmen's Differential/Comparator unity-gain circuitry for an input-to-output gain-balancing resolution of 0.1 dB. The preamp section offers adjustable phono-cartridge capacitance loading and a versatile signal-processor patch bay; it will accommodate two turntables and three tape decks. The CX-4200 will fit in a standard 19-inch rack, and optional oak or walnut side panels are available. Price is \$700.

Circle 72 on Reader-Service Card



with manual, search, scan, and preset tuning modes. The tuner's memory holds six AM and six FM stations. Power output into 4 ohms is said to be 22 watts per channel. National Semiconductor's one-chip DNR noise reduction system is built-in, as is switchable tape-playback equalization. The unit's digital display serves double duty as a frequency and clock readout.

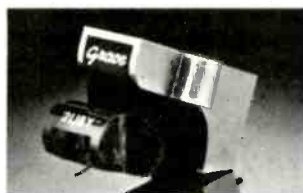
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P-Mounts on Pivots

Technics' SL-D30 is one of a line of seven new turntables with pivoted tonearms designed for plug-in P-mount cartridges. (See "1983 New Products Roundup," September.) The automatic direct-drive unit features a base made of Technics' TNRC material, for vibration resistance; a gimbal suspension for its straight, low-mass tonearm; and an arm/cartridge resonance frequency near the 10-Hz ideal with any P-mount cartridge. Wow and flutter are rated at 0.0025% WRMS, rumble at less than -78 dB (DIN B). Price for the SL-D30 is \$170.

Circle 90 on Reader-Service Card



Detailed Response

Thanks to its solid ruby cantilever, Grace's latest fixed-coil phono pickup is said to provide improved resolution of musical detail and excellent square-wave response. The F-9E Ruby also features hand-wound coils, an omniaxial suspension, samarium-cobalt



AR Thinks Small

AR is the latest member of the "small is beautiful" school of speaker design. The company's AR-1MS is a two-way acoustic suspension system incorporating a 4-inch long-throw woofer and a 3/4-inch dome tweeter with a ferrofluid-treated voice coil. Rated for 75 watts (18 1/4 dBW) maximum input, the speaker measures 7 1/4 by 4 1/4 by 4 3/4 inches and is housed in a grey aluminum cabinet with a black metal grille. Price is \$110.

Circle 86 on Reader-Service Card

Jet Propelled

Lear Jet's top-of-the-line car receiver/cassette player, the \$400 A-15, features phase-locked-loop frequency-synthesis tuning

Circle 10 on Reader-Service Card

For Information call 854-8989

AUDIO SPOT

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	RK60	55w/ch	289.00		STRVX4	284.00
Technics	SA626		\$360.00		STRVX3	219.00
	SA222	30w/ch	203.00		STRVX2	178.95
	SA203	30w/ch	175.00	Sansui	Z3000	259.00
	SA424		275.00		Z5000	317.00
Kenwood	KR850		call		Z7000	515.95
	KR830		for		Z9000	614.95
	KR820		price	Pioneer	SK4	122.00
	KR810				SK5	159.00
					SK6	215.00
					SK7	339.00

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Technics	SLB 20	\$ 69.95	Discwasher disc cleaner	9.95
	SLB 30	84.95	Slanlon stylus cleaner	6.95
	SLD 20	99.95	Allsop tape cleaner	9.95
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	SLQ 20	136.95		
Dual	1258-52	115.00		
	1268-55	148.00		
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EQUALIZER

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	SS 1 Mark II	72.95
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JVC	KDD10	\$112.00	Pioneer	CT 9R	429.95
	KDD20	127.00		CT 8R	379.95
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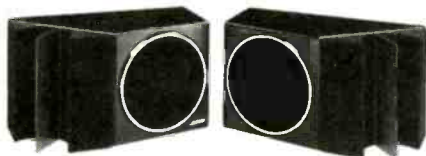
magnets, and a nude-mounted Vital elliptical stylus. Price of the F-9E Ruby is \$300; the RS-9E replacement stylus (which may also be used to upgrade Grace F-9E and F-9L cartridges) costs \$100.
Circle 88 on Reader-Service Card



Naka-Phones

Elimination of distortion-causing diaphragm breakup was the goal of Nakamichi engineers in designing the company's \$70 SP-7 open-air stereo headphones. Nakamichi says that several developments contributed to its achievement, including a novel drive system using a powerful ferrite ring magnet; an oversized voice-coil; and a large-diameter, low-mass polyester diaphragm with a "tangential edge" that is claimed to provide very high compliance with exceptional linearity. In addition, the

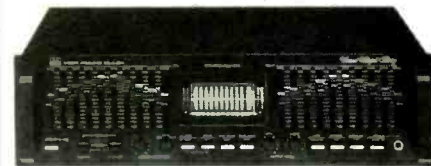
carpads have been designed to reduce variations in perceived response caused by changes in pad pressure.
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A Baby Bose

Bose's least expensive Direct/Reflecting loudspeaker is the new Model 201. Priced at \$262 per matched pair, each system is housed in a complex ported enclosure of injection-molded black plastic that is said to reduce low-frequency distortion by as much as 20 dB compared to designs using conventional cabinets. The 201 has a 6-inch long-excursion woofer, a 2-inch outward-firing tweeter, and a "Dual Frequency" crossover network that enables the two drivers to work together over almost an octave. According to Bose, this enhances the spaciousness of the sound while avoiding phase-shift effects and tonal coloration. A large vane in front of the tweeter can be rotated to alter the speaker's radiation pattern above 2 kHz to compensate its spatial reproduction for various placements or

types of music. Excess power is absorbed by a built-in protection circuit without interruption of the music.
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An Equalizer/Analyzer from ADC

A built-in spectrum analyzer with a pink-noise generator and a calibrated microphone makes ADC's top-of-the-line Sound Shaper Thirty a highly sophisticated graphic equalizer. In addition to ten bands of equalization per channel, the SS-30 includes an infrasonic filter, provisions for two-way tape dubbing, and LED slide-position indicators. The SS-30 sells for \$400.
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Cleaning Up

Allsop says that the pivoting arm on its new Orbitrac record cleaner automatically
(Continued on page 10)

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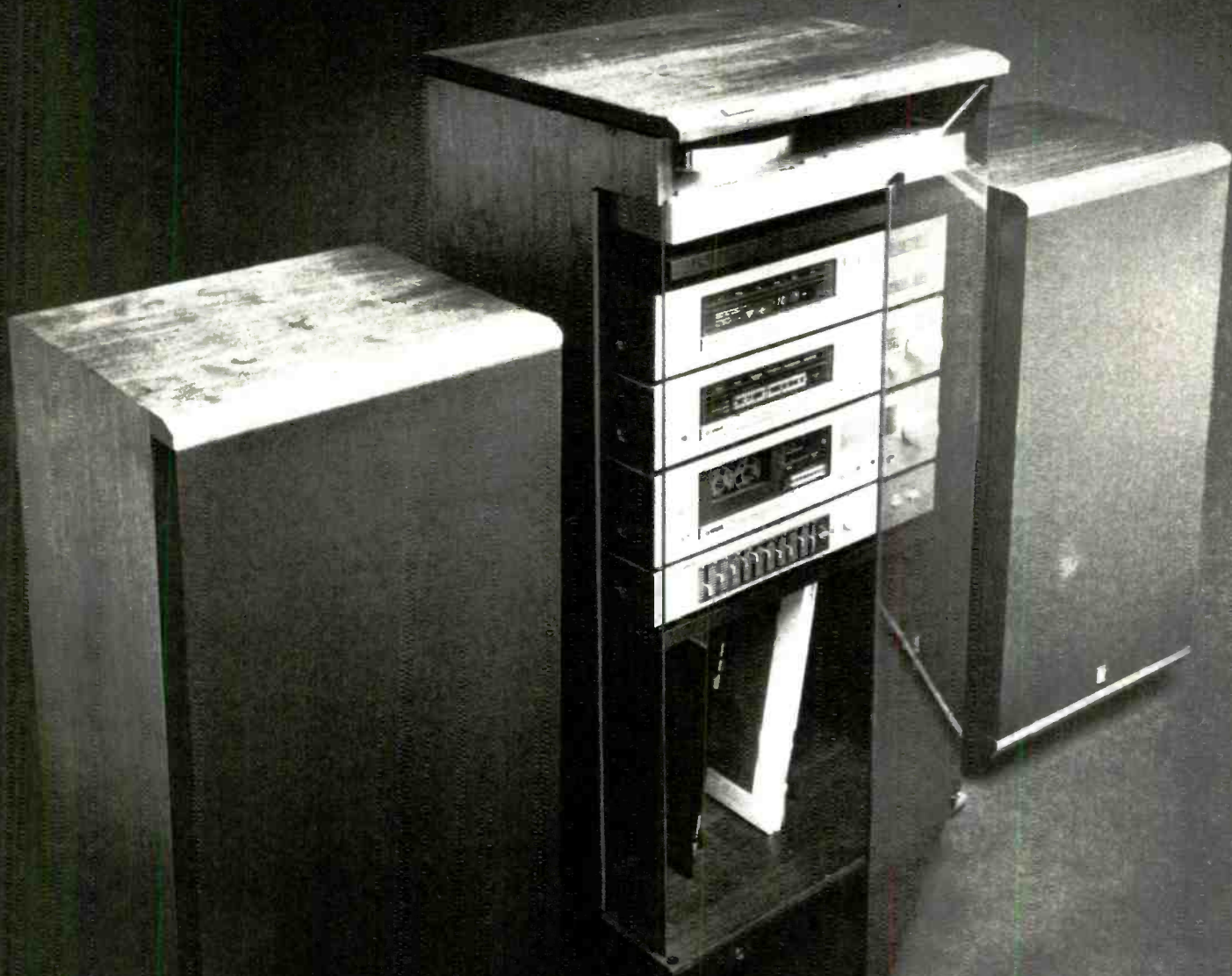
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YAMAHA

(Continued from page 8)

**Revox B795.
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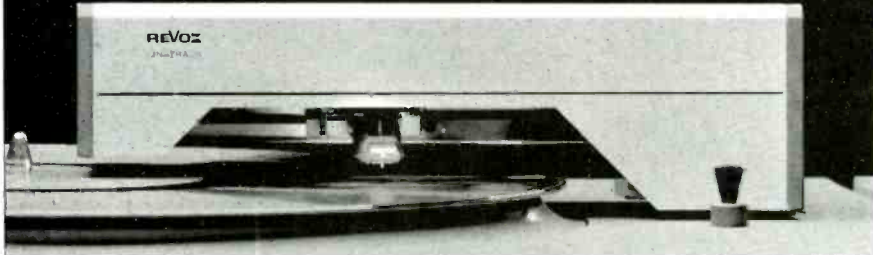
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aligns its cleaning fibers with a record's grooves for effective removal of dirt, dust, and impurities. A specially formulated antistatic cleaning solution that is claimed to be safe on all types of record vinyl is supplied, as is a specially formulated mat to support the record during the cleaning operation. (Allsop recommends that records not be cleaned on the turntable.) Price of the Orbitrac is \$27.

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On the Run

A compact handful from Olympus, the SR-11 combines a microcassette recorder and FM-stereo tuner on a single 10-ounce chassis. The two-speed capstan-drive system is driven by a coreless motor for maximum torque with low wow and flutter. The unit will make recordings direct from FM on regular or metal microcassettes, but requires external microphones for live recording. Other features include automatic end-of-tape shutoff, a balance control, a pause switch, and a mechanical tape counter. The 5-inch by 3-inch by 1-inch SR-11, priced at \$200, includes headphones, a rod antenna, patch cords, and a carrying case.

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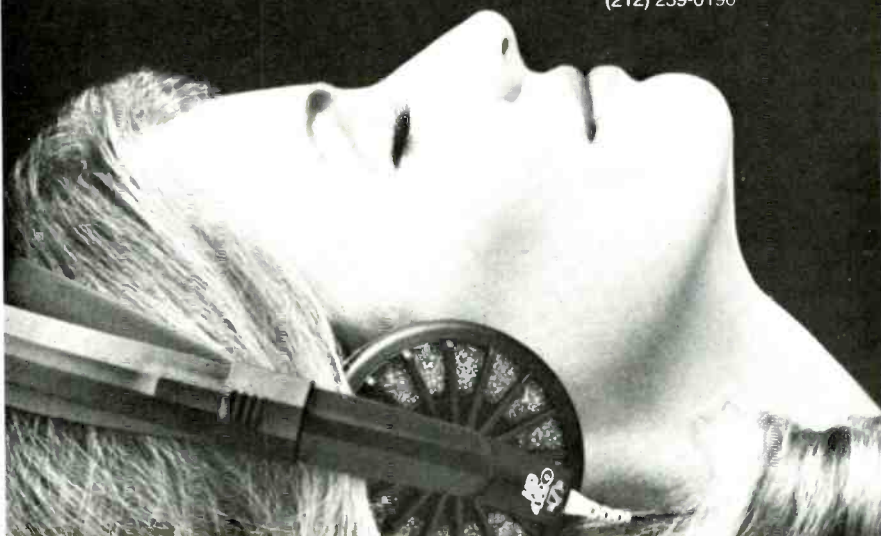
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L-Series line, the L-15, is said to combine high power-handling capability, high efficiency, and accurate frequency response. A two-way design, the L-15 employs a 1-inch phenolic dome tweeter with a 1-inch copper voice coil and a 6½-inch woofer with JBL's Symmetrical Field Geometry magnetic structure for reduced second-harmonic distortion. The walnut-veneered L-15 measures just 14¼ inches high, 9¼ inches wide, and 7¼ inches deep. Price is \$150.
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An Automated Akai

Akai's top-of-the-line three-head cassette deck, the GX-F91, offers both Dolby B and C noise reduction. Fully automatic tuning of bias, equalization, and tape sensitivity is performed over a series of sixty-four steps by a microprocessor. Once the deck has been tuned for a particular tape, the settings are entered into one of four memories. According to Akai, the Super GX Crystal ferrite recording and playback heads are so hard that they can be guaranteed for more than seventeen years of wear-free use. Convenience features include Intro Scan, which samples the first ten seconds of each selection, and the Instant Program Location System, which finds the beginning of any selection in either forward or reverse mode. There's also a digital real-time counter and an automatic fader that increases gain at the beginning of a recording and decreases it at the end. Seldom-used controls are normally concealed by a motor-driven flip-down panel. Price of the GX-F91 is \$750.
Circle 89 on Reader-Service Card



Back to Basiks

The manufacturer of the esteemed Linn Sondek turntable has introduced a moderate-price tonearm/cartridge combination called the Linn Basik LV-X. Among the features borrowed from the more expensive Linn Ittok arm are a substantial main-pillar/horizontal-bearing assembly; close-tolerance, temperature-stable vertical bearings; and a rigid arm tube. The clamp linking the LV-X's detachable headshell to the arm tube is said to ensure an especially firm connection. A fixed-coil pickup made especially for Linn completes the \$200 package.
Circle 87 on Reader-Service Card



CX Kit

A CX decoder and peak expander kit is now available from Sound Concepts. The man-

ufacturer claims that the KSX-1 kit can be assembled in about four hours, and that the finished product is identical to the \$119 factory-built SX-80. The device includes a peak limiter as well as a duplicate tape monitor loop. Supplied with a CBS calibration record, the KSX-1 is priced at \$76.

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For additional news on new instruments and accessories, see *Input Output*, page 86.

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Circle 17 on Reader-Service Card

Practical answers to your audio questions by Robert Long

Two Right Hands

I recently had the good fortune to find two JBL-112 loudspeakers in a warehouse closeout. Normally they are sold in mirror-image pairs, since the tweeter and midrange driver are on opposite sides of the cabinet. But I have two "rights." To try to restore the intended tweeter/midrange relationship, I've turned one speaker upside down, with the 12-inch woofer on top. This seems to make a decided improvement in the imaging, but will this placement destroy the speaker? Is there another approach I should take?—Jim Larkin, Clifton, N.J.

I see no reason why the inversion should harm the speaker, but if one woofer is near the floor and the other raised from it, the result should be a disparity of room loading (the manner in which the room's acoustics alter the sound) and therefore of tonal balance between the two speakers. It's likely that this is more deleterious to stereo imaging than the want of tweeter/midrange symmetry—depending on the actual physical arrangement in your listening room. But by all means go with what sounds best. That's the point of audio, after all.

Old Gram-Ma's Tale

When I first got involved with stereo equipment, it seemed to me that there was a fairly direct relationship between stylus tracking force and record wear. But now I notice that moving-coil cartridges require a higher tracking force than moving-magnet or similar designs. Will a high quality moving-coil model cause greater wear than a high quality fixed-coil pickup?—Dean Perry, San Diego, Calif.

The "relationship" you cite is (and always was) an old wives' tale—based, no doubt on the competitive race among manufacturers in the late '60s/early '70s for ever-lower vertical tracking force (VTF) ratings. Actually, optimum tracking force is related to the geometry of the stylus tip. The contact area where a stylus rests against the groove walls varies among stylus designs. This contact area is called the bearing surface (as it bears the weight of the tonearm/cartridge/

stylus assembly). As this area increases or decreases, the optimum tracking force changes. What is the best tracking force for one stylus won't necessarily be best for another, even with the same tonearm/cartridge combination. If you set the VTF within the optimum range, record wear is very slight. If the VTF is too low, mistracking and severe wear can easily occur; set it too high, and the pressures created can exceed the bearing strength of the vinyl, which also damages the record.

Phono Detector

My system consists of a Pioneer SX-3600 receiver, Dual Model 1258 turntable, and Scott Model 208 speakers. Sometimes when I have the selector set to phono, I can hear radio or TV stations through the speakers. This sound stops if I unplug the turntable from the receiver. What causes this noise, and how can I correct it?—John P. McCarble, Beaumont, Texas.

In all probability, you're experiencing a phenomenon about which we receive many letters. Any time the terminals in the phono signal path—either at the receiver or at the pickup cartridge—become oxidized, they can act as a detector, producing audio from modulated radio-frequency (RF) signals. Contact cleaner, wire brushing, or a brisk sliding or turning of the seated connectors will dislodge the oxidation products and should cure the noise. If it doesn't, the culprit is probably the cables from the turntable to the receiver, which may be picking up RF signals and routing them into the receiver's phono section. Short of installing new leads with better (preferably foil) shielding, you might try tying some loops in your present cables or changing their length or orientation.

Signal Supercharger

I have a Realistic/Archer FM antenna amplifier that is rated for 18 dB of gain. It supplies relatively noise-free listening in mono, but it still isn't strong enough for stereo. If I put an identical amplifier in series with this one, will I get a stronger but still usable signal—or will I overload the antenna terminals on my receiver? What would happen if two audio amplifiers were connected this

way?—Rusty W. Buck, Alexandria, La.

With two amplifiers in the antenna line, you'd end up boosting everything that comes from the antenna—broadcast signals, ignition noise, static, everything—by 36 dB (18 plus 18). If the RF is as weak to begin with as your letter implies (say, around 30 dBf), such a boost would put it in the range you might expect in suburban reception (somewhere around the 65 dBf level at which tuners are tested), and well below the overload threshold of your tuner. But with all that noise being boosted along with the signal, you may not find the listening any more satisfactory than you did with a single 18-dB amplifier.

Audio amplifiers are different because they are designed for a standardized maximum input level and will readily overload if the output of one is fed to the input of another. RF amplifiers like your Archer are designed to work with a broad range of input levels. And since the voltages and current ratings involved are much lower in RF, the price of overload is not nearly as severe: Audio amplifiers burn out a lot more readily when abused.

Thunder and Snap

When a receiver is turned on, why does it sound like thunder in the speakers? Also, when the tonearm goes to its rest position, a loud snap occurs. (My tuner, phono, and 8-track player are four-channel stereo, and the two cassette units are two-channel stereo. They are all connected to the receiver.)—John P. Esparza, Inver Grove Heights, Minn.

Most components wouldn't make these noises unless muting circuitry (in the receiver) or switching (in the turntable) had been omitted to keep the price down. Perhaps this is true in your case. The problem occurs because it takes a moment for the capacitors in an amplifier to charge up and the circuit voltages to stabilize; until they do, enough current can flow randomly within the circuitry to produce your "thunder." The "snap" is a transient induced in the unmuted audio cables of the turntable when the motor power is shut off at the end of the play cycle.

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

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Basically Speaking

Audio concepts and terms explained by Michael Riggs

Loudspeaker Fundamentals

STRIPPED TO ITS ESSENCE. a loudspeaker is just an electric motor designed to move air. Much the same could be said of a window fan, however, so perhaps a little elaboration is in order.

The most common type of loudspeaker has four main parts: a magnet, a voice coil, a "basket," and a diaphragm. The voice coil is simply a hollow bobbin with a long wire wrapped continuously around it. One end of the bobbin is attached to the diaphragm, which may be paper, plastic, or even metal. Most diaphragms are cones, but a few are flat, and many used in speakers intended to reproduce only high or middle frequencies are domes. In a cone speaker, the voice coil extends back from the apex of the diaphragm. If the diaphragm is a dome, the attachment is made to the outer rim, so that the complete structure takes on something of the aspect of a grain silo.

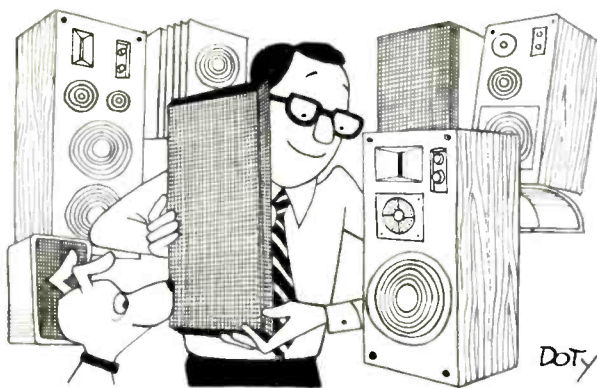
The basket is just a metal form designed to anchor all the other parts in correct relation to one another. Its front rim is attached to the outer edge of the diaphragm by means of a flexible surround (so that the diaphragm is free to move fore and aft). The magnet is attached to the basket's back plate and has a circular gap deep enough and just wide enough to accommodate the voice coil, which is kept centered in the gap by a flexible disc, called a spider, whose outer edge is attached to the basket.

So, we have a coil of wire immersed in a permanent magnetic field. If a current is passed through a conductor, a magnetic field will be generated around it. Magnetic fields react to each other, either repelling or attracting, depending on their relative polarities. Thus, if a current is passed through the voice-coil wire of a loudspeaker, it will generate a magnetic field around the coil, which will react to the magnetic field in the gap of the permanent magnet. The end result is that the voice coil moves, thereby moving the diaphragm to which it is attached, which in turn moves the air surrounding the diaphragm.

You can see this effect simply by connecting a battery across the terminals of a

loudspeaker system while observing the woofer cone. The direction and distance of the diaphragm movement are determined by the current's polarity (direction of flow) and amplitude, respectively. A battery produces direct (non-alternating) current with a fixed polarity and voltage: Swapping the battery terminals around will reverse the direction of the cone motion, and using a different voltage battery will change the diaphragm displacement.

An alternating current, therefore, will cause the speaker diaphragm to move back and forth at the frequency of the current variation. What an amplifier delivers to a loudspeaker is an alternating current modulated at the frequency of the input voltage to the amplifier. The corresponding motion of the speaker diaphragm generates vibrations



(longitudinal waves, to be precise) that we perceive as sound. That, basically, is how a moving-coil, or dynamic, loudspeaker works.

Such devices have been around for many, many years, but only over the last few decades have they been made to perform to high fidelity standards: It takes more than a cone flapping in the breeze to make music. One of the main problems becomes immediately apparent if you take an individual loudspeaker driver, put it on a table, and hook it up to an amplifier. Regardless of the speaker's size (within reason) or shape, it will reproduce bass notes very weakly. This is because the wavelength increases as the frequency goes down. At bass frequencies, the wavelengths are long enough that no speaker of practical dimensions can fully separate the compression wavefront produced on one side of the diaphragm from the necessarily equal but opposite rarefaction wavefront on the other: Air moves around the sides of the driver to equalize the pressure, effectively

cancelling the speaker's output in both directions. The diaphragm can't get a grip on the air, any more than you can get a grip on a fistful of water.

Perhaps the most straightforward solution is to mount the speaker in a very large baffle, such as a room wall, to keep the radiation from the front of the driver separate from the back wave. Use of this "infinite baffle" technique is understandably rare, however. Usually, the speaker is mounted on a relatively small baffle that forms the front panel of an enclosed box. The designer must then take into account the springiness of the air trapped in the cabinet, which tends to raise the driver's resonance frequency. This is important because response rolls off (becomes attenuated) rapidly below resonance (at a rate of at least 12 dB per octave).

Designers have learned to work around this inherent limitation by using special types of enclosures. Acoustic suspension loudspeakers, for example, combine a totally sealed cabinet with a very floppy cone suspension, which yields a low resonance frequency. The air itself supplies the restoring force that otherwise would have to be provided by a stiffer surround. Bass reflex, passive radiator, and other ported enclosure types rely on a tuned resonator (usually an undriven diaphragm or a column of air in a tube open to the outside) to augment the speaker's low bass response.

The other main problem with dynamic loudspeakers is that it's nearly impossible to cover the entire ten-octave audible range adequately with a single driver. The response of a driver large enough to handle low frequencies will roll off above a certain frequency. Even if it didn't, it would, because of its size, still become very directional at high frequencies, so that it would sound very dull to anyone not sitting directly in front of it. A very small driver, on the other hand, cannot reproduce deep bass. Therefore, almost all dynamic loudspeaker systems include two or more drivers of different sizes. An electrical circuit, called a crossover or dividing network, is built into the system to separate the incoming signal from an amplifier into a corresponding number of frequency ranges. The crossover in a two-way system, for example, directs energy below a certain frequency to a relatively large "woofer" and energy at higher frequencies to a small "tweeter." **HF**

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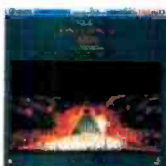
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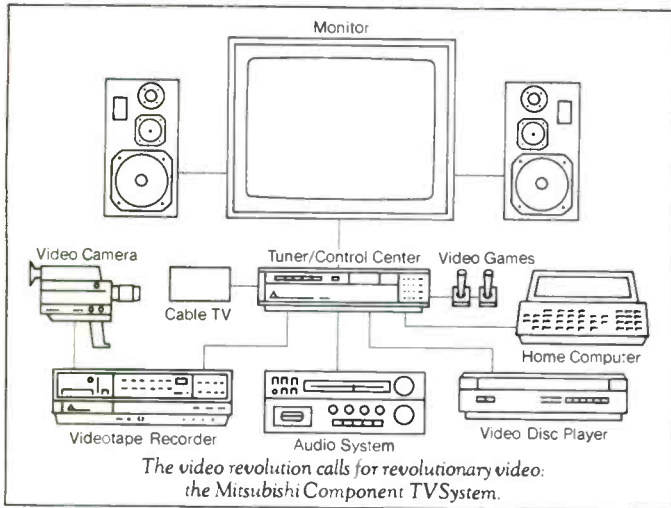
There's a frequency-synthesized tuner/

control center with multiple video inputs for your VCR, video disc player, video game console, home computer or any of the other video wonders looming on the horizon.

Electronic mode selection allows you to



switch instantly from one program source to another — at the control center itself or from



your favorite chair via the wireless remote.

The 25-inch (diagonal) professional-quality monitor features an Automatic Picture Latitude Circuit and a comb filter that yield 330 lines of resolution (versus the normal 280) for a crisper, sharper over-the-air picture. Or a stunning 400 lines of resolution from direct tape or disc input, achieved by bypassing the picture-degrading RF signal conversion process.

A pair of big, beautiful, high-fidelity speakers deliver sound that's actually as good as the picture. Even stereo, from stereo video discs, videotapes and FM simulcasts.

In short, Mitsubishi component TV offers the picture and sound upgrade that results when individual components aren't compromised by the need to fit them all into one box.

But there's something more. Something you won't find in any other company's TV, component or otherwise.

Our exclusive, patented Diamond Vision™ picture tube.

UP TO 40% WIDER COLOR RANGE WITH DIAMOND VISION.

Diamond Vision is the most important picture tube innovation in years.

It was developed initially to eliminate

image-fading sun glare on our outdoor electronic scoreboards. And was based on the proven fact that certain chemicals absorb certain colors in the light spectrum. The result was a combination of chemicals mixed with the glass to absorb the offending light.

In adapting this principle to our home screens, we added other color-absorbing chemicals to eliminate the undesirable light elements emitted by the phosphors of the picture tube. Then painstakingly re-engineered the phosphors themselves to match the new screen's transmission characteristics.

The result is not only a picture relatively unaffected by ambient light, but a significantly improved picture overall. Brightness. Contrast. Color fidelity.

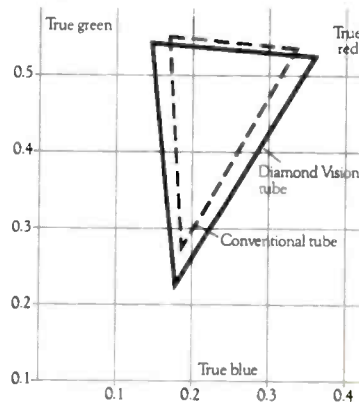
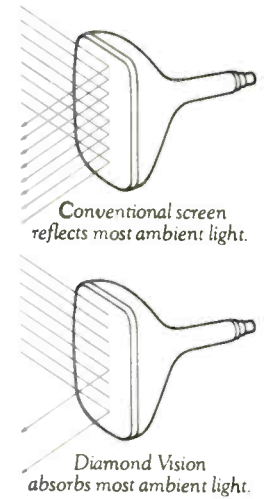
And compared to conventional picture tubes, the color reproduction range is 15% to 40% wider, depending on the amount of ambient light present.

So when you shop for a component TV system, look for that little "Diamond Vision" sign in the lower right hand corner of the screen. It tells you a lot about what's inside.

And there's another sure sign just below that. Something that speaks even more eloquently about how that system is built.

It's just one word.

Mitsubishi.



Comparison of the color range reproduced by Diamond Vision and conventional TV tubes under ambient light.



Even If You Can't Have The Best Of Everything,
You Can Have The Best Of Something.

Mitsubishi Electric Sales America, Inc. 3030 Victoria St., Rancho Dominguez, CA 90221. Available at specialty houses nationwide. Specifications are subject to change without notice.



NOW YOU CAN HAVE DIGITAL RECORDING WHERE YOU WANT IT MOST: AT HOME.

There are moments when a musician is so inspired he stops making music and starts making magic. And, as most artists agree, these peak periods of supreme inspiration don't always occur in the clinical conditions of the recording studio.

Which explains why Sony, the inventor of digital audio processing, has just created the world's smallest, lightest and most compact digital audio processor — the PCM-F1.

Already touted by every major audio magazine, the PCM-F1 leaves one awestruck by its vital statistics.* Its level of performance surpasses that of even the most sophisticated analog recording studio. Its unique 3-way power supply allows you to use it anytime, anyplace.

And because Sony consciously designed it without a built-in VCR, it can be used with any VCR — 1/2 or 3/4 inch.

But perhaps its greatest feature is its price.

Obviously, we can go on and on about the brilliance of this new machine, but by now we figure you've heard enough about it and you're ready to go to your Sony dealer and hear it for yourself.



SONY The one and only.

*Features and Specifications: Wow and flutter — unmeasurable; dynamic range — greater than 90dB; distortion — less than 0.005%; frequency response — 10-20,000 Hz, ± 0.5 dB; Weight — 9 lbs.; height — 3 3/4"; depth — 12"; width — 8 1/2"; 14- and 16-bit quantization. © 1982 Sony Corp. of America. Sony is a registered trademark of the Sony Corp.

The Autophile

Going on the road with stereo by Gary Stock

Delco/Bose's Perfect Match

THE ELEMENTAL PROBLEM of car stereo is the car—which does all it can to get in the way of the stereo. A small, often noisy interior with relatively few opportunities for adequate speaker installations makes a discouraging beginning. Response irregularities induced by the interior's size, shape, and upholstery, combined with enforced listening positions that work against anyone in the car hearing a proper stereo image, add to the frustration.

This is not to say, however, that good equipment, skillfully installed, can't overcome these difficulties: It can. Especially effective in the battle against abominable auto acoustics are such devices as equalizers, subwoofers, and add-on tweeters (see "Autophile," September). But installation is always the joker in the deck. Badly done, it can thwart the best efforts of the best equipment money can buy.

Intimate familiarity with all these sad truths made the chance to get acquainted with a radically different approach to car stereo all the more exciting. My particular opportunity came all wrapped up in a big Cadillac with cruise control, a seat that remembered my name, and a clutch of lovingly made tapes from Mobile Fidelity, ready for a few days of serious on-the-road auditioning. Called the Delco-GM/Bose Music System, the design represents one of the first serious efforts at matching state-of-the-art electronics technology to the acoustical idiosyncrasies of specific car models.

In making that effort, the system's

developers—Bose Corporation and the Delco Electronics Division of the General Motors Company—have stood the conventional logic of car stereo design on its head. The car's acoustics and the driver and passengers' listening positions become advantages, because they are known in advance. Thus, the system can be designed to compensate for them almost exactly.

The Music System consists of an electronically tuned Delco radio/cassette unit, equipped with both Dolby B and DNR noise reduction, coupled to four powered loudspeaker modules with molded plastic enclosures. Each module includes a highly efficient 25-watt digital power amplifier (operating on a principle Bose calls two-state modulation) and a modified version of the 4-inch HVC full-range driver that Bose uses in its Model 901 Series IV home loudspeaker. Two of the modules are placed up front, in the door panels, while the other two go in the rear deck, with the drivers aimed so that their sound bounces off the rear window.

As of right now, the only cars available with this rig are the Cadillac Seville and Eldorado, the Buick Riviera, and the Oldsmobile Toronado, although there are rumors that the sleek new 1983 Corvette may have it. The Music System is strictly a factory-installed item: It cannot be retrofitted or installed in other car models. This is a necessary result of the design philosophy, which requires that the amplifier/speaker modules be physically, electrically, and acoustically customized for the specific car model in which they are to be used and for their particular positions in the vehicle's interior. For example, each module has a built-in active equalization network tailored not only to the response of the speaker in its

enclosure, but to the car's acoustical peculiarities, as well.

The information required for this electro-acoustical fitting was gathered by an "artificial listener" (some might call it a dummy) called Morgan by the Bose engineers. Morgan has microphones where we have ears, and everything he hears with them goes into Bose's computerized acoustical measurement and analysis system, known as Interval. Interval performs fast Fourier transforms (FFTs) for frequency-response analysis and interaural crosscorrelations for analysis of the sound field's spatial properties. It also enables the engineers to perform computer simulations of design changes and their effects, which drastically reduces the time and expense required for the development process.

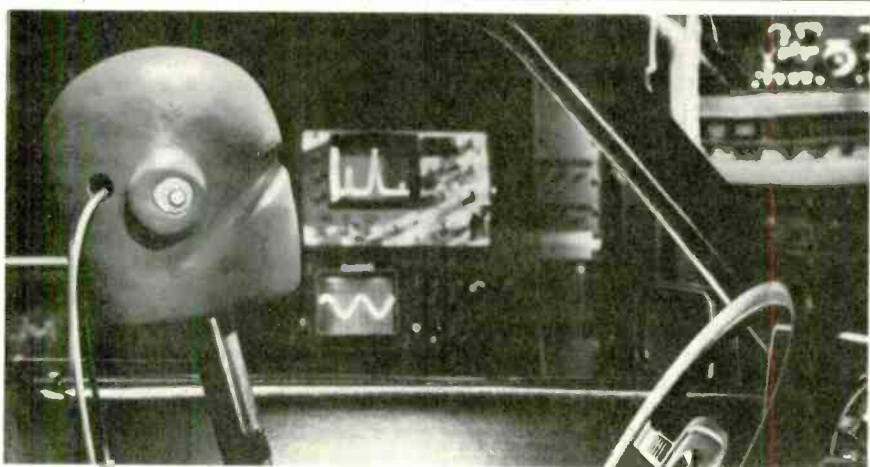
Based on previous experience, however, I had some doubts about the performance level Bose and General Motors would seek in their collaboration. But these reservations quickly vanished once I had slipped behind the wheel of my Seville. The performance of the Delco/Bose system was astounding—smooth, balanced, and possessed of one of the few genuinely convincing stereo images I've heard in an automobile. There's enough clean volume to set the windows vibrating visibly, the sound is essentially the same no matter where you sit in the car, and the front end provides excellent radio reception and very good human engineering. Frankly, considering the neatness of the factory installation, the Delco warranty, and the anticipated price (rumored to be less than \$1,000), I can't imagine anyone who can afford one of these cars buying it without the Music System.

Much of the reason for the quality of the system's sound, despite the obstacles thrown up by automotive acoustics, is surely traceable to the designers' ability to nail down, examine, and ultimately control most of the important variables. But there are valuable lessons in this project, even for those of us not flush enough to buy a GM luxury car. Here are a few of the observations Bose and Delco engineers made in their presentations and in their conversations with me:

- Imaging is better for both driver and passengers when the speakers face upward (or close to it), rather than outward. The brain's "image-assembling" process is confused by the directional characteristics of speakers when they fire directly at a listener sitting nearer to one than to the other.

- Extended bass is easier to achieve in a car

(Continued on page 96)



Bose's computerized artificial listener, "Morgan," at work behind the wheel.

Sound Views

Opinion and comment on the changing audio scene by Robert Long

The Trouble with Tape Rankings

SOME YEARS AGO, when we undertook our first round of cassette-tape testing, we received a letter expounding what seemed at first glance a very attractive idea. The writers had assigned numerical values to those of our findings that didn't already consist of some sort of specific measurement (e.g., packaging). Then they devised weighting factors for all the data elements—both ours as published and theirs as assigned—so that they could be compared. Finally, they fed the whole works into a computer and asked it to rank the tapes we had tested both in order of absolute performance quality and in order of what the British call "value for money."

It was obvious that a great deal of thought had gone into the project. I don't remember the details, but there was a mechanism for assigning numerical values to our subjective value judgements, because not all the important characteristics of cassettes can be measured in lab tests.

Weighting factors are, of course, crucial to an accurate rating system. Take, for example, a tape with a signal-to-noise (S/N) measurement of 60 dB and midrange headroom of 3 dB. If S/N ratio and separation are held to be of *equal* importance, the weighting factor of the former would have to be one-twentieth that of the latter. On the other hand, if midrange headroom is seen as twice as important as S/N ratio, its weighting factor would have to be forty times as great. It's easy to see that the assignment of weighting factors is at least as important as the measurements (or the arbitrary values) to which they are applied.

Even this example is an oversimplification of the knots that must be examined and untied to lead to any kind of useful conclusion. The fact is that the system proposed by our ingenious correspondents didn't work, for all their good intentions. The one tape that we considered less than acceptable for high fidelity recording came out in their ranking as the best "value for money"—which, perhaps, should not have surprised us much. What did surprise us were the quality rankings, which placed some fine tapes well down on the list and some distinctly mediocre ones near the head.

At first I thought the compilers must have mistaken some of our lab measurements, but all their numbers checked. When I examined the weighting factors, however, some of their method's fallacies began to emerge. One characteristic that I considered fairly important was not factored in at all, evidently because the analysts were unable to find a formula that could distill the information into a simple numerical rating. Worse, there were major disparities in how other parameters were

The success or failure of a tape depends mainly on how it is used.

weighted. Some were given an importance factor that would be appropriate to inexpensive equipment but not to the top models; others were treated conversely.

And as I considered the individual parameters I realized that, for many of them, no single weighting formula was likely to be satisfactory. Beyond a certain point, for example, a tape's dynamic range (with noise reduction) can easily exceed that of a source like FM. At that point, the dynamic range drops from being a highly important factor to an unimportant one. Thus, a complex function, rather than a simple multiplier, would be needed to convert the raw dynamic range into a figure of merit. And the function would have to vary with the tape's intended use—making a 70-dB dynamic range, for example, excellent for recording from FM, but substandard for live recording of a jazz band.

Of course, that raises another question: How are we to cope with two interrelated parameters when both are influenced by use? Take, for instance, the matter of headroom. Midrange headroom is very important, but only up to the level where the recordist stops using it—a point that depends on the recorder's metering system. If it's possible to pin the meter (that is, drive it all the way up) without exceeding the headroom, few recordists—even those with three-head decks that permit monitoring during recording—would be willing to trust the tape's rated limits over the testimo-

ny of their eyes. In some cases, that may be just as well. Recording a live jazz band, for instance, the brass transients and cymbals, among other things, may reach (or surpass) the limits of the high-frequency headroom before all that midrange capability has been used up. Substitute a string quartet, on the other hand, and the high-frequency demands at, say, 10 kHz drop radically with respect to those in the midrange. The fact is that these variables—the meters, the tape, the program material, the midrange headroom, and the high-frequency headroom—are only a few among the many that are intimately interrelated. Distortion, noise, dynamic range, frequency response, and so on do not exist in a vacuum, and all are influenced by the deck's variables (noise reduction options, for instance).

We might be tempted to go to the extreme opposite from that of the single-number-of-merit approach and tabulate ratings for all tapes in all possible recorders—and for all possible applications. If you record only from classical orchestral FM broadcasts on a Teac 450 with Dolby B noise reduction, for example, TDK's D might rate a 7 out of a possible 10 on some scheme of reckoning. But you can imagine how many pages it would take—and how much searching on the part of our readers—to cover just that one tape for all the recorders, switching options, and applications that conceivably would be of interest. It could be done, and it would give figures of merit, but it would be so outrageously cumbersome as to confound the initial impulse toward simplicity.

Ultimately, however, the success or failure of a given tape depends more on how it is used than on all the other factors combined. A poor tape (and we try not to test poor tapes) may well limit the quality of a recording made by a knowledgeable recordist. But a quality tape can also yield a poor recording if the recordist doesn't adequately understand the tape's properties.

That is the key. Rankings, even if they could be worked out to allow for all the variables involved, wouldn't contribute to *understanding*. Therefore they can't provide what they're intended to—instant, foolproof, and unqualified differentiation between the available alternatives. Carefully worked out rankings can prevent grossly inadequate choices for their assumed applications, but such a lowest-common-denominator approach is inconsistent with the ideal of high fidelity: the search for the best possible reproduction of sound. **HF**

Once again, JVC harnesses higher tech in the pursuit of higher fidelity.

The power of higher tech, harnessed by superior engineering. Once again, it's the mark of JVC's leadership. Even in the realm of moderately priced components like these.

The intricacy of JVC turntable design.

You see it, and hear it, in attention to subtle, yet significant details. Like a straight, low-mass tonearm with *tracing hold* to stabilize tracking. And quartz control to insure virtually perfect platter rotation.

Powerful, yet musically pure receivers.

A JVC innovation called *Super-A* removes subtle forms of distortion. So

musical overtones and transients are amplified intact for a pure, musically natural sound. Add graphic equalization and quartz tuning, and you have receivers unsurpassed for performance and versatility.

The innovators in metal cassette decks.

It was JVC who first put together the technology needed to record metal tapes. Now we've added Dolby® C for ultra-quiet recordings. Plus features like Music Scan to find selections automatically. Spectro-Peak metering. Logic controls, digital indication, memory and more.

Speakers more precise than the ear itself.

Our Dyna-Flat ribbon tweeter extends to 100 kHz, higher than the ear can hear. By doing so, it helps provide correct amplitude and phase characteristics in the audible range. So music takes on the focus, detail and spatial image of live sound.

Your JVC dealer is waiting to demonstrate the full new line of higher tech components. Computerized tuners. "Thinking" tonearms. Self-optimizing cassette decks. Higher tech engineering all focused on one goal — achieving the highest fidelity possible.



JVC

US JVC CORP

41 Slater Drive, Elmwood Park, N.J. 07407
JVC CANADA INC., Scarborough, ONT.

*Dolby is a registered trademark of Dolby Laboratories.

2

Second in a series
on how Delco
Electronics
and Bose technology
contribute to your
enjoyment of driving.

For the first time a music system and the listening environment have been designed together.

The performance of even the best home music systems is limited by the acoustics of the environment, the placement of the speakers and the location of the listeners. These important factors are beyond the control of the designer.

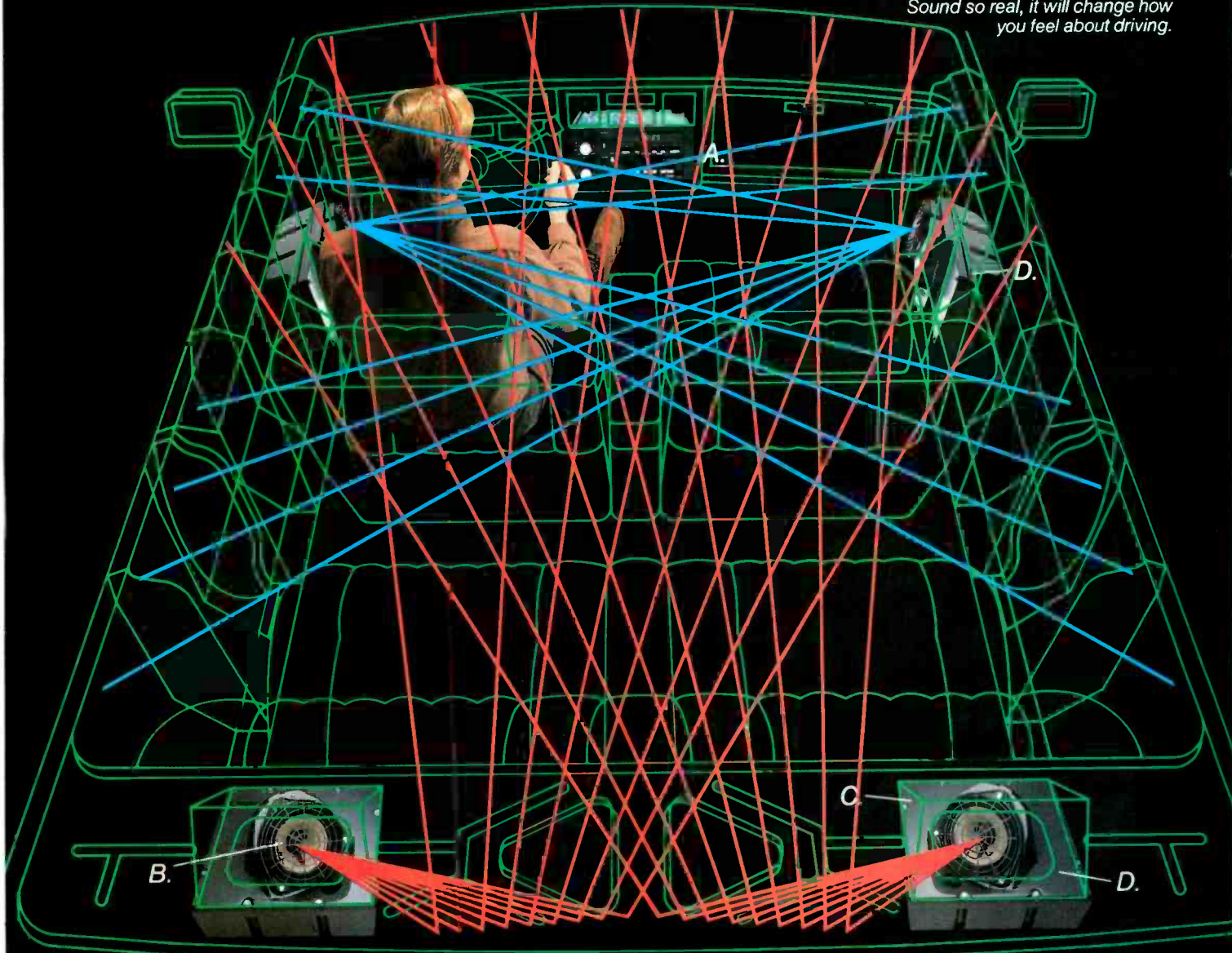
Three years ago Delco Electronics, General Motors Car Divisions and Bose Corporation began research to design a music system with, and for, its environment. The acoustics of the car were measured, the speakers precisely placed, and the known locations of the listeners were considered in the design. The result is a music system designed differently for each automobile body, but with one element in common—the performance!

And how much difference does this new design concept make? We let hundreds of people listen to the Delco-GM/Bose Music System during its development. From musicians to people who had not believed that music was important in their lives, the reaction was the same.

But if we say more we might bias the experience you will have when you visit your GM dealer. Just try not to get excited!*

Delco **GM** **BOSE**

Sound so real, it will change how you feel about driving.



A. (ETR) Electronically tuned receiver. B. Helical voice coil speaker. C. "Digital mode" amplifier built into each enclosure. D. Reflex enclosure.

*Available as a factory-installed option on Cadillac Seville and Eldorado, Buick Riviera, and Oldsmobile Toronado.

A totally new class of music systems from Delco-GM.

New Equipment Reports

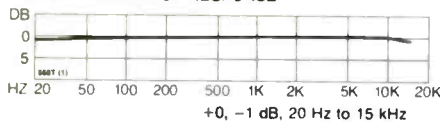
Preparation supervised by Michael Riggs, Robert Long, and Edward J. Foster.
Laboratory data (unless otherwise noted) supplied by Diversified Science Laboratories.



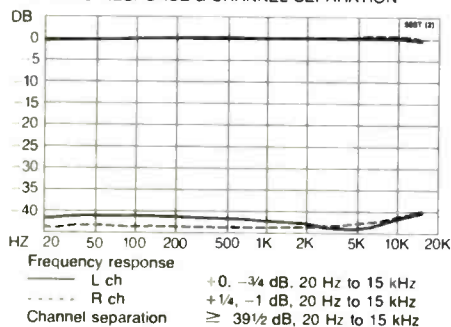
Great Scott! A Tiger of a Tuner!

Scott Model 558T AM/FM tuner. Dimensions: 17 by 13 $\frac{1}{4}$ inches (front panel), 10 $\frac{3}{4}$ inches deep plus clearance for antenna connections. Price \$280. Warranty: "limited," three years parts and labor. Manufacturer: made in Korea for H. H. Scott, Inc., 20 Commerce Way, Woburn, Mass. 01801.

MONO FREQUENCY RESPONSE



STEREO RESPONSE & CHANNEL SEPARATION



IT HAS BEEN SOME YEARS since we tested a Scott tuner. Audiophiles with long memories are still sighing over the LT-112B, a superb tuner when we tested it in '66 and one of Scott's last great kit models. Well, friends, you can put away your 112Bs; for all its sterling qualities, it has been altogether eclipsed. Behind the slim faceplate and modest pricetag of the Model 558T lurks a tiger of a tuner.

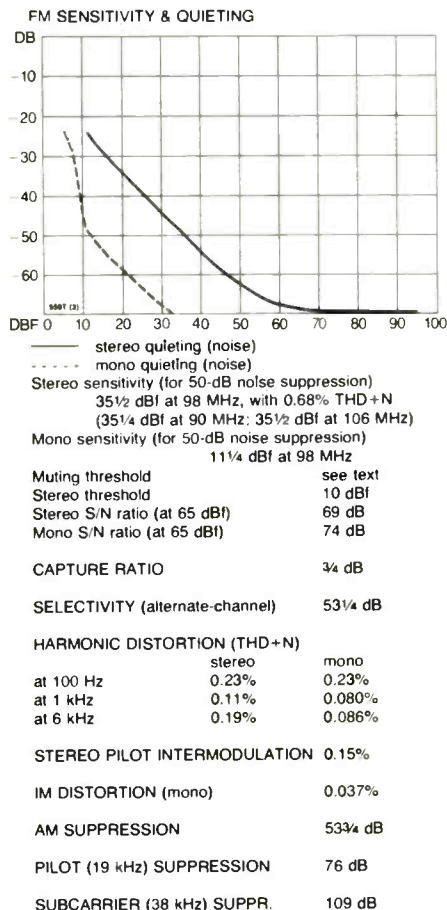
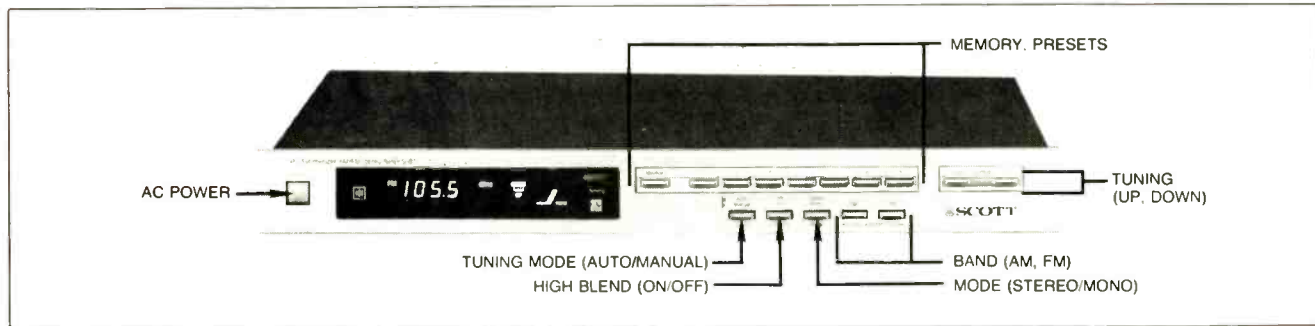
Not that it's gussied up with the sort of pyrotechnical features of some of today's fancy models; on the contrary, this is a relatively simple digital tuner with memory that just happens to perform better than most of the competition. Its design centers around a four-gang PLL frequency-synthesis front end with a pulse-filtration circuit to control the noise that is a by-product of digital switching.

The AM and FM bands have seven station memories each. The AM section strikes us as distinctly above average. Scott's products are distributed widely in Europe, where AM services are quite important, so it follows that a good deal of attention has been paid to this tuner's AM circuitry. In fact, if you look closely at the fluorescent display panel, you'll see faint designations for MW and LW—medium wave and long wave, respectively. (The European version of the 558T, in fact, offers all three bands—MW is what we call AM, while LW lies at lower frequencies yet—with somewhat different front-panel switching.) Also present, but unused in the U.S. version, are an extra digit in the number display and marks on either side of the

TUNED indicator, evidently to indicate which direction to tune in the narrower frequency steps of the European version. Our model steps along smartly in full-channel increments: 200 kHz for FM and 10 kHz for AM.

The tuning system is fairly conventional. In the manual mode, UP and DOWN bars (actually, opposite ends of a single rocker element) step the tuner each time you apply gentle pressure, allowing you to audition each channel as you go. Pressing harder tunes the 558T rapidly, with no audible output. The automatic mode keeps stepping until a receivable channel is reached. The muting operates while the tuner is "in transit," but not when it is set to a frequency where there is no receivable station. To avoid the roar of uninhabited channels, use the automatic mode, which stops only at occupied frequencies. To store a particular station, press MEMORY and a corresponding area of the fluorescent panel lights for a few seconds, during which the station can be entered.

To help you orient a rotatable antenna for the best signal, there is a multi-element signal-strength indicator, shaped something like a hysteresis curve, on the fluorescent panel. Though it has six segments, the top two come on together in our model, yielding five functioning levels of differentiation—more than most of today's tuners afford. Furthermore, the LEDs' signal thresholds are well distributed: the first illuminates at 16 dBf, and the remaining ones occur at fairly even intervals of about 10 dBf, up to 54 dBf for the top two elements.



They thus cover the range from marginal mono reception (about 55 dB of quieting) to maximum mono quieting (74 dB) and nearly full stereo quieting. (In this area, the meter on the old LT-112B—which measured multipath as well as signal strength—did outpoint those on the large majority of today's tuners, including the 558T, because of its response to much smaller increments.)

An unusual feature of the back panel is a captive, permanently attached one-meter output cable to feed your amplifier. It seems a sensible length, though some users may grumble that it's a little too long or too short to be ideal for their particular systems. The usual AM bar antenna is included, along with binding posts for a long-wire AM antenna and an FM-antenna downlead. For 75-ohm coax, there is a binding post for the hot lead and a collar for the grounding shield—a common arrangement in current equipment. (One of these days, some enterprising company is going to realize that the

popularity of coax is on the increase for both FM and TV use, that video recorders have made the so-called F connectors the standard for such use, and that it would be a logical convenience to standardize on those connectors for quality FM tuners as well. But that day is not here yet.)

Areas in which the 558T's performance particularly shines include sensitivity, frequency response, and channel separation. Actually, Scott could have sacrificed more of its exemplary channel separation to the BLEND, which takes more of a nibble than a bite out of the hiss on weak stereo stations. Also exemplary is the degree to which the pilot and subcarrier frequencies are suppressed. And, at 4 dB, the adjacent-channel selectivity is unusually good (the alternate-channel's is slightly less so). But there is no respect in which this tuner cannot be characterized as good or better. As a whole, it represents a performance level that belies its moderate price.

Circle 98 on Reader-Service Card



In the detail shown here, the 558T's neat visual display tells us at a glance that we're perfectly tuned to a very strong FM stereo broadcast on 90.3 MHz, which also happens to occupy the fourth memory preset position.

Signet's Hand-Crafted Cartridge

Signet TK-7LCA fixed-coil phono cartridge, with Straight Line Contact multiradial diamond stylus. Price: approx. \$200 (varies somewhat from market to market). Warranty: "full," three years parts and labor. Manufacturer: Audio-Technica, Japan; U.S. distributor: Signet Div., A.T.U.S., Inc., 4701 Hudson Dr., Stow, Ohio 44224.

SIGNET HAS ALWAYS STRESSED the importance of combining craftsmanship with technology, apparently feeling that the latter alone is not enough. This attitude is reflected throughout the current TK series of moving-magnet cartridges, which are individually tweaked and tested for maximum performance. Judging from the TK-7LCA, which is medium-high in the line (there are four models below it and two above it), the results are well worth the extra effort.

The TK-7LCA uses two coils per channel, each wound with a single low-oxygen copper wire without solders or welds for maximum efficiency. The coil cores are of

Signet's laminated UniCore construction, with integral pole pieces for minimum loss at high frequencies, and there are separate magnets for each channel for maximum separation. Compliance and damping are said to be hand-adjusted for each cartridge during assembly. A nude-diamond Straight Line Contact multiradial stylus is mounted into the TK-7LCA's tapered beryllium-rod cantilever by means of a laser-bored square hole. The square shape of the diamond's shank reduces tip mass and helps assure correct orientation in the cantilever.

The tracking-force recommended is a range: from 0.8 to 1.6 grams. Diversified Science Laboratories put the pickup

From the Driving Force.

A powerful solution to underpowered car stereo. Panasonic High Power.

The awesome power of the Driving Force is unleashed through the 40-watt Panasonic High Power car stereo.

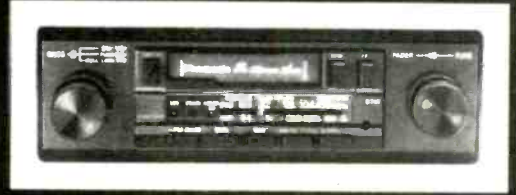
Forty watts, 20 per channel, to pump out your music the way you want it. Forty watts for clean, crisp highs, thundering lows and everything in between. And that's just the beginning.

In the cassette player, there's Dolby[®] noise reduction to cut tape hiss down to size. Locking fast forward/rewind frees your hands. The 3-mode tape selector gives you metal, chrome and normal tape capability. And Radio Monitor lets you listen to the radio without ejecting the cassette.

The FM Optimizer minimizes high end noise and enhances FM signal reception. INQ circuits reduce interference from power lines, passing traffic and your car's own engine. The adaptive front end helps the tuner maintain optimum sensitivity for maximum reception.

There are 4-way faders as well as separate bass and treble controls to help balance the sound.

Feel the power of your music with High Power from Panasonic.



Panasonic car audio *The driving force*



[®]Dolby is a trademark of Dolby Laboratories, Inc.



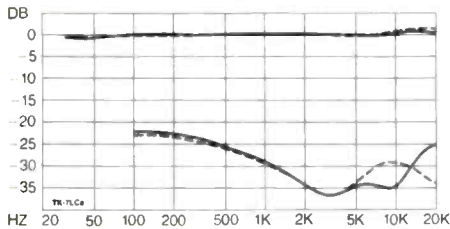
through our standard "torture test" (actually, certain cuts on the CBS STR-120 and STR-100 test records) at the minimum value in that range without misadventure. For the remainder of its tests—and for our listening tests—a median value seemed more prudent, and 1¼ grams was adopted for both. Vertical tracking angle matched the 20-degree spec in the low-frequency test; at midrange frequencies, where rake angle begins to play a part in the results, the apparent VTA measured a little lower, suggesting that the rake angle is nearly as good as the VTA. (Both are influenced somewhat by vertical tracking force, of course, because cantilever attitude varies accordingly.)

The SME is moderately bulky by today's standards; with it, the arm/cartridge resonance falls half-way between the worst warp range (around 5 Hz) and the optimum frequency (around 10 Hz). The lighter the arm, the higher the arm/cartridge resonance, but even an extremely light arm should not raise the resonance into the audible range (above 20 Hz).

The resonance figures in the SME tonearm suggest the TK-7LcCa will have little trouble tracking warps—and, indeed, we had none in our listening tests, even with a somewhat more massive arm. They do indicate, however, that the Signet could be kept even farther out of harm's way in this respect by mounting it in a lighter arm.

Most important of the lab data, however, are the extremely smooth response curves and, to a lesser extent, the very good separation. Together, they suggest uncolored reproduction with excellent stereo imaging. And that's exactly what we heard in the listening room. Signet claims even greater clarity and transparency for its top two models, but without the opportunity for A/B comparisons, it's hard to imagine how the sound of the TK-7LcCa could be improved on. We considered it exceptional on every record we subjected it to and a challenge for any cartridge on the market—fixed-coil or moving-coil—at any price. **Circle 95 on Reader-Service Card**

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



Frequency response
 — L ch ±1 dB, 20 Hz to 20 kHz
 - - - R ch ±1½, -1 dB, 20 Hz to 20 kHz
 Channel separation ≥ 25 dB, 450 Hz to 20 kHz

SENSITIVITY (1 kHz) 1.57 mV/cm/sec
 CHANNEL BALANCE (1 kHz) ±0.5 dB

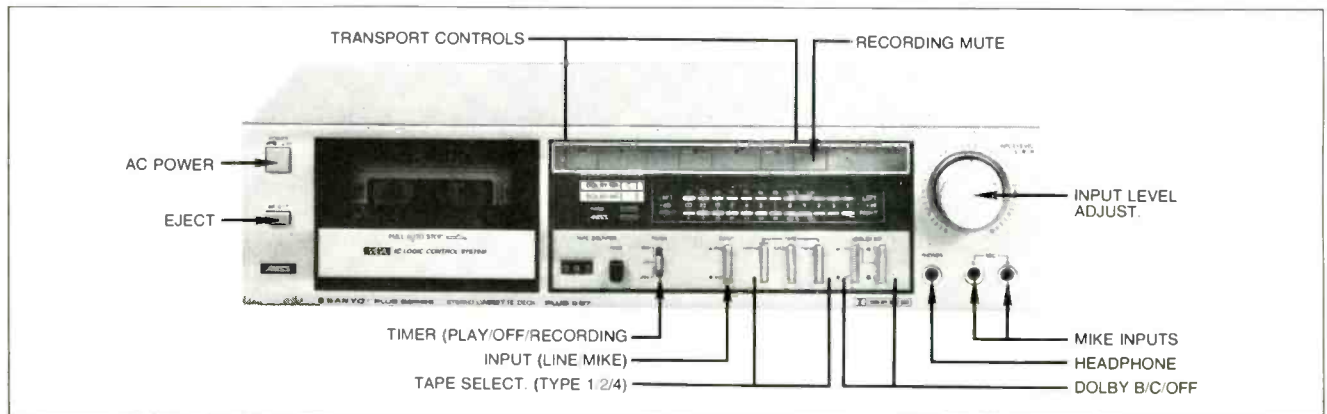
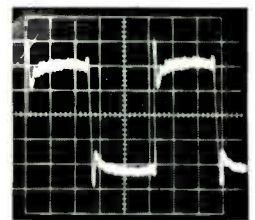
VERTICAL TRACKING ANGLE ≈20°

LOW-FREQUENCY RESONANCE (in SME 3009)
 vertical 7.2 Hz; 16-dB rise
 lateral 7.3 Hz; 14¾-dB rise

MAX. TRACKING LEVEL (re RIAA 0 VU; 1.8 grams)
 lateral ≧ +18 dB
 vertical ≧ +12 dB

WEIGHT 6.6 grams

SQUARE-WAVE RESPONSE



Sanyo's Sane and Simple Deck

Sanyo Plus D-57 cassette deck, with Dolby B and C noise reduction. Dimensions: 17¼ by 4 inches (front panel), 10½ inches deep plus clearance for controls and connections. Price: \$230. Warranty: "limited," two years parts and labor. Manufacturer: Sanyo Electric Co., Ltd., Japan; U.S. distributor: Sanyo Electric, Inc., 1200 W. Artesia Blvd., Compton, Calif. 90220.

THOSE FOR WHOM a \$230 cassette deck is at the bottom, rather than the top of the price spectrum may be somewhat put off by Sanyo's sometimes extravagant description of its Plus Series cassette deck. Don't be. The D-57 may not be as ultrasophisticated as some of the company's product literature suggests, but it's a very nice deck and an excellent value nonetheless.

It employs a combination record/play head and is equipped for both Dolby B and Dolby C noise reduction. There are three tape-selector options: ferric, "chrome," and metal. The peak-reading level display is calibrated from -20 to +6 dB, with increments of 3 dB or less per step from -7 dB up (and a "cal" mark at 0 dB, which is

curious since you can't calibrate the deck in normal use). The fanciest touch is what Sanyo calls AMSS (Automatic Music Select System), which seeks out the blank spaces between selections in either direction of fast wind and begins playback when it finds one. The spaces should be at least four seconds long and reasonably noise-free. The AMSS works about as well as such features generally do, functioning quite effectively with pop music, but sometimes being fooled into thinking it has found an interselection space by the pauses in classical works.

The AMSS is activated by pressing PLAY simultaneously with one of the fast-wind buttons, all of which are found in the



Because Sony redesigned the car stereo, the auto makers don't have to redesign the car.

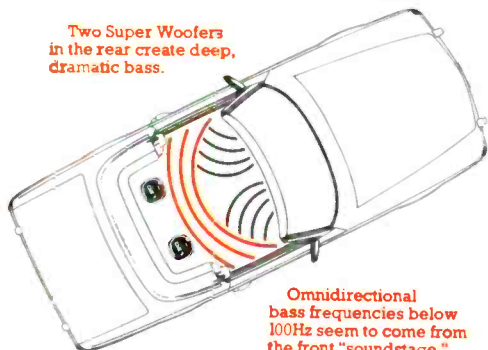
The interior of an automobile is designed with a lot of purposes in mind. Unfortunately, great stereo sound reproduction isn't one of them.

Fortunately, Sony did more than just tackle this problem. They actually solved it. By designing a stereo system that meets the acoustical challenges inherent in a car.

INTRODUCING THE SONY SOUNDFIELD™ SYSTEM.

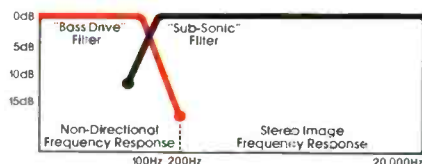
As the very name of our system indicates, we started with the acoustical sound field itself by treating the entire front of the car as a stage. The very directional high-end and mid-range frequencies emanate from this stage in an accurate stereo image.

Two Super Woofers in the rear create deep, dramatic bass.



Omnidirectional bass frequencies below 100Hz seem to come from the front "soundstage."

So the highs come across clear and soaring. The midrange, natural and accurate.



The bass frequencies below 100Hz actually are directed from the rear of the car, where the Super Woofers are placed. However, since these frequencies are omnidirectional, they seem to be coming from the proper "stage" location.

The result is richer, fuller, and more dramatic bass.

CONVERT WITH COMPONENTS.

The optimum SoundField System consists of a powerful amplifier (XM-120) driving a pair of 8" Super Woofers (XS-L20), along with a medium-powered amplifier driving the front speakers. This means full-range speakers can be used without risk of modulation distortion.

But you can begin to enjoy the

SoundField System simply by adding one of our lower powered amplifiers and the Super Woofers to the car stereo you already have. Then you can slowly build up your system adding a higher powered amplifier, more speakers, and an equalizer.

A SOUND THAT TAKES A BACKSEAT TO NONE.

Although the technology of the Sony SoundField System is complex, the reason for it is simple.

It will give you high dB levels with very low distortion, extremely precise stereo imaging, and an amazingly broad frequency response. In addition, you'll be pleasantly surprised at just how easily a SoundField System can be installed in your car.

So come into your local Sony dealer and ask to hear the next generation in autosound systems.

One listen and you'll know why the auto makers don't have to redesign the car.

SONY
THE ONE AND ONLY



...and then came the SE-9.

35 years ago, to satisfy listening preferences, serious music lovers had to redesign their listening rooms. Remove the drapes. Add a rug here. Rearrange the upholstered sofa there. Get rid of that crystal chandelier!

Bass and treble tone controls came later, and they helped — but only a little. When you needed a boost in that lowest bass region, you had to accept boosted upper bass and mid-range tones as well — whether you needed them or not.

By 1958, the first equalizers appeared. They allowed you to alter specific bands of tones to suit the needs of the listening room — and the music program. With special mics, a pink noise generator, and a real-time

analyzer, you could electronically adjust your system to your listening preference. If — that is — you didn't mind spending several thousand dollars and a half hour adjusting and readjusting controls to enjoy a half hour of listening.

Then came Sansui's remarkable SE-9 Compu-Equalizer. It takes the guesswork and the frustration out of equalization. At the touch of a button, the SE-9's built-in pink noise generator feeds its signals first to one speaker, then the other. Sounds picked up by the SE-9's calibrated microphone are then analyzed by its microprocessor. Sit back and watch in amazement, as the SE-9's motorized system moves each of its

16 fader controls (8 per channel) to create the curve that yields precisely flat response at your preferred listening location.

Touch another button, and the curve is memorized for future, instant recall. Move to another location — even another room — and the SE-9 can create and store a new curve — up to four of them.

At last, after 35 years, a perfect equalization system without errors or frustration. And, at a price that makes perfect equalization affordable for all serious music lovers.

See the SE-9 and Sansui's truly complete line of high quality components and systems at your Sansui dealer today. Or write to us for details.



SANSUI ELECTRONICS CORPORATION
Lyndhurst, New Jersey 07071, Gardena, CA 90248
Sansui Electric Co., Ltd., Tokyo, Japan

Sansui

A Quick Guide to Tape Types

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

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

Type 1 (IEC Type I) tapes are ferrics requiring the same 120-microsecond playback EQ but somewhat higher bias. They sometimes are styled LH (low-noise, high-output) formulations or "premium ferrics."

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

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

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

transport controls above the metering. The owner's manual, which is better than average for such a product, describes these controls as "pushbuttons." In fact they are touchplates that may respond even when you brush a finger against them inadvertently. Since only the recording interlock and the PAUSE are fitted with pilot LEDs, it's sometimes difficult to ascertain whether the deck is doing what you intend, particularly since you can't monitor from the tape during recording. However, a glance at the cassette well usually helps, since hub rotation is easier to see than it is in many decks. Once we became familiar with the deck and its "feel," our initial anxiety tended to evaporate.

The muting control is manual in the sense that it cuts the recording feed for as long as you touch it and serves no other function: if you want to go from MUTE to PAUSE, waiting for the next selection to start, you simply keep your finger on MUTE while you press the PAUSE beside it. The pause function itself is quick and very noise-free. It involves no automatic muting, which many solenoid pause controls employ to kill the pitch irregularity when the deck restarts. If you start in the middle of music you can hear the irregularity on the D-57. But you also get seamless joints (with no "hole" from the muting) if you stop and start during essentially pitchless sounds (like applause or hiss) or during silence. We consider this an important advantage for some kinds of recording. Less admirable is the recording level control, whose totally independent elements

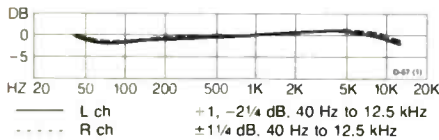
make it difficult to maintain channel balance during fades, for instance.

Performance is generally quite good, though you won't find the glittering response on the extreme high end that you would with three-head decks fitted with a multiplex-filter defeat switch for the Dolby modes. But even among such "advanced" decks, bass response frequently is less extended than the D-57's.

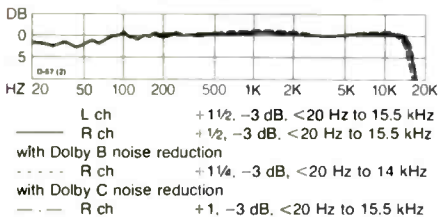
Sanyo suggested three TDK tapes for DSL's tests: SA as the Type 2 ("chrome") ferricobalt, MA as the Type 4 metal, and D as the ferric. In the data, we have called the latter "Type 1," though in the past we have classified D as Type 0—that is, a relatively modest ferric. It has been souped up little by little, however, and today its characteristics are better classified as a Type 1 tape than Type 0. The D-57 does well by it, in any event. Results, including Dolby tracking, with all three tapes are unusually good for a deck in this price class, despite the slight suggestion of underbias (the tendency to a high-frequency peak) with the metal formulation. Distortion is not quite as low at -10 dB as the data suggest, however: Atypically, for tape equipment, the second harmonic measures higher than the third in the D-57, for maximum THD figures near 1% with all three tapes.

An under-\$300 cassette deck that's not chintzy in some respect is a rare find these days. The Sanyo Plus entry is such a rarity: in fact, some users may find that it serves their needs better, and looks handsomer, than many decks at twice the price. **Circle 97 on Reader-Service Card**

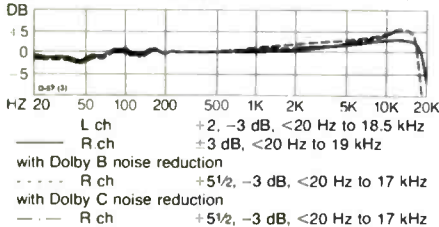
PLAYBACK RESPONSE (TDK test tape; -20 dB DIN)



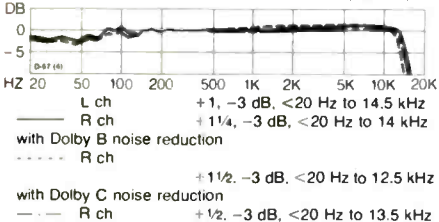
RECORD/PLAY RESPONSE, TYPE 2 TAPE (-20 dB)



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



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



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

	Type 2 tape	Type 4 tape	Type 1 tape
without noise reduction	53 1/2 dB	52 dB	51 dB
with Dolby B	63 1/4 dB	62 dB	61 dB
with Dolby C	71 3/4 dB	70 1/4 dB	69 1/2 dB

INDICATOR READING FOR DIN 0 DB (315 Hz)

Type 2 tape	+1 dB (with 1.2% THD)
Type 4 tape	0 dB (with 1.3% THD)
Type 1 tape	+1 dB (with 2.3% THD)

INDICATOR READING FOR 3% DISTORTION (315 Hz)

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

DISTORTION (third harmonic; at -10 dB DIN)

Type 2 tape	≤ 0.58%, 50 Hz to 5 kHz
Type 4 tape	≤ 0.52%, 50 Hz to 5 kHz
Type 1 tape	≤ 0.45%, 50 Hz to 5 kHz

ERASURE (100 Hz)

Type 2 tape	65 dB
Type 4 tape	54 1/2 dB

CHANNEL SEPARATION (315 Hz)

	63 dB
--	-------

INDICATOR "BALLISTICS"

Response time	11 msec
Decay time	≈450 msec
Overshoot	0 dB

SPEED ACCURACY 1.8% fast, 105-127 VAC

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

	±0.085%
--	---------

SENSITIVITY (re DIN 0 dB; 315 Hz)

line input	85 mV
mike input	0.46 mV

MIKE INPUT OVERLOAD (clipping)

	10.25 mV
--	----------

OUTPUT (from DIN 0 dB)

	0.57 V
--	--------

*See text.

CONVERSION TABLE FOR POWER OUTPUT

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.

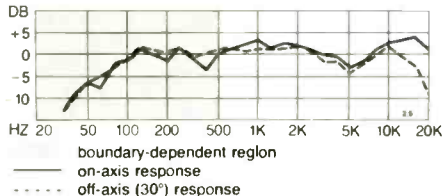
WATTS	dBW	WATTS	dBW	WATTS	dBW
1.00	0	10.0	10	100	20
1.25	1	12.5	11	125	21
1.6	2	16	12	160	22
2.0	3	20	13	200	23
2.5	4	25	14	250	24
3.2	5	32	15	320	25
4.0	6	40	16	400	26
5.0	7	50	17	500	27
6.3	8	63	18	630	28
8.0	9	80	19	800	29



A Mirage— A Convincing Illusion

Mirage 2.5 loudspeaker system. Dimensions: 12¾ by 31½ inches (front), 9 inches deep. Price: \$499 per pair; T-2 speaker stands, \$40 per pair. Warranty: "limited," ten years parts and labor. Manufacturer: Mirage Acoustics, Unit 1, 21 Progress Avenue, Scarborough, Ontario, Canada M1P 4S8

ROOM RESPONSE CHARACTERISTICS



SENSITIVITY (at 1 meter; 2.8-volt pink noise, 250 Hz to 6 kHz) 90 dB

AVERAGE IMPEDANCE (250 Hz to 6 kHz) 8.1 ohms

IT'S NO SURPRISE that most of the loudspeakers on the U.S. market are made in the United States. But it does puzzle us slightly that so few Canadian manufacturers have brought their products south. England, an ocean away, is better represented. This is beginning to shift, however, and the company perhaps most responsible is Mirage Acoustics.

The Model 2.5 is the second Mirage loudspeaker we have reviewed. The first (which has now been replaced in the line) was a medium-size two-way system called the SM-1 (test report, April 1981). Differences between the two are in emphasis and refinement, rather than in basic approach. Like the earlier speaker, the 2.5 is designed for use on short stands (which are available separately as a kit for a modest price) and uses first-order (6-dB-per-octave) crossovers for best phase response.

Unlike the older speaker, however, or any of Mirage's other current models, the 2.5 is a three-way system, with a 10-inch woofer, a 4-inch midrange, and a ¾-inch dome tweeter. The company had until now been reluctant to build a three-way, feeling that almost all such systems were flawed by response anomalies originating with their midrange drivers. A considerable part of the design effort for the 2.5 therefore went into the development of a satisfactory "squawker," as the British sometimes call them.

Physically, the 2.5 is tall and slender, with a walnut- or oak-grain vinyl finish and a dark brown grille cloth. The speakers come in mirror-image pairs, with the midrange and tweeter set close together in a vertical line and offset toward the inside edge of the cabinet. Amplifier connections are made to color-coded binding posts inset in the back panel.

Except where otherwise noted, Diversified Science Laboratories made all of its measurements with the right-hand speaker set on one of Mirage's 10-inch-high stands about three inches from the rear wall and away from any side walls. Power handling was excellent. The 2.5 accepted without strain the full power of the test amp (63½ volts peak, equivalent to 27 dBW, or more than 500 watts, into 8 ohms) on 300-Hz tone bursts. On the more stringent, if somewhat less realistic, 300-Hz continuous-tone test, it handled DSL's maximum level of 28.3 volts (equivalent to 20 dBW, or 100 watts, into 8 ohms) without excessive distortion or buzzing.

Total harmonic distortion (THD) was, as one would expect from the power-handling performance, agreeably low. At a

moderately high sound pressure level (SPL) of 85 dB, it averaged about ¼% over the entire test range (30 Hz to 10 kHz) and about ⅓% from 80 Hz up. Distortion increased gradually at higher levels, but did not become really significant until a very loud 100 dB SPL was reached. These are fine results.

The 2.5's sensitivity proved moderately high. In addition, its impedance curve is exceptionally smooth and for the most part reasonably high, with a maximum of 10 ohms at approximately 50 Hz and a minimum of 6.8 ohms above 250 Hz. The overall minimum, however, is 3.6 ohms at approximately 90 Hz. This alone should be no problem for most amplifiers, but we would recommend against running a pair of 2.5s in parallel with another set of speakers.

Frequency response is very smooth, remaining within ±4 dB from 40 Hz to 20 kHz on axis and within ±4¼ dB from 40 Hz to 16 kHz off axis. DSL also ran curves (not reproduced here) with the 2.5 placed forty inches from the rear wall. They start rolling off about an octave higher in the bass, because of the loss of reinforcement from the rear wall, but are otherwise slightly smoother than the curves made with the speaker against the wall. The on-axis curve stays within ±3¼ dB from 80 Hz to 20 kHz, and the off-axis response was within ±3¼ dB from 70 Hz to 16 kHz. Indeed, in this position, the off-axis response was flat within a mere ±1½ dB from 100 Hz to 2.8 kHz—a range that encompasses the entire musical midrange, plus a healthy swatch of the upper bass and lower treble. In both positions, the advantage of a very small tweeter was evident in the treble extension of the off-axis curves, indicating excellent dispersion.

In the listening room, we experimented a bit and finally placed the 2.5s about midway between the two positions DSL used. (The speakers do not seem overly placement-sensitive.) Their overall sound is smooth, clean, and transparent. To whatever small extent they deviate from neutrality, it is in the direction of a slightly warm sound, which is not generally displeasing. One of this speaker's nicest qualities, in fact, is the sense of authority and solidity it projects. Imaging is precise and well maintained, especially laterally. In short, the Mirage 2.5 generates a very credible illusion of the real thing for an altogether reasonable price. And it looks nice, besides. If it fits your budget, it's well worth a listen.

Circle 94 on Reader-Service Card

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

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JBL Automotive Loudspeakers.

When you understand how well they're put together, the argument for buying anything else simply falls apart.



A unique flat-wire voice coil (Patent applied for) helps JBL Automotive Loudspeakers achieve both high efficiency and high power capacity.



Each speaker features a die-cast aluminum frame to ensure complete freedom from warping or corrosion.



The loudspeaker's magnetic structure produces a symmetrical magnetic field around the voice coil gap of the low frequency driver. This design provides a dramatic reduction in distortion.

You're looking at the inner workings of a remarkable automotive product. It's manufactured to tolerances so precise that they actually rival those found in critical engine components. It incorporates some of today's most advanced metalworking and chemical engineering techniques. And its performance is unsurpassed.

The product is JBL's T545, 3-way automotive loudspeaker. Part of a full line of new JBL speakers designed with innovative features you can see as well as hear. Each model, for example, utilizes a rugged die-cast aluminum frame to ensure tight tolerances and complete freedom from warping and corrosion. The loudspeakers also feature large, long-excursion, flat-wire voice coils. This design uses the magnetic field in the voice coil gap more efficiently so the speakers need less power to operate.

And that's only part of the story. Through the use of large-diameter, high-temperature voice coil formers and the latest in high-temperature adhesive technology, power capacity has also been improved. Combined with the loudspeakers' high efficiency, this provides outstanding dynamic range and significantly higher maximum sound output.

Other features include a massive, barium ferrite magnetic structure, powerful high frequency and ultra-high frequency drivers, and biamplification capability on 6 x 9-inch models.

Of course, the best way to appreciate their advanced engineering is to audition them for yourself. So ask the audio specialists at your JBL dealer for a complete demonstration of JBL Automotive Loudspeakers.

Once you hear them, the argument for buying anything else will simply fall apart.



First with the pros.

Circle 23 on Reader-Service Card

JBL/harman international

A Dynamite Amp from Acoustat

Acoustat TNT-200 power amplifier, in metal case. Dimensions: 17 by 5 inches (front), 14 inches deep. Price: \$1,095. Warranty: "limited," five years parts and labor (transferrable). Manufacturer: Acoustat Corp., 3101 Southwest First Terrace, Fort Lauderdale, Fla. 33315.

RATED POWER 23 dBW (200 watts)/channel

OUTPUT AT CLIPPING (both channels driven)

8-ohm load	23 $\frac{3}{4}$ dBW (240 watts)/channel
4-ohm load	\geq 25 dBW (320 watts)/channel*
16-ohm load	21 $\frac{1}{2}$ dBW (140 watts)/channel

DYNAMIC HEADROOM (re rated power, 8-ohm load)
+1 $\frac{1}{2}$ dB

HARMONIC DISTORTION (THD: 20 Hz to 20 kHz)
at 23 dBW (200 watts) \leq 0.259%
at 0 dBW (1 watt) \leq 0.02%

*See text



IT HAS BEEN SAID that all power amps sound the same, and indeed, ones with similar specs—at least for power, distortion, and so forth—are normally almost indistinguishable, leaving reviewers the unenviable task of comparing the virtually identical. On rare occasions, however, we come across a power amplifier that is different in concept and, very subtly, in sound. Such is the case with the Acoustat TNT-200.

The Acoustat is not the first power amp to use MOS FET (metal-oxide semiconductor field-effect transistor) output devices. Nor is it the first design of this type to pack 200 watts per channel. But it is novel

in the way its circuitry uses these devices, whose potential Acoustat feels is not fully exploited in conventional configurations. (See "How It Works.")

Power FETs cost several times as much as comparably rated bipolar transistors, but they offer certain significant advantages. They are more linear, and therefore generate less high-order distortion; they have low output conductance—another way of saying that the input is relatively unaffected by what is happening at the output; they have no "storage effect," and thus have a very fast response time.

Most important, the current through a

How It Works

ALTHOUGH MOS FETs, like bipolar transistors, are solid-state devices, they behave in many ways more like tubes: Current through the device is controlled by the input voltage rather than by the input current and in a "voltage-squared" rather than exponential fashion. Despite these differences, many FET power amplifiers have output stages that are direct analogs of those used in conventional transistor amps (without the usual protection circuitry). Acoustat, however, has decided that what is sauce for the goose is not necessarily tasty on the gander. FETs have their own advantages and limitations; ideally, one should use them in circuits that emphasize the former and minimize the latter, rather than slavishly mimicking configurations optimized for essentially dissimilar devices.

For example, most bipolar output stages are what is called a complementary-symmetry emitter-follower—a design with tremendous current gain, but no voltage gain. The voltage gain is all in the earlier stages. With bipolar transistors, this yields maximum bandwidth, minimum distortion, and low output impedance (high damping factor). Although the same configuration has been used with MOS FETs, it does not work as well with them. A FET requires a differential of 10 to 15 volts between its gate and source (the analogs of a bipolar's base and emitter) to conduct current, as compared with less than a volt for a conventional transistor. Thus, a FET output stage configured as a source-follower (the FET equivalent of a bipolar emitter-follower) has a maximum output voltage 10 to 15 volts lower in either direction than the voltages on the positive and negative power-supply rails. The power-sup-

ply voltages must therefore be higher than in a similarly rated bipolar amplifier, which causes a substantial loss in efficiency and greater heat generation.

Furthermore, a FET's input impedance is highly capacitive. Because a source-follower doesn't have any voltage gain, its input voltage must be the same as its output voltage. And to charge the input capacitance to that voltage requires considerable driving current. Without such (essentially wasted) drive, the amplifier's slew rate (the maximum rate of change of the output voltage in response to high-level signals) is reduced. Thus, reasoned Acoustat, a source-follower is not the answer: A FET output stage should have voltage as well as current gain, just as tube circuits do.

The classic FET configuration for voltage gain is called the common-source topology. However, it is difficult to use in a balanced complementary-output stage without introducing a driver transformer, which would degrade performance. Instead, Acoustat has resurrected an old tube circuit that has ground-referenced inputs and "floating" power supplies, with the speakers connected to the ground return of the power supplies. (In such a circuit, neither output terminal can be allowed to short to the chassis.) The power supply for the output stage is separate from the one that feeds the low-level stages, and only the output supply fluctuates with the signal.

Acoustat did have some problems closing a conventional feedback loop with this configuration, so the company developed (and has patents pending on) a unique and rather elaborate feedback topology. The inspiration for the technique

came with the realization that signal gain and error gain are not inextricably connected and that it is possible to eliminate distortion without reducing gain to unity (as is customary in bipolar emitter-follower output stages).

The TNT-200's first stage is a "transconductance amplifier"—that is, one in which the output current is proportional to the input voltage (and, implicitly, one in which the output voltage does not affect either). The next stage is a "transresistance amplifier"—one whose output voltage is determined by its input current (and is unaffected by its input voltage). There is a point between the two stages where whatever voltage is present represents output error (since if the amplifier were perfect, no voltage would exist at that point), current represents signal, and the two are independent of each other. Voltage feedback from this point to the input tends to "precorrect" the output and load nonlinearities (in effect, anticipating the behavior of the output stage and its load), thus creating the low output impedance and low distortion of a unity-gain stage while maintaining the desired output-stage voltage gain.

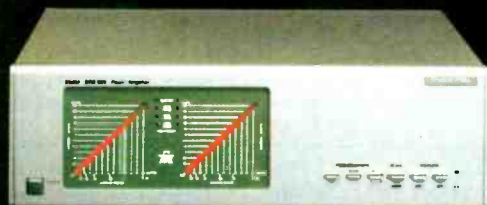
In actuality, there are three feedback paths in the Acoustat topology. One, which carries voltage feedback from the output to the input, is conventional in every respect. The second, from the node between the transconductance stage and the transresistance stage to the input, is a positive feedback loop that serves to precorrect the system, as described above. (Acoustat calls this complement feedback.) The third, called the anisotropic loop, carries negative feedback from the output to the interstage node.

You'll be sold on our DRS 900 amplifier after just one peak.

Our new DRS™ 900 amplifier will bring you as close as you can get to concert hall sound without buying a ticket. How? Power and lots of it. And after all, who knows more about high power amplifiers than Phase Linear? We became known for them back in the days when everyone's idea of good stereo was loud stereo. If you could blow the windows out of your home, you had a good stereo. And nothing could blow out windows like an amplifier from Phase Linear. Well, the volume era is over. The quest for purity is on. The trouble is, you just can't

get pure sound reproduction out of a low power amplifier. You need lots of power... power for purity. Advances in recording technology like direct-to-disc and digital audio disc recordings require enormous amounts of peak power. Without it, the amplifier simply clips the peaks leaving you without the full musical experience. For example, accurately reproducing the final cannon shot from a digitally recorded version of

Tchaikovsky's 1812 Overture can require 900 watts of peak power! And that's at reasonable volume levels. That much power is needed because the dynamic range (the ratio of the loudest note to the residual noise) of a digital audio disc is about four times that of a conventional record.



Power for Purity™

Our DRS 900 handled the previously mentioned cannon shot. No clipping, no distortion. Yet, the DRS 900 is conservatively rated at 150 watts per channel RMS (see specifications). You see, efficient power is the key. The DRS 900 has a dual voltage power supply. It operates at an efficient 150 watt capability. Then, when

the music approaches a peak requiring more dynamic headroom (more power to keep it from clipping), the

secondary supply kicks in, instantly providing up to 900 watts of peak power per channel. A conventional 150 watt amplifier has a peak power rating of just about 300 watts. Keep that in mind the next time you're comparing amplifiers. Don't go by RMS alone. You have to compare dynamic headroom, too. When you do, you'll be sold on our DRS 900.

See the entire line of Phase Linear audio components at your Phase Linear Dealer, today. For the address of the dealer nearest you, call us toll free at (800) 323-4815. In Illinois call (800) 942-8833. Or write us at 4134 N. United Parkway, Schiller Park, IL 60176. Oh, and remember to give us your address so we can send you a copy of "The Phase Linear Report: Power for Purity." It's an exciting analysis of audio amplification in the eighties. We think it should be required reading for anyone serious about audio.

DRS 900 SPECIFICATIONS
150 Watts per channel continuous
output power, minimum RMS into 8
ohms, with no more than 0.15% total
harmonic distortion 20-20kHz, 900
Watts peak per channel momentary
output power into 8 ohms with no
more than 0.2% THD, 20-20kHz.

AUDIO New Equipment Reports

FREQUENCY RESPONSE (at 0 dBW)	
	+0, -1/4 dB, <10 Hz to 49.7 kHz
	+0, -3 dB, <10 Hz to 256 kHz
S/N RATIO (re 0 dBW; A-weighted)	82 dB
SENSITIVITY (re 0 dBW)	105 mV
DAMPING FACTOR (at 50 Hz)	1,200

*See text

FET decreases with increasing temperature, rather than the other way around, so FETs are not prone to potentially destructive "thermal runaway" the way bipolars are. As a result, they do not require the extensive protection circuitry that, in some conventional configurations, requires as many components as the amplifier itself, if not more. To the extent that activation of the protection circuitry induces short-term, but severe, distortion when driving the complex load impedance presented by some loudspeakers, avoidance of such circuits will yield audibly superior results with at least those "difficult" speakers. It also ensures that the amplifier will deliver its rated power into reactive loads, as well as into the purely resistive loads used for testing and setting specifications (per IHF standards and FTC regulations, respectively).

The TNT-200 acquitted itself well on Diversified Science Laboratories' test bench, although distortion at rated power was greater than we have come to take for granted with top-of-the-line power amps. It is not high enough to be audible on music, however, even with the traces of third and fifth harmonic that were present. Only at high frequencies, where the harmonics lie beyond the range of audibility, does THD

approach 0.25%. Twin-tone intermodulation distortion remains below 0.1% all the way out to 20 kHz.

Frequency response is dead flat across the audio band and beyond, with bandwidth extending almost to radio frequencies. Noise is adequately low, and sensitivity is typical of amplifiers in its class.

A dynamic headroom of 1 1/2 dB suggests a short-term "music-power" rating of 24 1/2 dBW (275 watts) per channel into 8-ohm speakers. With 4-ohm loads, the music power is probably well over 25 dBW (320 watts) per channel (the point at which the power-line fuse blew in the continuous-power test).

The TNT-200 is protected by six 5-ampere slow-blow fuses: two for the power transformer, the others for the tripled complementary MOS FET output stages. A spare pair is provided with the unit, and between DSL's bench tests and our listening tests, we went through those and another box besides. Occasionally, one of the power-line fuses blew on turn-on even when no signal was present. Acoustat advised that they may change the power-line fuses to 7-amp slow-blow types to avoid this problem. We finally decided to take that risk with our sample, to avoid the nuisance of removing the cover plate to reach the troublesome fuses. Once the swap was made, we had no more difficulties.

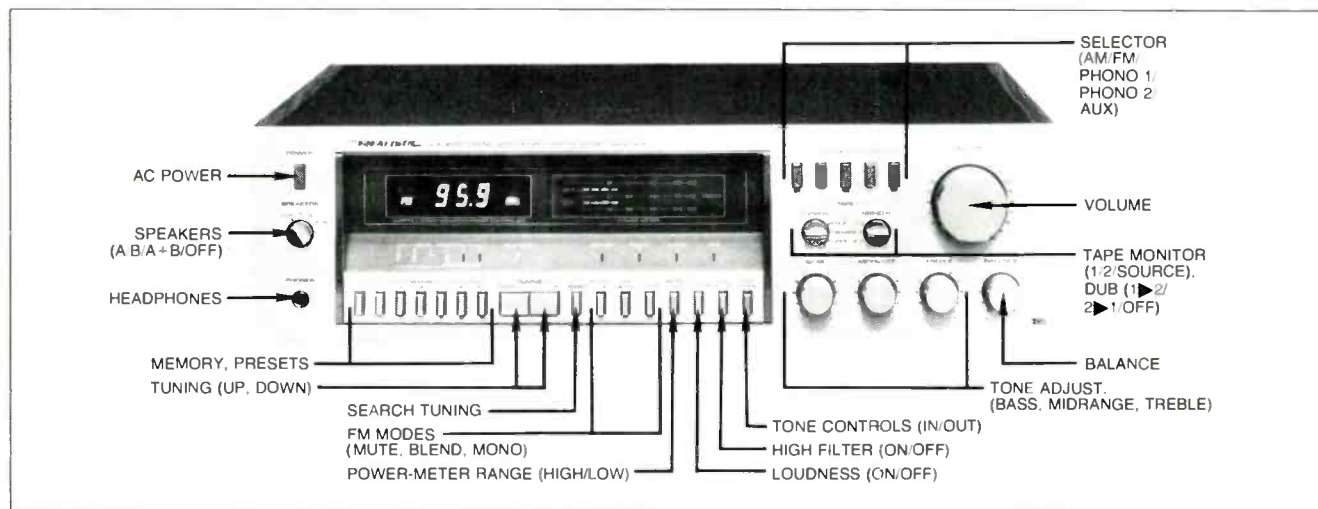
With the exception of the fuses, the TNT-200 has no internal protection for itself or the loudspeakers connected to it. On the bench, it did produce turn-on and turn-off transients, although these were not bothersome in the listening tests. One could

connect external speaker-protection fuses, but these would diminish the amplifier's extraordinary damping factor.

In addition to determining the damping factor at 50 Hz, DSL also measured it at higher frequencies, where it remained uncommonly high—well over 100 to beyond 10 kHz. This suggests an unusually high capacity for maintaining uniform frequency response into loudspeakers as well as laboratory resistors. (The frequency responses of amplifiers are sometimes influenced by reactive loads, especially if they are highly capacitive, as are most electrostatic loudspeakers and some specialty "low-inductance" speaker cables. This is similar to the effect that high-inductance cartridges have on the RIAA equalization of some phono preamps.) In fact, Acoustat claims that because of the TNT-200's novel feedback circuit, impedance "looking out" of the amplifier is even lower than that "looking into" the output terminals. This would imply even greater ability to handle unusual loads than DSL's tests suggest, but we could come up with no way to measure such a low impedance accurately in that direction.

Whether because of its extraordinarily low output impedance (the importance of which is a matter of debate) or some other undefined subtlety, the Acoustat TNT-200 is one of those rare power amps that does indeed sound very slightly different from most other amplifiers. Bass seems tighter, treble more crisply defined—extremely subtle differences, to be sure, but gratifying nonetheless.

Circle 96 on Reader-Service Card

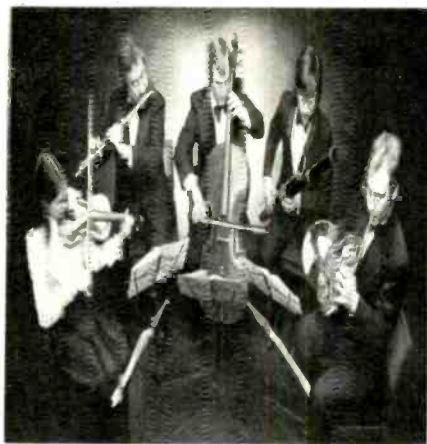


A Realistic Receiver with a Fancy Touch

MANY BRAND NAMES express the dreams with which the manufacturing company was founded, but say nothing of moment about the product. Not so Radio Shack's Realistic brand, which has always tried for a synthesis of the most popular performance points and features at the lowest possible price. Realism, in this case, is a matter of devising a product for which the demand is already in evidence. Realistic products are,

to that extent, quite the opposite from the sort whose rugged individualism may or may not be carving a track to the future at any price. There is a place for both approaches, of course, and Radio Shack has steadfastly maintained the Realistic niche for a generation now.

The STA-2290 is a digital AM/FM receiver with six presets for each band, muting (which influences the sensitivity of



Sony is about to widen your ideas of audio tape.



INTRODUCING UCX-S WITH WIDE FIDELITY SOUND.

Sony's revolutionary UCX-S has the widest dynamic range of any high-bias tape: it has expanded recording capacity.

We call it Wide Fidelity Sound![™]

With UCX-S, you can record at higher volume levels with less distortion than any other high-bias tape.

UCX-S has unsurpassed frequency response in the low and middle ranges. And at the very delicate high frequency

ranges, its enhanced responsiveness gives exceptionally beautiful high notes. The incredible specifications include



Retentivity and Squareness higher by far than any other high-bias tape. Retentivity: 1800 Gauss. Squareness: 93%, an astounding figure.

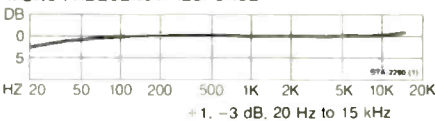
But the real test comes when you lean back and listen. You'll hear everything with more clarity than you've ever heard before on a high-bias tape. On Sony UCX-S, with Wide Fidelity Sound. **SONY**

AUDIO New Equipment Reports

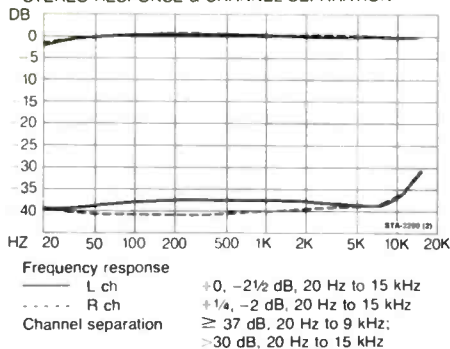
Realistic STA-2290 AM/FM receiver. Dimensions: 19½ by 5¼ inches (front panel), 15¼ inches deep plus clearance for controls and connections. AC convenience outlets: one switched, one unswitched (100 watts max. each). Price: \$600. Warranty: "limited," two years parts and labor. Manufacturer: made in Korea for Radio Shack Division of Tandy Corporation, Fort Worth, Texas 76102.

FM tuner section

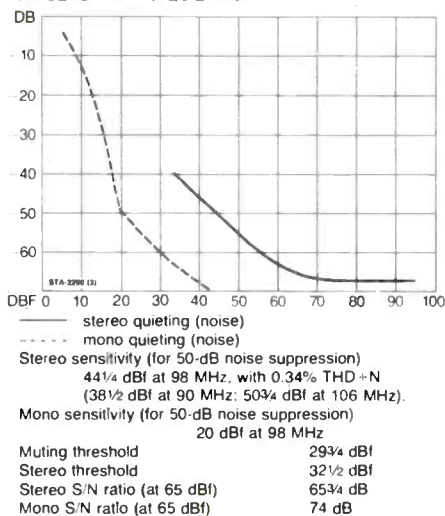
MONO FREQUENCY RESPONSE



STEREO RESPONSE & CHANNEL SEPARATION



FM SENSITIVITY & QUIETING



CAPTURE RATIO

1 dB

SELECTIVITY DISTORTION (THD+N)

	stereo	mono
at 100 Hz	0.28%	0.17%
at 1 kHz	0.19%	0.11%
at 6 kHz	0.27%	0.20%

STEREO PILOT INTERMODULATION

0.088%

IM DISTORTION (mono)

0.067%

PILOT (19 kHz) SUPPRESSION

99¾ dB

SUBCARRIER (38 kHz) SUPPR.

>120 dB

Amplifier section

RATED POWER 19½ dBW (90 watts)/channel

OUTPUT AT CLIPPING (both channels driven)
8-ohm load 20¾ dBW (120 watts)/channel
4-ohm load 22¼ dBW (170 watts)/channel
16-ohm load 18½ dBW (70 watts)/channel

DYNAMIC HEADROOM (re rated power, 8-ohm load)
+1¼ dB

HARMONIC DISTORTION (THD: 20 Hz to 20 kHz)
at 19½ dBW (90 watts) ≤ 0.033%
at 0 dBW (1 watt) ≤ 0.024%

the automatic-search scan mode's station "perception"), provision for two speaker pairs (A, B, or neither), independent tape dubbing for listening to one source while recording another, and three-band (bass, treble, midrange) tone controls with a defeat switch. Jumpers on the back panel enable you to disconnect the power-amp section and insert a speaker equalizer or similar device into the signal path.

There are two full tape loops—each, atypically, fitted with a DIN input/output connector in addition to the usual arrays of pin jacks. Switching for dubbing and monitoring is unusually comprehensive and straightforward; during dubbing you can monitor either the playback or the recording deck—a function you're denied on many receivers fitted with dubbing selectors. There are two phono inputs, which share a single preamp; if you want to use one for a low-output moving-coil pickup, you will need an outboard step-up transformer or head amp. The phono impedance is complex, as its capacitance varies with frequency. Experience suggests that some pickups might have problems with this variation, though we could find nothing amiss with the cartridges in our listening setup.

There is, in effect, a sharp and nondefeatable infrasonic filter built into the phono section. It has only slight influence on the audible frequencies, but it effectively suppresses unwanted response to warps and other infrasonics. The switchable high filter is very gentle—and makes barely a dent in severe hiss, though, unlike some gentle filters, it is more effective than a mere cut at the treble control. At their maximum boost positions, the bass and treble controls produce maxima of +28½ dB at 30 Hz and about +35 dB at 15 kHz, respectively. These levels are higher than we normally encounter. Indeed, Diversified Science Laboratories had to run these tests at unusually low levels because +30 dB with respect to the usual testing level of 0 dBW, or 1 watt, would result in power levels 30 dB higher—in the kilowatt range—if all the downstream amplification stages had enough reserve to meet the demands imposed by the tone controls. (They don't, of course.) The cut positions measure -17 dB at 20 Hz and -21 dB at 20 kHz.

With only moderate boost or cut, the BASS and TREBLE supply a desirable shelving response characteristic. The midrange control (which is centered on 1.5 kHz and thus might be called a low-treble control) operates over a more typical range with

extremes of +8¼ and -7½ dB. In our view, you'll get the best results by staying close to the center positions of all three. (At extreme boost settings, situations could arise where you might blow a speaker.)

The loudness compensation is more than sufficient. At DSL's standard test level, boost exceeded 15 dB in the extreme bass and 10 dB in the extreme treble. When DSL turned the VOLUME down by 10 dB—at which point its test setting was close to that used for moderate levels in our listening tests—bass boost approached 20 dB at 20 Hz. Thus the compensation is evidently designed to match acoustic levels with exceptionally inefficient loudspeakers.

In most respects, the tuner section is fairly typical of those in today's receivers. Sensitivity is somewhat lower than we're used to, perhaps, particularly toward the high end of the FM dial. But the STA-2290 holds its own on weak stations in our listening room when compared to tuners that measure several dB more sensitive. The blend feature (which many tuner sections don't have at all) is of marginal effectiveness, altering rather than reducing the hiss on weak stereo stations. Selectivity, in the usual alternate-channel figure shown in the data, is good and remains distinctly better than average even in the adjacent-channel measurement of 3¾ dB. Pilot and subcarrier suppression are among the best we have ever measured.

The power amplifier is rated at a hefty 90 watts (19½ dBW) per channel by Radio Shack and actually puts out another 1¼ dB into 8 ohms on both a continuous and a dynamic basis, bringing the effective output with this load to about 120 watts. (Power output into 4 ohms is even higher, by a considerable margin.) Distortion at the 0-dBW testing level is below 0.01%, except at the extreme top of the frequency band, and consists exclusively of the relatively benign second-order products. At rated power, distortion increases most in the mid-band, where the third harmonic dominates the THD measurements, but is still well below the threshold of audibility.

We haven't seen many receivers with this much power or so many features for this price. And, though it's a small matter once you've become acquainted with the receiver, the owner's manual is quite easy to follow. The STA-2290 is not cheap, of course—but it represents the kind of value we have come to expect from Radio Shack.

Circle 99 on Reader-Service Card

FREQUENCY RESPONSE

+0, -½ dB, 14 Hz to 27.4 kHz;
+0, -3 dB, <10 Hz to 70.4 kHz

RIAA EQUALIZATION

+¼ -1 dB, 46 Hz to 20 kHz; -3 dB at 22 Hz; -25¼ dB at 5 Hz

INPUT CHARACTERISTICS (re 0 dBW; A-weighting)

	sensitivity	S/N ratio
phono	0.22 mV	74¾ dB
aux	18 mV	78 dB

PHONO OVERLOAD (1-kHz clipping) 145 mV

PHONO IMPEDANCE 51K ohms; complex

DAMPING FACTOR (at 50 Hz) 120

HIGH FILTER -3 dB at 4.3 kHz; 6 dB/octave

The Kyocera D-801 Cassette Deck with 3 motors and a direct driven dual capstan...

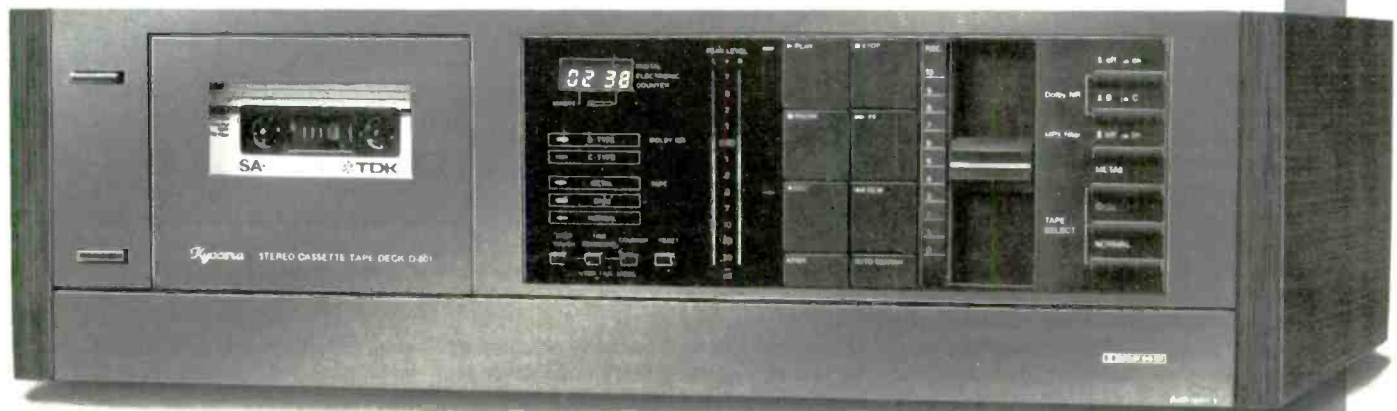
With only 0.02% WRMS wow and flutter.

If you think 3 motors impress you, think of what they can do for tape performance. One drives our dual capstans to insure constant and highly accurate speed with remarkable low wow & flutter of 0.02%. A second motor drives both the take-up and feed reels while the third motor gently positions the record/playback head against the tape surface. An innovative approach resulting in accurate head-to-tape positioning and optimal head azimuth alignment. But motors alone do not insure top

performance. That's where both Dolby* B and C noise reduction circuits come in, along with a Sendust alloy tape head, electromagnetic braking on both take-up and feed reels; selectable bias and equalization for all types of tapes; 30-20,000 Hz response range; full LED function indication; feather-touch controls; APMR for automatic program search; auto stop; auto repeat, memory and a full bank of operational controls concealed behind a flip-down access panel; plus the convenience of a

4-digit LED electronic timer/counter for precise elapsed time, remaining time, stopwatch and memory stop and registering time and/or counter reference of recorded programs... and more.

But our most impressive feature awaits at your local audio retailer... a demonstration of the D-801...it's just one of a very impressive list of distinguished audio components and systems from Kyocera...where the future is now!



KYOCERA

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Circle 11 on Reader-Service Card

Record and Tape Care Products That Really Do Work

Somewhere on that dazzling display rack are at least ten well-wrought devices worth considering.

by Robert Long

Consulting Technical Editor

IT MUST BE WRITTEN somewhere that there are plenty of bucks to be made from record and tape care accessories. Everybody and his brother-in-law seems to have jumped into the field, either as manufacturers or simply as merchandisers for products made elsewhere. But let the buyer beware: That wall of gadgetry near the checkout at your neighborhood equipment or record outlet usually contains as many ill-conceived products as legitimately useful ones. In the hope that you can avoid some of the misfortunes I've encountered, here is a synopsis of ten products—or types of products—that, in my experience, have proven truly useful.

Record Cleaning

Right off the bat, let me say that I look askance at any product that leaves a residue on records. (There is one exception, which I'll get to in due course.) All of the really gummy "antistatic" record sprays that I know of have been taken off the market, which is fortunate: From time to time I examine ruefully the early LPs I've ruined with such products and renew my vows never to make that mistake again.

Even more albums in my collection have suffered from an excess of old-fashioned moisture—or rather from the fungal damage that has resulted from leaving the records where they were unprotected from condensation, steam vents, or leaky pipes. Which is one reason why the Discwasher approach strikes me as eminently the sanest one around: Use minimum moisture, with minimum impurities in the moisture, and remove it as quickly as possible. There may be competing products that are every bit as safe and effective as Discwasher's, but I know of none that has arrived at that estimable estate by way of as much painstaking research. So this is one area where I stick to a specific brand.

Don't expect miracles, however. The



PHOTOS BY ROBERT CURTIS

Discwasher's D-4 fluid and brush are designed to work together to remove most record pollutants safely and efficiently. Note the line of lint on the brush pad.

Discwasher system is not adept at removing the sort of heavy soil that should never get on your records if you take adequate care of them. So if Kojak comes to listen and leaves his lollipop lying on the Brahms quintet, you'll probably have to resort to more radical measures. There's the old Ivory Liquid technique (wash in lukewarm

suds, rinse thoroughly, blot moist, and dry in the most dust-free air you can find.) Safer and more convenient, though vastly more expensive, would be something like the Keith Monks or VPI record-washing machines, which use an alcohol solution as a cleaning agent and vacuum it away for quick drying.

The Q-Tip Solution

When it comes time to clean the grime (mostly oxide flakes) from tape heads, many recordists use Johnson & Johnson Q-Tips. They're good, though they're among the most expensive of their kind on the market. The garden-variety cotton swab usually holds its shape well—and may have a longer shaft, which can be either a help or a hinderance in reaching awkward spots in your recorder's tape path, depending on its design. Some of the cheap brands tend to leave lint behind, so be sure to test them out before getting down to business.

While you're in the drugstore, you might want to buy some pure isopropyl alcohol (accept no substitutes or additives) to use with the swabs. Most headgap materials are essentially insoluble in it. This is important: Should you dissolve the headgap filler along with the crud, you've ruined the head. If you're in any doubt, buy a head-cleaning solution from the company that made your deck, though, on an ounce-for-ounce basis, that is usually more expensive.



Cotton swabs and a bottle of pure isopropyl alcohol (not rubbing alcohol) can serve as a nearly universal head-cleaning kit for tape decks.

No Warps, Please

When considering a place to store your record albums, think smooth, unbroken surfaces. Failure to observe this rule results in warpage, which in turn leads to mistracking and undue record wear. Whatever housing you buy should support the record in its jacket evenly across the entire surface. That lovely rack with the filagree ends that Aunt Eunice gave you is out: gadgets with wire dividers are even worse. The material of the housing—which can be wood, acrylic, styrene, even corrugated board—is less important than its stability and evenness.



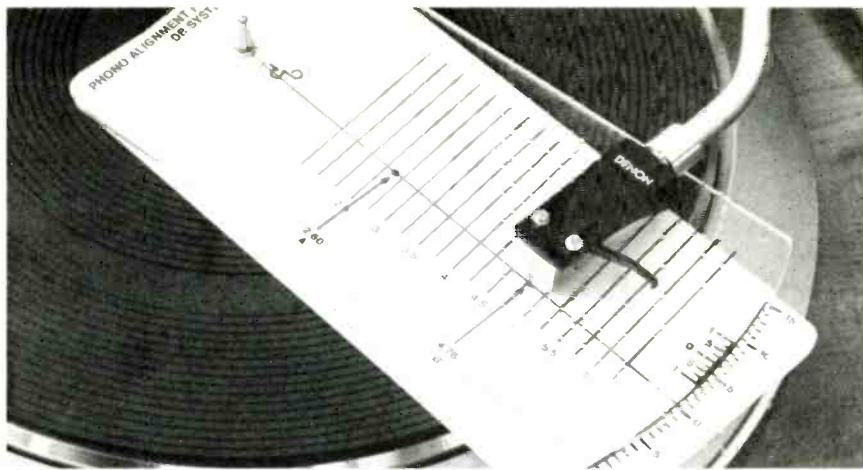
Two examples of what not to do: Stacking records in this way only encourages warp age, and a wire rack doesn't provide adequately firm or even support.

Boxed In

There are few cassette storage options as effective as the regular old two-piece Philips-style plastic box. It does a pretty good job of keeping out dust—particularly when the joint at the back is fitted with a labeling liner—and you can see in to identify the contents. In addition, it immobilizes the cassette hubs, preventing the formation of loose tape loops, which can cause snarls when you try to play the tape. The primary disadvantage of Philips-style boxes is that they break fairly easily. Admittedly, the empty boxes that are sold separately aren't up to the quality standard of the better blank-tape brands, but they're infinitely better than nothing. I'd recommend that any serious cassette recordist always have a few spares on hand.



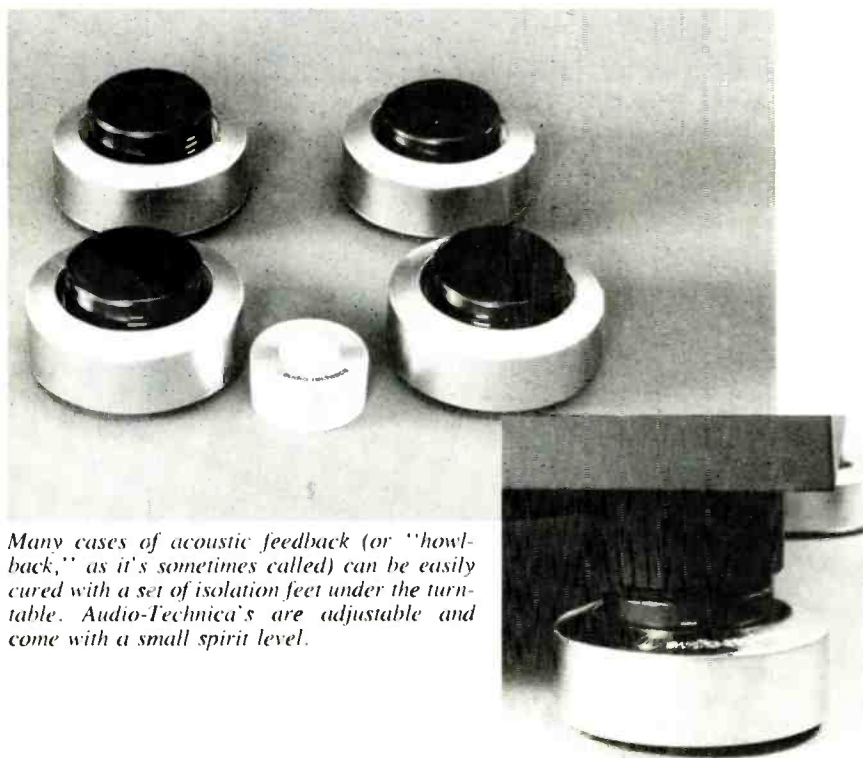
The standard Philips-style plastic box that most cassettes come in also serves as an excellent storage container for the tapes.



Setting the Pickup Straight

Even when tonearms are correctly designed (which is by no means always the case), the instructions for mounting the pickup are often all too vague. The solution is a pickup-alignment "protractor," which lets you get a positive fix on the correct adjustment of your phono cartridge. These devices are available from ADC and DB Systems, among others; every serious audiophile should have one.

Cartridge alignment protractors, such as this one from DB Systems, enable you to install your phono pickup accurately in almost any tonearm.



Many cases of acoustic feedback (or "howlback," as it's sometimes called) can be easily cured with a set of isolation feet under the turntable. Audio-Technica's are adjustable and come with a small spirit level.

Those Underthings

Acoustic-feedback problems [see "Retsoff's Remedies," October] can be among the most troublesome in audio, and I wish I could suggest a single product as a universal cure. Unfortunately, what's just the ticket for one system may make the problem worse in another. It all depends on what's causing the problem, the nature of the interactive masses and compliances involved, the physical design of the turntable, and so on. Various mounts and mounting feet are made specifically for this problem (Audio-Technica's Audio Insulator System, for one) and can be very helpful.

There are also more mundane measures that may be just as effective, easier to find, and less expensive. Among the ones I've used over the years are rubber pads intended to prevent housemaid's knee when you're scrubbing floors, felt pads that are sold to keep office machines quiet, rubber or foam weatherstripping with adhesive backing, dabs of GE silicone glue, and so on. Don't be shy: Improvise. A thoughtful stroll through the neighborhood hardware store should suggest all sorts of additional possibilities.



The Big Blanker

To prevent noise pollution in reused tapes, there's nothing like the hand-held degaussers or "bulk erasers" that are sold by Nortronics and others. They're generally rated for tape packs as much as a 1/4-inch thick—regular open-reel audio tapes—and if correctly used will get any cassette, including metal, as clean as brand-new tape. The heavy-duty professional models rated for tape packs as much as two inches thick are far more expensive, so if you want to erase 1/2-inch video cassettes, try a hand-held model first. Mine does quite a respectable job.

A hand-held bulk-tape eraser, like this model from Radio Shack, can quickly and effectively return cassette, open reel, and sometimes even video tape to virgin quality.

Weight a Moment

If you've never tried a record hold-down device, you might be surprised by the degree to which they can improve the clarity of record reproduction in some systems. The choice of specific type or brand will depend on your equipment. There are two types. The most common looks like a hockey puck with a hole in the center and uses dead weight to damp vibration in the record. (Some turntables may wheeze a bit in trying to drive the extra load.) The alternative uses friction instead of weight and must be able to grip center the spindle: if your turntable's spindle is too short, this approach may not work.

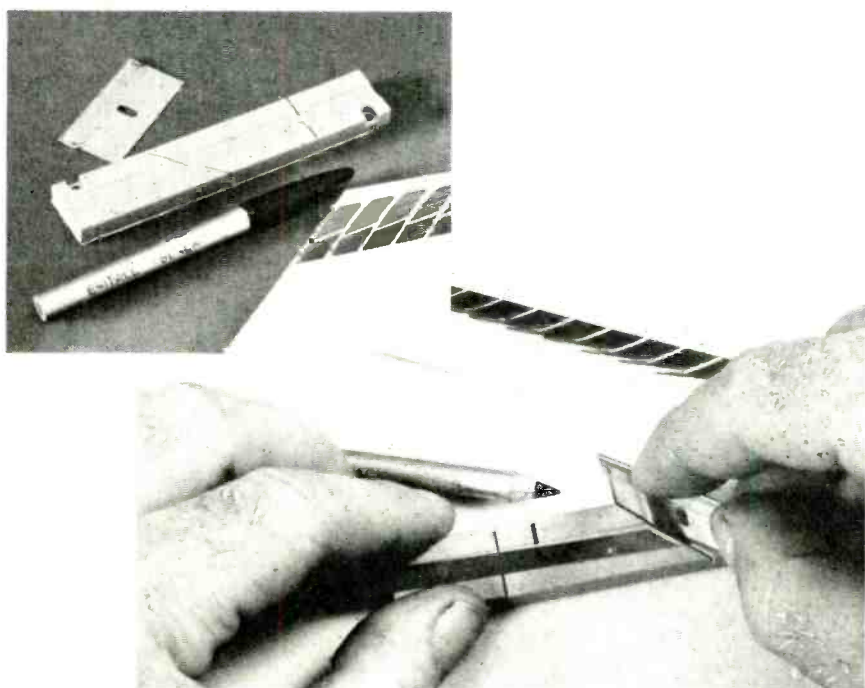


A record weight or clamp can help damp out vinyl resonances in records, as well as flatten wavy waxes.

Tall Tales

Tape editing is so fascinating that I'm surprised more recordists (at least those using open reels) don't get hooked on it. When the day comes that you need to splice two bits of tape together—as it surely will—nothing is an adequate substitute for a (preferably metal) EdiTall block (named after its inventor, Joel Tall) of the correct size for your tape format. In addition, you'll need a sharp single-edge razor blade and a roll of splicing tape a tad narrower than your recording tape. You can also buy splicing tabs in premeasured lengths. My favorite for 1/4-inch tape is the BASF dispenser rolls, available through Gotham Audio in New York.

Don't use wide tape and then try trimming down the overhang. That makes your splices more audible than they need be—which also is true of the indented cuts applied automatically by some splicing gadgets. And don't, under any circumstances, use mending tape: It will ooze adhesive, neatly gluing the tape layers together in the pack and depositing goo in your recorder when you play the tape.



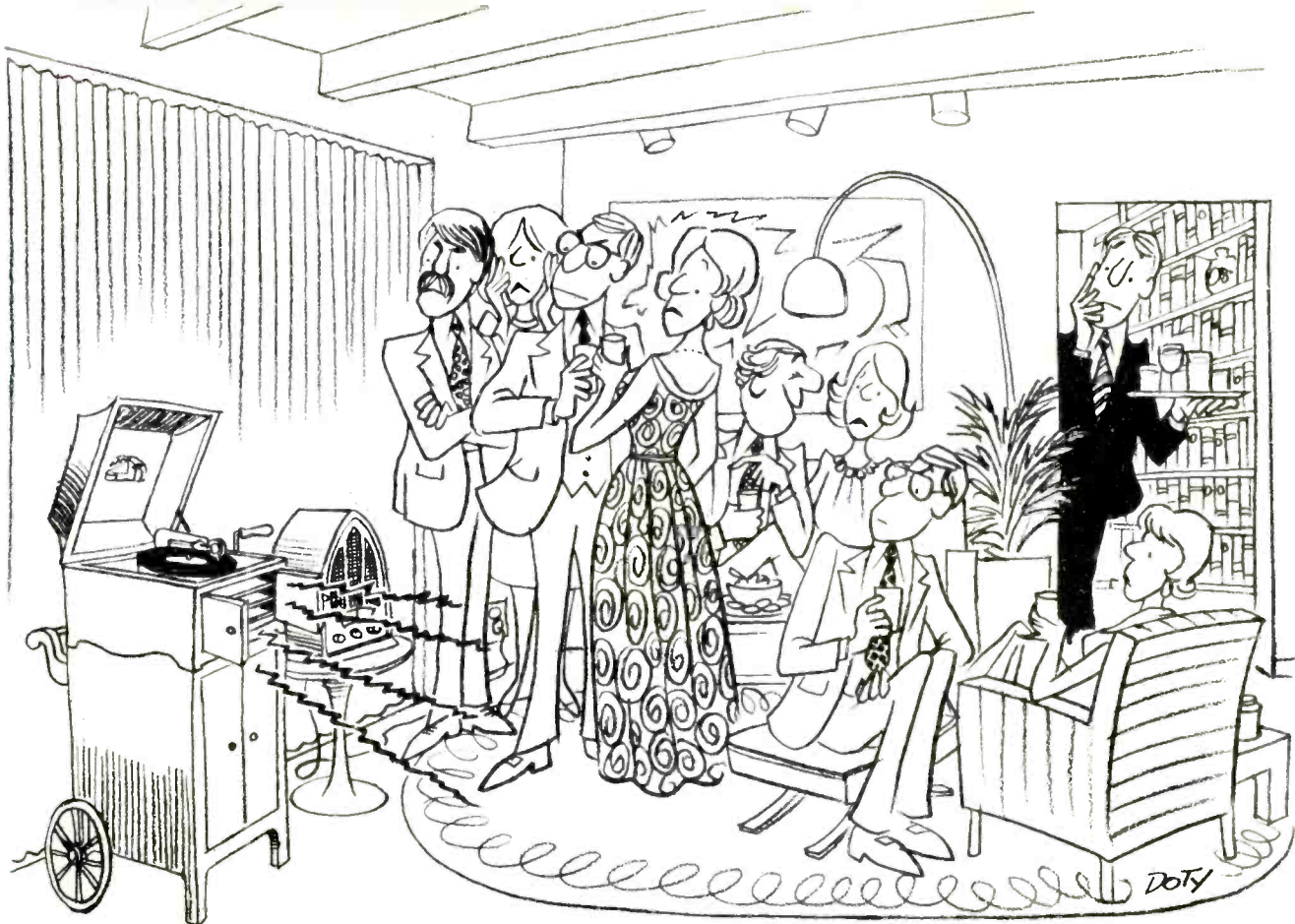
The classic EdiTall tape splicing block is used in conjunction with splicing tape and a single-edge razor blade.

Taking the Static

At the beginning, I said that I didn't approve of anything that would leave a residue on records—with one exception. That exception is Stanton's Permastat. It's the only record treatment I can think of for which all the tests I've examined have shown positive results. (And when I say "treatment," I mean products that are designed to leave a residue on the record's surface.) The mere absence of negative side effects is not the real point, of course; Permastat really does prevent the accumulation of static electricity, and the dirt it attracts, to a startling degree. **HF**



Stanton's Permastat leaves an ultrathin layer of antistatic compound in the record grooves. It comes in a spray bottle with a pad for distributing the solution.



Is Your Stereo System Obsolete?

The whens, whys, and hows of upgrading your present audio system
by Peter W. Mitchell

ONE OF THE SATISFYING THINGS about owning a high-quality music-reproduction system is the secure feeling that you have invested in something stable and lasting. Alas, permanence is illusory. Certain components in a stereo system are, by their very nature, evanescent: It is their destiny to be consumed in the process of providing listening pleasure. Moreover, if you read many advertisements and sales brochures for stereo equipment, you may get the impression that any product more than a couple of years old is seriously deficient and in need of replacement.

How rapidly do stereo components wear out or become obsolete? When is it wise to replace them, and why? Not surpris-

ingly, the answers are different for each component category. They also depend on how much you value small improvements in sound quality and on how dissatisfied you are with the performance of your present audio system.

That's something only you can know, but we can provide some strictly equipment-related guidelines that may help you to decide whether, and when, to buy new gear. They are based on two considerations: how much your present components have deteriorated because of aging and the significance of the improvements made in newer equipment.

Cartridges

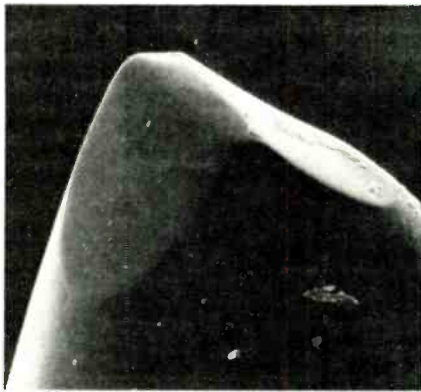
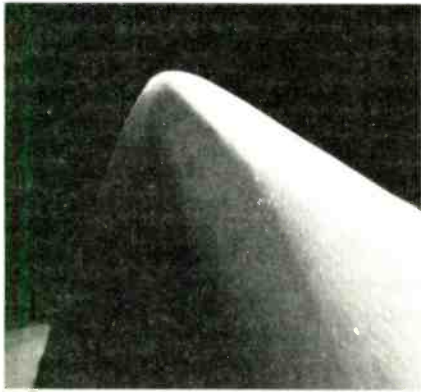
Let's begin with the smallest audio component: the phono cartridge. Its stylus slides along at an average speed of three-quarters of a mile per hour, so if you play records for just one hour each day, the stylus travels through more than a million feet

of grooves per year. Every foot of the way, it rubs against the groove walls with an average pressure of several thousand pounds per square inch. Even diamond cannot withstand that kind of punishment. And unless you keep your discs scrupulously clean, the stylus tip also grinds against dust particles in the groove, which makes things even worse. After 500 to 1,000 hours of use, the tip begins to develop flat spots with sharp edges. This leads to increased distortion and, eventually, to record damage.

Of course, "everyone knows" that phono styli must be replaced after a year or two of regular use, so you don't need to be reminded here. Then again, maybe you do. Try this test: Search through your sales receipts to find out exactly when you bought your present cartridge or stylus assembly. If you are like most people, you may be surprised to discover how long it has been.

Even if you don't play records every day, you may not get much more life out of

Peter W. Mitchell is a prolific writer on science and technology, as well as president of the Boston Audio Society and proprietor of Mystic Valley Audio, a design and consulting firm based in West Medford, Massachusetts.



COURTESY OF STANTON MAGNETICS

A fresh Stanton Stereohedron stylus (left, 2,000X magnification) and a similar, but badly worn, stylus (right, 4,000X magnification) whose sharp edges will damage records.

your stylus. In most pickups, the stylus cantilever is mounted in an elastomer compound that provides its centering and compliance. After several years of exposure to the air, and particularly to polluted urban air, the elastomer may lose some resilience, resulting in poorer tracking. It's therefore wise to replace the stylus assembly every couple of years regardless of how often you play discs.

Some audiophiles, including me, never buy a replacement stylus. By the time the old stylus wears out, there are always enough design improvements to justify getting a whole new pickup. Several years ago it seemed that phono cartridge design had been refined about as much as it could be, but manufacturers have continued to make remarkable advances in reducing stylus mass (which affects high-frequency tracking), improving cantilever stiffness, and raising overall sonic quality. This is particularly true in the top-of-the-line models. Budget-price pickups have a longer market life between design changes, making stylus replacement a more practical policy. But if you are lucky, the manufacturer may be incorporating some of his latest technology into a better stylus assembly for your old pickup, giving you upgraded performance for a bargain price.

Tuners

The situation is quite different for FM tuners. In terms of appearance and operating controls, today's tuners are dramatically different from those of a few years ago: They include frequency-synthesis tuning, digital displays, many pushbuttons, and no knobs. But these changes do not signify large improvements in audible performance. Digital tuning, for instance, greatly enhances ease of operation, but has little or no effect on the sound. You may well decide, however, that the cost of a new digital tuner is entirely justified by the marvelous convenience of instant dead-accurate tuning of your favorite stations: after you have lived with it, you won't want to go back to knob-and-dial manual tuning.

If you have to cope with particularly difficult reception conditions, some design

improvements may be genuinely useful to you. For example, if you live within a mile or two of a powerful transmitter that interferes with your reception of other stations, you will be happy to know that within the last two years a new generation of FETs (field-effect transistors) has substantially lessened many tuners' susceptibility to front-end overload. On the other hand, if your problem is that you can't get sufficiently noise-free reception of weak or distant stations, or if you cannot install a decent antenna to pull in clean FM signals, be informed that new tuners from NAD, Tandberg, and Carver have significantly better stereo quieting than anything previously available.

For most listeners in most locations, though, tuners of ten years ago are sensitive and selective enough and have low enough distortion and wide enough stereo separation, so that further improvements in these areas are unimportant. If your tuner was made within the last decade, the odds are that it has a MOS FET RF (radio-frequency) stage, a high-gain IC (integrated circuit) with ceramic filters in its IF (intermediate-frequency) stage, and a PLL (phase-locked-loop) stereo multiplex decoder. With these building blocks, its performance would probably be virtually indistinguishable from most of this year's models in a direct A/B listening comparison. So before you buy a new tuner, try feeding your present one a stronger and cleaner signal from a better antenna. Even if you already have a good roof antenna, its lead-in wire may be badly weathered if it has been in place for several years. Replace the lead-in with new shielded twinlead or coaxial cable having heavy-duty insulation.

Amplifiers

No fundamental improvements have been made in the basic design of stereo amplifiers since about 1966, when the industry changed from germanium to silicon transistors. So if your amplifier was made within the last decade, and if it was correctly designed and well-built in the first place, there probably isn't much reason to replace it. Should you want a more power-

ful amp, remember that you have to at least double the power to hear a significant difference. As for deterioration due to aging, solid-state amplifiers generally maintain their performance until something—usually an electrolytic capacitor—breaks down, and then replacing the bad part restores the original performance.

Note the important reservation in the preceding paragraph: "If it was correctly designed." One of the important technological advances in recent years is that output transistors have gotten progressively better at coping with speaker impedances that are low and "reactive," which require the amplifier to deliver high-current peaks that may be out-of-phase with the driving voltage. [See "The Uneasy Symbiosis," October 1980.] Early transistors could easily be destroyed by these current demands, a problem that many amplifier designers tried to solve by adding elaborate current-limiting protection circuits. Often the result was an amplifier that worked beautifully in lab tests driving 8-ohm resistors, but produced less power or more distortion when connected to loudspeakers. Designers who recognized this problem used larger output transistors, or several wired in parallel, to provide the unrestricted current flow needed for the best sound.

With today's output transistors (and especially with MOS FETs, which need no protection at all), it is much easier for a designer to avoid the problems of "tight" protection circuits. So if your old amplifier has restrictive output protection, it may be that a new amp with greater output-current capability would sound noticeably better, even if its 8-ohm power rating were no different. (The power rating at 4 ohms, if you can find it listed, is usually a good index of output current: Except in the case of amplifiers such as the Apt Model One, which takes an unorthodox approach to this problem, the 4-ohm rating should be appreciably higher than the 8-ohm rating—the more so the better.)

This is one of several areas in which amplifiers have generally gotten better over the years. Others include lower preamp noise, more common inclusion of effective infrasonic filtering, and the reduction of many subtle forms of electronic misbehavior. Individually, these improvements usually are not dramatic, and it is quite possible that in a direct comparison between your old amplifier and a new one you would not hear a difference. On the other hand, they might add up to a cumulative benefit worth paying for. The only way to tell is to conduct a direct comparison, either by bringing your amplifier into the store or bringing a new amp home on trial.

Loudspeakers

Loudspeakers occasionally deteriorate with age. For example, ten to fifteen years ago some manufacturers used urethane

foam for the compliant surrounds around the edges of their woofer cones. With long-term exposure to air and pollution, that foam underwent a progressive chemical change, losing its springiness and in some cases virtually rotting away. (Later foams don't have this fault.) In some speakers made with Bextrene cones during the same period, the glues fastening the cones to their suspensions gradually separated. Sometimes you can discover such problems by visual inspection after removing the grille, and sometimes they show up in the sound—as increasingly boomy bass, for example, or in the harsh buzzing of an off-center voice coil.

These cases represent a small minority, fortunately. But even if your old speakers are as good as new, there has been substantial progress in loudspeaker manufacturing during the past decade that may have rendered them obsolete. Note that I say *manufacturing*, not design. Loudspeaker engineering theory is well established, and most design "breakthroughs" fade into obscurity a few years after they are announced. But speaker makers have surmounted many of the practical obstacles that once separated the actual behavior of mass-produced loudspeakers from the theoretical ideal.

For instance, today's loudspeaker designers have better materials to work with: cone materials with fewer pronounced resonances and breakup modes to color the sound, silicone and magnetic ferrofluid to improve power handling and provide resonance damping, and a great variety of useful coatings and glues. Established but obscure theories (such as how to mate a woofer with a bass-reflex enclosure for accurate bass) have been clarified so that most working speaker engineers now understand them. And sophisticated instruments (such as microcomputers and real-time spectrum analyzers) for making thorough measurements of speaker behavior are much less expensive than they used to be, which means that speaker design is now on more solid ground. Equally important is the fact that such instrumentation is affordable enough to be used on the production line, giving every speaker the equivalent of a lab test to ensure that its performance matches that of the engineering prototype.

This does not necessarily mean, however, that your old speakers are obsolete. The best loudspeakers of five or ten years ago can still hold their own with many of today's models. But excellence is no longer as rare as it used to be, and there are now many more fine speakers to choose from. To put in another way: Today's best speakers are somewhat better than those of yesterday, but today's average speaker is dramatically better than its counterpart of a decade ago. The improvements are mainly of four kinds: smoother frequency response with less coloration, better integration of woofer and tweeter response in the cross-

over region, much better stereo imaging (largely due to more uniform sample-to-sample quality control), and less distortion at high power levels. So if your present speakers were of average quality when you bought them, a new pair could provide you with substantial rewards in greater listening pleasure.

Cassette Decks

Apart from the fact that they are far more prone to mechanical wear and failure, cassette decks are in much the same boat as speakers. The best ones of ten years ago were really quite good—comparable to today's best in many respects—but the quality of middle-of-the-road and budget recorders has risen appreciably. However, you should also take into account four important developments that have occurred across the board: wider use of materials such as sendust, ferrite, and hardened permalloy for low-wear heads; the almost uni-

When you should upgrade depends partly on the type of component.

versal adoption of peak-reading meters; introduction of easy-to-use manual and automatic tape-matching systems; and widespread incorporation of noise reduction systems that are more aggressive than Dolby B.

Whether you need a deck with Dolby C or DBX noise reduction depends largely on what kind of material you intend to record. For music with wide dynamic range, they are clearly beneficial. But if you plan mainly to dub popular LPs, which rarely have a dynamic range of more than about 20 or 30 dB, Dolby B will usually be adequate.

Dolby HX Professional is also beginning to show up in a few decks. It is not a noise reduction system, but works instead to increase high-frequency headroom. This improves frequency response at high recording levels and helps prevent compression of high-frequency transients, such as from cymbals. It can be used in conjunction with any noise reduction system or with no noise reduction at all, and tapes made with HX Professional do not require any complementary processing on playback. In effect, HX Professional can give you the performance of Type 4 metal tape with considerably less expensive Type 1 ferric and Type 2 chrome and ferricobalt formulations.

Regardless of what noise reduction system you use, you cannot get optimum

results unless your deck's bias and record equalization are properly adjusted for the tape you are using. (And if you are using Dolby B or C, it is also important that the Dolby recording circuits be calibrated to the sensitivity of the tape.) A few relatively expensive machines are able to perform these adjustments automatically for nearly any tape you happen to pop into them. Some other decks include controls and test tones that enable you to do the same thing manually at least as well and at less expense. Some include trimmers for all three parameters—bias, EQ, and sensitivity (Dolby recording level)—but for most purposes you can get by quite nicely without the equalization adjustment. (It's nice, however, to have test-tone oscillators included: A bias knob by itself is not as useful.) The alternative, of course, is to stick with the tapes for which your deck was set up at the factory (or to have it adjusted by a technician for your favorite brands), but that's good only as long as the tape manufacturer continues using the same formulation without modification.

Although more pedestrian, peak-reading meters and harder heads have important practical consequences. The former enable you to use a recorder's available dynamic range more fully and effectively. The latter ensure that your deck's high-frequency response will not deteriorate quickly with use. This is especially important, because head replacement is fairly expensive. Indeed, the prospect of that service bill might be the one thing that would goad you into replacing an old machine with which you were otherwise perfectly satisfied.

Turntables

Turntables have also improved over the years, but not so dramatically. Recent trends to lower-mass tonearms, which work better with today's high-compliance cartridges, and improved acoustic isolation have certainly been beneficial. And there are now turntables with selection-sequence programming and other such microprocessor-controlled conveniences that were simply unheard-of a few years ago. However, in the absence of serious mechanical failure or any dissatisfaction on your part with the performance of your present turntable, there is little reason to abandon it.

How to Shop

When you decide to upgrade, you will naturally want to be sure that the new equipment you buy is a good value and won't become obsolete quickly. Test reports in *HIGH FIDELITY* and other magazines can help, particularly if you read them with care. Virtually all of today's stereo gear is competently designed and well made, so most product reviews are positive in tone. Nevertheless, there is a substantial differ-
(Continued on page 96)

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Environments

Bringing technology home by Christine Begole



Blending the Practical with the Aesthetic

CONSIDER SOME OF the components that comprise the much-publicized "home entertainment center": speakers, receivers, turntables, cassette decks, television sets, video game units, VCRs, video disc players, and personal computers. Chances are, you own about half of those. But since you don't live in a mansion, you haven't put them in your sleek "media room." Rather, most of your equipment resides in your living room, which, as a result, ranges in decor from early technological nightmare to late patch-cord eclectic.

Industrial designers are devising ever more attractive components with logically placed control groupings, but when it comes to carving out an environment for them in the home, most electronics buffs greatly favor simple expediency over aesthetic or even practical criteria. An audiophile friend recently invited me over to see his specially designed listening room, which was complete with acoustically treated walls. His mind-boggling assortment of very expensive, very sophisticated componentry was all stacked on a card table that he had discovered in the garage. The room sounded great, but between the mound of equipment and the tangle of patch cords and speaker wire, it looked pretty terrible. Not to mention the fact that the card table's legs could have buckled at any moment.

This may be an extreme example, but the fact is that most of us have a hard time integrating aesthetic form with electronic function. People will spend weeks searching for the right cassette deck and receiver and then mount them so high on a bookshelf that their controls are unreadable (not to mention unreachable). Then there are those who forget the special requirements of their componentry. That pretty little glass and chrome wall unit may match the depth of the turntable's base, but it doesn't have the extra inch or two needed for the dust cover to open. And the glass-doored cabinet purchased to show off the high-tech assortment of equipment contained within often takes on all the visual appeal of a barroom jukebox when placed in a traditionally decorated room.

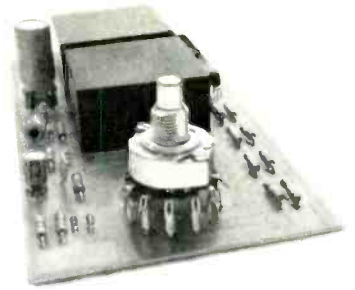
Although I cannot provide hard and fast rules in an area that is largely dependent on personal taste, I will be suggesting in (Continued on page 48)

If you have \$18,000 to spare, you can commission furniture designer Ron Seff to build you a porphyry-lacquered media center with matching polished copper trim (top left). For more realistic budgets, there are scores of ready-made audio/video cabinets to choose from. Pictured above (from top to bottom) is a cabinet with glass doors from Mariani Audio and Video Furniture, a wall unit comprised of Custom Woodwork and Design's stackable modules, and a media "bench" purchased by an HF staffer at a department store closeout sale. (Similar units are available from Workbench and other modern-furniture outlets.)

PHOTO BY JOHN COLE

Vertical Driver Alignment provides the most useful horizontal and vertical sound dispersion patterns.

S-Stop Overload Protection Circuitry makes the 105.2 virtually damage-proof, even with the highest power amplifiers.



LED Listening Window/ Peak Power Indicator provides a visual indication of optimum listener positioning and signals when peak input levels are reached.

Directable, phase-compensating mid-range treble enclosure is adjustable in both horizontal and vertical planes to provide further control of dispersion.



Switchable Peak Indicator from 50-200 watts triggers front LED to help avoid distortion due to amplifier clipping.

Every 105.2 individual driver is computer matched to within 1/2 db to its mate and to the other drivers in the enclosure to guarantee absolute unit-to-unit and side-to-side consistency.

3-point shock-mounted bass driver prevents any possible twisting of the basket or transmission of unwanted vibrations to the speaker enclosure.



Advanced Bextrene polymer drive units exhibit far less sonic coloration than conventional paper or other plasticized materials.

Each 105.2 full system is matched to its mate to within 1/2 db to assure absolutely precise stereo imaging. (A slight variation at one frequency spreads, or smears the sound.)



Each separate piece of the carefully selected woods on every 105.2 is precisely matched to its mate to achieve a level of cabinet finish rarely found on the finest furniture.

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*In Olde English, the word "compleat" is used to connote the most exhaustive, comprehensive study of a given subject.

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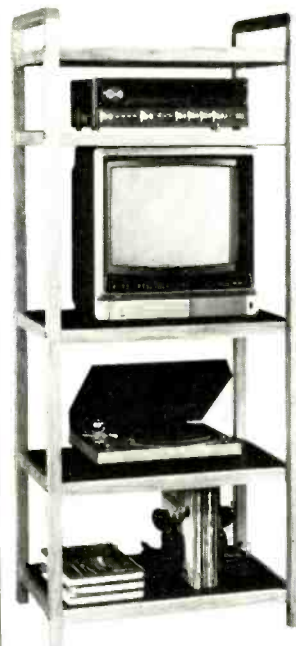
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ENVIRONMENTS

(Continued from page 46)



Après Audio's wooden étagère requires a minimum of floor space, while the casters on Gusdorf's lowboy audio/video cabinet permit easy access to back-panel connections.

this and future columns various strategies to make living with electronics a more harmonious experience. Seven years ago, when I was an undergraduate, a couple of wooden planks with cinder-block supports seemed the ideal stereo storage system—it even matched the cinder-block walls of my dorm room. Now, with a home of my own, more sophisticated listening needs, and a far wider field of electronic home-entertainment gear to choose from, arranging all those goodies creatively and rationally becomes a matter for serious thought and planning.

No matter what your room decor, the most important consideration is synergy—grouping those components that are electronically interdependent or whose functions are enhanced by physical proximity. For instance, if you are adamant about bookshelf placement for your audio system, make sure that the cassette deck is either next to the turntable or right above or below it. Otherwise, dubbing LPs can turn out to be a hit-or-miss proposition. For that matter, if you have two cassette decks and want to make copies from one to the other, you're going to need easy access to back-panel connections on all your components. Open-backed, rack-like cabinets mounted on casters can be a useful—if not the most beautiful—choice for system mounting. If you find a rack you like, make sure it has ample storage capacity for all the gear you might want to buy eventually, both audio and video. For instance, if you plan to enjoy the stereo capability of a video disc player and it won't fit in your cabinet, you'll have to snake wires from the player to your amplifier.

That should start you thinking. For more on what's available in audio and video furniture, drop a note to the following companies requesting their catalogs. **HF**

Sources and Resources

Custom Woodwork & Design
10843 Ursala Drive
Willow Springs, IL 60480

Mariani Audio and Video Furniture
8285 S.W. Nimbus, Suite 139
Beaverton, OR 97005

Gusdorf Corporation
6900 Manchester
St. Louis, MO 63143

O'Sullivan Industries Inc.
19th & Gulf Street
Lamar, MO 64759

Bush Industries
312 Fair Oak St.
Little Valley, NY 14755

Après Audio Ltd.
99 Kinderkamack Rd.
Westwood, NJ 07675

Modern Furniture Outlets

Conran's
145 Huguenot St.
New Rochelle, NY 10801
(Catalog \$3.00)

SCAN Co-op Contemporary Furnishings
8406 Greenwood Place
Savage, MD 20763
(Brochure free)

Workbench
470 Park Avenue South
New York, NY 10016
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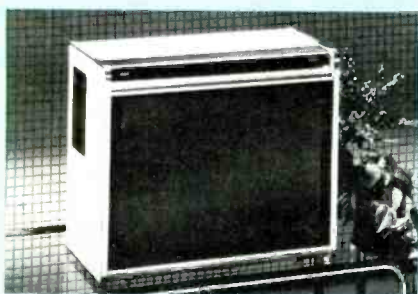
VideoFronts

Latest video news and products by the Editors



An intervalometer on Akai's new VC-X2 color video camera enables you to create Disney-esque "unfolding flower" special effects. This time-lapse feature is also useful for security surveillance. Intervals between recording periods range from ten to ninety seconds, enabling time-lapse recording over a ten-day period with a T-160 tape. The f/1.4 lens has a macro setting and a 6:1 two-speed power zoom for focal lengths from 11.5 to 70mm. According to the manufacturer, the 300-line resolution of the Saticon imaging tube is the highest of any VHS camera. Automatic features include focus, iris, white balance, and fade-in/fade-out for both video and audio. A four-position switch permits interfacing with VCRs produced by other VHS manufacturers. The VC-X2 also has a four-state negative/positive polarity reversal system, which can be used to convert slide and film negatives to video positives. The electronic viewfinder has a 1½-inch screen. Price of the lightweight (5.3 pounds) VC-X2 is \$1,195.

Circle 80 on Reader-Service Card



Video monitor/receivers have entered the big time as RCA weighs in with five models that have direct video and audio inputs for VCRs, video disc players, and video games. There are four 25-inch sets, which achieve compactness through the use of a 110° picture tube. They range in price from \$1,030 for a unit in an oak veneer cabinet to \$1,900 for a set in a pecan armoire that has storage space for video products; the sleek model VGM-2023S, shown here, sells for

\$1,080. The 19-inch monitor/receiver is priced at \$730. All five sets have 127-channel tuning capability through an infrared remote control and a complement of two video inputs, two audio inputs, a video and audio output, and external speaker jacks. A CCD (charge-coupled device) comb filter for better color separation and picture crispness is featured in all five models.



The Pentax entry in the portable VCR sweepstakes, the PV-R020A (\$1,269), has four heads to provide special effects (forward and reverse visual search, single frame advance, slow motion, and still frame) in both the SP and EP modes. In addition to sound-on-sound recording, audio and video dubbing are also possible with this eleven-pound (including rechargeable battery) VHS deck.

Pentax's companion tuner-timer, the \$530 PV-U020A, can be programmed for as many as eight events over a twenty-one day period. The unit's sixteen presets can be assigned to any of 105 channels, including mid- and superband cable frequencies. The tuner-timer is capable of charging two batteries at once for the recorder. In case of a power failure, an internal battery will keep the tuner's programmed instructions in memory for as long as one hour.

Circle 77 on Reader-Service Card



Fisher's 46-inch PT-900 projection television receiver includes a stereo amp rated at

7½ watts per channel and a pair of speaker systems incorporating 6½-inch woofers and 2-inch tweeters. There's also a matrixing circuit to produce pseudostereo from television sound. The three-tube, three-lens video system is said to have a picture brightness of 70 footlamberts; automatic color correction is performed by a vertical internal reference (VIR) circuit. A seventeen-key infrared remote control can tune 105 channels, including mid- and superband cable channels. Two pairs of video inputs and three pairs of audio inputs with associated switching enable the PT-900 to act as a monitor for VCRs, video disc players, and electronic games. Housed in a hutch-style cabinet, the PT-900 sells for \$3,800.

Circle 79 on Reader-Service Card

A new head-cleaning cassette from Koss houses a premoistened cleaning cartridge that is disposable, eliminating the possibility of contaminating the heads with debris from a previous cleaning cycle. Koss says the V.I.P. (Video Improvement Process) head cleaner is nonabrasive, uses a residue-free solvent, and avoids heat build-up during cleaning. The V.I.P. scrubs the pinch roller, the tape guides, capstan, and heads, and then shuts off automatically after the cycle is completed. Available for both Beta and VHS decks, the cassette comes complete with three disposable Clean 'n' Toss cartridges for \$20; packets of three replacement cartridges are \$4.00.

Circle 78 on Reader-Service Card

Canon brings its photographic expertise to video with the VC-10A color video camera. The f/1.4 lens features variable-speed power zoom, with a focal length that ranges from 11 to 70mm and a macrofocusing capability of 0.16 inches. The camera is equipped with Canon's Solid-State Triangulation system for automatic focusing and a Saticon imaging tube. A character generator and an internal timer are built into the electronic viewfinder, and a fader switch is said to produce smooth fade-in/fade-out effects automatically. The VC-10A camera is designed to work with Canon's VR-10A portable VHS recorder, and all VCR transport functions can be controlled from the camera. Price of the camera is \$1,295; suggested list for the recorder is \$860 and for the VT-10 tuner/timer, \$475.

Circle 76 on Reader-Service Card

Laser vs. CED Video Disc Players

**HANDS-ON
REPORT**

A special feature-by-feature comparison of two top-of-the-line stereo models—Pioneer's LD-1100 laser player and RCA's SGT-250 CED player



The newest video disc players from Pioneer (left) and RCA are capable of stereo playback with CX noise reduction. Picture quality from both is superior to that of most VCRs, and audio playback on the LD-1100 compares quite favorably to that of stereo LPs. Maximum viewing time is the same for both players—one hour per side.

This Hands-On Report was conducted under the supervision of Edward J. Foster, Consulting Audio-Video Editor of HIGH FIDELITY and Director of Diversified Science Laboratories.

RESEARCH ON PLAY-ONLY VIDEO media dates back two decades to the ill-fated optical-film-based EVR system (with which I was loosely associated at CBS Laboratories). After many such false starts, two systems—both disc formats—have made it to the marketplace. (A third disc format, JVC's VHD system, has been developed, but will initially be available solely to the business market in Japan.)

Reviewed here are the top-of-the-line models from the two currently available video disc camps, the RCA SelectaVision SGT-250 (\$450) and the Pioneer LaserDisc LD-1100 (\$800). The two operate on different technical principles and thus are incompatible in terms of software. But both offer the same viewing time (one hour per side) and can reproduce stereophonic sound with CBS' CX noise reduction from appropriately recorded discs. (The SGT-250 is RCA's first stereo system; previous models were mono only.)

What makes the two systems incompatible are the recording and playback techniques they use. The RCA-developed CED (Capacitance Electronic Disc) player resembles a conventional audio disc-playback system in that a diamond stylus tracks a spiral groove. But the pickup is anything but ordinary: It senses information as variations in capacitance (rather than groove velocity, as in an audio disc). Because there

is physical contact between disc and stylus, both are subject to a certain amount of wear and tear. However, the vertical tracking force is only about 0.0065 of a gram, compared to the 1-gram-plus VTF typical of audio disc playback systems, and stylus life is rated at "several years" by RCA. Replacing the stylus is quite simple. The cartridge simply lifts out of its carrier and is discarded; a new one is inserted in its place. A new pickup costs \$77.

As its name implies, the LaserDisc system uses a low-power laser beam to read information encoded as a series of pits beneath the transparent surface of a disc. The laser beam is focused on the pits and the varying amount of light reflected from them carries the information. The reflected beam is detected by a photo diode, which converts the light to an electrical signal. Because no physical contact occurs, there is no wear. And because the laser beam is focused *beneath* the clear surface of the disc, scratches, fingerprints, and dust are, for the most part, "out of focus" and have no effect on signal quality. Thus, you can handle a LaserDisc and load it into a player just as you would an ordinary audio record.

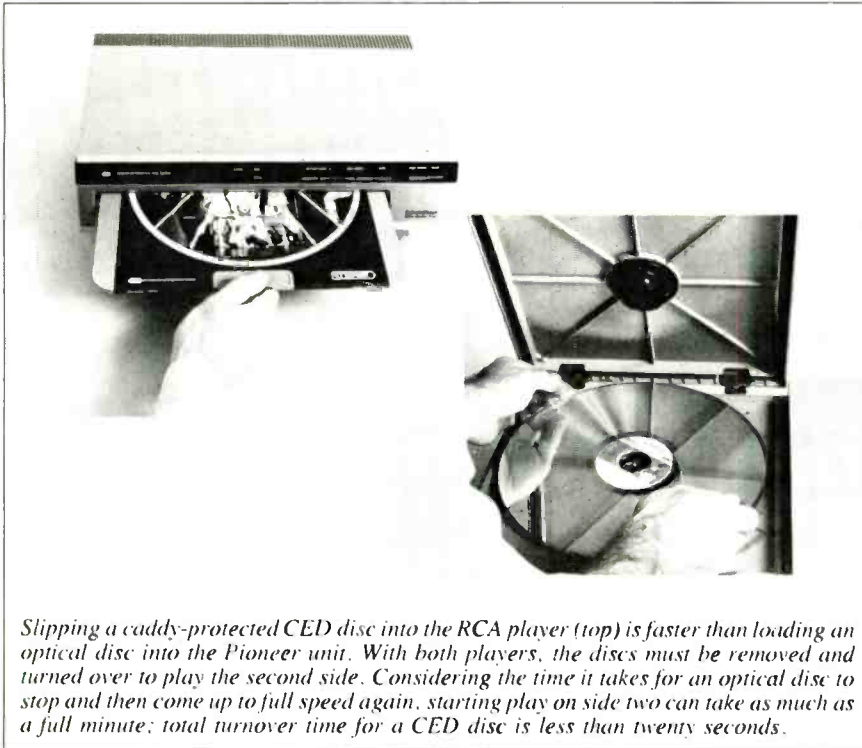
In contrast, the CED disc is extremely sensitive to dust and fingerprints, because the information is physically molded into the surface. To prevent damage, the disc is packaged in a cardboard sleeve called a caddy, which you insert into the player and then withdraw, leaving the disc in the machine. When the side is over, you rein-

sert the caddy and withdraw it with the disc once again inside. Then you simply flip the caddy over and reinsert it to play the opposite side.

It might sound as if the LaserDisc system is easier to use, but quite the opposite is true. Although the optical disc is as simple to handle as an ordinary record, the CED disc/caddy system is even easier. This reflects a key difference between the systems—the market for which they are apparently intended. Bearing in mind that both players are top-of-the-line models, RCA's SGT-250 seems to place greater emphasis on operational simplicity, while Pioneer's LD-1100 exploits the unique features of the optical disc technology.

The SGT-250 has only seven buttons on the front panel: POWER, LOAD/UNLOAD, PAUSE, a pair for VISUAL SEARCH in either direction, and another pair for RAPID ACCESS in either direction. Operation is intuitively evident, even without reading the owner's manual. In fact, the manual contains more on how to hook up the system than on operation.

To load or unload a CED disc, you press LOAD/UNLOAD. A blinking "L" in the display tells you the system is ready to accept a disc. You insert the caddy and then withdraw it; the disc placement mechanism whirs for a second and two dashes (--) appear on the front-panel display. About eight seconds later, picture and sound appear on your TV screen. The display then keeps track of the side's elapsed playing time. A blinking "E" indicates the end of

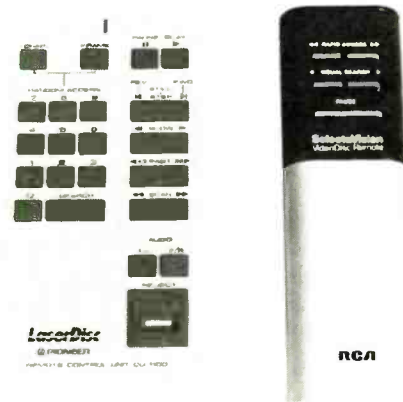


Slipping a caddy-protected CED disc into the RCA player (top) is faster than loading an optical disc into the Pioneer unit. With both players, the discs must be removed and turned over to play the second side. Considering the time it takes for an optical disc to stop and then come up to full speed again, starting play on side two can take as much as a full minute; total turnover time for a CED disc is less than twenty seconds.

the side.

Other controls include PAUSE, which stops the program and blanks the screen. VISUAL SEARCH accelerates motion in either direction in full color and with remarkable clarity. RAPID ACCESS scans ahead or backward at an even higher speed, but without a picture. There is no sound in either SEARCH or ACCESS. The real-time counter shows where you are on a side.

Front-panel lamps indicate which side



Infrared remote controls are standard equipment with both players. Most functions on the Pioneer remote work only with CAV (constant angular velocity) discs, which provide a maximum of thirty minutes of viewing per side. Since most LaserDiscs are in the CLV (constant linear velocity) format, which gives the same playing time as CED discs (sixty minutes per side), Pioneer and RCA special features are just about equivalent for entertainment use.

is being played and whether the SGT-250 is in the stereo mode. A three-position slide switch on the rear panel selects NORMAL (stereo) operation or either the "A" or "B" channel alone (for discs with single, isolatable channel options). Another rear-panel switch selects the output channel (3 or 4). There are 75-ohm coax fittings for the TV antenna and for connection to the TV itself. (Although the SGT-250 does not record off the air, the signal from the TV antenna is routed through it.) Connection to an external stereo amplifier and speakers is via a pair of pin jacks. (The audio that is fed to the TV set via the RF link is mono.) Another pin jack enables you to feed direct video signals to a TV monitor.

Input and output connections on the Pioneer LD-1100 are similar to those on the RCA player, except that a coax fitting is used for the direct video output. Both video disc players have infrared remote control. RCA's operates PAUSE, RAPID ACCESS, and VISUAL SEARCH. Pioneer's remote unit is unusual in that it is the only means of accessing certain special features.

Since you cannot access specific frames on a constant linear velocity (CLV) optical disc, locating a particular point on a side takes some hunting. As with CED discs, you must use timing to find the spot. With a CLV disc in the player, the time elapsed since the side began is displayed when you press FRAME. You can advance or back up to any desired minute by pressing SEARCH and entering the minute on the keypad. If you're not sure what minute you want, SCAN lets you race through the program in either direction with a black and white picture that is at least recognizable. (It's not

stable enough to be called accelerated motion.)

By comparison to the remote, the player's on-chassis control panel is sparse. Only PLAY, SCAN, PAUSE, and the two audio defeats are on the main panel. In addition, there is a CX selector button, a slow-speed control, and a power switch. The REJECT serves two purposes: It stops the disc and, with a second press, opens the lid.

Judging by these two machines, we can see why the two formats co-exist. The RCA SGT-250 is a machine for the masses. It's very easy to use, it's less expensive than the LaserDisc player, and it works well. Picture definition at least equals that of any of the best video tape recorders operated at their highest speeds and is much better than that of an average VCR. Color quality is also first rate, and you get wide-bandwidth stereo sound if you hook the player up to an external stereo amplifier and speakers. (The frequency responses of the stereo VCRs we've reviewed have been mediocre.)

In terms of sheer technical excellence, however, LaserDisc beats SelectaVision. Video definition with the laser player is superb—better than we've seen on any VCR—and color is excellent, too. The LD-1100 generated a more stable picture than the SGT-250, which produced a small amount of horizontal jitter that was noticeable mainly as the picture credits rolled by. And once up to speed, the LD-1100 tracked perfectly every disc we played. Our RCA player occasionally skipped a few frames, but not that frequently (perhaps one to three times per side) or that noticeably (only one skip was bad enough to be caught by a casual viewer).

On a well-recorded CX-encoded laser disc, the sound is excellent—at least equivalent to that of a very good audio record. The CED sound, although extended in bandwidth, seems less smooth. Whether this is due to CX mistracking, we have no way of knowing; the RCA player lacks a CX switch, and the circuit is presumably always active. Despite the CX noise reduction system, the CED player at times was prone to static-like noise, which we assume was due to dropouts. On the other hand, the LaserDisc system was so noise-free that we could hear the mechanical whir of the disc. (Admittedly, that in itself can get annoying, and it would be a plus if Pioneer could quiet the player a bit more.)

So we see good reason for both systems. The RCA CED player is utterly simple to use and provides quite acceptable performance that should satisfy most viewers. The Pioneer LaserDisc player might appeal more to the videophile. It takes more getting used to, but it rewards you with superb performance. And with CAV discs, it's a mass storage medium of endless potential.

HF
Circle 75 on Reader-Service Card for Pioneer LD-1100; Circle 74 on Reader-Service Card for RCA SGT-250

TubeFood

New video programming: cassette, disc, pay and basic cable by Susan Elliott

(Check local cable listings for availability and schedules.)

November Arts Cable Highlights

PERFORMER PROFILES

ABC Arts: *Jon Vickers in Samson and Delilah* (Saint Saëns).

CBS Cable: *Special People:* Ravi Shankar, Pinchas Zukerman, Eugenia Zukerman, Bobbi Humphrey. □ *Signature* (interview series): Pianist Andre Watts; singer Shirley Verrett; dancer Alexander Godunov.

OPERA

CBS Cable: *The Mikado* (Sullivan) with William Conrad, Clive Revill, Derek Hammond-Stroud, Stafford Dean, Kate Flowers, Anne Collins; conducted by Alexander Paris (London Symphony, Ambrosia Opera Chorus).

SYMPHONIC & CHAMBER MUSIC

ABC Arts: *Martinů Quintet No. 2* (Pro Arte Quintet of Monte Carlo). □ *The 1982 International Tchaikovsky Competition* (highlights). □ *Brahms Trio No. 1 in B Major* (Eugene Istomin, Isaac Stern, Leonard Rose).

CBS Cable: *Kraft Music Hall:* Zubin Mehta and the Israeli Philharmonic Orchestra (Schubert, Mendelssohn, Weber). □ *Bernstein Conducts Beethoven* (Vienna Philharmonic, Symphony No. 5).

DANCE

ABC Arts: *The 1982 International Ballet Competition* with Dick Button, Jacques D'Amboise, Marge Champion.

CBS Cable: *Twyla Tharp: Confessions of a Cornermaker* (Bach, Springsteen). □ *Davidshundlertanze* (Schumann) with N.Y. City Ballet principals; choreographed by George Balanchine. □ *May O'Donnell: Dance Energies* (Dorsey, Goodman, Miller, Herman) with O'Donnell Dance Co. □ *Romeo and Juliet* (Prokofiev) with Yuri Zhdanov and Galina Ulanova; choreographed by Lev Lavrovsky (Bolshoi Ballet, 1954 film).

JAZZ and POPULAR SONG

ABC Arts: *Dave Brubeck: Live at the Vineyards.*

CBS Cable: *Cabaret: Margaret Whiting* with 6-piece band at Ted Hook's On Stage. □ *Eileen Farrell: The Diva Sings Pop* (Gershwin). □ *Elisabeth Swados: Songs of Innocence and Experience* (Swados).

Pay Service Premieres

Cinemax: *The Last Time I Saw Paris; Southern Comfort; Love Me or Leave Me; Blume in Love; St. Ives.*

Home Box Office: *Ghost Story; Paternity; Prince of the City; So Fine; True Confessions; I Go Pogo.*

Showtime: *True Confessions; Pater-*

nity; Rich and Famous; Prince of the City; Ghost Story; Southern Comfort; So Fine; The High Country; Happy Birthday to Me; Blood Beach; Dunkirk; Montenegro; Prisoner of War; Imitation General; Soldiers Three; Faerie Tale Theater: Hansel and Gretel; Mark Twain Theater: Huck, the Hero; Legend of the Wild: A Challenge for Robin Hood; Hot Ticket: Frank Sinatra, Concert for the Americas; Hot Ticket: Rick Springfield in Concert.

The Movie Channel: *Rich and Famous; Prince of the City; True Confessions; Ghost Story; So Fine; Paternity; Love and Money; Just Before Dawn; Good Riddance; Southern Comfort; The Bronte Sisters; The Three Musketeers; I Go Pogo; King Solomon's Treasure; Convoy.*

Video Discs

FEATURE FILMS

Paramount Home Video (CED and laser): *Star Trek II: The Wrath of Khan.*

RCA SelectaVision (CED): *Swept Away; And Justice for All; Neighbors; Murder on the Orient Express; Bananas; Revenge of the Pink Panther; In Praise of Older Women; Wholly Moses; Semi-Tough; Pretty Baby; Tom Jones; Key Largo; The Searchers; 42nd Street; The Heritage of the Bible.*

Vestron Video (laser): *Tribute; Fort Apache, the Bronx; Cannonball Run; The Changeling; Till Marriage Do Us Part.*

Q.&A.

Your video questions answered by Edward J. Foster

Q. *I read with interest your answer ["Video Q. & A.," February] to the owner of a Heath GR-2000 TV receiver who had a problem with images from his Sony Betamax SL-5800 tearing. Although my picture does not tear, I have a similar problem. I recently purchased a Sony Betamax SL-5600, and when I play back tapes on it I cannot eliminate the "herringbone effect" that appears on my TV set's screen. I have a 25-inch RCA Model 2000 TV receiver that I bought in 1969, and I get perfectly good broadcast reception on it. But I have been told that eliminating the "herringbone" would be extremely costly and that I should replace the set instead. I can't believe that. Does my problem have a solution as simple as*

the one you gave Mr. Watkins?—Hal M. Rogers, San Jose, Calif.

A. I'm afraid you and Mr. Watkins have different problems. As far as I can tell from your description, yours is caused by interference between the signal generated by the VCR's RF modulator and some Channel 3 signal in your area. The "tearing" in Mr. Watkins' picture was due to a loss of sync and could be fixed by modifications to his TV's synchronizing circuit.

My best advice is to tune the TV set carefully to a signal from the VCR with the receiver's automatic fine tuning (AFT) switched off. (You can use either a pre-recorded tape or the VCR's own tuner as a source.) This may help clear up the interfer-

ence, but you may also find that it returns when you switch the AFT back on. If so, turn the circuit off when using the VCR. I'd also check all connections between your VCR and your TV, as well as the antenna connections. If you're using regular twinlead as lead-in wire, try replacing it with shielded twinlead or coax (using the appropriate impedance-matching balun transformers, of course.)

If these suggestions don't work, a new TV set may be in order. Yours appears to have served you well, but many improvements have been made since you purchased it—including the use of comb filters in some models for greatly improved color definition and reduced interference. This may be a good excuse to upgrade.

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ADVENT

ADVENT

Brahms's Duo Sonatas: An Embarrassment of Riches

New, varied performances run the gamut of these widely divergent masterpieces.
Reviewed by Harris Goldsmith

APPROPRIATELY ENOUGH, for a master of absolute music, Brahms showed a lifelong interest in the problems of sonata form. Although his earliest surviving works in that genre are for piano alone, in later life, for whatever reason, he preferred to use his own beloved instrument exclusively in ensemble situations—at least when it came to sonatas.

Undoubtedly, there were numerous attempts at duos long before the E minor Cello Sonata, begun in 1862 when Brahms was twenty-nine, but this notoriously self-critical burgeoning master is known to have destroyed great quantities of music. Only the short, stormy Scherzo he wrote in 1853 for the *F-A-E* Sonata (of which more presently) seems to have survived his wrathful edict.

The fruit of his creativity—like that of his great forebears Bach, Haydn, Mozart, and Beethoven—tended to grow in clusters. The evidence to support such an assertion is both abundant and conclusive: the three early Piano Sonatas, Opp. 1, 2, and 5; the first two Piano Quartets, Opp. 25 and 26; two Clarinet Sonatas, Op. 120; the first two String Quartets, Op. 51; and the last two Sonatas for Violin and Piano, Opp. 100 and 108 (both obviously sequels to the First, Op. 78, completed seven years earlier).

This generalization, however, does *not* apply to the first two compositions under consideration: Brahms's two sonatas for cello and piano were separated by more than twenty years, and though they are often juxtaposed on records for convenience, each is a loner—a self-contained entity with an aesthetic personality all its own. Before pondering the many dissimilarities between the two masterpieces, let us note the few particulars common to both: Each is, of course, masterfully scored—a bona fide duo in which neither cello nor piano predominates. Then, too, as so often with Brahms, the emotional burden is unevenly distributed in both. In the E minor Sonata, the focal point occurs in the last movement—a towering fugue structure. The F major, on the other hand, reverses matters: its pleasing, almost too carefree, finale can easily sound anticlimactic in per-

formance after the emotionally (and physically) draining first three movements. Finally, Brahms specifies in each work a repeat of the first-movement exposition, which he does nowhere else in his mature sonatas. (One must not, however, infer that he looked unkindly on the double bar of classical tradition; three of his four symphonies include repeats, as do many of the larger chamber works.)

Oddly, the earlier E minor Sonata is the one most recognizably tinged with that autumnal introspection usually associated with the composer's Indian-summer period. The F major, which was a product of those years, is by contrast a relatively stormy, extroverted affair—full of ardor and thrust. Whatever the reason for the paradox, the E minor Sonata is in many respects a stylistic sibling of the much later Fourth Symphony—also in E minor.

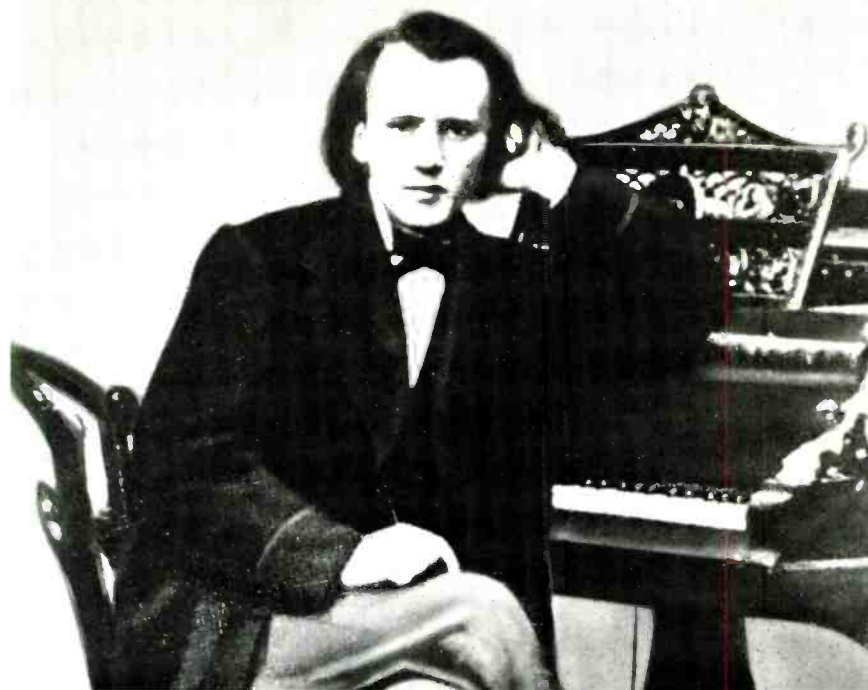
For all its consistent expertise, Brahms's cello writing varies enormously in the two scores. In the F major, it leaps about boldly, using the difficult higher register audaciously (and, for less-than-virtuosic players, cruelly). But the conservative, even cautious, scoring of the E minor also poses a built-in challenge—to make it seem varied and aurally interesting. Scored almost exclusively in the instrument's "safe" lower range, it takes a master's touch to keep it lithe and to avoid the dual hazards of drabness and awkwardness. Not to mention pedantry: The last movement, for instance, resembles the mirror fugues of Bach's *Art of Fugue* (a further point of similarity with the Fourth Symphony, which utilizes another great baroque form, the passacaglia, for its finale); it can easily sound learned and dryly literal.

The three latest recorded editions represent different philosophies of both performance and engineering. Lynn Harrell and Vladimir Ashkenazy go all out for lushness and nuance. They are abetted by Decca's engineering, except in the opening movement of the F major, where the recording, made at St. George the Martyr in London, suggests instead an airplane hangar or the Paris sewer. The resonant ambience works against the fast-moving tremolandos that begin that work, and Harrell's predilection

for throbbing vibrato and slow shifts makes things pretty excruciating. Elsewhere, he plays much better, recalling the patrician restraint of his first solo appearances (while still a principal of Szell's Cleveland Orchestra). In fact, the E minor and the rest of the F major get knowing, aristocratic treatment. Ashkenazy's playing combines refinement with passionate lyricism.

Still in all, I prefer *everything*—the more probing interpretations, the more characterful classicism, the sharper, cleaner recorded sound—in the Hungaroton edition. Miklós Perényi and Zoltán Kocsis stress sinew and tension in performances that suggest what a Casals/Rudolf Serkin collaboration from the early 1950s might have sounded like in this music. Indeed, in comparison to the 1938 Casals/Horszowski F major that was recorded (CBS M5 30069), Perényi and Kocsis show a strikingly similar interpretive approach; Perényi's tempo in the first movement is even a hairbreadth faster than the notably unsentimental reading of his onetime mentor, and in the last, slightly slower than Casals' admirably spacious, poised pacing. Perényi is lean, searing, and intense rather than dirgelike in the opening movement of the E minor. In his way, he lavishes as much color there as does Harrell, but the sound is drier, more focused. The second movement in the Hungarian performance is a graciously flowing intermezzo that makes an admirable launching pad for the fiery, rapidly paced fugue. I like Hungaroton's direct, compact acoustic—which nonetheless avoids the hardness of some of its earlier recordings.

Having heard an unsatisfying rendition of the F major from the German-born, Starker-trained Christoph Henkel some years ago, I am happy to report that the Bis album attests to a remarkable artistic transformation. In basic sonority, the Scandinavian recording has much in common with the Hungaroton. What ultimately keeps these fine performances a notch below their Hungarian counterparts is a slight obsessiveness: At the beginning of the F major, for example, Henkel tends to overaccenuate the sixteenth-note upbeats in his opening theme militaristically (one can almost



THE BETTMANN ARCHIVE

Brahms and his beloved piano: his later sonatas used it only in ensemble situations.

hear him clicking his heels), and throughout, both he and his admirable pianist, Elisabeth Westenholz, sound a little too dutiful and overdeliberate. They are also a bit too monochromatic tonally—probably as much attributable to the Gofriller cello and Bösendorfer piano used as to their way of playing them. One curious blemish: In the trio of the F major's third movement, Westenholz fails to differentiate one phrase from an almost identical one earlier, twice playing a spurious B flat octave in the left hand at measure 183. The lapse—though minuscule—is quite uncharacteristic of these otherwise scrupulous, detail-conscious artists.

All three performances, creditably, observe the repeats in both sonatas—much more unusual in the E minor than in the terser, shorter F major.

Turning to the three violin sonatas, we find in the G major, vintage 1879, a well-nigh perfect edifice written at the high noon of Brahms's creativity. Its nobility of scale suggests the masterful expansiveness and grandeur of the contemporaneous Violin Concerto, Op. 77, and the easy, lilting (or rather, soaring) momentum of its first movement has much in common with that of the Second Symphony. There is a Beethoven influence here, too; this spacious sonata's structure is analogous to that of Beethoven's big E flat Violin Sonata, Op. 12, No. 3. Brahms introduces elements of cyclic form, bringing back the theme of the Adagio several times in the flowing finale, which also uses elements of his "Regenlied," Op. 59, No. 3—thus the nickname sometimes attached to the sonata. (Listeners familiar with the rest of his chamber

music will also note a kinship with the finale of the C minor Piano Quartet, Op. 60.)

The 1886 A major Sonata is sometimes known as the *Thun*, after the place of its inception. The opening movement has a thematic closeness to the Prize Song from the opera *Meistersinger*, by Brahms's "enemy" Wagner. Slow movement and scherzo are combined—and alternated—in the intermezzolike central movement. I find the sonata's last movement elusive in shape: Its thematic content is a bit inconclusive, and the subordinate idea in nebulous diminished-seventh arpeggios—just fine for a slow movement (note, for example, Brahms's use of similar material in the A major Piano Quartet, Op. 26)—doesn't quite gel for a final summation.

Completed two years later, the D minor Sonata, the most dramatic of the three, with much of the Double Concerto's terseness in the first two movements, also has a goodly amount of Brahms's characteristic charm in the scherzolike third movement. In sharpest contrast to the A major, this sonata ends triumphantly with a stampeding *Presto agitato* finale—a fiery culmination that, similar in mood to the youthful *F-A-E* Scherzo, brings the wheel full cycle.

When Toshiya Eto first recorded two of these sonatas, HF's Paul Affelder called him "one of an increasing number of Oriental musicians . . . quite capable of giving a valid interpretation of Western music," although "in the faster movements one looks for greater inner tension, and perhaps a bit more variety of nuance throughout." Eto, who returned to his native Japan to become an honored guru for a whole generation of younger violinists, sounds like a

far more confident Brahmin in 1977 than he did in 1961: if—somewhat lacking in nuance—his tone still strikes some as glaring and intense, many modern fiddlers the world over share that trait.

Much of the improvement undoubtedly stems from the substitution of William Masselos for the earlier recording's Brooks Smith (not "as expressive as he might have been," according to Affelder). Masselos, a noted specialist in avant-garde performance, is in fact a Romantic to the manner born—and he comes by his heritage honestly as a onetime disciple of Clara-Schumann-pupil Carl Friedberg. The piano parts here are *magnificently* rendered—huge surging lines, absorbing clarity of detail, and a vibrant singing humanity. No one, probably, has done so much for Brahms's keyboard parts since Arthur Rubinstein (with Szeryng), Egon Petri (with Szigeti), and Edwin Fischer (with De Vito).

The fourth side of this worthy release restores to the domestic (and probably international) catalog the complete *F-A-E* Sonata, which Isaac Stern and Alexander Zakin recorded on a Columbia mono disc. This work, written by Brahms, Robert Schumann, and the latter's friend Albert Dietrich for an impending visit of Joseph Joachim to Düsseldorf, is more unified stylistically than one might expect from such a patchwork operation. Dietrich's first movement, a mite academic to be sure, is an estimable and solid example of Schumann style without quite the master's inspiration. Schumann's second and fourth movements are lyrical and wistful, and the fiery incursion by the fledgling Brahms (using an assertive motto à la Beethoven's Fifth to impressive effect) works well in the context. Superbly played by Eto and Masselos, with high-powered engineering and suave processing from Nonesuch, this caps a major release—quite the finest edition of these pieces to appear in some time.

We owe a debt of gratitude to Richard Mühlfeld, clarinetist par excellence, for without his incentive, the aging Brahms would probably never have composed his Op. 114 Trio, Op. 115 Quintet, and Op. 120 Sonatas. The sonatas, among Brahms's very last works, are magnificently wrought; the melding of instruments is in many ways the most sophisticated and subtle of all of the duos. Much has been made of Op. 120's benign, autumnal qualities, but those are handsomely complemented by other, less-publicized ingredients. The F minor's first movement is full of molten, spitfire passion; the E flat's second movement, though also energetic, smolders rather than blazes. And then there is the finale of the F minor—a sportive, joyous resolution of the work's earlier anguished drama. In both of these related yet diverse works, Brahms's mastery of motivic manipulation reached its zenith.

(Continued on page 95)

Mozart's Struggles: The String Quartet

One of the rare tidal waves of Mozart quartet recordings shows the progression from raw talent to true genius.
Reviewed by R.D. Darrell

IN CONTRAST TO THE STEADY mushrooming of the Mozart opera, symphony, concerto, sonata—and to a lesser extent the mixed-ensemble—discographies, that of the precious legacy for string foursomes has grown much more slowly and sporadically. So it's cause for rejoicing, and not only by chamber-music specialists, to encounter one of the rare periodic tidal waxings of Mozart string-quartet recording activity. And the current flurry of releases is particularly welcome for its generous representation of mostly relatively young artists of varied nationalities and its up-to-date audio technologies—including, for the first time in this repertoire, digital recording.

There's an exceptionally well-defined choice between the two latest versions of the deservedly best-known and most often recorded Mozart quartets: the set of six dedicated to Haydn—major milestones in chamber-music history as well as in the maturation of the composer's own genius. Musical prodigy though he certainly was, Mozart was by no means a born composer of string quartets, a form that Haydn and Boccherini were just beginning to give a distinctive identity at the time of Mozart's birth, January 27, 1756. His early attempts were far less spontaneous and imaginative than his early essays in other forms. Most of the initial baker's dozen of string quartets were written on his travels—first an isolated trial, then a set of six on his third Italian trip (1772–73), when he was only sixteen or barely seventeen and writing under strong Italian influences, especially that of Sammartini. The next set of six was written in a rush later in 1773, during the visit to Vienna in which he first met Haydn and was stimulated to imitate (more than emulate) the older master's Opp. 17 and 20 Quartets.

Indeed, all the early Mozart quartets seem to have been products of external forces (primarily father Leopold's insistence on having some ensemble works to impress prospective patrons and publishers—all to no avail, as it turned out) rather than of any genuine creative urge. It's significant, too, that none of these early quartets is discussed by either father or son in *Next month Paul Henry Lang discusses Mozart's difficulty in assimilating the influences of Handel and Bach in his Masses.*—Ed.



The Chilingirian Quartet captures not only dramatic grandeurs, but high humor.

their correspondence of the time.

It was a quite different kind of external influence with far more potent consequences—a galvanic lightning stroke—that electrified the twenty-six-year-old Mozart into returning to the form he had gratefully abandoned for nine years. This was his encounter, in Vienna in 1781 or early 1782, with evidence of Haydn's revolutionary advances in his Op. 33 (*Sun*) Quartets. This shock and the fiery ambition to match such an achievement were so great that, perhaps for the first time in his life, Mozart found creativity no easy task.

He had always written music as effortlessly and copiously "as"—in his own vivid if coarse simile—"sows p---." But now it took him more than two years to produce what, in his dedication to Haydn, he termed, "*il frutto di una lunga, e laboriosa fatica*" (the fruit of long and laborious endeavor). To be sure, the final results show no sign of the sweat and uncertainties that went into them, or of the exceptional number of material revisions and rejections. And even though he worked on more than one of the quartets at a time, each of the six is individually distinguished in its

own right.

Even collectors who already own one or more of the several admirable previous *Haydn* sets (from the famous 1953 Budapest/Odyssey [Y3 31242] mono and 1963 Juilliard/Epic [out of print] stereo milestones) may well find new illuminations and rewards in both the 1977–78 DG version (available earlier on separate discs, now integrated) by the Melos Quartet of Stuttgart (established 1965) and the Vanguard Bach Guild American release of a 1980 CRD recording by the younger British Chilingirian Quartet (formed in 1971). The former set already commands many admirers, and if my own response is more dubious, I'm probably unduly biased due to a strictly personal distaste for first-violinist Wilhelm Melcher's (or the recording engineers') occasional high-register tonal stridency as well as for the whole ensemble's frequent vehemence and exaggerated dynamic contrasts. Even I, however, can't dispute the group's virtuosity: At its best, the playing is brilliantly assured, and throughout, it is distinguished by Peter Buck's truly outstanding cello part.

Less bravura, the Britishers are also

COURTESY VANGUARD RECORDING SOCIETY

less mannered and better integrated tonally—and the eponymous leader is more graceful as well as sweeter-toned. Better still, the Chilingirian is more warmly poetic, radiating an infectious relish of not only the music's dramatic grandeurs, but also its by no means infrequent sense of high humor. Moreover, in contrast to the DG engineers' realistically vivid close-up sonics, Bob Auger's for CRD are less insistent, with a more natural "chamber" character and acoustical ambience.

Then, too, most nonspecialist listeners will probably find A. Hyatt King's detailed technical analyses of the six quartets (in DG's trilingual booklet, which includes a handsome facsimile reproduction of the original title page of these quartets, published in 1785 as Op. 10) somewhat less usefully informative than Bach Guild's; Stanley Sadie's more generalized liner notes, with fuller background, provide a "placement" of the Haydn set aptly suited for an entry in Vanguard's "Historical Anthology of Music" series.

Neither the Melos' approach, more Germanic than Austrian, nor the Chilingirian's, more eclectic and lyrical, is "definitive," of course. It's fruitless to speculate how the last three of these works may have sounded when they were run through on a Saturday evening, February 12, 1785, in Vienna, for the benefit of Haydn, Leopold Mozart, and a couple of local barons—the occasion of Haydn's famous assertion to Leopold: "Before God and as an honest man, I tell you that your son is the greatest composer known to me either in person or by name." (Would that the art of recording had been known then!)

I, for one, prefer—even over the Chilingirian's gracious, well-restrained Romantic treatment—a somewhat cooler and more virile one, like that demonstrated so exhilaratingly by the Czech Panocha Quartet, active since 1969, in its performance of the K. 458 (*Hunt*) Quartet. Recorded digitally by Nippon Columbia during a 1980 Japa-

Mozart String Quartets			
No.	Key	K.	Composed
1	G	80	Lodi, March 15, 1770*
2	D	155	Bolzano, Oct.-Nov. 1772
3	G	156	Milan, end 1772
4	C	157	Milan, end 1772-beg. '73
5	F	158	Milan, end 1772-beg. '73
6	B flat	159	Milan, early 1773
7	E flat	160	Milan, early 1773
8	F	168	Vienna, Aug. 1773
9	A	169	Vienna, Aug. 1773
10	C	170	Vienna, Aug. 1773
11	E flat	171	Vienna, Aug. 1773
12	B flat	172	Vienna, Sept. 1773
13	D minor	173	Vienna, Sept. 1773
14-19 (<i>Haydn</i>) Vienna			
14	G	387	Dec. 31, 1782
15	D minor	421	June 1783
16	E flat	428	June-July 1783
17	B flat	458	Nov. 9, 1784
(Hunt)			
18	A	464	Jan. 10, 1785
19	C	465	Jan. 14, 1785
(Dissonant)			
20	D	499	Vienna, Aug. 19, 1786
(Hoffmeister)			
21-23 (<i>Prussian</i>) Vienna			
21	D	575	June 1789
22	B flat	589	May 1790
23	F	590	June 1790

*First three movements; fourth added in Vienna, 1773, or Salzburg, 1774.

Note: The three Divertimentos, K. 136-38 (Salzburg, early 1772), are sometimes included among the early quartets; the four so-called *Milanesse* Quartets, K. Anh. 210-13, of doubtful authenticity, are usually excluded.

nese visit, it is issued—together with an equally liting and mercurial K. 575 (first of the three *Prussian* Quartets)—by Denon as a coproduction with Supraphon. The sonics testify persuasively to the virtues of digitalism at its best; the readings and performances are sheer joy. The only catch is today's all too familiar one: an unconsciously high price.

I eagerly anticipate a complete Panocha Haydn set, but meanwhile the choice of the first *Prussian* Quartet is a timely complement to the Melos' latest Mozart program: the second and third of the three

works actually composed of six commissioned by Frederick the Great after Mozart's visit to Potsdam in the spring of 1789. This set also was written with great difficulty, although here the problems were less internal than external: his wife's as well as his own illness, ever more stringent money troubles, the pressing demands of *Così fan tutte* and other projects. The need to please a cello-playing royal patron was of course no problem at all—and the many prominent cello passages make them particularly well suited to the Melos' Buck. But his colleagues also are at their best here, with fewer idiosyncratic mannerisms than in their earlier Haydn set, and the recording is no less brilliant and vivid.

The latest complete *Prussian* triptych also includes the isolated, underappreciated K. 499 Quartet, named for Mozart's friend and sometime publisher, Franz Anton Hoffmeister. Completed August 19, 1786, a year-and-a-half after the last of the Haydn six, this Hoffmeister Quartet may well have been responsive to the public complaints about the earlier music's "difficulty." But ingeniously, it only *seems* to be less intricate, although it is indeed more overtly genial and humorous.

Fine as the Prague Quartet invariably is, this older Czech foursome, active since 1949, strikes me as just a bit too tense and serious in these last four of the Mozartean quartet legacy. The tautly dramatic readings do have distinctive attractions, however, and they are powerfully, fairly closely recorded (in 1977 and 1978) by two different production/engineering teams. Anyone who shares my slight reservations about the performances will find good alternatives in the 1976 Juilliard/CBS budget-priced set (MG 33976) and in two 1978 Telefunken single discs by the Alban Berg Quartet (6.41999, 6.42042).

What a far cry any of these last quartets are from the early ones! The nine-year gap between No. 13 and No. 14 (first of the Haydn six) saw an extraordinary aesthetic and technical quantum leap. For a single but completely convincing example, play first what are probably the highest moments in the early quartets, the fugal finales of Nos. 8 and 13—then the fugal finale of No. 14. Weigh for yourself the difference between a considerable talent and true genius.

Cocking one's ears especially for the contrapuntal writing throughout the last ten quartets can be an incalculably illuminating "learning" experience when one remembers Paul Henry Lang's skeleton key for unlocking one of the secrets of Mozart's quartet style: "the uncanny and unparalleled ability with which he steps in and out of homophony to polyphony and vice versa; the dividing line is of gossamer fineness, and this 'obscure clarity that falls from the stars' (*The Cid*) cannot be grasped by any known sort of analysis" (HF, July 1978).

(Continued on page 96)

MOZART: Haydn Quartets (6).

Chilingirian Quartet. [Simon Lawman, prod.] BACH GUILD HM 80/2, \$23.94 (three discs, manual sequence).

Melos Quartet. [Rudolf Werner and Wolfgang Mitlehner, prod.] DEUTSCHE GRAMMOPHON 2740 249, \$32.94 (three discs, manual sequence) [from DG singles, 1977-78].

Quartets for Strings: No. 14, in G, K. 387; No. 15, in D minor, K. 421; No. 16, in E flat, K. 428*; No. 17, in B flat, K. 458 (*Hunt*)*; No. 18, in A, K. 464; No. 19, in C, K. 465 (*Dissonant*).

MOZART: Quartets for Strings: No. 17; No. 21, in D, K. 575.

Panocha Quartet. [Eduard Herzog and Toru Yuki, prod.] DENON OX 7004-ND, \$15 (digital recording) (distributed by Discwasher, 1407 North Providence Road, Columbia, Mo. 65205).

MOZART: Quartet for Strings, No. 20,

in D, K. 499 (*Hoffmeister*); Prussian Quartets (3).

Prague Quartet. [Jaroslav Rybář and Jan Vrána, prod.] SUPRAPHON 1111 2601/2, \$19.96 (two discs, manual sequence).

Quartets for Strings (*Prussian*): No. 21; No. 22, in B flat, K. 589; No. 23, in F, K. 590.

MOZART: Quartets for Strings (*Prussian*): No. 22*; No. 23*.

Melos Quartet. [Rudolf Werner*, Wolfgang Stengel†, and Steven Paul†, prod.] DEUTSCHE GRAMMOPHON 2531 320, \$10.98. Tape: 3301 320, \$10.98 (cassette).

MOZART: Early Quartets (4).

Sequoia Quartet. [Judith Sherman, prod.] NONESUCH D 79026, \$11.98 (digital recording). Tape: D1 79026, \$11.98 (cassette).

Quartets for Strings: No. 3, in G, K. 156; No. 4, in C, K. 157; No. 8, in F, K. 168; No. 13, in D minor, K. 173.

In Search of Béatrice and Bénédict

The principal singers in DG's new recording shed light on the serious business of Berlioz' comic masterpiece.
Reviewed by Kenneth Furie

"YOU'RE SIGHING, my lady."

"Happiness oppresses my soul. I can't think of it without trembling in spite of myself. Claudio! Claudio! So I'm going to be yours."

This brief recitative exchange between Héro (the very evening she's to be married) and her confidante Ursule precedes their Duo-Nocturne, which ends the long first act of *Béatrice et Bénédict* and is by common consent the opera's most beautiful number. The Nocturne is certainly beautiful, but I can't help feeling that the received view of the opera fails to take proper notice of what's actually going on in it.

In the received view, *Béatrice* is a miracle of lightness: the simple, untroubled comic opera with which Berlioz brought his flamboyant compositional career to a close, the ritually cited parallel being Verdi and *Falstaff*. That Berlioz should have produced so unclouded a work is seen as all the more remarkable in view of the mounting physical and psychological distress of this declining period of his life.

In this view, the opera is a drastic simplification of Shakespeare's *Much Ado*. It is assumed that Berlioz, for some reason or other, wasn't up to the job of operating the play as such, and so contented himself with stripping it down to the battle of wits between Béatrice and Bénédict, who interrupt their wisecracking just long enough to fall in love. Most but not all commentators notice that Berlioz has left in a third principal, Béatrice's cousin Héro, but to those who do notice she functions as a simple counterpoint to the acerbic Béatrice. Héro would be the simple romantic maiden, secure in the path of true love—the composer having surgically removed all obstacles to her marriage to the dashing young war hero Claudio.

The first and most immediate problem with this view is Héro herself. Doesn't it matter that almost every time we encounter her she is either crying or, as in the recitative quoted above, on the verge of tears? Now you may choose to believe that feeble line she hands Ursule, but the haunting reflection "*Claudio! Claudio! je vais donc être à toi!*"—which sends the girls into the Nocturne proper—strongly suggests to me that what's coming down on Héro is some-



Yvonne Minton: freedom, tonal richness

thing more oppressive than a surfeit of happiness.

Sure enough, by the end of one stanza of the Nocturne, Héro *is* crying. When Ursule gently comments on this ("You're crying, my lady"), she comes up with an even loopier explanation. "These tears comfort my soul," the soon-to-be bride replies. "You'll feel yours flowing in your turn, the day when you see your love crowned." Whereupon the girls are launched in a sort of B section of the Nocturne—a bit quicker and harmonically more, shall we say, troubled—which shortly dissolves into a reprise of their "Serene and peaceful night." It's on this wistful and brooding note, in the form of an orchestral coda based on the Nocturne, that this long act so full of roistering and tumult ends.

You may well wonder whether it isn't reasonable for Héro to be so edgy on the brink of such a major change in her life. In which case you are already one large step ahead of the commentators who manage to reduce both cousins to something less than two dimensions.

The fact is that Héro's state of mind is sufficiently troubling to Ursule to prompt her comment, in the spoken dialogue before the Nocturne, "There's your melancholy

taking hold of you again." (Héro has just said how grateful she is to her father—the Sicilian governor, Léonato—for excusing her from the nuptial banquet. "My heart is full of joy," she says, "but the noise and the crowd are unbearable for me.") At the same time, we have seen Héro display considerable spunk, in the *allegro con fuoco* conclusion of her aria—the opera's first solo number, a fact that takes on particular importance in view of the score's unusual musical pattern, about which we'll talk later.

Even before this, we have seen in the opera's first spoken scene that Héro has quite particular ways of dealing with her cousin's fatiguing cynicism, based on the very real and touching relationship we can see exists between them. At any rate we might see all of this if the spoken dialogue were to be considered an integral part of the score, something else we'll talk about later.

Berlioz also allows us gradually to see beneath Béatrice's (and for that matter Bénédict's) shell of toughness. It turns out that Héro has no monopoly on tears. In her Act II monologue Béatrice recalls, perhaps for the first time since the event, the trauma of the day the army, whose victorious return was celebrated in the opera's opening chorus, left to fight the Moors. "It all comes back to me, it all comes back to me," she sings, to the tune we have heard as the *andante* of the overture.

As she allows the memory to emerge, she relives the nightmare that followed, in which she saw the triumphant Moors leaving behind a pile of Christian corpses that included a gasping, and then dying, Bénédict. She remembers screaming in her sleep, and then she remembers waking up and recovering her sangfroid. "I laughed at my agitation. I laughed at Bénédict, at myself, at my foolish fears."

And then, as the strings sound a gentle figure in repeated eighth notes, with a slight ritard, she remembers one thing more: "Alas! Alas, that laughter was bathed in tears." This is potentially the most beautiful line in the score, and we have heard it too, sounded by the horns in the overture, before the first clarinet chimed in with "*Il m'en souvient, il m'en souvient.*" In the

DEUTSCHE GRAMMOPHON DUBBIN

opera as well. the memory of those tears leads into this phrase, which Béatrice repeats now that it truly *has* come back.

What Berlioz seems to me to have captured here is not just the extreme vulnerability that Béatrice works so hard to conceal, as much from herself as from the outside world, but the process by which we use the selectivity of memory to "protect" us from experiences we're emotionally unequipped to deal with.

In this connection, the new DG recording rates a warm welcome, since it gives us really our first opportunity to appreciate what's going on in Béatrice's music. The writing demands a mezzo voice of some size and considerable security, able to project with force both around the upper E, where the climax of the nightmare lies (later, the voice must also sail up to and sustain high B flats), and down around and below the break.

The Béatrice of Colin Davis' Philips remake, Janet Baker, not only couldn't do any of this but was apparently in pretty rocky vocal shape during those sessions. Having hardly any available tone below the break, she turned "*Il m'en souvient*" into something like "*Il [unintelligible] vient*"—i.e., "He's coming"—which doesn't mean quite the same thing. Nor could she more than lightly squeak that crucial (and very difficult) octave descent, from E flat down to E natural, on "*le jour du départ de l'armée*," or more than weakly huff the high-lying nightmare memory, "*Des flots du sang chrétien la terre était rouge*."

Some of the music's potential might have been intuited from Josephine Veasey's performance in the earlier Davis recording, for Oiseau-Lyre. The voice was certainly of the right caliber, but the tendency to tremulousness evident even in her more successful later recordings (e.g., Fricka with Karajan, Didon with Davis) here took the form of an unsteadiness that compromised her good intentions. Now DG brings us Yvonne Minton—another notable Fricka—and she encompasses the music with as much freedom and tonal richness as we have any right to expect.

I might say the same of her leading man, Plácido Domingo, whose achievement is in some ways more impressive still, in that Bénédict's writing is even less effective in conventional terms than Béatrice's. His Rondo—and it is one of the particularities of the score that it contains only three solo numbers, one for each of the principals—contains very little in the way of sustained melody, but Domingo sings it with such fullness of tone that we can hear a human context for his giddy exploration of the notion that "Ah! I'm going to love her."

We can also hear, as has been suggested by such roles as Hoffmann, that French is a good language for Domingo—not in the form of letter-perfect pronunciation,

which he doesn't manage, but in the colors and texture his voice takes on. As with Minton, he begins to make sense of large chunks of this score for the first time on records. Oiseau-Lyre's John Mitchinson again had the right idea, but got through this quirky music in such a strangulated vocal set as to keep the character veiled even when the text indicates that he, like Béatrice, is beginning to penetrate that emotional armor.

There's more good news. DG's Ileana Cotrubas is a perfectly presentable Héro. Vulnerability and melancholy are about all I've heard her do, but as we've seen, these are conspicuous elements of Héro's musical personality. Cotrubas can't get much fire into the *allegro con fuoco* of the aria, where Oiseau-Lyre's April Cantelo gets closer to showing us some real exuberance. Philips' Christiane Eda-Pierre is okay too, singing the role rather more smoothly than Cotrubas or Cantelo.

We are, of course, getting a fairly one-dimensional view of Héro, despite the evidence that Berlioz was at great pains to cre-

Berlioz wasn't a simplifier; he focused on themes that stirred him.

ate her in all three dimensions. Partly this is a matter of answering the music's vocal demands, for both melting lyricism and trumpetlike fire. (These demands were rather nicely answered by Sheila Armstrong in Seiji Ozawa's 1977 Boston Symphony concert performances.) But partly too it's a matter of recognizing that Héro, being human, has the same range of emotional responses as any of us. Just like us, she is strong and confident in certain situations and helpless and terrified in others.

As regards her terror—and I don't think the word is too strong to describe what she's feeling—we might note one circumstance concerning her marriage: its timing. When the victorious army has returned, its commanding general Don Pedro doesn't want to talk about his military feats. All that seems to be on his mind is matchmaking. He is apparently the ringleader of the conspiracy to bring Béatrice and Bénédict together, and more immediately he is also singlehandedly responsible for the timing of the wedding of Héro and Claudio.

At any rate, Don Pedro confides to Claudio (and I see no reason to doubt his story): "The mission you entrusted to me has succeeded completely. Léonato agrees not to delay your marriage any longer." He goes on to explain that Léonato has gone so

far as to arrange the wedding for this very evening, in anticipation of the happy occasion of the army's safe and victorious return.

So, it would appear not quite correct to say, as I did earlier, that Berlioz has stripped away all obstacles to this marriage. The clear implication is that, while Léonato has consented to it in theory, in practice he has been stalling, and overcoming his reluctance to lose his daughter has required a sustained campaign from no less a personage than Don Pedro.

Now consider the possible effect on Héro of this relatively sudden development. As long as she knew that there was no wedding in her immediate future, it was reasonably safe for her to think only of how badly she wanted it to happen. Then, suddenly, not only is there going to be a wedding, but it's going to happen almost immediately.

Is it unreasonable to guess that some of the melancholy that so alarms Ursule took possession of Héro when her father gave her the "happy" news? Suddenly she has to deal, not with romantic fantasy, but with impending reality: what it means to go from being a doted-on little girl, the apple of her adoring Daddy's eye, to being a woman and a wife, taking on simultaneously the responsibilities of adulthood and the vulnerabilities involved in exposing herself so completely and permanently to someone who is after all pretty much a stranger.

"*Claudio! Claudio! je vais donc être à toi*," she muses, and the prospect is at once heady and terrifying, as it has to be to anyone who keeps his or her eyes even partly open. And the text teems with indications that Béatrice and Bénédict keep their eyes wide open, ever alert for any stray stimulus that might penetrate their ever so carefully maintained emotional fortifications.

Give Héro credit for being able to acknowledge her feelings for Claudio freely—to herself, to him, to her father, to almost anyone who will listen. What should be obvious to anyone who is paying attention is that Béatrice and Bénédict have been fighting like mad, since well before the opera began, to deny, even (or especially) to themselves, their attraction to each other.

Incredibly, the standard view of the opera takes this charade at face value. It's remarkable how many putatively intelligent people are willing to sit through *Béatrice* pretending that it asks the question, "What finally brings these two antagonistic protagonists together?" No wonder the opera seems like a simplification of Shakespeare.

But Berlioz wasn't a simplifier. Whether he was working with *Faust* or *Romeo and Juliet* or *The Aeneid* or the Nativity story, he focused on particular themes that stirred him and that he felt able to make real in music. I think the question that intrigued him looking at *Much Ado* was, "What keeps Béatrice and Bénédict

apart so long?" It's clear enough to at least some of the people around them that they belong together. Consider the exchange between Don Pedro and Claudio immediately after their exasperating trio with the dastardly eternal bachelor Bénédict, as the two war heroes slip into their roles as Fred Mertz and Ricky Ricardo, conspiring to rope Ricky's bachelor buddy into happy wedlock.

Don Pedro: "By heaven, we've got to pull this thing off. The only woman suitable for that lunatic is Béatrice."

Claudio: "Just as the only man suitable for that madwoman is Bénédict."

(Extra-credit question: Just why is it so important to Fred and Ricky and the others that Béatrice and Bénédict stop being single? Note that Héro's immediate response to what appear to be her own considerable anxieties about marriage is to try to marry off everyone in sight—first Béatrice, then Ursule.)

In part, the general inability to grasp what's going on in *Béatrice* stems from an inability or unwillingness to come to grips with its form, with what's going on in either the spoken dialogue or the musical numbers, not to mention how they go together. Fairly representative of orthodox expert opinion, I think, is the view expressed in the English-language essay in DG's booklet by Julian Rushton, to whom *Béatrice* is:

"the traditional *opéra comique* with spoken dialogue. The action is carried on in speech and the musical numbers (here Berlioz diverges from Mozart) are dramatically static, whether they explore significant moments in the action, embellish it, or simply seek to entertain. Even the two trios, for all their shifting moods, end exactly where they started, and thus serve only to clarify and deepen attitudes which can be understood from the dialogue."

Question: Is the function of Béatrice's monologue—or rather the ninety-plus bars of it we've touched on, maybe a third of the whole—to "explore" or to "embellish" or to "entertain"? The answer of course is none of the above. Listen to the frenzied orchestral introduction, with that whirling motif in bars 1–2 and 7–8 that sounds sort of like a top being set in motion, to which Béatrice makes her entrance, and then listen to her recitative: "God! What have I just heard? What have I just heard? I feel a secret fire growing in my breast. Bénédict! Is it possible? Bénédict might love me?"

Bear in mind that we have not been witness to what exactly it is that Béatrice has heard. Although we know from the spoken dialogue of Act I that the conspirators intend to do to her what they have done to Bénédict, which is to say to allow her to overhear "proof" that her nemesis is in agonies of love, as of the moment of Béatrice's entrance we haven't yet seen any of the principals in Act II, which has so far been given over to the drunken feasting of the music master Somarone and his musi-

cians and the other servants.

Now the stage is left to Béatrice. Wittingly or unwittingly, the conspirators have stumbled on a stratagem that pierces the armor of both Bénédict and Béatrice. At the top of each's list of fears is the Big R: rejection—and in the form of the special humiliation available at the hands of such a caustic would-be rejector. But suddenly each is confronted with seemingly irrefutable proof that the other is attracted to him or her.

In Béatrice's case, we see her test this idea: "*Se peut-il? Bénédict m'aimerait?*" Note that she can't even quite bring herself to voice this possibility in the simple present tense ("Bénédict loves me?") but retreats into the conditional (literally "Bénédict would love me?"), though the significance of this idea to her may be felt in its positioning up on that strategic high F—listen to what Minton does with this whole section.

What Béatrice discovers is that it is possible for her to acknowledge this possibility that Bénédict might love her, even to acknowledge it out loud (as long as she's alone), and *the world doesn't come to an*

Why is it so important to others that Béatrice and Bénédict marry?

end. Instead, this acknowledgment frees an emotional blockage, and she is remembering her horrible nightmare, and finally she is remembering the tears that bathed her laughter. And having discovered that she can survive the acknowledgment of even *these* feelings, she entertains yet another idea, the most dangerous of all: "I love him then? I love him then?" The tempo has changed, to an allegro agitato, and Béatrice is off and running. As she discovers that she can survive even *this* idea, the mezzo has to be prepared to let loose in her upper extension, from F up to B flat.

Are you going to tell me that this isn't "action"? You might argue that Béatrice's monologue is atypical of the score in its straightforward, linear coherence, and in a sense it is. But what would constitute a "typical" number in this strange and wonderful score? What Rushton so casually calls "the traditional *opéra comique* with spoken dialogue" seems to me traditional only in that it consists of musical numbers interspersed with spoken dialogue. For one thing, not counting the overture, the entire score consists of some fourteen discrete numbers, including (as noted earlier) only three solos. For another thing, most of those numbers are quite long—say, six to

eleven minutes. For yet another, the structural logic of many key numbers isn't at all obvious. But one thing that all those numbers have in common is that they provide opportunities for characters to deal with situations too charged emotionally to be dealt with in straight speech.

The obvious corollary is that it is in almost all cases impossible to understand what the musical numbers are about *without* the spoken dialogue out of which they evolve, and in this regard the discographic situation is unsatisfactory. Oiseau-Lyre omitted the dialogue altogether. Philips included a certain amount, but the editing tended to reduce the dialogue to what's strictly necessary for plot purposes, and in the process a great deal of important material fell by the wayside. What's more, the dialogue was so poorly performed (with one important exception, about which more below) that it hardly mattered.

DG's solution is a running narration, and the solution isn't entirely without merit. The narrator, Geneviève Page, is a far less grating presence than the unctuous fellow who narrated DG's *Merry Wives of Windsor*, and this format makes it possible at least to touch on matters that are simply edited out of Philips' dialogue.

Still, I don't want to hear *about* what Héro and Béatrice say in the first block of spoken dialogue; I want to hear them deal with Léonato, with the Messenger, with each other. Ditto Béatrice and Bénédict in their botched attempt to come together in Act II, where they have to face the fact that acknowledging their feelings to themselves, difficult and important a step as this is, doesn't at all get them through the next step, which is to acknowledge them to the other interested party.

In addition, DG's formal presentation disrupts the human logic of three big choral numbers. Only in the Philips set do we actually hear Béatrice interrupt the reprise of the opening "*Le More est en fuite*" chorus, and then hear Héro show her spunk by exhorting the chorus by all means to resume celebrating. Only in the Philips set do we hear the first stanza of the Act II opener, Somarone's drinking song, sung offstage, though unfortunately we don't get to hear the opening dialogue between the two waiters to explain what's going on.

Finally, only in the Philips set do we hear something like what Berlioz imagined for the rehearsal of Somarone's "Grotesque Epithalamium" in Act I. Jules Bastin is allowed most of his spoken scene before the rehearsal begins, and he makes the most of his hilarious efforts to get his musicians ready. After the first stanza, enough dialogue is left in to set up the second (with the newly composed oboe obbligato added), during which we actually hear Somarone's stream of rehearsal comments.

What Bastin does is so nice that it's all the more frustrating to have so much left (*Continued on page 94*)

CLASSICAL Reviews



Herbert von Karajan and Dmitri Shostakovich: a fine Tenth Symphony—See page 72.

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John Canarina
Scott Cantrell
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BERLIOZ: Béatrice et Benedict—See page 58.

BRAHMS: Sonatas: for Cello and Piano (2); for Violin and Piano (3); for Clarinet and Piano (2); for Viola and Piano (2)—See page 54.

BRIAN: Symphonies: No. 5 (Wine of Summer)*; No. 25.

John Hoffman, baritone*: São Paulo Symphony Orchestra, Francisco Teatro, cond. ARIES LP 1629. \$8.98 (Aries Records, P.O. Box 126, Reseda, Calif. 91335).

Undaunted by previous notoriety (HF, August 1981), Aries fearlessly continues its Havergal Brian series with two works from opposite ends of the composer's output. The Fifth Symphony, for baritone and orchestra, bears the subtitle *Wine of Summer* (not *Wind*, as given on the jacket); it's based on a poem by Lord Alfred Douglas,

Bach Postponed

The final installment of our series on the size of Bach's choruses—Joshua Rifkin's response to Robert Marshall's rebuttal—will appear next month; production schedules proved unrealistic in view of the logistical difficulties of the project.—Ed.

noted for his association with Oscar Wilde. Though composed in 1937, it was not premiered until 1969, a fairly normal gap between creation and performance where Brian is concerned. The vocal line is reminiscent of the many works for baritone of Frederick Delius. Orchestrally, however, the piece is not Delian at all, although it does have an uncharacteristic lushness. As so often, Brian uses a large orchestra, but the inspired quirkiness of the later works is missing.

Symphony No. 25, dating from 1966, is more "Brian-esque"; its finale opens with a grotesque march, à la Holst or Vaughan Williams, which Brian deserts very quickly. While he probably could have developed it into something staggering, he chooses not to, yet keeps returning to it in short snatches only to leave it again. As Brian authority Malcolm MacDonald has said, "He's teasing you."

Aries has apparently retired Colin Wilson, conductor for many of the Brian works previously issued, and high time, too. Replacing him is one Francisco Teatro, who proves to be a real find. On the basis of these performances he should be conducting and recording throughout the world, in concert halls and in "teatri" everywhere. The jacket lists the orchestra as the São Paulo Symphony, the label as the Sao Paulo Symphony. Whichever it is (and with Aries it could be either or neither), it delivers excellent performances under Teatro's knowing hand, with baritone John Hoffman the superbly sensitive soloist in No. 5.

Despite his obvious sympathy for the score, Teatro does have difficulty in delineating the opening theme of No. 25 clearly, and he is not helped by the rather dull and murky recording, in contrast to the relative brightness achieved on the other side. It's true that Brian gives the theme to the lower range of the violas in the midst of a generally thick orchestration, contributing to its inaudibility—still, some adjustment should have been made, either by the conductor or the producer.

But wait! . . . Having just accidentally dropped the record into a bucket of sodium pentathol, I notice a strange thing occurring. The labels have become almost transparent, and there seems to be other printing underneath, which is barely legible. Under No. 5's label can be discerned the words "Brian Rayner Cook, baritone: New Philharmonia Orchestra, Stanley Pope, conductor; concert performance in Alexandra Palace, 1976." What this means I can't begin to imagine. On the reverse side it says "BBC Scottish Symphony Orchestra, 1976." The conductor's name really is hard to read, and I can only make out his initials, which are

J.C.

CHERUBINI: Requiem in C minor—See page 64.

FAURÉ: Barcarolle No. 3, Op. 42—See Recitals and Miscellany.

FRANCK: Prelude, Chorale, and Fugue—See Recitals and Miscellany.

Critics' Choice

The most noteworthy releases reviewed recently

ALKAN: *Piano Works*. Smith. ARABESQUE 8127-3 (3), July.
BACH: *Well-Tempered Clavier, Book I*. Horszowski. VANGUARD CARDINAL VCS 10138/40 (3), Oct.
BARTÓK: *Orchestral Works*. Budapest Philharmonic. Budapest Symphony. Joó. SEFEL SEFD 5005/9 (5), Sept.
BETHOVEN: *Diabelli Variations*. P. Serkin. RCA ARL 1-4276. Aug.
BETHOVEN: *Fidelio*. Altmeyer. Jerusalem. Nimsgern, Masur. EURODISC 300 712 (3), Aug.
BRAHMS: *Symphony No. 1*. National Philharmonic. Paita. LODIA LOD 779, Sept.
CAVALLI: *Ercole amante*. Palmer, Cold, Corboz. ERATO STU 71328 (3), May.

DEBUSSY, FAURÉ: *Songs*. Ameling. Baldwin. CBS M 37210, Aug.
DEBUSSY, RAVEL: *String Quartets*. Galimir Quartet. VANGUARD VA 25009, Sept.
DOWLAND: *Songbooks (4)*. Consort of Musicke, Rooley. OISEAU-LYRE DSLO 508/9 (2), 528/9 (2), 531/2 (2), 585/6 (2), Aug.
GILLES: *Requiem*. Ghent Collegium Vocale. Cologne Musica Antiqua, Herreweghe. ARCHIV 2533 461, Sept.
GRIFFES: *Piano Works*. Oldham. NEW WORLD NW 310/1 (2), Sept.
HAYDN: *Paris Symphonies (6)*. Berlin Philharmonic, Karajan. DG 2741 005 (3), Oct.
HAYDN: *Symphonies, Vols. 1, 2*. L'Estro Armonico, Solomons. SAGA HAYDN 1 (3), 2 (3), Oct.
HENZE: *Tristan*. Francesch, Henze. DG 2530 834, July.
JANÁČEK: *Idyll; Mládi*. Los Angeles Chamber, Schwarz. NONESUCH D 79033, Sept.
MOZART: *Piano Works*. Schiff. LONDON CS 7240, Aug.
MOZART: *Two-, Three-Piano Concertos, K.*

365, 242. Eschenbach, Frantz. ANGEL DS 37903, Oct.
NIELSEN: *Symphony No. 4, Op. 29*. Berlin Philharmonic, Karajan. DG 2532 029, Oct.
STRAUSS, R.: *Alpine Symphony*. Berlin Philharmonic, Karajan. DG 2532 015, Aug.
TCHAIKOVSKY: *Orchestral Works*. London Symphony. Simon. CHANDOS DBRD 2003 (2), June.
WEINBERGER: *Schwanda*. Popp, Jerusalem, Nimsgern, Wallberg. CBS M3 36926 (3), July.
CENTENARY EDITION OF BARTÓK'S RECORDINGS, VOL. 1. HUNGAROTON LPX 12326/33 (8), June.
FLUTE MUSIC OF LES SIX. Boyd, Schmidt. STOLAT SZM 0119, Oct.
VLADIMIR HOROWITZ AT THE MET. RCA ATC 1-4260, Sept.
HEINRICH STROBEL: Verehrter Meister, lieber Freund. Southwest German Radio. SCHWANN/DG 0629 027/31 (5), Oct.
THE TANGO PROJECT. Schimmel, Sahl, Kurtis. NONESUCH D 79030, Aug.

HAYDN: Sonatas for Keyboard (6).

Glenn Gould, piano. [Glenn Gould and Samuel H. Carter, prod.] CBS MASTERWORKS 12M 36947 (digital recording; two discs, manual sequence) [price at dealer's option].

Sonatas: No. 56, in D; No. 58, in C; No. 59, in E flat; No. 60, in C; No. 61, in D; No. 62, in E flat.

In several ways, this album represents the beginning of a new phase in Glenn Gould's checkered recording career. His first digital release, it also introduces a new production team (his prior discs were made with Andrew Kazdin) and a new piano (a Yamaha in place of the tinkered-with Steinway of yore). And this is his first extensive voyage into the Haydn repertory. (A lone sonata appeared on one of his first mono releases.)

Best of all, it seems to mark at least a partial return to the more expansively lyrical style that made some of the early Gould recordings so communicative and attractive. In welcome contrast to his disastrous series of Mozart sonatas, one finds here a degree of repose and rhetorical expansiveness in the adagios and andantes—a welcome foil for his customary sharp incisiveness and biting articulation in the faster movements.

The usual Gould eccentricities—present, to be sure—remain under relatively stringent control. There is the inevitable constant vocal obbligato, along with some slow arpeggiation of accompanimental chords, beginning on rather than before the beat, and a certain intentional monochromaticism. (Presumably, the even touch and constricted color of his Yamaha grand supply just the hue desired by this problematical artist; though always pleasant, it is sometimes a little uninteresting.) The more intimate works are more successful here than the boldly heroic No. 62 and the wryly propulsive No. 60, both of which could use a bit more humor and more "air" between

the notes. The piano-playing itself, of course, is spectacular.

CBS supplies a virtually noiseless pressing, and scholarly notes by Christa Landon in three languages. H.G.

JANÁČEK: The Cunning Little Vixen.

CAST:
 Bystrouška Lucia Popp (s)
 Frantík Eva Hříbková (s)
 Pepík Zuzana Hudecová (s)
 The Rooster/The Jay Gertrude Jahn (s)
 The Cricket Miriam Ondrášková (s)
 The Fox Eva Randová (ms)
 Pásková/The Woodpecker/Chocholka Ivana Mixová (ms)
 Lapák Libuše Marová (ms)
 The Forester's Wife/The Owl Eva Zigmundová (ms)
 The Frog/The Grasshopper Peter Šaray (boy s)
 The Schoolmaster/The Gnat Vladimír Krejčík (t)
 Pásek Beno Blachut (t)
 The Forester Dalibor Jedlička (bs-b)
 The Parson/The Badger Richard Novák (bs)
 Harašta Václav Zitek (bs)
 Bratislava Children's Choir, Vienna State Opera Chorus, Vienna Philharmonic Orchestra, Charles Mackerras, cond. [James Mallinson, prod.] LONDON LDR 72010. \$25.96 (digital recording; two discs, manual sequence).

COMPARISONS:
 Neumann/Czech Phil. Pro Arte 2PAL 2012
 Gregor/Prague Nat. Theater Sup. 1 12 1181/2

Janáček's *The Cunning Little Vixen* needs no introduction at this late date; together with *Jenůfa*, the opera has taken a firm hold on the repertory all over the world. A product of the composer's astonishingly productive old age, *Vixen* is his most endearingly lyrical opera, a moving evocation of the natural order of things, in which there is no death, only endless rebirth. The Forester grasps this miracle in the transcendent final scene as the great cycle of life majestically turns before his eyes. No wonder Janáček asked to have this gloriously affirmative

music played at his funeral.

I cannot remember being quite so caught up in a new opera recording as I have been by this *Vixen*, the fourth entry in Decca/London's superb series of Janáček operas. Apart from the musical excellence of the performance and the flawless engineering, there is an intangible quality here that I find difficult to analyze. Perhaps it arises from the intense involvement of all concerned as they bring this treasurable work to life and collaborate in creating a true phonographic event. When so many opera sets these days sound stillborn, insipid, and sheathed in plastic, London's *Vixen* leaps from the speakers with startling freshness, vitality, and spontaneity—a reminder of a time when musicians made records that sounded like an artistic expression rather than a mechanical reflex.

Much of the inspiration must come from Charles Mackerras, who has loved this music for years and understands Janáček like a native. There is an uncanny rightness about his conducting as he puts every note in perspective and conjures up moods that avoid sentimentality without missing the score's dramatic power, poetic atmosphere, or depth of feeling. He knows when to linger over a phrase, when to urge the orchestra forward, and how to weight Janáček's unusual instrumental textures to achieve the luminous vibrancy that permeates this radiant hymn to nature.

Mackerras is fortunate to have the Vienna Philharmonic at his disposal, a virtuoso ensemble that the Czechoslovakian orchestras on three earlier Supraphon recordings can hardly match. For the first time on discs, all the sensuous sweetness of the string passages, the airy delicacy of the woodwind writing, and the rich sonority of the brass underpinning blend into a satisfyingly balanced and cogently defined musical entity.

The native cast has Janáček in its

blood, and many of these singers may be heard on previous *Vixen* recordings from Czechoslovakia. No doubt they have been spurred to surpass themselves by the presence of Mackerras and the Vienna Philharmonic; the slightly lazy, provincial routine that sometimes creeps into the all-Czech versions never threatens this performance for a moment. Dalibor Jedlička, promoted from his roles of Parson and Badger on the Gregor recording, is a warm, virile Forester—far more persuasive than Supraphon/Pro Arte's Richard Novák, here much better suited to the less demanding Parson/Badger assignments. Eva Randová's ardently sung Fox has made me upgrade my estimate of this mezzo after her recent unfortunate Frickas at Bayreuth and the Met. And how typical of London to call upon the veteran Beno Blachut, one of Czechoslovakia's greatest tenors of the past, to make a cameo appearance as the innkeeper, Pásek.

Best of all, we have Lucia Popp in the title role, and she is utterly enchanting. Like so many Czech singers who have achieved international renown, Popp has been absorbed into the Austro-German operatic mainstream, and we tend to forget her Moravian heritage—and how wonderful at last to hear an important voice in this music. Not only is Popp's inflection of the text deliciously idiomatic, but her bell-pure soprano sounds ravishing on every note and in every gorgeously shaped phrase. Here is a *Vixen* that for once captures the ears as well as the heart.

I have already mentioned the brilliant clarity of London's engineering, which successfully reproduces the full range of Janáček's colorful orchestral palette. It only remains to mention the wise essay by John Tyrrell that accompanies the discs, and the generous selection of charming wildlife drawings that originally inspired Janáček. I might also complain mildly about Deryck Viney's hideous English translation, full of annoying British colloquialisms that turn Janáček's animals into a parcel of grubby cockneys. That minor drawback duly noted, I can only urge everyone to hear this magnificent recording, one of the most distinguished releases of this or any other year.

P.G.D.

MACDOWELL: First Modern Suite, Op. 10; Sonata for Piano, No. 4, Op. 59 (Keltic)—See page 74.

MOZART: Quartets for Strings (14)—See page 56.

MOZART: Overtures (9).

Academy of St. Martin-in-the-Fields. Neville Marriner, cond. [John Fraser, prod.] ANGEL DS 37879, \$10.98 (digital recording). Tape: 4XS 37879, \$9.98 (cassette).

Lucio Silla, K. 135; Idomeneo, K. 366; Die Entführung aus dem Serail, K. 384; Der Schauspieldirektor, K. 486; Le Nozze di Figaro, K. 492; Don Giovanni, K. 527; Così fan tutte, K.

588; Die Zauberflöte, K. 620; La Clemenza di Tito, K. 621.

COMPARISONS:
Haitink/London Phil. Phi. 9500 882
Davis/Royal Phil. Sera. S 60037
Böhm/various orch. DG Priv. 2535 229
Faerber/Württemberg Turn. QTV-S 34628

For a good many years, Colin Davis' Seraphim disc has neatly and economically answered the basic-library need for a collection of the eight essential Mozart overtures (which is to say those listed above from *Idomeneo* on), to which was added the brief *Finta giardiniera* Overture, otherwise available at the moment only in the DG

complete recording. Now there is competition, in the form of a Haitink/Philips disc that slipped into the catalog a while back and this new Marriner/Angel—both featuring the essential eight and the three-movement, eight-minute-plus *Lucio Silla*.

Except for some grittiness in the Seraphim string sound (it would be interesting to hear a new disc mastering of the tapes), the Davis disc remains an attractive proposition. He went on to record seven of the operas represented complete (all but *Finta giardiniera* and *Magic Flute*), and I find these earlier performances generally fresher (Continued on page 67)

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At Last, Cherubini Receives His Due

Reviewed by Paul Henry Lang



HIGH FIDELITY ARCHIVES

FINALLY WE HAVE A GOOD RECORDING of a masterpiece admired by Berlioz, Brahms, Wagner, and just about every musician in the nineteenth century—yet unaccountably forgotten by the twentieth. Cherubini, the enigmatic Florentine, like Handel in London, spent his entire mature life in Paris, surviving revolutions and dynasties, never budging from his principles, even when challenged by Napoleon. He was regarded with awe by his colleagues but never became popular with the public, though some of his operas were still in the European repertory in my youth. Everyone admired his incomparable mastery of the *métier* of composing—Haydn called him his “spiritual son”—but his music was considered cool, even cerebral.

Those who listen to this Mass will discover a work rich in sentiment, a deeply felt meditation on the dread of death and hope of eternity, expressed with infinite delicacy and reserve. It belongs in the company of the Mozart, Berlioz, and Verdi Requiems. Commissioned in 1816 by Louis XVIII to be sung for the eternal rest of the executed Louis XVI, it was performed again two years later at the funeral of Méhul and subsequently taken up in many churches and by choral societies.

The C minor Requiem is unlike any other Mass for the dead we can recall, because in no other is the mood of serenity so consistently maintained. Yet even devout prayer (as in the “*Pie Jesu*”) is permeated with the thought of the inevitability of death; it is not fear that overwhelms the

composer, but a great sorrow and mourning. And he had no interest in conjuring up the Day of Wrath, which composers from Mozart to Verdi rendered with dramatic violence. In many ways, the “*Dies irae*” is the centerpiece of the Requiem Mass, yet after a brief flare-up and a fearsome stroke on the gong at the beginning, Cherubini throws a veil over the terrors of the Last Judgment. By the middle of this great medieval poem, the choral parts engage in hushed dialogues until, at the “*Judex ergo*,” the dramatic beginning returns briefly. The “*Rex tremendae*,” which Mozart set with such dramatic force, Cherubini treats with quiet awe.

The supplication in the Introit and Kyrie calls for very dark colors: the violins are silent, divided violas taking their place. (It was this movement that inspired Brahms to use the same orchestration in his *German Requiem*.) An expressive cello melody prefaces each part of the Kyrie, and then meanders softly through it. The Offertory contains a magnificent triple fugue, and for once the choral parts are not swamped in performance: they come across even in the lively stretto. Again the composer surprises us in the “*Lacrymosa*,” usually a quiet melodious section, here almost convulsive with its thrusting accents, though at the end it becomes submissive. The Sanctus is festive, as tradition demands, but the movement, unusually brief and concise, is followed by a repetition of the “*Pie Jesu*,” in which Cherubini immediately returns, in an ineffable melody introduced by the clarinet,

to the supplicating tone. Anguished cries, repeated thrice, begin the Agnus Dei, yet after the elemental surges of the excited chorus, the anguish subsides and is succeeded by a long decrescendo. The “*Lux aeterna*,” the last section of the Requiem Mass, rises once more, then, while the basses rumble mysteriously, reaches a transcendental tone; the chorus, almost immobile and stammering, whisperingly accepts what is ordained. Berlioz, who hated Cherubini as the powerful director of the Conservatoire whom he considered athwart his path, nevertheless went on record as saying that this movement “surpasses everything that has ever been written of the kind.”

This sombre work has no solo parts, so the conductor can concentrate on orchestra and chorus; Riccardo Muti does this masterfully and is rewarded by outstanding playing and singing. The dark coloring and the delicate interplay of instruments and voices are beautifully brought out. But what particularly impresses is his realization that in almost every movement of the Requiem there are moments of halting, questioning wonderment at the mystery of death. The conductor never fails to convey these moments of aching poignancy, yet without obvious tempo or dynamic alterations. The sound of the digital recording, if not exceptional, is very good. **HF**

CHERUBINI: Requiem in C minor.

Ambrosian Singers, Philharmonia Orchestra, Riccardo Muti, cond. [John Mordler, prod.] ANGEL DS 37789 (digital recording). Tape 4XS 37789. \$9.98 (cassette).



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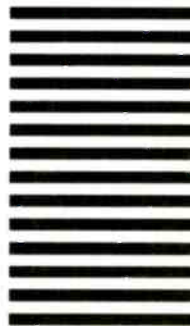
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CLASSICAL Reviews

(Continued from page 63)

and more alive. What's more, I'd sooner have *Finta giardiniera* than *Lucio Silla*, a pretty but hardly riveting piece. (There is in any event another source for the latter. See below.)

Actually, Marriner makes a rather good case here for *Lucio Silla*, driving it harder than he did in his deleted Angel recording (with three other overtures and the ballet *Les petits riens*). Most of these performances in fact tend to the hard-driven, though this isn't necessarily a matter of tempo. Marriner's *Magic Flute*, for example, times out only eight seconds faster than Davis' and eleven seconds faster than Haitink's, and yet it has for me an unmistakably brisker feeling, which must have to do with a certain bluntness of attack, bordering at times on cudgeling.

The recorded sound, which is forward and highly detailed but not very warm, contributes to the impression of almost aggressive brilliance. Setting aside for a moment the question of the effectiveness of individual performances, the overall effect is a degree of "up"-ness that may be either exhilarating or fatiguing, depending on your taste and mood. I've certainly found it relaxing to switch to the mellower, more refined Haitink performances, where I hear more sense of shape and flow in the phrasing, especially as regards the winds.

Which is not to deny the attractions of

the Marriner disc. In addition to *Lucio Silla*, the other opera-seria overtures—*Idomeneo* and especially *Clemenza di Tito*—respond right smartly to Marriner's gung-ho treatment, and *Figaro* and *Abduction* can undoubtedly absorb fairly hefty energy transfusions. Looking to the long haul, I'm not so sure about the skittish *Magic Flute* and *Don Giovanni* and *Impresario*, but the *Così* is a winner, more spacious and songful.

You'll have to decide for yourself which of these discs suits you best, but you can't go far wrong with any. You might also consider the DG Privilege disc assembled from Karl Böhm's complete recordings of *Abduction*, *Impresario*, *Figaro*, *Don Giovanni* (the earlier, and somewhat better, Prague set), *Così*, and *Magic Flute*, with the Symphony No. 32 ingeniously cribbed from his symphony cycle for its secret identity as the intended overture to *Zaide*. The performances, while uneven, have the advantage of having been conceived in connection with their operatic contexts, and some of them, notably the rousing Berlin Philharmonic *Magic Flute*, are quite good.

Since the Privilege disc was put together before Böhm recorded *Idomeneo* and *Clemenza di Tito*, those overtures are lacking. You can catch them, though, along with the overtures to *Impresario* and seven of Mozart's early stage works, on a Turn-

about disc that isn't terribly polished but is on the whole more inviting than the cut-and-dried performances in the complete recordings of such works as *Mitridate*, *Sogno di Scipione*, and *Lucio Silla*. If you can find a copy flat enough to track, this is a useful supplement to the basic collections.

K.F.

MUSSORGSKY: *Salammô* (excerpts).

CAST:
Salammô Ludmila Shemchuk (ms)
 Balcanic Iskander/Spendius/Animachar William Stone (b)
 Mathô Gheorghj Seleznev (bs)
 First Priest Giorgio Surjan (bs)
 Arena di Verona and Oratorio dell'Immacolata di Bergamo Children's Choruses, RAI Chorus and Symphony Orchestra, Milan, Zoltán Peskó, cond. CBS MASTERWORKS M2 36939 (two discs, manual sequence) [recorded in performance, November 10, 1980] [price at dealer's option].

In 1863, Gustave Flaubert's exotic historical novel *Salammô*, issued in France only the previous year, was published in Russia, and the twenty-four-year-old Mussorgsky began work on his opera on the subject. The project occupied him on and off for three years, but was then dropped with just three extended scenes written, plus songs or choruses for three others, about half the total in orchestrated form. Themes and orchestral motifs from *Salammô* were cannibalized

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for later use by the composer, but otherwise the materials were known to only a few Mussorgsky scholars until the Hungarian conductor Zoltán Peskó undertook the collecting, comparing, and orchestrating that led to the performance preserved on this recording.

Flaubert's novel chronicles the rebellion of the mercenary barbarian armies against Carthage—unpaid after years of sanguinary labor against Rome, the barbarian hordes nearly destroy the republic before they are defeated by the tactical sophistication of Hamilcar Barca. Woven into this tale is the obsessive relationship between Mathô, the Libyan general who becomes commander of the barbarian armies, and Hamilcar's daughter, Salammbô, a sheltered virgin dedicated to the cult of the goddess Tanit (Mussorgsky makes her high priestess of Tanit). With the connivance of the freed Greek slave Spendius, Mathô penetrates the temple of Tanit and steals a sacred garment called the Zaïmph, which is supposed to possess mystical powers. On the instructions of the eunuch priest Schahabarim, Salammbô makes her way to Mathô's tent in the barbarian encampment, seduces him, repossesses the Zaïmph, and in the confusion of an attack, flees with it to Hamilcar's camp. The superstitions surrounding the Zaïmph have an impact on the fortunes of war. Hamilcar gives Salammbô as bride to the Numidian chief Narr'Havas, who has deserted with his army to the Carthaginian side. But when Mathô, taken prisoner in the barbarian defeat, is savagely tortured to death by the Carthaginian population, Salammbô dies as the wedding preparations proceed. There is also a great deal of moon goddesses vs. sun gods, female principle vs. male, but you Jungians can't sue, because Gustave got there first.

It all sounds like natural-born grand-opera stuff, but unless considerably revised, it isn't. The finest things in the novel are descriptions of feast, battle, torture, and sacrifice, some of them still fairly gamy. The characters are presented primarily through the roles they play in the deathly politico-religious conflicts of the plot, and though the psychological predicament of the heroine and the content of her relationship to Mathô (the confusion—or perhaps the unity—of religious obsessiveness with the sexual variety) is strongly suggested, it is not much specified. The central scenes of the personal drama would have to be imagined and elaborated for the stage by a librettist of high competence.

Within a few years, Mussorgsky was to find a substantially ready-made libretto that would allow him just this exploration of the personal significance of high political drama and the political significance of high personal drama, but at this point he seems to have had scant idea of how to illumine from a librettistic viewpoint the personal aspects of *Salammbô*, which would necessarily be the core of what's enactable on a

stage. The pieces he wrote are with one exception either incidental or public/ritual in nature, and stuck for words, he turned to extant Russian verses from unrelated sources.

So the closest to a stageable *Salammbô* has been the briefly successful version by Ernest Reyer, which reached this country at the turn of the century in a scenically fabulous production in New Orleans, and for three performances at the Metropolitan (with a cast that included Bréval, Saléza, Journet, Scotti, and a whole bunch of the wonderful second-line singers then active in the company's French wing). And the closest to popularity has been the choice of



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Perhaps half the music is worth going back to and very pleasant to have.

Peskó: intelligently scored contribution

a fictitious *Salammbô* as the vehicle for the disastrous debut sequence in *Citizen Kane*. (My movie trivia informants tell me that *Thais* was the intended selection, but that difficulty ensued over rights. I must say that *Salammbô* is the perfect substitute, but can anyone tell me just which scene of *Salammbô* that opening fragment is supposed to represent?)

I don't mean by all this that there is nothing of consequence here. Mussorgsky was thinking in the right direction in creating for Mathô a prison monologue for which there is no equivalent in the novel. While I can't quite agree with Peskó's opinion that the result is "one of the most extraordinary monologues in all opera" (does he truly believe it ranks with those of Boris, of Florestan, of Sachs, just to stick to non-Italian examples for male voice?), it's a strong scene, for sure. Most of it is in the "realistic-declamatory" style that was to be the composer's main contribution to the line of great Russian bass and baritone scenas for such characters as Igor and Susanin, and is quite an opportunity for a first-rate singing actor. There is a beautiful melodic development as Mathô contemplates an isolated death ("Ya unru odinok"), and it is likely, to judge from other thematic frag-

ments that make appearances, that the piece would have made greater impact as the culmination of the Salammbô/Mathô relationship that didn't get written—the missing Tent Scene, Salammbô's first appearance at the mercenaries' wild feast. Bits of *Boris* peep through in the orchestra.

The other really imposing section is the first part of the longest consecutive sequence, the ritual in the Temple of Moloch as the apparently doomed people of Carthage implore the god for deliverance (in the novel, it is a gruesome, brilliantly written description of mass child sacrifice). The color of this scene is rich and barbaric, with some fascinating harmonic and instru-

mental choices and beautiful choral writing that includes haunting use of the children's voices. The scene then segues into Salammbô's decision to attempt the retrieval of the Zaïmph, and the people's reactions; here the writing becomes rather predictable and a bit strained.

The rest is less interesting. A previous ritual scene, in the Temple of Tanit, is more clichéd and less painful, with passages for Salammbô that sound like pages Borodin decided not to give to Konchakovna. Of the incidental numbers, a chorus of priestesses attempting to console Salammbô during the wedding preliminaries, a little like the maidens of Sandomir with Marina but less individual, is at least quite pretty. A baritone song for a Balearic soldier, given a nice introduction of the sinuous Oriental oboe variety, is moderately attractive but ordinary, with some very tweaky orchestral commentary, and a supposedly rousing chorus of Libyans is pretty much a dead loss. So perhaps half the music, nearly all of it in the second half of the existing score, is worth going back to, and very pleasant to have. A single disc would do it.

Fortunately, the singers are a fairly impressive group, and a fairly unfamiliar one—always a welcome combination.

There are two impressive-sounding Slavic basses. Gheorgi Seleznev, the Mathô, shows a tone both broad and deep, with a fine resonant bite to it. At times the voice is a little deficient in vibrato, but when given a more cantabile opportunity he can rise to it. He can sing softly to lovely effect, and though he is clearly not a baritone, he reaches a ringing and honestly come-by G in his monologue.

Just as commanding, and even more beautiful, is the voice of Giorgio Surjan, who as the First Priest is called upon to intone (rather startlingly, to our ears) the principle theme of Boris' "I Have Attained the Highest Power." He has less of a challenge than Seleznev here, but it is clear that his instrument has good size, length of range, and the capacity for a solid legato. Two to look forward to.

The Salammbô, Ludmila Shemchuk, has a mezzo of luscious timbre in the middle. She, too, has the reach in her voice (the role is very high at points), but it sounds as though it narrows above the upper-middle transition—unless, as is entirely possible, the engineers of this live event have sabotaged her on the high end. She sings with good line and dynamic control. The young American baritone William Stone renders several supporting characters with a warm, pliant voice that sometimes tends toward dryness at the top.

There is nothing outstanding about the orchestral and choral work, but it is certainly sufficient, and the occasion seems to have been tolerably well rehearsed. Peskó's contributions to the orchestration seem to me very intelligently scored and stylistically logical. The recorded sound has a slight edge to it, and not much sheen or depth. (I wonder if a mono edition would sound noticeably different.) But its balance is acceptable; it conveys the music. There's a trilingual libretto, and above-average notes from Rubens Tedeschi and Peskó. C.L.O.

RAVEL: Gaspard de la nuit—See Recitals and Miscellany.

RAVEL: L'Enfant et les sortilèges.

CAST:

The Child Susan Davenny Wyner (s)
 Fire/Princess/Nightingale Arleen Augér (s)
 Shepherdess Lynda Richardson (s)
 Sofa/Bat/Squirrel Jane Berbié (ms)
 Shepherd/White Cat Linda Finnie (ms)
 Maman/Chinese Cup/Dragonfly/Owl
 Jocelyne Taillon (a)
 Teapot/Arithmetician/Tree Frog
 Philip Langridge (t)
 Grandfather Clock/Black Cat
 Philippe Huttenlocher (b)

Armchair/Tree Jules Bastin (bs)
 Ambrosian Opera Chorus, London Symphony Orchestra, André Previn, cond. [Suvi Raj Grubb, prod.] ANGEL DS 37869, \$10.98 (digital recording). Tape: 4XS 37869 (cassette).

COMPARISON:

Maazel/Orch. National DG 138 675

This is an attractive performance of a fascinating but problematic piece. The problems of *L'Enfant* are by no means confined to its visual element (how do you make something intelligible of the coming-to-articulate-life of all the Child's surroundings?), but there's no doubt that the absence of this element simplifies life for recorded performers.

What we need to do, I think, is re-complicate matters a bit. While conductors are in their element with the musical ingenuity of *L'Enfant*—and who wouldn't savor the jazzy fox-trot of the Teapot and Chinese Cup, the rustic and plaintive ballet of the wallpaper figures, etc.?—most of the

opera's characters are allowed to bob to the surface and sink back without leaving a ripple.

I don't think the problem is so much the difficulty of bringing a grandfather clock or a nightingale to anthropomorphic life, although heaven knows such characters don't exactly demand dramatic seriousness from performers disinclined to provide it. Still, the text zeroes in with considerable precision on the stakes of all those aggrieved furnishings and critters. Some are trying to comprehend their loss, or to get on with their existences, or to cope with their injuries, or to appeal for help. Many want something from the source of their

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misery, the Child: acknowledgment, humiliation, guilt, revenge.

It's probably not coincidental that the strongest impression in the new recording is made by Philip Langridge. The same thing happened with Hugues Cuénod in the Ansermet recording (a casualty of London's mass Treasury deletions), and Michel Sénéchal is no slouch with Maazel. Taking nothing away from these gentlemen, the fact is that the first two tenor roles, the strutting Teapot and the hectoring Arithmetician, are written so aggressively (a tortuously high tessitura, for one thing) that the performer has to be cooking from his first cue just to be able to *sing* them.

Even these roles can be made more vivid by making that crazy writing more directly express the pursuit of their needs and trusting that the result will be effective, rather than heading straight for a cute "effect." (Remember, however zany the little old Arithmetician may appear to us, he doesn't think of himself as ridiculous, or "cute.") What, then, about all those other characters, less overtly demonstrative than the Teapot and Arithmetician?

When your entire role lasts only a few minutes, you don't have the luxury of a Rigoletto or Isolde, who may be able to steal some performance time to ease into the character. What's more, Ravel's vocal writing is rarely effective in conventional terms, making it that much easier to understand the temptation to fall back on the latent cuteness of Colette's libretto. In the process, however, we are severed from the emotional reality of the Child's fantasy as irrevocably as his assault on the wallpaper separates the Shepherd and Shepherdess.

Both the Angel and the DG performances are well conducted and recorded, and on most counts I would be hard put to choose between them. DG has one important edge in Françoise Ogéas's vocally solid Child. This is the one character we have to listen to throughout the opera, and I have a hard time with Susan Davenny Wyner's hollow, unsteady tone.

I'm also partial to DG's Jeannine Colard as Maman and the Dragonfly, and she might also have been a smashing Chinese Cup if Maazel hadn't been so literal in reading Ravel's "nasal voices" instruction for the Teapot and Cup. Angel's Jocelyne Tailon is a more effective if rather matronly Cup, but a less individual Maman and Dragonfly. Jane Berbié doesn't make much of the Sofa in either recording but is a solid Shepherd (DG), Bat (Angel), and Squirrel (both)—though Ansermet's Suzanne Danco works up to a more powerful climax as the Squirrel.

Danco, however, is a surprisingly uninteresting Princess, a role that on paper looks like perhaps the opera's most affecting. Almost by default, Angel's Arleen Augér is the choice here and in the two coloratura parts, the Fire and Nightingale, that Ravel specified should be doubled with the

Princess. The forlorn duet of the Shepherd and Shepherdess is another episode that somehow rarely seems to come off—too bad we can't pair DG's Shepherd (Berbié) and Angel's Shepherdess (Lynda Richardson). The lower-range male roles are so elusive that not even such sympathetic performers as DG's Camille Maurane and Heinz Rehfuss make much headway.

Neither cast, then, has a decisive advantage, with the possible exception of DG's Child. On the other hand, the DG libretto is in French only, while Angel supplies a good new translation by Felix Aprahamian. In the end, allowing for the reservations noted above, either recording

emotional finale (*Antar's* is quiet and reflective) has undoubtedly militated against frequent performances; after all, quiet endings don't elicit as much applause as loud ones. (I know *Scheherazade* ends softly, but most of the finale is exciting nonetheless.)

Antar has fared only slightly better on records than in the concert hall. In addition to this new recording, SCHWANN lists only a version by Maurice Abravanel and the Utah Symphony (Vanguard VCS 10060). Long-deleted accounts include those by Morton Gould and the Chicago Symphony, Ernest Ansermet and the Suisse Romande, Paul Paray and the Detroit Symphony (for which



JULIAN H. KREGER

Mellow
expansiveness
calls attention
to the beauty
of Schubert's music.

Leonard Shure leaves nit-picking behind.

should give a fair measure of enjoyment. Which leaves us with two serviceable accounts of *L'Enfant* and none of the more engaging *L'Heure espagnole*. Hint: Maazel's DG recording is rather better than his *L'Enfant*. K.F.

RIMSKY-KORSAKOV: Symphony No. 2, Op. 9 (*Antar*); Russian Easter Overture, Op. 36.

Rotterdam Philharmonic Orchestra, David Zinman, cond. PHILIPS 9500 971, \$12.98 (digital recording). Tape: 7300 971, \$12.98 (cassette).

In his autobiography, *Chronicle of My Musical Life*, Rimsky-Korsakov wrote, "I was wrong to call *Antar* a symphony. It is a poem, suite, fairy-tale—anything but a symphony." Whatever it is, it's another of those unjustly neglected works conductors seem to delight in passing over, a gorgeous example of Russian exoticism. Anyone who likes *Scheherazade* or *Le Coq d'or* will certainly respond to the sensuously beautiful melodies and colorful orchestration of *Antar*. Perhaps it's a case of Rimsky's having written the same type of music once too often—yet *Antar* is in no way inferior to the other works. The lack of an exciting or

I retain a special fondness), and Erich Leinsdorf and the Cleveland Orchestra.

Entering the not very competitive lists is the gifted American David Zinman, who displays real sensitivity for *Antar's* many soft lyrical episodes, largely concentrated in the opening and closing movements. The two dynamic and agitated middle sections would benefit from greater . . . well, dynamism and agitation, which are found aplenty in the old Paray version. (Conversely, Paray could have used some of Zinman's poetry.)

The Rotterdam Philharmonic again proves an excellent though somewhat low-key orchestra. In the fifth measure of the opening movement the rhythm of the cello and bassoon triplet is unclear; this is the work's first inkling of a thematic statement, and it is played clearly in subsequent entrances by other sections, yet with each return to the cellos and bassoon, it is either unclear or hurried. Similarly, the second movement opens with a murmuring sixteenth-note cello passage, taken up successively by the other strings, and the fourth beat of each measure is crucial in establishing the contour of the theme; I defy anyone

unfamiliar with the piece to discern the theme here, so little articulation is there of that fourth beat whenever the strings play it.

Gripes aside, this is a worthy presentation of *Antar* even without the flair others have brought to it. And I cannot stress enough how enjoyable this music will be to those sympathetic to the idiom. (Anyone not so inclined must be an old grouch indeed.)

The more familiar *Russian Easter Overture* is not exactly overplayed these days either. Zinman's reading is graced by fine solo playing, especially from the violinist, cellist, and flutist. The famous trombone solo (for the second trombone, as was Rimsky's wont) is appropriately portentous but a bit foursquare and lacking in expression. One of the most colorful works in the literature, the overture, like *Antar*, receives a rather low-key performance, when it should really light up the sky with its festive and fiery brilliance. In general, I've found Zinman's concert performances and his recordings with the Rochester Philharmonic and the Netherlands Chamber Orchestra more dynamic and characterful than his work with the Rotterdam Philharmonic. Still, this is a most worthwhile release.

In Philips' trilingual liner notes, much space is devoted to Max Harrison's description of *Antar* and Rimsky's four versions of it, leaving room for only two extremely perfunctory sentences on the overture. But it's really time to stop stretching a one-side work, such as *Antar*, over two sides. Other versions, including the Paray (identically coupled), have been accommodated on one side. Here there would then have been room for a third work, such as *Sadko*. Philips is the main culprit in this chintzy practice (Mendelssohn's *Reformation* Symphony, Bizet's symphony). Prices being what they are, especially for digital recordings, the buyer deserves a bit more. J.C.

SCHUBERT: Sonata for Piano, in B flat, D. 960.

Leonard Shure, piano. [Julian H. Kreeger, prod.] AUDIOPHON 2010. \$11.98 (PM&J Productions, Inc., 2710 Ponce de Leon Blvd., Coral Gables, Fla. 33134).

Some years ago, at a New York performance, Leonard Shure played this sonata and displayed some decidedly arbitrary notions about voicing; at bar 2 of the first movement, for example, the emphasis suddenly—and inexplicably—shifted from the upper to the lower octave in the right hand, perhaps to demonstrate the discrepancy of slur markings in the Universal/Ratz edition. I mention that anomaly only to praise its absence in the present recording.

Presumably, Shure—who now seems to be using the Breitkopf edition reprinted by Dover (although he corrects the obvious misprint, C sharp in place of B natural, at the start of the slow movement that his one-time mentor Artur Schnabel dogmatically

perpetuated in *his* recording of the work)—has left such nit-picking behind. And all to the good! In place of the stern and sometimes ungainly intellectualism that used to pervade much of his playing, he seems all heart now. To be sure, his interpretation is succinctly organized and thoroughly intelligent in its simplicity and forward motion, but there is also a mellow expansiveness that calls attention to the beauty and emotional significance of Schubert's music as well as its construction. Indeed, one is surprised to find a few careless details (the accompaniment of bar 222 in the first movement recapitulation, slightly different from bar 7, is not played so here), which,

however, detract not a bit from the total communication. Slightly, but only slightly, more annoying are certain pianistic failings, such as the unevenness of the pianissimo bass trills so important to the first movement, and certain wrong notes and gauchely articulated passagework (especially, heavy chordal passages, which could have more clarity). It should also be mentioned that the sonata alone, shorn of its long first-movement repeat and with no makeweight, provides somewhat short measure. (The first side runs only 14:25.)

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resonant piano sound is admirable, but the test pressing used for review had a few ticks and blemishes. H. G.

SESSIONS: Symphony No. 7; Divertimento.

Louisville Orchestra, Peter Leonard, cond. [Andrew Kazdin, prod.] LOUISVILLE LS 775, \$7.98 (Louisville First Edition Recordings, 609 W. Main St., Louisville, Ky. 40202).

SESSIONS: Sonatas for Piano, Nos. 1-3.

Rebecca La Brecque, piano. OPUS ONE 56/7, \$25 (two discs, manual sequence) (Opus One, P.O. Box 604, Greenville, Maine 04441).

Roger Sessions celebrated his eighty-fifth birthday in December 1981, during a musical season that turned out to be something of a celebration of this great and neglected American composer. Most important, the Juilliard School mounted a carefully prepared, theatrically effective production of his magnum opus, the grand (in both genre and quality) opera *Montezuma*. His newest work, a *Concerto for Orchestra*, was introduced by the Boston Symphony and promptly garnered a Pulitzer Prize. (A recording is on the way.) Other important pieces were played at concerts in New York, Washington, and elsewhere, and in the cause of wider dissemination, we have some recordings as well.

Sessions' contribution to the modern symphonic literature is exceptional in its specific gravity, gestural variety, textural intricacy, mastery of rhythmic flux and harmonic implication—and, finally, in its emotional complexity and impact. That richness entails, almost necessarily, a less obviously direct initial appeal to the listener, by comparison with, say, the work of the decade-younger Shostakovich (and, heaven knows, his less populist scores took long enough to find their way into the international repertory). It also makes considerable demands on the performers; Sessions' music does not exactly play itself, and the implicit shape and line take time to discover and clarify.

The Seventh Symphony (1967) was commissioned for the 150th anniversary of the University of Michigan and first performed by the Chicago Symphony under Jean Martinon. Like most of the composer's symphonies, it is in three movements (fast-slow-fast), though in this case an additional slow Epilogue achieves a sense of retrospective closure. From the springy octaves and the responding oscillating patterns of the beginning, the thread of the musical argument is consistently absorbing. Among its distinctive features are a certain prominence of the darker wind colors (alto flute, English horn), a fondness for quintuple meter that is a facet of pervasive rhythmic asymmetry, and a perhaps excessive propensity to underline climaxes with the higher pitched percussion instruments. Peter Leonard and the Louisville Orchestra handle most of the musical challenges well,

although the violins sound understrength and less than ideally secure when pressed (as they often are by Sessions) into the higher positions. Most important, the performance has the necessary shape.

The 1959 *Divertimento*, though more substantial than the title might suggest, is a more symmetrical, accessible work than any of Sessions' symphonies. The five movements are designated Prelude, Aria, Toccata, Perpetuum Mobile, and Epilogue, and the suggestions of virtuosity therein are very much to the point—this is a wonderfully high-spirited, bouncy showpiece for orchestra, not easy to play but surely rewarding for both performers and audi-

a Chopin-esque setting, is quite un-Chopin-esque in impact: this gives way to a vigorous Allegro, then returns, to be succeeded by a spiky finale. The later sonatas are in distinct movements, the writing denser, ever more closely reasoned; studied in sequence, all three constitute an admirable introduction to Sessions' music.

I would have to add, however, that these performances are less convincing, in shape and in detail, than the alternatives presently available (No. 1, by Robert Helps, on CRI SD 198; No. 2, by Alan Marks, on CRI SD 385; No. 3, by Helps, on New World NW 307). The piano writing is of great complexity; an extraordinary com-



Sessions' music does not play itself; the shape and line take time to discover.

Roger Sessions: a recent celebration

ences. Again, the Louisville forces do well with the substance and most of the detail.

The presentation, however, leaves something to be desired. Though the composer's own notes on the symphony are quoted, the liner's description of the *Divertimento* is quite inadequate, with no indication of the number of movements or their titles, while the label specifies only four movements, with no titles! The recorded sound, at least, is clear and natural in effect. With the deletion of Argo ZRG 702, which contained Frederik Prausnitz' fine performances of Sessions' *Rhapsody* and Eighth Symphony, this is now the most satisfactory representation of Sessions' symphonic writing on disc.

The most valuable aspect of Rebecca La Brecque's integral recording of Sessions' three piano sonatas is that it focuses our attention on the stature of his contribution to this genre. Dating, respectively, from 1930, 1946, and 1965, the piano sonatas represent three distinct periods of the composer's style yet reflect the same fundamental musical preoccupations. The First Sonata begins with a classic Sessions "long line," an unfolding melody that, though in

mand of tempo and rhythm is required to clarify the music's flow, and nothing less than a magisterial polyphonic technique is needed to sort out the many linear strands. La Brecque's dedication to the music and her seriousness of purpose are unquestionable—but she simply is not a pianist in the class of Helps, technically speaking, so her performances don't achieve the profile or clarity (or even the required tempos) that his do. Good marks for effort, and for presentation, with a booklet of notes on the music by James McCalla and on its performance by the pianist. The final side is filled out with recorded conversation between composer and pianist, not very satisfactorily engineered or edited—though the sound of the sonatas themselves is quite good.

D.H.

SHOSTAKOVICH: Symphony No. 10, in E minor, Op. 93.

Berlin Philharmonic Orchestra, Herbert von Karajan, cond. [Günther Breest, prod.] DEUTSCHE GRAMMOPHON 2532 030, \$12.98 (digital recording). Tape: 3302 030, \$12.98 (cassette).

Having attended the American premiere of

the Shostakovich Tenth, by Dimitri Mitropoulos and the New York Philharmonic (October 14, 1954), I recall that one critic wrote: "Shostakovich has written an excellent symphony lasting thirty minutes. Unfortunately it takes fifty minutes to perform." Immediate purchase of the now deleted Mitropoulos recording, the passage of time, and increased familiarity with the score have demonstrated to at least one listener that Shostakovich wrote not merely an excellent, but a great symphony—and one lasting fifty minutes (close to fifty-two here).

During the same season, I first heard Herbert von Karajan and the Berlin Philharmonic, at their picketed New York debut (March 1, 1955). He seemed not so much to conduct as to preside over the performance, merely reminding the players of details agreed upon at rehearsals. My early aural impressions of his work, in subsequent concerts and recordings, were that he smoothed away the accents, the "rough spots" in Beethoven, Brahms, Berlioz, and others, and presented their scores in sleek, smooth-sounding, bland interpretations.

Again the passing of the years has brought changes, not only in my perception of his work, but in the work perceived. While some of the old sleekness remains, many of his recordings of the past decade or so demonstrate greater personal involvement, a more committed, more penetrating approach to scores. The former blandness has given way to powerful statements of much of the symphonic literature. (I leave evaluation of his operatic conducting to others.)

Karajan has always been very selective in his choice of repertoire, and the Tenth Symphony is the only Shostakovich he has performed and recorded. I haven't heard his earlier recording (DG 139 020), but the new version gives ample evidence that the score is tailor-made for the Karajan of today. There is no smoothing-away here, no holding back at climaxes.

The long and mostly brooding first movement, so beautifully begun by the sensitive Berlin strings, rises to climactic moments of searing intensity; Karajan and the orchestra really throw themselves into the music, and they supply just the right touch of irony in the bittersweet waltz episodes. The whirling dervish of a scherzo (a portrait of the demented Stalin, according to the composer's memoirs) has a fury and panache comparable to Mitropoulos' pioneering version. More waltzlike music permeates the Allegretto third movement, in which the composer's musical signature, DSCH (German nomenclature for the notes D, E flat, C, B), plays a prominent part. The brooding atmosphere returns to open the finale, followed by a high-spirited Allegro that would be typical of Russian symphony finales of the 1940s and '50s, were it not for its moments of fierce combativeness and the feeling of triumph achieved not

without loss, as depicted in the melancholy woodwind passages. Karajan's finale is swifter than other versions, but the orchestra's virtuosity sweeps all before it, even despite flaws in the comical staccato bassoon solo beginning at figure 192.

Vividly recorded, this is, in toto, a marvelously virile and exciting (as well as poignant) rendition of one of the most magnificent symphonies of our time, the stature of which increases with each hearing. Speaking personally, I can hardly imagine or remember that there was a period in my lifetime when this work did not exist. To do so is to be reminded anew of the wonder of the creative process.

J.C.

STEFFENS: Transpositions.

Peter Roggenkamp, piano*; Ursula Wüst, flute†; Hans Dietrich Klaus, clarinet**; Reiner Schmidt, viola††; Northwest German Philharmonic Orchestra, Janos Kulka, cond.†† LABOR LAB 12, \$8.98 (Labor Records, P.O. Box 1262, Peter Stuyvesant Station, New York, N.Y. 10009).

Spielstrategien * Pluie de feu * La Femme-Fleur.*† Guernica.†† Rose ouest**/ Rituelle Aktionen II (tape).

Walter Steffens, a thirty-eight-year-old German composer, has devoted his energies since the mid-1960s to a seemingly quixotic task—transforming pieces of vi-

(Continued on page 76)

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Edward MacDowell: Inveterate Tinkerer, Near Master

Reviewed by Irving Lowens

WE OWE CHARLES FIERRO a debt of gratitude for presenting the first recording ever of Edward MacDowell's *First Modern Suite*, the student work begun in 1881 under the guidance of Joachim Raff which so pleased Franz Liszt that he recommended it for performance at the forthcoming meeting of the Allgemeiner Deutscher Musikverein to be held in Zurich the following July. MacDowell himself played it, from manuscript, and reported to his mother in New York that he had scored a "great success." In 1883, the suite was published by Breitkopf and Härtel in Leipzig (again, upon Liszt's recommendation) and MacDowell was launched as a composer.

Fierro also offers the *Keltic Sonata*, a fiercely difficult piece from MacDowell's last creative years that is almost never heard today and has been recorded only twice previously. Thus, we have here specimens of major works from the beginning and end of the career of one of America's most gifted composers (although the story, as I will shortly explain, is a little more complicated than that). MacDowell is, of course, out of fashion these days and has been for many years, but his time will come again. I agree with Virgil Thomson, who has called him "our nearest to a great master before Ives" and iconoclastically suggests that "MacDowell may well survive him." Accepting that thesis for the sake of argument, the *First Modern Suite* looms as a work of some historical significance.

MacDowell was an inveterate tinkerer. He constantly twiddled with his compositions, reworking them even after they had appeared in print, and the Op. 10 of 1883 is almost unrecognizable as the same work as the Op. 10 of 1906—his last word on the

subject, so far as can be determined. In 1891, three years after his return to the United States from Germany, he had published (essentially for copyright reasons) a "new edition" of the first and fourth movements of Op. 10. The Praeludium differs very little from the original, the changes consisting of a few added staccato marks, phrase curves, and so on, but quite a different story was the Intermezzo, which grew from eighty-six to 132 bars. Still not content with the suite, MacDowell continued to revise it, and the results of more than a decade of further reevaluation became evident in a drastically revised edition published by Breitkopf in 1906. The Praeludium is totally reworked; in the Presto the changes are even more numerous; the third movement (Andantino and Allegretto) is, to quote Oscar Sonneck, "fully twenty bars shorter and in MacDowell's best vein"; the Intermezzo is now the expanded version of 1891; the fifth movement (Rhapsodie) has been, to quote Sonneck again, "so thoroughly overhauled as often to sound like a new piece"; the concluding Fugue has a completely rewritten ending. Fierro plays the 1906 version. This may be, as the program note points out, "one of the last attempts—if not *the* last—MacDowell ever made at composition." Thus, we won't really know what kind of composer MacDowell was at age twenty-one until somebody records the original version of the suite, as published in 1883!

The situation with MacDowell's last piano sonata, though much simpler, also presents some of the complications that caused Sonneck to refer to the bibliography of this composer's works as "perhaps the most complicated of recent times." So far as Sonneck (and all subsequent students of MacDowell's music) knew, only a single edition of the *Keltic Sonata* was published. Not so. An actual copy of the first edition was deposited for copyright on March 16, 1901. Some time between then and the following May, MacDowell had a few second thoughts, and on May 7, 1901, his long-suffering publisher, Arthur P. Schmidt, wrote him that he "had already carefully made with ink in the copies on hand" MacDowell's corrections and humbly asked: "May I use up the yellow covers for revisions now on hand?" We do not know how MacDowell replied, but he apparently had

still further thoughts about the sonata, because on November 5, 1902, Schmidt wrote once again and assured the composer: "I will make the correction in the *Keltic Sonata*."

Thanks to the existence of a copy of the first edition that MacDowell presented to his friend and disciple W. H. Humiston, in which his corrections are indicated in red ink, we know that he changed the metronome marking on page 30 from quarter = 69 to quarter = 88, while on page 31, for the concluding codetta, the metronome marking was altered from quarter = 48 to half = 40, and the words "gradually broaden" were to be added over the last two bars of the third system. Schmidt made the correction on page 30 correctly in later printings, but unfortunately, he messed up those on page 31. Instead of *half* = 40, it came out *quarter* = 40, thus cutting MacDowell's desired tempo in half! Accordingly, *everybody* who plays the *Keltic* and uses, unknowingly, the revised edition, is farther away from MacDowell's original intention than if the first edition (where quarter = 48 appears) had been used. And to make the cheese still more binding, the words "gradually broaden" are printed as "gradually broader"—over the wrong bar!

The best of the three recordings of the *Keltic Sonata* is that of Leon Bates, who takes the piece somewhat slower than Fierro does, uses a wider dynamic range (MacDowell ranges from *pppp* to *fff*), and has less trouble with its formidable technical problems. The Mitchell recording, now more than fifteen years old, is acoustically *hors de combat*. As to the *First Modern Suite*, Fierro not only has no competition, but he plays the spots off the piece. In view of the pairing (Bates backs his *Keltic* with Barber's *Excursions* and George Walker's Sonata No. 3) and Nonesuch's bargain price, Fierro is clearly the better choice for MacDowell aficionados. **HF**

MACDOWELL: First Modern Suite, Op. 10; Sonata for Piano, No. 4, Op. 59 (Keltic).

Charles Fierro, piano. [Charles Fierro and Michael Fraser, prod.] NONESUCH H 71399, \$5.98. Tape: N5 71399, \$5.98 (cassette).

COMPARISON—Sonata:

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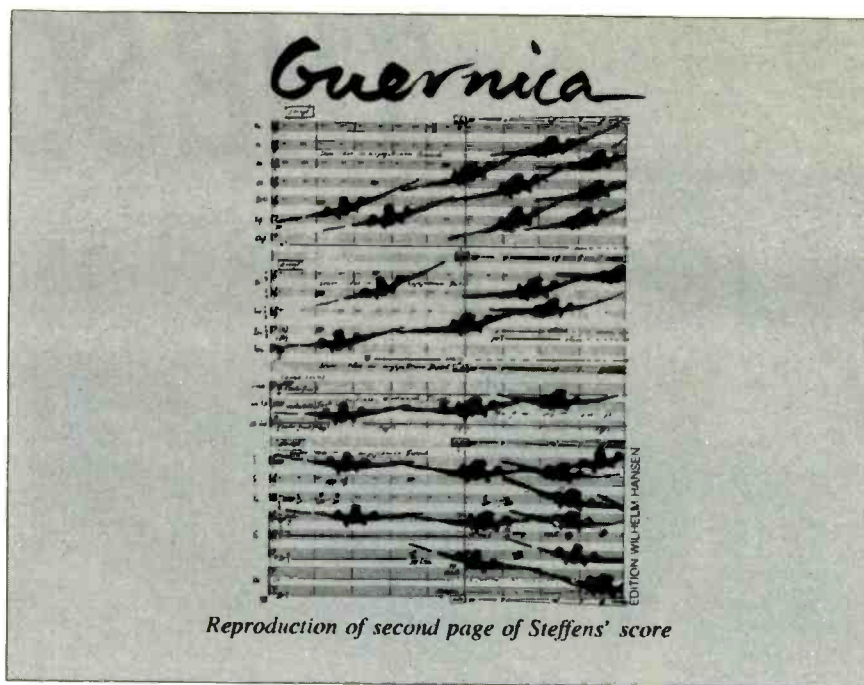
(Continued from page 73)

sual art into music. This disc, apparently the first of several volumes, shows that visual-to-audio "transposition" (as the album title has it) can be done, if only in a limited way. But more important, the collection shows Steffens to be an inventive composer whose music works on purely musical terms, independent of artsy-philosophical rationalizations.

Steffens covers an extraordinary range of styles here, from serialism to minimalism, from dense, Romantic orchestral writing to *musique concrète* (literally, in fact: The source material for the tape piece *Rituelle Aktionen II* was gathered at a construction site). As for the "transposition" business, it really works only in the piano piece *Spielstrategien* (*Game Strategies*)—and there only because the graphic design grids that inspired Steffens lend themselves to musical games, with lines slanted in different directions representing different notes of an arpeggiated chord. Even at that, *Spielstrategien* offers several distinct musical reductions of the graphic, striving toward either consonance or chaos as the eighty-nine frames of the design slowly change. Both "Meditations" are conceived in a minimalist vein; the first sounds rather like Bach's famous C major Prelude with the needle stuck, the second somewhat more dramatic.

Picasso paintings provide the inspiration for two pieces. *La Femme-Fleur*, for flute and piano, derives from the series in which Picasso transforms a female nude into a sunflower; here a graceful flute melody evolves into something more abstract and pointillistic, and then back again, with a touch of Picasso's ironic humor. *Guernica* is the album's most ambitious and striking offering—not quite a concerto, but an orchestral work with a richly endowed solo viola part, beautifully played by Reiner Schmidt. Again, Picasso's specific images don't translate into sound; nor does Steffens choose to convey the chaos of the painting or its myriad details. What he does convey, through tensely emotional orchestral writing, is the tragedy of the bombing that moved Picasso to commemorate the Spanish Civil War.

The other works are more abstract. *Pluie de feu*, for piano, is based on Bernard Aubertin's graphic in which twenty-seven matches are lit and allowed to burn out: the pictorial score consists of twenty-four pairs of notes (one treble, one bass, connected by a line representing a matchstick) that, we are told, represent four statements of a tone row—although one doesn't quite hear it that way—plus three unpitched matchsticks that Steffens calls "noise fields," representing the crown of flame over Aubertin's twenty-seven matches. The realization of the "noise fields" is left to the discretion of the pianist, in this case the adaptable Peter Roggenkamp (also heard in the more firmly controlled *Spielstrategien*).



who creates a prepared piano, using foil strips, for the occasion. As a concept, it is interesting; as a piece of music, it doesn't amount to much.

Like *Pluie de feu*, the clarinet work *Rose ouest* has a graphic score—this one oval-shaped, with notes interconnected by a series of lines. Several sequences are possible; the player is expected to impose (or improvise) a form of his own, presumably in a way that somehow represents the work's visual inspiration—a stained-glass window in the Notre Dame Cathedral. But there's a catch: *Rose ouest* is played simultaneously with *Rituelle Aktionen II*, the construction-site tape piece. Thus, the clarinetist has two quite divergent stimuli to react to, the grandeur of a Notre Dame window and the more pedestrian noise of jackhammers, et al. Hans Dietrich Klaus makes the sensible choice, ignoring the former and reacting to the rhythms and impulses of the latter. The result may not conform to the composer's intention of portraying the window, but it makes an effective piece for clarinet and tape.

The recording comes with copious notes and reproductions of either Steffens' scores or the original artworks—all of which, alas, Labor's graphic designers present in small black type on a reflective silver cover. A.K.

Recitals and Miscellany

TWENTIETH-CENTURY CONSORT, VOL. 2.

Lucy Shelton, soprano*; David Gordon, tenor†; Lambert and Jan Orkis and James Pri-

mosch, piano**; Thomas Jones, percussion†; Emerson String Quartet††; Twentieth-Century Consort, Emerson Quartet members, Christopher Kendall, cond.*. [Bill Bennett, prod.] SMITHSONIAN N 1027, \$13.98 (\$12.58 to members) (two discs) (add \$1.75 for shipping; Smithsonian Recordings, P.O. Box 10230, Des Moines, Iowa 50336).

ALBERT: To Wake the Dead.* CRUMB: Celestial Mechanics (Makrokosmos IV).** DAVIDOVSKY: Quartet for Strings, No. 4.†† WERNICK: A Poison Tree.* WRIGHT: Cantata.†

Several months ago, the Smithsonian released the first installment of a series by the Twentieth-Century Consort (N 1022, July), which covered a broad if mostly conservative selection of contemporary musical languages, attempting to show a synthesis between old and new compositional styles. In the second volume, these young, versatile players continue their survey of what the annotator calls "a new plurality of styles," choosing works so as to "eschew the esoteric yet remain above the obvious."

What they eschew, actually, is the novelty snobbism that has dogged serious music throughout our century—the notion that complete originality in both concept and detail is paramount, and its corollary, that composers who use gestures and devices that have been used before are merely derivative second-raters. Rather, the consort gravitates toward composers (mostly well-known) who have settled on specific streams of language that are familiar, but not yet quite "mainstream," and who seek to establish a working contemporary vocabulary by drawing on those styles.

Often, these composers combine several elements of twentieth-century style and extend the language, adding personal touches. Maurice Wright, for one, contrib-

utes a cantata for tenor, percussion, and electronic tape—hardly a novel combination. His vocal lines, though rhythmically sharp and melodically angular, express the seventeenth-century texts with concision. Yet the work's greatest appeal (and the element that made Wright's *Chamber Symphony* for piano and tape one of the more memorable works in Vol. 1) is the tight interaction between the tape and live participants. At the start, he provides in the tape part a hazy hint of an offstage chorus. Later, with the help of a voice-synthesizing computer program (developed by Charles Dodge), that hint is realized, and the electronic voices supply both an interesting contrapuntal segment and a choral part that runs in tandem with the tenor.

Stephen Albert, in *To Wake the Dead*, uses more conventional instrumental resources to couch his setting of Joyce fragments (from *Finnegan's Wake*) in strains that, though tonal at heart, call freely and frequently on expressive dissonance. Albert also employs a lot of early-Stravinskian rhythmic figures and, depending on the text segment being set, interposes sections of childlike melody, antiquarian modality, and even some almost Schubertian sweetness. Beneath it all, carrying the work's seven movements to an operatic climax, is a dramatic momentum, which, combined with Albert's skill as an instrumental colorist, quite effectively evokes the bizarre atmosphere of the Joyce text.

The third vocal piece, Richard Wernick's provocatively ambiguous treatment of Blake's *A Poison Tree*, begins with a brusque, cathartic instrumental fantasia in colors similar to those Albert uses (flute, clarinet, violin, cello, and piano—without Albert's harmonium, viola, and piccolo). Wernick's setting is tense—or rather, the instrumental accompaniment is steeped in tension, the vocal melody more innocent. Blake's poem is quick-moving, ironic, and glib, but Wernick seems to see more to it. The first time through, he conveys those elements faithfully in the form of a modified *vals macabre*. But the final section repeats the last verse twice, declaiming it slowly and quietly, as if the poet/persona is so haunted by the poisonous fruit of his anger that his bitterness gives way to remorse.

Among the instrumental works, the Severity school is represented by Mario Davidovsky's String Quartet No. 4, the one work here in which I find nothing appealing despite my admiration both for Davidovsky's electronic pieces and for the Emerson Quartet, for which the work was composed. Whatever the failings of this harsh, uninteresting composition, it leaves no doubt about the group's technical facility: The performance is tight and assured, and the players make their way through the catalog of string effects (from pizzicato plucking, to strumming, to straightforward, full-bodied lushness) without a hitch. At times, they seem

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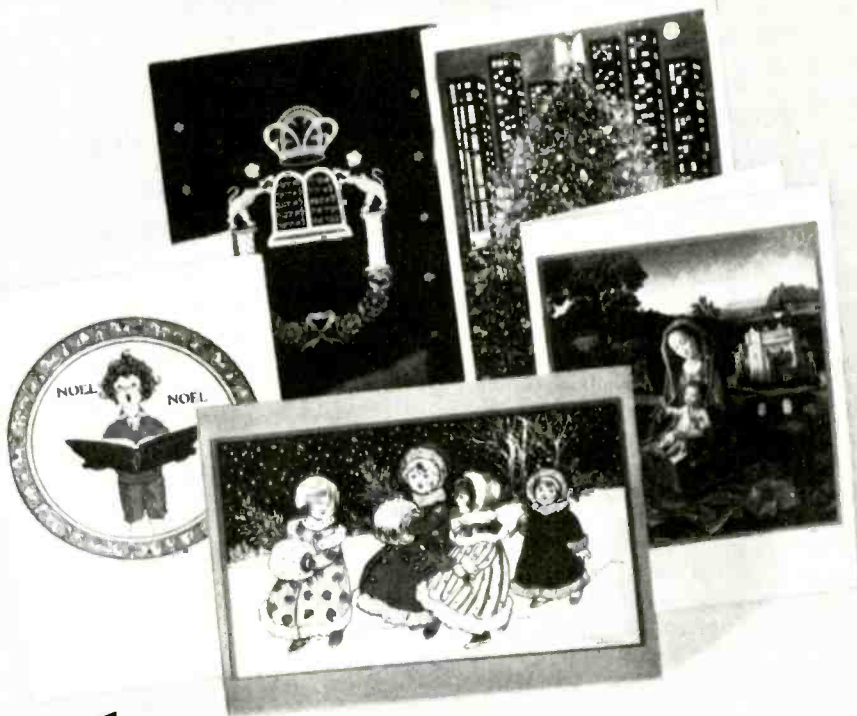
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CLASSICAL Reviews

intent on injecting some passion in spite of the piece, but since the sections that lend themselves to a passionate approach are few and brief, the work's overall aridity never dissipates for long.

George Crumb is the one true pioneer in this crowd, although his unusual methods of tone production have, with repeated use, grown familiar and almost "safe" over the years. In *Celestial Mechanics (Makrokosmos IV)*, for two amplified pianos, the amplification serves not so much to alter the piano's sound as to magnify some of the quiet, otherworldly effects Crumb draws from the instrument. Many of his signature effects are here—scratched strings, pizzicato melodies, percussive sections, and exotic, Eastern sounds; but he has a way of ordering them so that they seem entirely appropriate, not at all gratuitous or gimmicky. The piece has four sections and moves in a downward slope—from the impulsive first movement, "Alpha centauri," with its sweeping fields of sound and motion, to the static finale, "Delta orionis," with its slow, repeating chord progression punctuated by a descending "percussive" line.

The performances, as in Vol. 1, all show full commitment on the part of players and singers clearly capable of meeting both the technical and interpretive challenges of the music. The package is also quite nice: Texts and a brief yet useful essay on each work are provided. But except for the Crumb side, the processing leaves much to be desired. In several works, the Albert particularly, the sound is constricted and confined. The pressing, too, is unusually crackly and even dirty: My Discwasher took more dust and debris off these two discs, received factory-sealed, than off many an old LP I've found in a second-hand shop. A.K.

EARL WILD: The Art of the Transcription.

Earl Wild, piano. [Julian H. Kreeger, prod.] AUDIOPON 2008, \$23.96 (two discs, manual sequence) (PM&J Productions, Inc., 2710 Ponce de Leon Blvd., Coral Gables, Fla. 33134).

GLUCK-SGAMBATI: Mélodie d'Orfée. RAMEAU-GODOWSKY: Trois Pièces. BACH-TAUSIG: Toccata and Fugue in D minor, S. 565. WAGNER-MOSZKOWSKI: Isoldens Tod. RIMSKY-KORSAKOV-RACHMANINOFF: Flight of the Bumblebee. KRIESLER-RACHMANINOFF: Liebeslied. MENDELSSOHN-RACHMANINOFF: A Midsummer Night's Dream: Scherzo. ROSSINI-THALBERG: Grand Fantasy on "Semiramide." CHOPIN-LISZT: Chants polonais (3): Mes joies; Le Printemps; Le Voeu d'une jeune fille. TCHAIKOVSKY-WILD: Pas de quatre sur "Lac des cygnes." STRAUSS-SCHULZ-EVLER: Concert Arabesques on Themes of "The Beautiful Blue Danube."

FAURÉ: Barcarolle No. 3, in G flat, Op. 42. FRANCK: Prelude, Chorale, and Fugue. RAVEL: Gaspard de la nuit.

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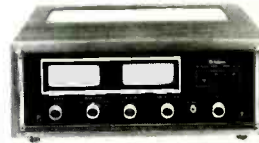
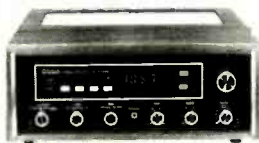
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Merrily We Roll Along: the chorus executes Sondheim's music with panache.

prod.] AUDIOFON 2007. \$11.98.

Sunday, November 1, 1981, was a normal and typical midseason day in New York's busy concert life: at the Metropolitan Opera House, Vladimir Horowitz gave his annual recital, while at Carnegie, Earl Wild entertained a capacity audience with an ingeniously assembled recital of kitsch transcriptions. At the 92nd St. Y, a chamber ensemble held forth, and at Alice Tully Hall, the Beethoven Society presented Claude Frank in the *Appassionata* and his first public performance of the *Diabelli Variations*. Divided as the piano buffs' attention might have been between Wild and Horowitz, there were more than enough to go around. (Obviously, a different kind of audience attends an all-Beethoven program, particularly one featuring the demanding *Diabelli* edifice.)

As it happens, both the Wild and the Horowitz concerts were recorded. The latter was discussed here recently (RCA ATC 1-4260, September), and now Audiofon presents a handsomely reproduced account of the Wild program. Readers familiar with my views (prejudices, if you will) will realize that salon pieces are not my prime love. (In fact, I have special antipathy for the saccharine and decadent complexities of Godowsky—who, surprisingly, comes off rather well in these three Rameau pieces.) But much of Wild's playing here is in the best of (bad) taste and thoroughly admirable as sheer pianism. He does particularly well with the Gluck-Sgambati ostinato, the Rameau-Godowsky, the Rossini-Thalberg, and the Tchaikovsky-Wild, playing with engaging freedom, nuance, and attractive color. The Wagner-Moszkowski is interesting, too, mainly for its departure from the more familiar Liszt version of the "Liebestod." As for the Rachmaninoff bonbons,

the composer's own performances, not surprisingly, prove more than any mortal pianist could approximate; similarly, other spirits of departed giants hover about certain pieces (Rosenthal in "Mes joies," Lhevinne in the *Blue Danube*). But even leaving comparisons aside, Wild offers too much fussing—and too little concentration and rhythmic direction—in the Schulz-Evler potpourri and some soggy ostinato in the Mendelssohn scherzo.

Wild's studio performances of Ravel, Fauré, and Franck are sturdily played and impeccably honest, although in *Gaspard*, "Ondine" is a little prosaic and loud, "Scarbo" a bit lacking in demonic thrust. In sum, I am not about to part with my Argerich recording (DG 2530 540). Nor do I take to Wild's flamboyant and rhythmically extravagant approach to the Franck, despite its valid and admirable style, as much as to Arthur Rubinstein's poised, shapely 1970 account recently released by RCA (ARL 1-3342). Audiofon, however, does Wild a handsome service technically. H.G.

Theater and Film

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Music and lyrics by Stephen Sondheim. Paul Gemignani, cond. [Thomas Z. Shepard, prod.] RCA RED SEAL CBL 1-4197. \$12.98 (half-speed mastering). Tape: CBK 1-4197. \$12.98 (cassette).

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Sondheim in *Merrily We Roll Along*. Seldom can the treatment have been more richly deserved. The song in question, "The Hills of Tomorrow," is heard first at the rise of the curtain at a graduation ceremony in 1980, then at its original performance twenty-five years before. In between, the character Franklin Shepard, composer of the emptily uplifting tune, class valedictorian in 1955 and distinguished guest speaker in 1980, revisits key scenes in a life spent in pursuit of the rewards of celebrity. He has progressed (like an antihero in Hogarth miraculously spared the outward effects of Hogarth's moral condemnation) from the youthful idealism so fatuously captured in the anthem's trite images of travel and conquest to a gilded cage of practicality and compromise, from which over the years all his friends and loves have departed or been excluded. It is the book's none too novel conceit to present the material in reverse chronological sequence (not three years ago, Harold Pinter was pulling the same trick in *Betrayal*, a rather subtler examination of lost innocence and adjustable loyalties), and the irony in the first instance is pretty benign. The reprise at the end, which purports to restore the anthem to the moment when it was new-minted and one might still believe in the promises now shattered, leers with a terminal and bitterer cynicism. It bares the bone beneath the painted skin.

Sondheim, need it be said, achieves his effects with cunning and with art. His lyrics prance along merrily with frisky rhymes and rhythms, and the principal tunes reappear, trickily transformed, in many guises from number to number. The danger in all the cleverness, and a danger not avoided, is that the craft will fail to add up to anything of beauty or power. *Vox populi, vox dei*; and the audience has spoken. *Merrily We Roll Along* met with stony disapproval and retired with barely seemly haste.

The album is a thoroughly polished presentation for the record. The chorus executes Sondheim's elaborate vocal cross-cutting with the mechanical panache of a crackerjack drill team, at times rising to a pitch of curiously evangelical mass hysteria. None of the soloists can boast of vocal glamour, but their wordy songs hardly require it, and their diction serves Sondheim the lyricist to perfection. As Charley Kringas, Frank's first collaborator (author of those youthful "Hills") and closest friend, Lonny Price tears through his account of life with Frank as he skyrockets to executive eminence in a caustic frenzy ("Franklin Shepard, Inc."). In Jason Alexander, the character of the vulgarian Broadway producer Joe Josephson finds a skillful and apt interpreter. The women, every one, affect or are afflicted with the hoarseness that in some quarters passes as the peak of sophisticated allure. Like so much else about this package, it doesn't work. M.G.

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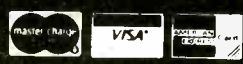
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The Tape Deck

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

Megalophilia

The vagaries of repertory selection and release scheduling have turned this column's recent preoccupation with music for small ensembles and solo instruments topsy-turvy. The new message is "think big," as we lead off with the latest heaven-storming Mahleriana. Augmenting, if not superseding, the Seventies' first wave of complete Mahler-symphony series are at least six more now in progress, four of which are represented this month by large-scale, mostly digitally recorded examples.

Special honors go to the finest yet of Klaus Tennstedt's acclaimed London Philharmonic series: his expansively eloquent, richly Romantic, yet tautly integrated Second (*Resurrection*) Symphony, with poignantly moving contributions from the chorus and soloists Edith Mathis and Doris Soffel. Superbly lucid HMV digitalism copes with the apocalyptic grandeurs as effectively as any audio engineering—short of quadriphony—possibly can, even in the present ferric (rather than HMV's chromium) cassette edition (Angel Prestige Box 4X2S 3916, \$19.96). In direct comparison, Vaclav Neumann's 1980 Czech Philharmonic analog version from Supraphon seems somewhat lacking in essential sonic weight and impact. Nevertheless, this performance is markedly more successful than Neumann's earlier ones, especially for its distinctive personality projection (Pro Arte Prestige Box 2PAC 2011, \$19.96).

Four symphonies—Nos. 1, 4, 5, and 6, of which I've heard only the last—launch the latest Mahler series, by Harold Farberman and the London Symphony for the Moss Music Group. Farberman, the first to record all four lives symphonies, never did lack ambition, and judging by his present Sixth (*Tragic*) Symphony, his is a refreshing, highly individual approach to score editions as well as to interpretation. Here, for example, he reverts to the composer's earlier sequence in the middle movements (the Andante before rather than after the Scherzo) and restores the third "hammerblow" in the Finale. The Londoners play beautifully for him, the digital recording is exceptional for its auditorium authenticity as well as its transparency (Max Wilcox doubles as producer-engineer), and the chromium tape edition is conveniently encompassed in a single double-play cassette (MMG D-CMG 109X, \$15.98).

James Levine's Chicago performance of the Seventh (*Song of the Night*) Sympho-

ny (RCA Red Seal digital/chrome Prestige Box ATK 2-4245, \$31.98) brings his series with various orchestras to within two of a more-than-complete ten. Perhaps it's because I'm still spellbound by last January's Barclay-Crocker reel epiphany of Haitink's c. 1971 Philips version (R 6700 036) that Levine strikes me as somewhat arbitrary and overidiosyncratic. Or it may just be that I'm more bothered than most Levine fans will be by some coarseness and imbalance in RCA's sonics.

One thing all cassette connoisseurs can agree upon is gratitude that all these sets include notes (and for the Second Symphony, texts), with first honors going—compensatorily—to Jack Diether's for Levine's Seventh.

Non-Mahlerian grandeurs. Theoretical, even the most advanced audio technology can't possibly capture the full size and impact of the biggest symphonic and operatic works. But in practice, the best attempts still can be inexpressibly thrilling. Witness the recording premiere of a largely unfamiliar opera that rivals the exotic stage spectacle and oriental tone coloring of *Aida*: Karl Goldmark's masterpiece, *The Queen of Sheba* (Hungaroton Prestige Box, MK 12179/82, \$39.92). This Hungarian State Opera production, conducted by Adám Fischer, can't be better described in its tape format than by Paul Henry Lang's accolade for the disc edition (HF, April 1981): "The performance is splendid, the cast superlative, and the sound first-class." Yet even more spectacular technologically is the first digital/chrome Berlioz *Damnation of Faust*—a "sound-stage" production in the best English Decca tradition, of Georg Solti's powerfully dramatic Chicago Symphony performance starring Frederica von Stade and José van Dam (London oversize Prestige Box, LDR5 73007, \$38.94). Even my cravings for more authentically Gallic tone qualities and my undiminished admiration for Colin Davis' c. 1974 Philips disc version tend to be swept away by the new version's sheer volume and impact.

But there were truly great recording achievements in the past, too, as RCA's 0.5 Series of historical-milestone reissues attests. The three latest Prestige-Box, superchrome cassette editions feature Charles Munch and the Bostonians in a 1959 Berlioz Requiem that—at least until the advent of quadriphony—was long near-definitive (ATK 2-4269, \$31.98); Fritz Reiner and the Chicagoans in their 1957 Mussorgsky-Ravel *Pictures at an Exhibition*, somewhat

belittled in its own day for a lack of sensationalism, but which now seems exceptional for its poetic restraint (ATK 1-4268, \$15.98); and most welcome as a prompt response to my recent plea, Reiner and the Chicago again, in the overdue return to tape of their landmark 1954 Strauss *Also sprach Zarathustra*, with Leslie Chase's pioneering stereo engineering (ATK 1-4286, \$15.98), which many audiophiles may still find even more rewarding than the 1962 version reissued last April in a chrome taping by Mobile Fidelity (MFSL C 522).

Monumental releases, along with less ambitious ones, also continue to augment the open-reel catalogs, primarily that of the dominant processor, Barclay-Crocker (11 Broadway, New York, N.Y. 10004). There are two notably imposing—and valuable—current treasures. One is the long-awaited updating of Antal Dorati's pioneering (1955, mono) complete Tchaikovsky *Sleeping Beauty*, this time with the Concertgebouw Orchestra in a well-nigh ideal evocation of the ballet and, of course, state-of-the-art tape processing (Philips/B-C Z 6769 036, two reels, \$29.95). Dorati's theatrical expertise is undiminished, and the Dutch orchestra and its violin and cello soloists play like angels—in contrast to the less refined BBC Symphony playing in Gennady Rozhdestvensky's Eurodisc cassette edition (500 575, April "Tape Deck"). That version remains, however, somewhat more sonically vivid and more powerfully gripping.

The other Himalayan peak is Vol. 5 of the Academy of Ancient Music's period-instrument Mozart symphonies (Oiseau-Lyre/B-C D 171D4, two reels, \$33.95)—perhaps the most widely appealing set to date in this extraordinary series, since it includes such relatively familiar works as the *Haffner* and *Linz* Symphonies, as well as Nos. 32–34, and Mozart's own symphony versions of the *Haffner* and *Pastoral* Serenades.

Delectably offbeat are two other Oiseau-Lyre/B-C reels by the Academy of Ancient Music under Christopher Hogwood—Bach and Stamitz. For the Bach is Carl Philipp Emanuel, with his ear- and mind-opening symphonies—six for strings, Wq. 182, and two for full orchestra, Wq. 174 and 176 (0 557, double-play, \$18.95). And the Stamitz is the Mannheim master Johann, with three of his then new-style virtuoso symphonies and a clarinet concerto, probably the first ever, here starring Alan Hacker (F 505, \$9.95). **HF**

BACKBEAT®



Wallace overdubbing a vocal track at Kajem.

Anatomy of a Record Album

A first-hand account from the writer, singer, multi-instrumentalist, and producer of "What It Is" by George Wallace

BACK IN THE SUMMER of 1980, I was in the throes of the biggest single professional advancement of my life. After years of writing, playing, plotting and general all-around dues-paying, I was finally recording an album for a major label. Though the result, "Heroes like You and Me," sold reasonably well for a first outing, it did not exactly leave me rich and famous. But my contract with CBS/Portrait called for two albums over a two-year period, so I had another chance coming. At this writing I am a countable number of days away from finishing that second disc, currently titled "What It Is."

Every LP released nowadays starts as a sizable wad of cash, and certainly mine was no exception. Besides covering the inevitable studio and tape costs, the \$100,000 budget for "What It Is" was designed to include everything from phone calls to sandwiches to taxi rides. But before I could see any of that money, before any rehearsals could be scheduled, before any tape machines rolled, I had to write an LP's worth of material.

1. The Songs

I usually write about fifteen songs (including the weird ones) a year, so coming

up with ten solid ones for "What It Is" was no more than the average-sized mountain of work. The musical idea for the first real *song* came from a Klark Kent (Stu Copeland) record. (I steal all the time, as I have no conscience.) The accompanying lyric line I had hooked onto was "he's the elephant man," which I eventually intended to flesh out into some sort of Sobering Statement. But when I listened to the music on tape, I realized that what it needed was not a poignant lyric but a goofy one. The melody suggested a cartoonlike hamburger-land satire, complete with dancing ketchup bottles. "Elephant Man" became "Hamburger Man," and from then on the song practically wrote itself.

No two songs of mine come into being exactly the same way, but for most of those on "What It Is" the music came first, the title second, and the words last. Ideas come from anywhere at any time; I've been known to jump out of bed at three in the morning to scribble something down before it got away. Generally, I don't write with the guitar or at the piano; unless a song is ready to be put on tape for the first time, an instrument can get in the way. I enjoy writing in many moods on many subjects, and I tend to let a lyric determine its own direction. Subjects covered in this particular

writing period ranged from philosophy to buffoonery, with a little love interest in there to spice things up.

As the songs were written I would record them at home in my eight-track studio [see BACKBEAT, September 1981], playing all the parts myself. I wouldn't go for the perfect take, saving the polishing for the final this-is-it, twenty-four-track version. Listening to those rough demos enabled me to gain some perspective—to weed out the duds from the goodies. By late summer of 1981 I had my fifteen songs and, with Portrait's inevitable advice and consent, selected ten as candidates for the new LP.

2. The Rehearsals

The next step was finding a rehearsal studio. I decided on Extraterrestrial Sound in Long Island because it has an eight-track deck identical to mine (the Teac 80-8) and because it is located near the home of drummer extraordinaire and longtime musical comrade Jim Bralower. I booked two solid weeks of time, and from mid-to-late August of last year Jim and I rehearsed our hearts out. I would take the click tracks and reference parts I had recorded at home so we could work up the drum and bass parts at the



Engineer Joe Alexander, Wallace, and drummer Bralower at the board

studio. Then I'd bring the day's results home on a cassette to study them. It worked beautifully. By the time we walked into the twenty-four-track studio to begin work on the real thing, we knew our parts inside out.

3. The Recording

The decision to use Kajem Studios, outside of Philadelphia, was partly aesthetic and partly financial. The studio is well-equipped and well-staffed and, having already spent around \$3,000 on rehearsals, I wanted to keep my costs down. (I also wanted to save some dollars for promoting the LP.)

When it came time to select a producer, I was my own natural choice. From years of single-handedly recording demo after demo in my home studio and from coproducing my first album, I felt I was eminently qualified. Portrait at one point suggested several high-profile alternatives, but the verdict eventually came down in my favor.

I packed up my Teac, my rehearsal tapes, and my not-so-impressive pile of keyboards, guitars, and basses and headed to Kajem, where, on October 12, 1981, Jimmy and I started cutting the basic (bass and drum) tracks. We copied the rehearsal tapes onto eight of the twenty-four available tracks, so we could refer back to them whenever we needed to. As it turned out, one of the impromptu, never-to-be-captured-again rehearsal tracks ended up as a "keeper."

We recorded bass and drums at the same time whenever possible; there is something entirely kinetic in the exchange of two musicians playing together as opposed to one playing alone. By the end of the first week we had the basics down on four songs. A week later, we had completed four more.

Eight of the ten songs were now ready

for overdubs. I sent Jimmy home for a two-week respite and got down to the business of being a one-man band. On Monday, October 27, within six or seven short hours (the average length of most of the sessions) I'd piled up a piano track, two supporting synthesizer tracks, and an electric string part on one tune, and rhythm guitar and keyboard bass tracks on another. Not every day went quite as well as that one, of course, but I do prefer to work fast. I figure if you can't get it down in five or six takes, give it up and try again another day.

The next two weeks flew by as I cut, pasted, or repaired the various drum, bass, guitar, keyboard, percussion, or lead vocal tracks for six of the ten songs. Jimmy came back for the remaining basic tracks, and I continued my layering. My routine settled into a cycle of record, play, rewind, stop, and fast forward, working five or six days and nights a week. A typical week in January follows:

- | | |
|--------|---|
| Mon. | <i>Now's the Time</i> : Recorded guitar, doubled it; recorded lead guitar and solo; bounced down bass tracks. |
| Tues. | <i>Take It to the Top</i> : Recorded electric piano, Arp Omni, and reggae guitar line. |
| Wed. | <i>Now's the Time</i> : Recorded lead vocal, synth pulse and synth solo. |
| Thurs. | <i>Now's the Time</i> : Fixed vocal and synth solo. <i>Wonderin'</i> : Recorded synth bass; bounced down saxes. |
| Fri. | <i>Take It to the Top</i> : Recorded lead vocal and clavinet. |
| Sat. | <i>Take It to the Top</i> : Recorded high harmonies and bounced them |

down. *Now's the Time* and *What It Is*: Recorded high harmonies.

Even at this stage, none of the tracks was immune to changes in lyric, melody, arrangement, overall sound, or even chords. *Take It to the Top* in particular went through several chord-pattern alterations. Still, things were slowly congealing, and I was ready to add background vocals and horn parts. I had already decided on singer/sax player Mark Rivera (currently touring with Billy Joel) and Importe/12 Records vocalist Amy Bolton (to whom I happen to be married). I wanted an "ensemble" kind of background sound, thus the use of singers other than myself and real, live saxophones—rather than the synthesized variety. As we experimented with all kinds of guitar/keyboard/vocal combinations, we left no piece of studio equipment untouched. Kajem has a lot of outboard toys*, and we had occasion to try them all, treating them as instruments in themselves.

By February 13, I had all but finished my ten songs and was still on time and on budget. No one from CBS had as yet dropped by to check on my progress, which was just as well since most label executives aren't given to identifying the eventual sound of a record under construction. I took it as a vote of confidence (for all they knew I could have been recording nursery rhymes with all that money) and enjoyed my delicious artistic freedom. But it was now time to get back in touch with CBS—it was their cash.

4. The Mix and the World of Waiting

A call to Lennie Petze, my main liaison at Portrait, revealed that the final mix-down was to take place at the Power Station in New York [see BACKBEAT, July]. Tony Bongiovi, the studio's designer/co-owner would be doing the actual mixing. I was momentarily bewildered, since I had expected (in fact, had already started) to mix at least part of the album at Kajem. In addition, the cost of mixing in New York would eat up any leftover money I would otherwise have had to contribute to Portrait's promotional campaign. But after meeting with Tony, I felt reassured that I was in good hands.

It was now the end of April and I was anxious to get started. But there wasn't a two-week block of time open at the studio until around the end of June. I had entered the World of Waiting. (Artists waiting for their records to come out have been known to go crazy.) I started thinking about the album cover and writing some new songs. (Continued on page 97)

*Partial list: MXR pitch transposer; Eventide flanger and digital delay; Sony digital reverb, EXR Aural Exciter, Pan-Scan auto panner; DeltaLab Acousticcomputer; Ursa Major Space Station.

Compact, Portable Multitrack Studios

A comparison of two 4-track cassette deck/mixers, one from Tascam and one from Fostex.

by J.B. Moore

ARE YOU THE SORT who buys records just to figure out how they were made? Do you stay up into the wee hours scheming outlandish ways to get great arrangements of your songs on tape? If so, chances are you've got a bad case of multitrack malaise.

There are at least two cures, one of which requires nothing more than cash. If you have a lot of it, take out your favorite record and call the studio named on the back. For a mere two-hundred or so dollars per hour (plus tape), it can translate your musical dreams into a twenty-four-track recorded reality. If, on the other hand, your resources are a bit more limited, read on.

Only a short while ago, putting even a modest multitrack home studio together had to be a major investment. A used four-track deck runs a few thousand dollars and a decent mixing board at least another thousand. And you still have a patch bay to wire, a spare room to remodel, and a variety of outboard gear to buy. Then Teac introduced the first four-track cassette deck/mixer. [see BACKBEAT, January 1980] the Tascam Portastudio Model 144 (which this writer happily owns), and the era of the compact, portable, affordable home studio began.

The latest generation of ministudios comprises the Fostex 250 Multi-Tracker and Teac's new Portastudio Model 244. I had been thinking of upgrading to the latter until I heard about the former. Since they

J.B. Moore is a record producer and songwriter.

INPUT OUTPUT

share most of the same features, cost the same (\$1,300), and are about the same weight (the Fostex weighs 19 pounds, the Teac 23). I decided to get some user opinions before making my purchase decision. I talked with Arthur Payson, an engineer at Skyline Studios in New York, who owns the Tascam 244. Phil Ashley has a Fostex 250; Phil is a keyboard player and arranger best known for his work with Rupert Holmes. Both like their minis; both also noted various shortcomings, most of them inherent to the format.

One significant improvement that Tascam has incorporated in the 244 is the capability for bouncing to *adjacent* tracks. (Bouncing is the procedure for moving a track or tracks to another.) Without that capability, you can fill only two tracks before having to combine them onto the remaining nonadjacent track. With it, you can fill three tracks and bounce to a fourth for a mono consolidation of basic rhythm elements, for example. Or, later on in the recording process, you might want to do live bounces in stereo from Tracks 1 and 2 to Tracks 3 and 4, adding a particular overdub on the left and then reversing the process to get another on the right. In any case, adjacent bouncing increases the number of

parts you can put on tape without having to mix down to another deck. Both decks have this capability; Ashley has gotten eleven tracks on his Fostex, though he and Payson average eight or nine.

If you are your own guitarist, drummer, keyboardist, engineer, and producer—as I am—you're going to need a footswitch for punching. (Punching is the ability to go in and out of RECORD in sync with the other tracks.) Otherwise, the only way to punch in is to hit RECORD and PLAY simultaneously and the only way to punch out is to stop the transport. Of course, doing that while playing an instrument at the same time is impossible, unless you specialize in one-handed instruments. The optional Tascam footswitch costs \$25; the Fostex costs \$15. A word of warning: Both machines tend to leave a small but audible click on the "out" side of a punch because of the distance between the erase and the record heads.

A handy feature in these ministudios is their pitch control, which can vary the speed and therefore the pitch of an entire track. This is particularly useful for overdubbing keyboards that are tuned slightly too high or too low or for taking the track down a key when recording high vocals. Each unit has peak overload LEDs, a 4-digit fluorescent tape counter, jacks for two headphones, and a button to bring the tape back to zero automatically.

The Tascam 244 uses DBX Type II noise reduction, while the Fostex 250 uses Dolby C. Under some circumstances, both systems tend to pump the high end (make *(Continued on page 97)*)



Tascam's second Portastudio, the Model 244



Fostex's first Multi-Tracker, the Model 250

ROBERT CURTIS

Reviews

T-Bone Burnett: *Trap Door*

Reggie Fisher & T-Bone Burnett, producers. Warner Bros. 1-23691

"It's a funny thing about humility: 'Soon as you know you're bein' humble, you're no longer humble.'" sings T-Bone Burnett on the title track of this six-song EP. "It's a funny thing about life: You've got to give up your life to be alive." Pithy pearls of wisdom, perhaps, though not the stuff of Top 40. Not usually, at least; with "Trap Door," Burnett has a shot at changing that.

Burnett long ago revealed himself to be a cunning songwriter, both as coleader of the Alpha Band, and on his own. (His solo debut of two years ago, "Truth Decay," was a critical smash but a commercial failure.) What's more, he has enough basic blues, rockabilly, and country in him—and enough good sense—to keep his music lean and rocking.

Lyrically, Burnett manages to cover a lot of ground here, including a chance encounter with an air-headed go-go dancer (*I Wish You Could Have Seen Her Dance*), what could be construed as a dig at industrialist Norton Simon and his "art museum in Pasadena" (*A Ridiculous Man*), and a version of *Diamonds Are a Girl's Best Friend* that will remind no one of Marilyn Monroe, as T-Bone recites (literally) the classic Jule Styne words in his deadpan Texas drawl. *Poetry* is ambiguous: It might be a straight love ballad or a paean to God. (Burnett is a veteran of Bob Dylan's Rolling Thunder Revue and a Christian himself.) It matters little, however, because he rarely proselytizes. Also, Burnett has a sense of humor, a rare quality in most born-again types.

As for the music, he and coproducer Reggie Fisher have given the songs a healthy pop sheen, with layers of jangling, Byrds-ian guitars. They might even have a hit on their hands with *Hold on Tight*. If so, it will be a welcome turn of events for an artist who has labored in obscurity for too long.

SAM GRAHAM

Don Henley: *I Can't Stand Still*

Don Henley, Danny Kortchmar, & Greg Ladanyi, producers. Asylum E 1-60048

Arriving within weeks of former partner Glenn Frey's post-Eagles solo album, Don Henley's "I Can't Stand Still" offers strong evidence that it was Henley, the band's most powerful singer, who provided that platinum monolith with a conscience. In contrast to the warm-hearted but slight pop/soul of Frey's "No Fun Allowed," Hen-



DENNIS KEELEY

T-Bone Burnett: rock & roll meets Marilyn Monroe

ley's new songs bristle with an edgy, anxious intelligence and a brooding rock energy. Thematically, he reaches well beyond the Eagles' usual romantic concerns, covering such issues as nuclear arms, declining literacy, TV journalism, and sexual hypocrisy.

Cynics might understandably expect those investigations to wind up as creative pratfalls. But the same seasoned pop craftsmanship that enabled him and Frey to compress a deceptive richness and detail into their three- and four-minute meal tickets enables Henley to tackle these more daunting subjects with impressive success. If anything, his more caustic thrust highlights his songs' economy. This is particularly true of *Dirty Laundry*, *Them and Us*, and *Johnny Can't Read*, a deceptively breezy assessment of a teenager's vanishing potential in a world of permissive excess.

Producers Henley, Danny Kortchmar, and Greg Ladanyi focus on compact ensembles and hard-edged guitars and keyboards. If that represents a conscious step away from the aural luster of the Eagles' albums, Henley's songs still boast an ear-filling depth that showcases his own straightforward, muscular drumming. Even the selection of hired hands—familiar L.A. studio heavies, former Eagle Tim Schmit, John David Souther, Warren Zevon, and Chief-

tains Paddy Moloney and Derek Bell—proves astute throughout. Just why Henley brought such urgency to this work remains intriguing, given his credit line after a decade of Eagles hits. But what matters is that the urgency is there, providing fresh proof that Los Angeles' mid-'70s superstars haven't necessarily mellowed past their prime.

SAM SUTHERLAND

Al Kooper: *Championship Wrestling*

Bill Szymczyk, producer
Columbia FC 38137

Al Kooper's career can best be described as uneven. As a supporting player, he consistently adds an agile touch to whatever project he's hired for, but his own work has been so spotty that when six years passed without a Kooper solo album, no one really noticed.

It has been a long time since he has had a central role on an LP of even passable quality, so the affability of "Championship Wrestling" comes as a surprise. It has some of the improvisatory feeling of his "Super Session" with the late Mike Bloomfield (to whom he dedicates this album), and some of the brassy punch of his first edition of *Blood, Sweat & Tears*. Perhaps realizing his limitations as a singer, Kooper has divided the vocals among himself, Valerie

BACKBEAT Reviews

Carter, Mickey Thomas, and Ricky Washington, and filled out the disc with a pair of propulsive big-band rock instrumentals that feature the five-piece Tower of Power horn section.

The proceedings move along at a brisk clip, thanks to the tag-team format: Kooper's vocal on a percolating version of the blues song *I Wish You Would* blends into Carter's splendid, Mary Wells reading of the Motown-flavored *Two Sides (to Every Situation)*, which in turn gives way to a muscular instrumental, and so on. This makes the low spots easy to overlook, and the cast members are professional without sounding as though they're punching the studio time clock. Special credit should go to the LP's costar, guitarist Jeff Baxter, another musical utility man who has learned (in outfits like Steely Dan) how to take direction and contribute something unique.

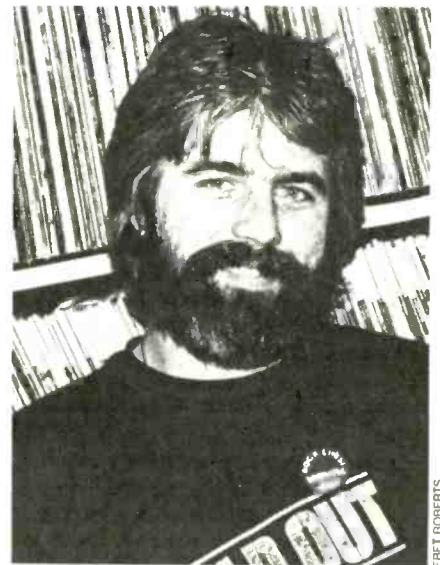
There are a number of diverting pleasures on "Championship Wrestling": Washington's General Johnson impression on the note-for-note replication of the Chairmen of the Board's *Finders Keepers*; Vince Colaiuta's powerhouse drumming on the instrumentals *Snowblind* and *Wrestle with This*; Carter and the Tower of Power horns doing a capable "caucasian" (as the credits point out) run-through of Clarence Carter's *I'd Rather Be an Old Man's Sweetheart (Than a Young Man's Fool)*. Kooper's albums have rarely been as impressive as his resume as a sideman, but this brawny exhibition isn't bad at all. MITCHELL COHEN

Jack Mack and the Heart Attack: Cardiac Party

Glenn Frey & Allan Blazek, producers. Warner Bros. 123733

One of Hollywood's more improbable (and, until now, local) musical phenomena is a ten-piece band that picked the very height of the town's infatuation with new rock to head in the opposite direction. Jack Mack and the Heart Attack isn't the first Los Angeles ensemble to style itself after a lost pop fashion, nor is it the first to choose '60s soul as its model. But after nearly two years of playing the club circuit, it now looms as the most convincing of its kind around, its original repertoire of vintage Stax, Volt, King, and Motown covers now replaced with new material you'd swear you first heard on an Otis Redding album fifteen years ago.

The front man, vocalist Max Gronenthal, has recorded under his own name for Chrysalis in a more contemporary, pop/rock vein. Here, he zeroes in on the timeless romantic and sexual obsessions of his forbears (Redding, Wilson Pickett, James Brown, and the late Sam Cooke among them), mastering their various mannerisms with enough high spirits and good humor to elevate his work above mere mimicry. Just when you've earmarked precisely which



McDonald: caressing emotional borders

singer he is reincarnating, he'll slip in a sly melisma or gruff shout shamelessly stolen from elsewhere.

Likewise, the band will spice an otherwise letter-perfect Stax/Volt slice of Memphis soul with a twin bass-vibes figure straight out of Motown. And, with fully half the group on horns, it can take familiar chorus figures from old classics and give them new life through sheer windpower and precision. Coupled with an array of guitar figures and organ lines that all sound time-warped from 1966, the band's partying verve is practically irresistible.

Less obviously, Gronenthal, leader Claude ("Jack Mack") Pepper, and associates revisit the comparatively simple emotions of that era. The singer may verge on heartbreak, but you know he isn't seriously alienated. Gronenthal's composite matinee hero is gruff, sexy but courtly, and delivered with enough hyperbolic force as to be at least partially tongue-in-cheek.

As an admitted denizen of the band's Thursday sets at Club Lingerie, I admit that I view the prospect of a major album with mixed feelings, since it will doubtless discourage as many spirited covers of neglected soul gems from Eddie Floyd, Rufus Thomas, James "Soul Brother Number One" Brown, and even Wayne Cochran. But former Eagle Glenn Frey and production partner Allan Blazek have done a superb job of capturing this band's live, dance-crazy spirit. SAM SUTHERLAND

Michael McDonald: If That's What It Takes

Ted Templeman & Lenny Waronker, producers. Warner Bros. 23703-1

It's hard to believe that "If That's What It Takes" is really Michael McDonald's first solo album. Between being the backbone of the Doobie Bros., a frequent collaborator with other artists, and the most imitated

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singer in pop, McDonald has seemed like a one-man genre. *SCTV* caught it best in a parody that found a breathless McDonald careening from session to session in his Mercedes. He has far from worn out his welcome, however, and if this record fails to hit the highs of his best work with the Doobies, it has the distinct advantage of having his voice on every track.

With a soulful style as smooth as salted butter, McDonald's pop is the best kind of romantic corn. A suburban soul man, he doesn't push his voice to the emotional edge as much as he caresses the border. The laconic chords that open *Playin' by the Rules* cue us into another of those relationships where "love don't always rhyme." McDonald is a master at this sort of seductive scolding, and the next tune, *I Keep Forgettin'*, is an album highlight that packs an ironic smack. "I keep forgettin' we're not in love anymore," sings the guy who clearly is, and the supple rhythm with which the line is delivered keeps us similarly suspended. With a voice like McDonald's, though, you can't help but think that the woman is going to melt all over again.

McDonald stretches his bluesy instincts by writing with a variety of partners—Ed Sanford on the above pair and one apiece with Kenny Loggins and Jackie De Shannon. Loggins sticks around to sing just like James Taylor on *I Gotta Try*, the Doobie-est track on the album, while De Shannon cowrote the upbeat title song about being ready to please. McDonald may not mouth more than modest sentiments, but he sings them better than almost anybody. On *I Can Let Go Now*, he's alone at the piano with a flock of strings hidden in the wings. It's as if we wandered into some deserted Holiday Inn bar long past midnight and found this guy playing to an audience of one. We order a bourbon but it's not really necessary—the smoky timbre of the piano man's voice warms our soul.

JOHN MILWARD

The Persuasions: Good News

Jerry Lawson, producer
Rounder 3053

In the hands, or rather, the larynxes of the Persuasions, a cappella harmony strips inspirational soul music to its essence. Basic emotions are mirrored and refracted, split into high, ecstatic wails and deep, sorrowful moans. The harmonizing acts as a fraternal support system: Lead singer Jerry Lawson celebrates the imminent arrival of a lover, and the tenor and bass echo his jubilation; he gets a Dear John letter, and they're a chorus that helps him curse his fate. There is such an intricate balance in this group, and its members have honed their sound to such a precision-point over the years, that there seems to be no genre beyond their grasp. In live performance, the Persuasions can make Kenny Rogers' *The*

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PETER YATES

The Persuasions: a cappella harmony honed to a precision point

Gambler sound like a piece of hard-won wisdom. With good material, they are simply transcendent.

"Good News" falls short of their greatest record, 1977's "Chirpin'," but it is a fine album nonetheless. It is revelatory in the way its arrangements and performances connect the "pop" songs originally done by Sam Cooke with the gospel music that formed his style. *Ain't That Good News* becomes a song about romantic reconciliation that could just as easily be about the coming of the Lord. *Soothe Me*, with its Jerry Lawson-Herbert Toubo Rhoad trade-off duet (in the manner of Sam & Dave, who also cut the song), makes an explicit correlation between the carnal and the spiritual, as the soul is cleansed of sin by a woman's "powerful love."

The Cooke songs—there are two others, *Cupid* and *I'll Come Running Back to You*—set a standard that the rest of "Good News" doesn't quite reach. It misses the mark on a churchy rendition of Shirley & Lee's *Let the Good Times Roll* and in the exaggerated despair of *I Lost Everything (I Ever Had)*—even his dog gets run over by a car. *Swanee River Medley (Raise 'em High, Ol' Man River, and Swanee River)* doesn't deliver what it promises in concept because the cultural and racial history embodied in the choice of songs is just too complex. The *Persuasions* bring dignity to a difficult transformation from slaves to minstrels, and the singing is exhilarating, but in the midst of an album that is predominantly a survey of contemporary soul, it's a jarring musical commentary.

It's indicative of the *Persuasions'* range that they can go from what amounts to a revisionist reading of Irving Berlin and Stephen Foster to a group showcase on an Everly Bros. teen-dream ballad. *All I Have*

To Do Is Dream and the album's concluding number, *I Won't Be the Fool Anymore*, are the closest "Good News" comes to classic doo-wop and the streetcorner sound is pure and affecting. This has not been a very good year for most kinds of music, but with new albums by Willie Winfield and the Harptones ("Love Needs"), Eugene Pitt and the Jive 5 ("Here We Are"), and now the *Persuasions*, perhaps 1982 will be remembered as a banner year for veteran black vocal groups. MITCHELL COHEN

Romeo Void: Benefactor

Ian Taylor, producer
415/Columbia ARC 38182

Romeo Void's most prominent identifying characteristics are the unpredictable saxophone bleatings of Benjamin Bossi, a crackerjack rhythm section, and Debora Iyall's cynical, analytical view of sexual transactions. As the singer and lyricist for the band, she guides its nervous excursions, bluntly declaiming her impatience with sentimentalism. Love, as she sang on Romeo Void's very impressive first album, is "a condition independent of its object." Songs on "It's a Condition"—*Myself to Myself*, *Talk Dirty to Me*, *White Sweater*—and on the four-song followup EP "Never Say Never" (coproduced by the Cars' Ric Ocasek), were so musically sharp and so distinctively expressive that "Benefactor" comes as something of a letdown. It is a wobbly second effort, incisive at times, cluttered at others.

Leading off with a truncated, remixed, and bowdlerized (a certain four-letter word has been obscured) *Never Say Never*, "Benefactor" continues the combination of rock momentum, jazzy saxophone outbursts, and Iyall's frankness. But the word-

play isn't as clever, the melodies aren't as immediately captivating, and the playing that sounded terse and lively now sounds murky. There are exceptions: *Flashflood* shows an alertness to the tension and small betrayals that can lurk under a relationship's surface; *Shake the Hands of Time*, which offers matter-of-fact advice to a woman pining over a man ("There's no money in boyfriends," says Iyall), is a direct rocker; and *Chinatown* captures the chaos of its San Francisco namesake.

The rest has a disconcerting effect. Iyall's determination to cut through romantic illusion is undermined by her impenetrable metaphors on *Ventilation* and *S.O.S.* And for all the talk about sex—sweaters tumble, shirts are lifted, passion is aroused, quickies are negotiated—the attitude is too chilly for its own good. There is a definite snap to *Undercover Kept* (what a tortuous construction), but, like so much of the LP, it gives off seedy signals.

Typical of Romeo Void's method is the way it covers the Isaac Hayes-David Porter song *Wrap It Up*, effectively subtracting the good-natured lust brought to it by Sam & Dave. Iyall, it seems, is so jaded that she takes "Wrap it up/I'll take it" literally: for her, the song comes down to bodies for barter, an appraisal and an offer. There's no absence of talent in Romeo Void, but on "Benefactor" its cheerlessness and antiromanticism are a drag.

MITCHELL COHEN

Shoes: Boomerang

Shoes, producers
Elektra 60146-1

What comes back when you let a guitar-happy quartet loose on a dozen well-crafted pop songs? "Boomerang," the third big-time album from the Shoes, one of the best rock-pop bands to emerge from the late '70s and the unquestionable kings of Zion, Illinois.

The Shoes are fans who made their fantasy come true. They grew up on the '60s pop stylings of the British Invasion, from the Beatles to the Zombies, and are now part of a Yankee lineage that includes early '70s groups like the Raspberries and Big Star. Instead of honing their craft before a live audience, they dabbled in front of a tape recorder and eventually came to duplicate the tricks of their chosen trade. The result is that while the Shoes are reminiscent of everybody, they also possess their own kind of rubber sole.

The production of "Boomerang"—this is the group's first self-produced effort on Elektra—falls between the light pop of 1979's "Present Tense" and the sharper edge of last year's "Tongue Twister." *Mayday* displays the band's hard-rock kick, with scratching rhythm guitars and echoing voices clustered around the hook that is its title. *Curiosity*, which comes complete with a cat that tempts danger, is pure pop with a

lyrical mix of acoustic and electric guitars. Between these poles sits *The Tube*, as lightweight as its subject of network television and just as addictive. Its tricks are a solid rock beat and production flourishes that the Beatles might have used on "Revolver."

The Shoes are a breezy pleasure but something more than frivolous. What they lack in profundity they make up for in fun, and when it comes to pop-rock, such charm can be the key to the toybox. It may be the chirpy *Double Talk* or the adolescently elegiac *Tested Charms*, but when you play "Boomerang" you're likely to find yourself humming along. JOHN MILWARD

Jazz

Tony Dagradi: *Lunar Eclipse*

Jonathan Rose, producer
Gramavision GR 8103 (260 W.
Broadway, New York, N.Y. 10013)

Tony Dagradi's second album as a leader conjures up any number of associations with his New Orleans home base, itself a stomping ground for strong and inventive jazz players and composers. Dagradi looms as a bright young hope in both those categories, and in its best moments, "Lunar Eclipse" blends deceptively sophisticated sources and techniques into music at once earthy and ethereal.

Far from seeking a mere showcase for his ripe lyricism on tenor and soprano saxes or his more contemplative style on bass clarinet, Dagradi has assembled a sure-footed quintet whose exhilarating interplay lends a coherence to the whole work. Acoustic bassist Jim Singleton, drummer John Vidacovich, and percussionist Mark Sanders add deft touches to their timekeeping, while Dagradi's reeds share the front line with Dave Torkanowsky's precise and often percussive keyboards.

Although Dagradi's occasional use of dissonance and a gruff, squealing tone attest to his familiarity with bop and free jazz, his pieces display a traditionalist's sense of song structure, turning up vivid themes for the rest of the band to explore. In that sense, Dagradi's role as a leader seems consistent with his supporting role in Carla Bley's band, often probing a similar balance between straightforward compositional maps and the more atmospheric interludes that point up Afro-American sources.

Production, by Gramavision label founder Jonathan Rose, is clean and spacious, highlighted by first-rate pressing and mastering. Dagradi and his partners apparently have remained content to stick close to home for live work, but if their stage sets match the lucid power of these tracks, he should seriously consider calling a travel agent: A nation of jazz fans would be grateful. SAM SUTHERLAND



Dagradi: Deceptively sophisticated

Preservation Hall Jazz Band: *New Orleans, Vol. II*

Allan Jaffe, producer
CBS FM 37780

About half of the original Preservation Hall touring band is still performing: clarinetist Willie Humphrey, now eighty-one; drummer Cie Frazier, seventy-eight; and the group's younger (under fifty) tuba player and manager, Allan Jaffe. Seventy-seven-year-old Percy Humphrey replaced Dede Pierce on trumpet, and the relatively young pianist Sing Miller and trombonist Frank Demond replaced Billie Pierce and Jim Robinson, respectively. On tour, this lineup maintains a remarkable consistency from year to year. (The bands at the Hall itself in New Orleans change from night to night.) To put it another way, it always seems to play the same things the same way. But on "New Orleans, Vol. II," recorded in December, 1981, there are some startling changes.

For one, clarinetist Humphrey has moved into a low-register style in which he noodles around provocatively. He uses a mellow, woody tone, sometimes rising up to the high singing style that was his earlier métier. His brother Percy leads the ensembles with an easy, casual command, not taking too many solos—or rather, refraining from doing so, given the way he slumps on the stage as if barely tolerating his surroundings. But that's just bandstand boredom. When he sings *Shake It and Break It*, *The Bucket's Got a Hole in It*, and particularly *Down on the Farm*, he comes to gloriously shouting life, with the whole band sizzling around him.

The third key member here is Demond, a remarkable young trombone player whose broad, gutsy tone provides

just the strength and attack that this group needs. He does not sound in the least like his predecessor Robinson: if he echoes any older player it is Jimmy Archey, who never even performed with the original band. "New Orleans, Vol. II" is a hopeful sign that Preservation Hall's tradition will be carried on for many years to come.

JOHN S. WILSON

Bobby Sherwood and His Orchestra: 1944-1946

George H. Buck, Jr., producer
Circle CLP 28 (3008 Wadsworth
Mill Pl., Atlanta, Ga. 30032-5899)

Despite its considerable merits, Bobby Sherwood's '40s big band left almost no mark on jazz history. This is partly because its leader had too many irons in the fire—he was an actor, a singer, an arranger, and a disc jockey. A child of vaudeville, Sherwood was onstage at the age of seven playing banjo. When Eddie Lang, the first jazz guitar virtuoso, died in 1933, a nineteen-year-old Sherwood took his place as Bing Crosby's accompanist. As a studio musician in Hollywood, he played guitar and trumpet; in the early '40s he played in Artie Shaw's band.

In 1942, Capitol Records asked Sherwood to put a big band together. The group's first record was *The Elks Parade*, a Dixieland piece much like Bob Crosby's *South Rampart Street Parade*. It was such a hit that the band took to the road and toured for the next seven years with Sherwood at the helm.

The fact that he went from big band Dixieland in 1942 to pure Stan Kenton in 1946 (*Sherwood Forest*) is indicative of his range. This disc, the first commercial release of the band's 1944-46 Lang-Worth transcriptions, shows a broader, more pop-oriented vision than Sherwood's Capitol records did. Edgar Sampson's *Blue Lou* (a Chick Webb and Benny Goodman hit) and Sherwood's *356 in the Books* are right out of the '30s Swing idiom. His capabilities as an arranger shine on Bix Beiderbecke's *In the Dark*, which he built around Eddie Lucas' English horn and Hal Becker's piano, and *After Hours* (later retitled *Theme for a Dream*), is a rich pastel with Kentonian saxophones. And it's fascinating to hear the Gershwin-Kern tune *A Sure Thing*—now treated as something rather precious and special—played as just another contemporary pop tune, as it was in 1944.

Though Sherwood is a strong presence on trumpet, he does not take all the solos. Rather, he gives ample space to his excellent sidemen, notably tenor saxophonist Herbie Haymer and trombonist Skip Layton, who is wonderfully broad and brash. Indeed, Sherwood was not one of the major big-band leaders, but this disc reminds us that he could have been. JOHN S. WILSON
(Continued on page 98)

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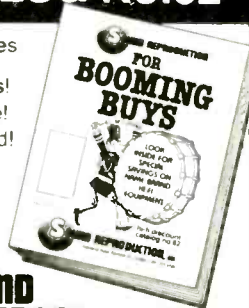
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BÉATRICE AND BÉNÉDICT

(Continued from page 60)

out. Not only does Berlioz intertwine speech and song; he manages to interlace all the other male characters in Somarone's Act I doings, setting us up for the role that he plays in the ultimate coming together of Béatrice and Bénédic. In the Oiseau-Lyre and DG sets, Somarone is reduced to his Act II drinking improvisation, well enough sung in both cases, but reduced to a random piece of fluff. (All three recordings, incidentally, seem to me to miss an opportunity here by failing to take into account that even Somarone's first stanza is an improvisation. It's just a more successful effort than the second.)

While we're on the subject of choruses, I have to register a complaint about all three recordings: I can't make out the words. In none of the recordings does there seem to have been much effort to include words as part of what's being performed. Again, Berlioz has built a great deal of variety into the score. In the case of the epithalamium, Don Pedro in fact complains of not being able to make out anything except the first words, "Die, tender spouses," which sentiment he understandably finds rather alarming for a wedding celebration. ("He's a little . . . bourgeois, the general," the aggrieved Somarone comments in an aside.)

On the other hand, when Béatrice breaks off the opening-chorus reprise, she complains specifically about the puerile rhymes. And on purely subjective grounds, I'd like to hear no effort spared in the great Nuptial March, where Berlioz suspends all kidding to affirm his deep-seated belief that there is something uniquely rewarding at the other end of the premarital grief that Héro, Béatrice, and Bénédic are going through.

The Nuptial March is one number in which DG's Daniel Barenboim seems to me to have miscalculated somewhat: The basic outline is there, but it's all a bit limp in contour. Otherwise he gives a perfectly sound reading—not long on imagination,

but reasonably responsive to what's happening in the music and generally livelier than the Davis/Philips performance, which lacked the freshness and sparkle of the Oiseau-Lyre. Would it be wildly impractical to hope for a midprice reissue of the latter, packaged with printed texts that include the complete spoken dialogue?

There's not much to choose in the smaller roles. I have to believe that a full-voiced contralto (I'll bet Lili Chookasian could still manage it) might make more of Ursule's contributions to the Duo-Nocturne and the Act II trio than Helen Watts (Oiseau-Lyre and Philips) and Nadine Denize (DG) do. Denize sounds to me like a potentially exciting Béatrice, but Ursule's writing really lies awfully low. I'm not sure, on the other hand, that a great deal can be done with the bits of music provided for Claudio and Don Pedro (Léonato is an entirely spoken role). In the case of Claudio, the few midrange singing tones still available to DG's Roger Soyer prove surprisingly useful.

As matters stand, you almost have to have both the DG and Philips recordings, along with a complete libretto from some other source, in order to make any kind of sense of *Béatrice*. Pressed to a choice, I'd probably go with DG, on the strength of Minton and Domingo. **HF**

BERLIOZ: Béatrice et Bénédic.

CAST:

Héro	Ileana Cotrubas (s)
Béatrice	Yvonne Minton (ms)
Ursule	Nadine Denize (ms)
Bénédic	Placido Domingo (t)
Somarone	Dietrich Fischer-Dieskau (b)
Claudio	Roger Soyer (bs-b)
Don Pedro	John Macurdy (bs)

Geneviève Page, narrator; Chorus of the Orchestre de Paris. Orchestre de Paris, Daniel Barenboim, cond. [Werner Mayer, Steven Paul, and Michael Horwath, prod.] DEUTSCHE GRAMMOPHON 2707 130, \$21.96 (two discs, manual sequence).

COMPARISONS:

Veasey, Mitchinson, Davis	Ois.-Lyre (OP)
Baker, Tear, Davis	Phi. 6700 121

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BRAHMS'S SONATAS

(Continued from page 55)

What an embarrassment of riches we have in these performances. If I begin by singling out the young Liverpool-born clarinetist Janet Hilton, it is merely because her artistry is new to me; her counterparts Richard Stoltzman and George Pieteron are known commodities. Hilton commands a gutsy, full-throated basset-horn sonority in her lower register and achieves a rapturous lyricism without either forcing or becoming kittenish. Her musical and interpretive impulses are notable for their naturalness. Peter Frankl's knowing work at the keyboard furnishes sympathetic support. The reverberant Chandos sound, however, sometimes, lends a tackiness to the piano in fortissimo passages (I would like more weight and definition, more solidity) and a hint of shrillness to the clarinet's high notes.

Philips provides a weightier, more appropriate sound for its team. Pieteron, the Concertgebouw Orchestra's principal clarinetist, recalls his distinguished predecessor Bram de Wilde, and Robert Marcellus of Szell's Cleveland Orchestra, with his dark, full-bodied sound and decidedly forthright style. Again there is a suggestion of the basset horn, but Pieteron shows less flexibility and grace than do Hilton and Stoltzman. For some, these performances may be too monochromatic, yet they have an undeniable ring of authenticity. The late Hephzibah Menuhin seemed a bit timorous and prosaic in some of her performances with brother Yehudi, but this beautifully reproduced disc is a worthy memorial to her fastidious musicianship; here the lack of coloristic variety sounds purposeful—and in keeping with the ideal established by Pieteron. (Hephzibah, incidentally, recorded these sonatas once before, with Gervase de Peyer on a 1959 Angel disc released only in Japan.)

Color, on the other hand, is the thing one notices most in the Stoltzman/Goode collaborations. The American clarinetist, who is fast becoming another James Galway, commands an utterly bewitching palette. Or perhaps that word should be "displays," for I sometimes have the impression that Stoltzman—something of a pied piper—is following himself, destination unknown! An improvisational gift is a wonderful thing, and I don't mean to belittle it; yet I often feel that Stoltzman's "sensitivity"—an almost tangible object—hovers over the music like a divining rod, responding to stimuli but never quite putting them into place. He will nudge a phrase slightly to make it "go," but then he will nudge it again in a different direction. This is lovely, ravishing playing to be sure, though a bit too precious for Brahms. And as with Hilton/Frankl and, to a lesser degree, Pieteron/Menuhin, lyricism often wins out here over drive and momentum. In his notes for this record, Michael Steinberg aptly sug-

gests that "for the first movement of the E flat Sonata, Brahms asks for an *allegro* that is *amabile* (and, one might add, for an *amabile* that is still *allegro*)." Time and again in these otherwise splendid performances, Steinberg's point has been overlooked. Richard Goode is an uncommonly congenial partner; in fact, I wish he had been *less* obliging and more purposeful. The sound, as resonant as Chandos', has rounder tone and greater clarity; in its way, it is just as realistic as Philips'.

I will pass over the Nolan/Spillman performances; while honest and competent, they are not geared for comparison at the highest level. The recording, though well balanced, is flat and cramped, and Bruce Nolan, for all his carefully prepared phrasing, sometimes has difficulty wrapping his tongue and fingers around the notes. Robert Spillman plays strongly and, like his partner, sincerely, yet the production betrays a pervasive amateurishness. (Why, for example, publicize the use of a Schirmer edition, "edited by Eric Simon"? The other performers presumably use either the original Simrock or the Vienna Urtext.)

Everyone knows that Brahms transcribed these pieces for viola (he also made violin transcriptions, virtually never performed), yet few are aware of the many options awaiting prospective performers of the viola versions. In making the transplants, Brahms added a few double-stops here and there and—more crucially—transposed some passages down an octave from the clarinet originals. A few of these transpositions entail minor changes of notation, since the revised figurations would otherwise exceed the low-C cutoff point of the viola's lowest range.

The cult of textual fidelity has reached mammoth proportions, and all three violists here (with one or two tiny exceptions from

Bernard Zaslav) play the music "as Brahms wrote it." But Brahms *didn't* write it that way; he hastily *arranged* it from the aptly conceived clarinet versions. While some of the changes suit the viola superbly, many of the transpositions—like the notorious passage in the first movement of the E flat (bars 117–19)—make for a clumsy, tonally monotonous effect. On a recording, balance *per se* is not necessarily a problem, as it would be in concert; even so, the piano almost swamps the viola, since both are playing in the same dark, low register. This is a classic case of misplaced purism. Some older-generation violists—William Primrose comes to mind—preserved the mellifluous *quality* of the viola arrangements but judiciously restored some passages to their clarinet register.

Yehudi Menuhin, though perhaps not a great violist (his sound is a bit light and "stuffy"), is certainly a great soloist, and that cannot be said of most of today's violists, oriented as they are toward chamber music. However one reacts to his liberties, he brings a sense of courage and conviction to this music unheard since the days of Primrose and (even farther back) Lionel Tertis. Louis Kentner, too, is a real stylist at the keyboard, even if he does commit flamboyant excesses now and then. Interestingly, these older-generation players generally favor rapid tempos, and the resulting performances—which I certainly hope will be released domestically—have constant mobility and interest.

An entirely different but equally attractive point of view shapes the new Tree/Goode performances. Michael Tree produces a lustrous, deeply sonorous sound, and if his outlook is just a shade plebeian, his deeply considered, forthright interpretations seem to have struck a more responsive chord in Goode, who here

BRAHMS: Sonatas for Cello and Piano: No. 1, in E minor, Op. 38; No. 2, in F, Op. 99.

Lynn Harrell, cello; Vladimir Ashkenazy, piano. [James Walker, prod.] LONDON CS 7208. \$10.98. Tape: CS 7208. \$10.98 (cassette).

Miklós Perényi, cello; Zoltán Kocsis, piano. [Jenő Simon, prod.] HUNGAROTON SLPX 12123. \$9.98.

Christoph Henkel, cello; Elisabeth Westenholtz, piano. [Robert von Bahr, prod.] BIS LP 192. \$10.98.

BRAHMS: Sonatas for Violin and Piano (3). BRAHMS, DIETRICH, and SCHUMANN: Sonata for Violin and Piano, in A minor (F-A-E).

Toshiya Eto, violin; William Masselos, piano. [Masamitsu Kurokawa, prod.] NONESUCH HB 73034. \$11.98 (two discs, manual sequence). Tape: N6 73034. \$11.98 (cassette).

BRAHMS: Sonatas: No. 1, in G, Op. 78; No. 2, in A, Op. 100; No. 3, in D minor, Op. 108.

BRAHMS: Sonatas for Clarinet and Piano, Op. 120: No. 1, in F minor; No. 2, in E flat.

Janet Hilton, clarinet; Peter Frankl, piano. [Brian Couzens, prod.] CHANDOS ABR 1020. \$13.98. Tape: ABT 1020. \$13.98 (cassette). (Distributed by Sine Qua Non Productions, 1 Charles St., Providence, R.I. 02904.)

George Pieteron, clarinet; Hephzibah Menuhin, piano. PHILIPS 9500 784. \$10.98. Tape: 7300 858. \$10.98 (cassette).

Richard Stoltzman, clarinet; Richard Goode, piano. [Max Wilcox, prod.] RCA RED SEAL ARC 1-4246. \$12.98 (digital recording). Tape: ARE 1-4246. \$12.98 (cassette).

Bruce Nolan, clarinet; Robert Spillman, piano. GOLDEN CREST RE 7094. \$8.98.

BRAHMS: Sonatas for Viola and Piano, Op. 120 (2).

Yehudi Menuhin, viola; Louis Kentner, piano. [John Fraser, prod.] EMI ASD 4039. \$11.98 (distributed by German News Co., 220 E. 86th St., New York, N.Y. 10028).

Michael Tree, viola; Richard Goode, piano. [Max Wilcox, prod.] NONESUCH D 79031. \$11.98 (digital recording). Tape: D4 79031. \$11.98 (cassette).

Zaslav Duo (Bernard Zaslav, viola; Naomi Zaslav, piano). [Roy Christensen, prod.] GASPARO GS 215. \$8.98.

BRAHMS

(Continued from page 55)

sounds more authoritative and massive than with Stoltzman. The piano sound, though a bit boomy, is commanding. These performances have a sobriety and grand clarification if less sheer temperament than those of Menuhin and Kentner.

Like Tree—a member, of course, of the Guarneri Quartet—Bernard Zaslav is also a fine quartet violist (in the Vermeer and, formerly, Fine Arts). He plays beautifully, with even a more gorgeous sound—on a Guadagni of magnificent qualities—and a more curvaceous grace than Tree's. But the Gasparo disc, for all its warmth and musicality, suffers from a curious—and crucial—flaw: Whether because of the playing or its reproduction, one cannot clearly hear all the piano's chordal harmonies. This incompleteness of voicing plays hob with Brahms's carefully devised voice-leading and counterpoint, ruining the Zaslavs' *con amore* teamwork. **HF**

MOZART'S STRUGGLES

(Continued from page 57)

While only complet Mozartians are likely to want to have *all* the early quartets, a representative selection will be useful for nonspecialists. An apt choice is the well-varied group of four (including Nos. 8 and 13, cited above for their fugal finales) presented by the Sequoia Quartet (founded in 1972), a group of young Japanese and Americans who won the 1976 Naumburg Award. I have had qualms about the extremely cool remoteness, even impersonality, of some of the Sequoia's earlier releases. But just such qualities neatly counter the usual tendency to romanticize or inflate this mostly lightweight, quintessentially rococo music—agreeable enough in itself, but significantly substantive only for its instructive contrasts with Mozart's later work in the medium. Nonesuch's digital recording is first-rate and not oppressively close, the acoustical ambience at least lukewarm, and there are extensive jacket notes by Dr. Robert Winter of UCLA.

Anhang: As if inspired by the music, all the manufacturers involved here have supplied admirably quiet-surfaced disc pressings (the Japanese Denon example is best of all) and—in the case of the DG and Nonesuch singles—musicassettes that are sonic spit-tin' images of their disc counterparts. With only a couple of exceptions, all significant score repeats are observed (the Melos skips both of those in the *Hunt* Quartet finale; the Prague skips those in the finales of Nos. 20 and 23); this for the benefit of listeners who care about such details—and most passionate Mozartians do! **HF**

UPGRADING YOUR SYSTEM

(Continued from page 44)



ence between lukewarm praise and an enthusiastic rave, and you should look for that difference as you read: Some components really do stand out from the crowd.

But beware if the enthusiasm is for the first appearance of genuinely new technology. There are risks associated with novelty, and when you buy the first models of a new genre, the odds tend to favor poor reliability and early obsolescence. Looking back, the first transistor amplifiers turned out to have high crossover distortion, the first digital time-delay devices were failure-prone, the first direct-drive turntables had severe infrasonic rumble, the first high-compliance phono cartridges suffered from resonance-induced flutter, and so on. If what you want is a lasting investment in music-listening pleasure, wait for the second-generation product: It will not only be more reliable, but chances are it will also be cheaper, since the early buyers will have paid for the development cost of the new technology.

When shopping, pay attention to product features—especially those that add cost and complexity without a commensurate gain in useful performance. If an amplifi-

THE AUTOPHILE

(Continued from page 19)



er's high-cut filter provides the same gradual rolloff as the treble control, why pay for the extra switch? If you listen to only three FM stations, why pay extra for a digital tuner with twelve presets? And when comparing two-way and three-way loudspeakers, don't assume that the three-way is better just because it has an extra driver. At a given price, two good drivers and a carefully tailored crossover may yield better sound (and consistency) than three individually cheaper drivers and a complicated crossover network. Ultimately you must listen, using good recordings. If something sounds better, it *is* better—regardless of what the sales brochures say about the technology.

One final hint: In many localities, equipment prices vary during the year according to a predictable pattern. For instance, many new-product introductions occur during the autumn, so manufacturers choose the late summer to clear out remaining inventories of current models at bargain prices. And in product categories such as loudspeakers and recording tape, which don't change much from year to year, inventories often build up during the slow-selling summer months and need to be unloaded. For both of these reasons, exceptional buys are commonly available in Labor Day or "back-to-school" sales. Similarly, in some areas it has become customary for stores to plan large Washington's Birthday sales in February, coinciding with similar promotions by automobile retailers. Of course, stores tend to be crowded during those heavily advertised sales, making listening difficult, so do your comparisons early and decide in advance what you want to buy. **HF**

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when laying out a new car stereo system are a narrow-band equalizer (preferably used with a test tape and a sound level meter) and a few hours spent evaluating potential speaker locations—using temporary cardboard enclosures if your speakers haven't any of their own.

The Delco-GM/Bose Music System does not represent the first collaboration between sound system designers and automakers, and I'm sure it won't be the last. I've heard a number of very credible-sounding factory-installed sound systems in cars such as the Nissan Leopard and the Mitsubishi Galant, some of which will probably be offered in this country soon. Blaupunkt is also said to be at work on a super system for use as an option in various German luxury cars. The Delco/Bose effort, though, is an important step forward, because it proves out in a single project *all* of the virtues of collaborative design. It may also introduce millions of people who don't know beans about high fidelity sound to the sonic delights of our avocation—audio's first mobile ambassador at large, as it were. Meanwhile, I'm trying to finesse another week on the road with that Caddy. **HF**

ANATOMY OF AN ALBUM

(Continued from page 85)



Determined to make the most of my time, I met with designer Spencer Drate who seemed to identify strongly with the humor suggested by some of the album cuts. He thought, as I did, that the title and a few of the songs were food-oriented. The end result is a cover picture of me sitting in a Chinese restaurant (actually a photographer's studio) about to gulp down a heaping bowl full of "What It Is."

Finally it was time to start the mix. Processing and perfecting twenty-four tracks of musical information to get a two-track stereo master tape can be an excruciatingly tedious, time-consuming job. With Bongiovi, however, it's anything but tedious. He mixes with a certain reckless abandon (not unlike myself when recording) and accepts the whatever-will-be-will-be theory, occasionally allowing accidents and mistakes to be crowning moments of creation. Instead of running through the same song twenty, fifty, or a hundred times

before arriving at the "perfect" mix, Tony is apt to run through it two or three times. The intros and tags might have to be mixed separately and edited in later, or a middle section might have to be inserted, but usually after only four hours—unlike the usual twelve or more—we would have our final mix. By the end of the first week, Tony (who had by now been named coproducer), Jimmy Bralower, and I had had four very productive sessions together.

Then we went on hold (again) and I received word that Portrait and Tony wanted to bump two of the cuts from the album. The prospect of having to start all over again—i.e., to write two new songs—was maddening to me. More lyrics to be conceived, more arrangements to be hammered out, more takes, both good and not-so-good. Actually, I replaced one track with a tune I had written three years ago. It was Lennie's enthusiasm for it that convinced me to put it on the album. (The lead vocal and guitar parts for it were taken directly from the demo I recorded on my eight-track, but don't tell anyone.) The other song was *brand* new, which is to say that it was written on the 34th Street crosstown bus on the way to the Power Station in a frantic flurry of half inspiration and half perspiration. Admittedly, the prevailing hurry-up-and-wait climate of these last few weeks of production has tried my patience, but I just keep telling myself that it's all for the creation of the Best Possible Record.

At this writing, we're still mixing. Once we have the two-track stereo master in hand, we'll move into the cutting room, from which we'll get a test record, or acetate. That will be listened to by me, Tony, Jimmy, my manager, label executives, and anyone else whose job it is to care. Upon approval by all interested parties, the go-ahead will be given to cut the master disc.

Disc-cutting is probably the trickiest single step in the record-making process; a master tape that sounds like a million bucks can be reduced to a real bargain-brand record with the wrong equalization or over-corrective limiting that squashes all fidelity and dynamics right out of the music. In the same way that there are different ways of producing a record, there are different styles of cutting it. For that reason, the choice of cutting room and cutting engineer can be fairly subjective. I've left the decision up to Tony, though I fully intend to show up for the actual session.

From the cutting room my master tape will get shoved into a vault, and the master disc will go to the CBS pressing plant in Pitman, N.J., which will not only press the records but ship them in their jackets to the distribution branch. As for me, there are more songs to write, possible appearances with a live band, a contract to renew, and more albums to record. [There is also more waiting: The album was just bumped to a January release date. *C'est la music biz.* George.—Ed.] **HF**

INPUT OUTPUT

(Continued from page 86)



high-frequency sounds seem to pulse), and since the noise reduction is in at all times there is nothing that can be done about it. Both Ashley and Payson complained that there was no provision for user head alignment, a significant omission. Payson's Teac had a 6-dB difference between input and output when he bought it; he had to take it all the way back to the factory to have it adjusted.

In the metering department, the Fostex wins hands down, since it monitors record input on all four tracks simultaneously. The Tascam monitors record input on only two of its four meters. This is a prime consideration, particularly if you plan to do a lot of live recording.

On the other hand, the Tascam's wide variety of send-and-receive and panning possibilities renders it far more versatile than its competitor, especially in the mixing phase. In addition, the 244's EQ system, which Payson aptly describes as "quasi-

parametric," is "sweepable," meaning the center frequencies are variable (from 62 Hz to 1.5 kHz and from 1 kHz to 8 kHz), instead of fixed as in the Fostex.

Regardless of which machine might pique your interest, there are some common caveats. Although it's true that the minis are self-contained, for quality recordings you're going to need some outboard gear. For instance, such slim, slow-moving tape leaves little margin for error in recording levels, which means you'll probably need to compress the dynamic range to control those levels. Of the seven mini users I know, six of them use the MXR compressor/limiter (I paid \$110 for mine) and some alternate it with a less expensive Dynacomp or similar device to get a harder sound on certain instruments, especially guitars. Payson uses a DBX 163 compressor/limiter, which is more of a pro than semipro item. But for about only \$100 more than the MXR, its superior quality may be worth your investment.

The EQ bands on the minis cover very broad frequency ranges, which is fine for mixing, but for recording you'll want to be able to work within narrower, more specific bandwidths. The Roland Boss six-band graphic equalizer is a good choice, as are the MXR ten-band graphic and the Ibanez parametric.

I'd also recommend some kind of delay: Without it, your tracks will tend to sound as if they were recorded in a small, soundproof box. There are dozens of echo/reverb units available. On the low end (around \$125) are various guitar toys (choruses, flangers, phasers, etc.) that simulate tape echo. You might also consider mono spring reverb. If you do decide on reverb, I'd recommend a unit with a tone control of some kind. Reverb gets very muddy if it is too bassy and extremely strident if it has too much high end. But almost any kind of delay is better than none, since it gives the mix more depth.

You may be wondering at this point whether it's worth going the ministudio route if you have to invest in all this outboard gear. The answer is easy: You're going to need the extras in a more elaborate home setup anyway. Relatively speaking, the minis are very inexpensive; they're also portable, easy to use, and very fast. In fact, most owners consider speed among their greatest virtues. Of course, one should have no illusions. Any decent demo studio can deliver a far better sound than either the Tascam 244 or the Fostex 250. Nevertheless, the mini is yours twenty-four hours a day, it specializes in your music, and it teaches you all the basics of recording. And that, for the price, is not bad at all. **HF**

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South Frisco Jazz Band: Oliver begot Watters begot Murphy begot South Frisco

BACKBEAT REVIEWS

(Continued from page 91)

South Frisco Jazz Band:

Live from Earthquake McGoon's

Bob Erdos, producer

Stomp Off S.O.S. 1027

Uptown Lowdown Jazz Band:

In Colonial York, Pa.

Bob Erdos, producer

Stomp Off S.O.S. 1030

(549 Fairview Terrace, York, Pa. 17403)

Both Lu Watters' Yerba Buena Jazz Band of the '40s and its successor, the Turk-Murphy band, patterned their sound on King Oliver's Creole Jazz Band of the early '20s. Not only did they follow the two-cornet lead of Oliver and Armstrong, but they also drew their repertoires from the oft-neglected works of Jelly Roll Morton, Oliver, Armstrong, and the black Chicago musicians of the '20s. Murphy's band is still active, playing at its leader's night club in San Francisco, Earthquake McGoon's. In the time since Murphy succeeded Watters in 1951, a generation of young musicians has built band styles and repertoires based on the '40s Watters-Murphy approach to the '20s Oliver-Morton-Armstrong style.

The South Frisco Jazz Band is led by banjo player Vince Saunders and includes two one-time Murphy sidemen in cornetist Leon Oakley and tuba player Bob Rann. It is based far south of Frisco, in Orange County; the Uptown Lowdown Jazz Band, led by cornetist Bert Barr, is a Seattle band. Both groups use Watters-Murphy arrangements and compositions (the former's *Big Bear Stomp* and *Annie Street Blues*, the latter's *Bay City* and *I Am Pecan Pete*). And both are blessed with unusually strong and salty trombonists. South Frisco's Jim Snyder has already built a reputation in Chicago with the Salty Dogs, while the Uptown's Dave Loomis is a fresh and vigorous voice. Both two-cornet teams have punch and

drive, but the two clarinetists miss the rough, sour-edged drive that Bob Helm brought to the Watters band. Still, it is encouraging to find tradition-oriented musicians moving towards exploratory models and away from deadly Dixieland repetition. JOHN S. WILSON

Art Tatum: The Genius

Alan Bates & John McKellan producers
Jazz Man JAZ 5024 (First American Records, Inc., 73 Marion St., Seattle, Wash. 98104)

This disc exposes a rarely heard facet of pianist Art Tatum's musical character in that one full side is devoted to his compositions. As a performer he drew from the pop and light classical repertory. Although he was not known as a blues player, his own pieces seemed to move instinctively toward the blues. He was known as a melodist, but his compositions are not particularly melodic.

Among the originals are a pair of fast boogies and a pair of easy blues. The former might have been played by Albert Ammons were it not for Tatum's breathtaking runs; the latter are relaxed and swinging but, like the boogies, wear thin after two minutes. His most interesting pieces are derivative. *Gang o' Notes* suggests Bix Beiderbecke until it turns into a flashing flare of Tatum virtuosity. *Just Before Dawn* is pure Willie (the Lion) Smith in his *Rustle of Spring* mood.

The second side is the more staid Tatum. Recorded by American Recording Artists (ARA) in the mid-'40s, this is a collection of standard tunes that, for the most part, he never went back to again. They include a striding *Song of the Vagabonds*, a *Runnin' Wild* that evokes thoughts of Teddy Wilson decorated with Tatum runs, and a *Memories of You* that keeps threatening to turn into composer Edward MacDowell.

JOHN S. WILSON

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