August 1979 \$1.50 CHINA: A Surprising Audio & Music Revolution The Editor's Exclusive Firsthand Report



Tape Special

40 Cassette-Deck Features: Which Do You Really Need?

First Lab/Listening Tests

3 New Cassette Decks with the Latest Technology



UNDER RE

For years, people have been selecting turntables based on specs obtained in a lab, without knowing what kind of sound they'll obtain in their homes.

And while a few turntables today look as good as Pioneer's PL-630 on paper, you'd be hard pressed to find one that sounds as good in your living room.

A SUSPENSION SYSTEM THAT ELIMINATES SHAKE, RATTLE & ROLL

In your home, simply walking across the floor can cause the stylus to skate across your records.

And acoustic feedback can make even the most lively piece of music sound dull and lifeless.



Pioneer's PL-630, however, has a free floating suspension system that isolates the platter and tone arm from the rest of the turntable. So that while the base may vibrate, the platter and tone arm won't. Which means you don't have to tip-toe across the floor just to prevent vibration. And you can turn your music up loud enough to rattle the walls without fear of rattling the turntable.

A DIRECT DRIVE MOTOR THAT WON'T DETERIORATE WITH OLD AGE.

All DC direct drive motors start out to be incredibly accurate.

Unfortunately, they don't always stay that way. After a while, the quality of sound

could deteriorate because the motor is left exposed and free to collect dust The electronic br of the PI-630 and foreign objects.

This is not the case with the PL-630. Unlike most of the competition, its motor is totally enclosed. Which means that the incredible wow and flutter figure of 0.025% will still be an incredible 0.025% years from now. And so will the 0.002% speed accuracy.

What's more, the electronic circuitry of this Quartz PLL Hall element system constantly monitors itself. When it senses the slightest deviation in speed, it corrects itself. By just switching the quartz "lock" on, you lock onto the correct speed, so you're assured of accurate platte speed at all times and under all conditions.

And because of its extremely high torque, the PL-630 reaches full platter speed in a mere third of a revolution.

But more importantly, it stops almost as quickly as it starts. Reverse current is fed into the drive system eliminating both excessive wear on the turntable and the need for a brake.

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eliminates record static permanently with only one application!



UNTREATED RECORD

Stanton introduces Permostat, the <u>only</u> record care product that eliminates record static permanently with just a single application. Permostat is a new and uniquely formulated fluid, which with just one application to a record totally eliminates static without any degradation in sound quality...and prolongs the life of your record.

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To demonstrate Permostat's unique anti-static qualities, Stanton engineers constructed a dust chamber to perform accelerated dust pickup tests. In this test, three records were suspended vertically

BRAND X

PERMOSTAT

anti-static record preservative from STAINTON

within the chamber, the first untreated, the second treated with anti-static products currently available (piezo electric guns, fluids, cloths and conducting brushes) and the third treated with Permostat.

Under test conditions, <u>only</u> the Permostat treated record showed no visible evidence of dust pickup and no residual charge.

Each Permostat kit provides protection for 25 records (both sides). Just spray it on, buff it in and eliminate static for the life of your records.

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Suggested Retail: Complete Kit...\$19.95 Refill...\$15.95

For further information contact: Stanton Magnetics Inc., Terminal Drive, Plainview, New York 11803

STANTON

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AUGUST 1979

VOLUME 29

NUMBER 8

HIGH FIDELITY

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with full tape copy capability

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After the music is recorded, and before it becomes a record, how do the top executives of A&M Records listen to Peter frampton, Chuck Mangione, and their other stars? On the Technics RS-1300. Why? Because of its outstanding frequency response, constant tape speed and low wow and flatter. In fact they were so impressed, A&M Records bought seven more.

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Like all our open real decks, the RS-1520 has Technics "Isolated Loop" tape transport system. By isolating the tape from external influences, our "Isolated Loôp" minimized tape tension to a constant 80 grams. This not only provides extremely stable tabe transport and low head wear, it also reduces modu ation noise to the point where it's detectable only on sophisticated testing eq_ipment.

Electronically, the RS-1520 is equally sophisticated. And the reasons are as simple as IC full-logic controls. A highly accurate microphone amplifier. FET mixing amplifie: And separate 3-position bias/EQ selectors.

The RS-1520, It meets the high standards of A&M Records for the same reasons the RS-1500 does: FREQ. RESP. 30-30,000Hz, \pm 3cB (\rightarrow 10dB rec. level) ct 15ips. WOW & FLUTTER: 0.018% WRMS at 15ips. S/N RATIO: 50dB (NAB weighted) at 15ips. SEPARATION: 50dB. START-UF TIME: 0.7 secs. SPEED DEVIATION: \pm 0.1% with 1.0 or 1.5 mil tape at 15ips. SPEED FLUCTJATION 0.05% with 1.0 or 1.5 mil tape at 15ips. PITCH CONTROL: \pm 6%. TRACK SYSTEM: 2-track 2-channel recording, playback and erase: 4-tradk, 2-channel playback.

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fact: the phono cartridge is the heart of hi-fi...



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Manufacturers of high fidelity components, microphones, sound systems and related circuitry. Circle 37 On Page 97 VIDEO TOPICS

HIGH FIDELITY

If You Show Me Yours . . .

Hi-fi—with stereo? This seems to be the year of quality TV sound, as manufacturer after manufacturer announces upgradings in the audio sections of 1980-model TV receivers. Of three major U.S. companies that have done so— Magnavox, Sylvania, and RCA—the last also is talking about dual speakers and simulated stereo, possibly as a prelude to stereo-sound reception.

Two-channel sound (either for stereo or for bilingual voice tracks) is one of several areas now under investigation by the Federal Communications Commission for possible adoption here. It already is in use in Japan (where it was tried out as long ago as the Osaka World's Fair), and AT&T has announced availability of a second audio channel for network or other feeds via U.S. phone lines and involving diplexers at the sending and receiving ends.

Any sort of regular stereo broadcasts on the U.S. TV channels are, insiders believe, at least two years away, however. The MCA/Philips/Magnavox video discs already offer stereo sound, and Hitachi and Sony both have (in Japan) home video cassette recorders with the capability—which is not actually built into the VCR decks sold in this country.

Time war (p). The whole world seems to be up in arms about VCR recording times as companies try to outdo each other in what can be time-warped from the broadcast schedules for subsequent viewing. Sony, Hitachi, and Toshiba all had been reported working on 41/2-hour Beta decks that employ a slower transport speed to get the extra time. Then the ante was upped to 5 hours in announcements from Toshiba and Zenith. In the midst of this, JVC announced a 3-hour deck, which doesn't sound like much until you realize that it is the sole holdout against the slower VHS speed and that other VHS companies are offering twice JVC's playing times as an option. JVC's approach was to go for thinner (and hence longer) tapes, rather than slower speed; and, sure enough, TDK guickly announced a 3-hour (high speed — 6 hours at the slower one) VHS blank cassette. By mid-May, RCA had jumped in with its 6hour VHS deck, but by using a third speed instead of the thinner tapes. And Matsushita is expected to announce momentarily a 6-hour Panasonic model, possibly

employing RCA's ultraslow speed.

Across the ocean, meanwhile, Philips has been rumored for some time to have a second VCR design in the works to counter the erosion of its once preemptive hold on the European videorecorder market by the Japanese designs. This month it is expected to introduce (in Berlin) a system that will record for 8 hours. The way things are going, you may be able to put the whole "Forsyte Saga" onto a single tape by the end of the year.

Heads up! The industry is watching one other development over its shoulder: fixed-head recorders. All of the current cassette systems use rotating video heads for high tape-to-head speeds (and, therefore, bandwidth) at only moderate transport speeds (and low linear tape consumption, needed for long record/play times). In effect, the helicalscan rotating heads' diagonal video tracks let tape width substitute for the tape lengths needed to achieve comparable times with fixed heads. But fixedhead systems involve fewer parts and less complexity, potentially making them less expensive and bulky. Thus they are seen as real competition to home sound-movie cameras, while the VHS and Beta portables now available may appear clumsy extensions of home hardware by comparison.

Most talked-of among the fixedhead systems is BASF's LVR (Longitudinal Video Recording). The company, which is based in Germany, has been letting it be known here and abroad for some time that LVR development is complete and that a U.S. manufacturing facility should be turning out recorders for worldwide sale by the end of this year.

Toshiba also has a system, evidently using 220 parallel tracks (much more than BASF) on tapes that run one hour in standard lengths and achieve track changes on its tape loop without the momentary loss of output that is said to occur with BASF's system. Toshiba's, too, is called LVR; while it is a "longitudinal video recording" system, it is not compatible with (let alone identical to) BASF's.

Even more difficult to assess is Kodak's system. There can hardly be anyone in the industry unaware that Kodak has been working on it for some time; its existence in the laboratory is just about the only specific that Kodak has not refused

The annof the noiseless

Like most music lovers, you've probably had it with the scratchy surface noise that always seems to ruin the music on your records. Well, dbx® Encoded Discs™ make record surface noise a thing of the past. When decoded with the new dbx Model 21 Disc/Tape Decoder (or dbx Models 122, 124 or 128 Noise Reduction Systems) and played back through any quality stereo system, dbx Encoded Discs reproduce music as you've never heard it before. Music with exceptional clarity and realism against a background of silence. Sound that is virtually indistinguishable from that of the original master tape.

For the past 50 years claims have been made for new breakthroughs in record technology, but until now no vinyl record has been free from the record surface noise that has plagued even state-of-the-art digital and direct-to-disc records. For the first time you can experience at home the emotional impact, excitement and musical sparkle of the finest studio master tapes — from dbx Encoded Discs.

With the cooperation of many respected record labels, dbx has obtained superbly engineered master tapes for remastering as dbx Encodec. Discs. By use of unique dbx noise reduction technology, the surface noise on dbx Encoded Discs is typically 30dB lower than on conventional records, and in many cases, they will provide up to a 50% increase in dynamic range (the difference between the loudest and the quietest music passages).

dbx ||

On conventional records, load passages of music are cut on the master disc as widely-spaced grooves Music of wide dynamic range, therefore, requires limiting the playing time of each LP side. Even worse, music peaks are often compressed to allow cutting narrower grooves, while quiet passages are boosted to keep the signal above the record surface noise level.

Limiting, compression and "gain riding" of the music signal need not be employed when producing dtx Encoded Discs, because of the unique operation of the dbx encode/decode process. The full dynamic range present in the original master tape is provided by dbx Encoded Discs without restricting playing time. Any noise you'll hear will more than likely be the noise that was present in the original master tape. Turntable rumble and groove echo disappear along with the record surface noise, while inner-groove distortion is reduced as well.

dbx Encoded Discs have been described as the most significant advance in recorded disc technology since the introduction of stereo some 25 years ago. However, this is something you should judge for yourself. Visit your nearest dbx dealer and let him play a dbx Encoded Disc through the dbx Model 21 Disc Decoder on any quality stereo system. You too can enter the new, noise-free world of recorded music for less than the cost of a fine phono cartridge.



Yamaha, the industry

When we set out to improve on our industry-acclaimed receivers, we knew we had a tough task ahead of us. How do you top being the first in such precedentsetting developments as built-in moving coll head amps, negative feedback MPX demodulators, pilot signal cancellation circuits, and the same amazingly low distortion throughout our entire line? After much continuing research, effort and unique care in design, we have the answer. It's called the CR-2040, the first in Yamaha's new line of receivers that does what only Yamaha could do. Outdo ourselves.

Unique continuously variable turnover tone controls. This unique Yamaha innovation gives you the tonal tailoring characteristics of both a parametric and a graphic equalizer. Without the added expense of having to purchase either. For instance, in addition to boosting or cutting the bass control \pm 10dB, you can also very the turnover frequencies between 100 & 500 Hz to compensate for speaker deficiencies, room anomalies, etc., for unparalleled tonal tailaring flexibility.

Built-in moving coil head amp. More and more listeners are discovering the begutiful experience of

130 126

Cantinuously variable loudness contour. This control compensates for the ear's decreased sensitivity to bass and treble tones at low volume levels. And you're not just limited to compensation at only one specific volume setting as with other manufacturers' on/off-type loudness switches. The Yamaha continuously variable loudness contour assures you of full, accurate fidelity at any volume setting you choose. Another Yamaha exclusive!

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music reproduced with a moving cail cartridge, s as Yamaha's newly introduced MC-1X and MC-1S. Discover this exquisite pleasure for yourself with the	e YAMAHA NATURAI	YAMAHA NATURAL SOUND STERED RECEIVER CR-2040		
CR-2040's built-in moving coil head amp. This ultra- noise head amp provides an ultra-quiet 86dBS/Nr		FM	88	
	VIPOWER OVERLOAD	'AM	• •	
BASS FLAT 10 320 3 400 4 10 5 5 10 400 4 12 13 12 12 12 12 12 12 12 12 12 12	32 2 2 4 3- 3 4 4 4	TRE 3.2, 6,4 2.5 8 2 10 «Hz	EBLE 2 FLAT 2 - +	

to assure you of capturing all the high-end detail and imaging the MC experience affords. All you'll miss is the extra expense and added noise of an outboard head amp or step-up transformer.

Independent input and record out selectors. If you're a tape recording enthusiast, this feature is something you won't want to be without. It lets you select the signal from one program source to send to the REC OUT terminals for recording while you listen through your speakers to an entirely different program chosen on the INPUT selector. You can also dub from one tape to another even while listening to an entirely different program. It's another example of why Yamaha is the industry leader. We build in what the others can't even figure out.

make previously unlistenable stations more clearly audible. All without your lifting a finger. And Yamaha's exclusive OTS (Optimum Tuning System) automatically locks in and holds the desired station when you release the tuning knob.





leader...leads again!

Advanced circuitry. All these advanced features are backed by the most advanced internal circuitry imaginable. Like the auto tracking pilot signal canceller. Yamaha invented pilot signal cancellation and now we've improved it further. A special circuit not only senses the incoming 19kHz pilot signal (which is a part of FM broadcasts), it also <u>automatically</u> tracks any signal fluctuation which might occur. This assures you of complete pilot signal cancellation for interference-free FM listening. Yamaha does it again!

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The tuner section has a Yamaha-exclusive Direct Current-Negative Feedback—PLL MPX IC provIding excellent phasing of the high frequencies for superb stereo separation and clearer sound. Our efforts to bring you the finest sound possible know no limits. Human engineering. As incredibly advanced and complex as the CR-2040 is, it is incredibly simple to operate. The front panel is arranged in a clean and logical manner with the larger primary operational controls located on the central forward panel, and the smaller tone-tailoring controls located on the lower panel. It takes a minimum of effort to set up the CR-2040 for maximum listening pleasure.

The functionally beautiful front panel is complemented by the beautifully functional ebony grain veneer cabinet. The elegant appearance of ebony is the perfect finishing touch to the extraordinary CR-2040.

And the CR-2040 is just one of a whole new line of receivers from Yamaha. Each one offers, in Its class, the ultimate in features, performance and pure musical pleasure. Visit your local Yamaha Audio Specialty Dealer and see and hear for yourself how we've outdone ourselves. He's listed in the Yellow Pages. Or write us: Yamaha, Audio Division, P.O. Box 6600, Buena Park, CA 90622.

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VIDEO TOPICS

to discuss. The rest, therefore, is conjecture, but it is supposed to be a fixed-head system incompatible with the others. One source close to the project told us early this year it "definitely" would be introduced in March. It wasn't. Still it hangs in the air, like the sword over Damocles' heac, unmoving but threatening those rash enough to take on the industrial/ marketing giant.

The other side. The compatibility disarray that these developments are visiting on video tape presumably would cause amusement in the video disc camp were it not as embroiled as it is with its own conflicts. The Magnavision disc (Philips et al.), having swept through Atlanta like General Sherman, has moved on to the Seattle market. Pioneer, Which offers an industrial player for the system, has hinted that it may have an announcement for the home market next October. In view of this, RCA is said to have redoubled its efforts on behalf of the SelectaVision disc system. Matsushita, JVC, and Toshiba are reported almost ready to jump into the fray-possibly with proposals that their systems be combined with each other's and/or RCA'sthis year. Sylvania (perhaps just to be different) is talking about 1981. Sony, too, has a video disc in the lab. "But," a weary reporter was heard to remark, "who doesn't?"

The Achilles' heel of Magnavision, say its competitors, is the price of its player — nearly \$1,000 — occasioned by its laser-technology complexity. Though some of the alternatives are (like Magnavision) optical, some are putely mechanical, and proponents of both system types usually postulate lower initial selling prices and greater hope of further savings with mass production. RCA has long estimated the SelectaVision player at \$400. Matsu;hita says its player may cost even less.

In case... If you are one of those compulsively active types and plan to take your video deck with you to make on-location tapes, Cases, Inc. (1745 W. 134th St., Gardena, Calif. 90249), has a line that, it states, includes models accommodating all ½-inch and ¾-inch formats. Exteriors are glass fiber laminated to plywood with steel reinforcements and aluminum edging; polyurethane foam lines that interiors. **HF** 4 x 10 3-way Power Handling 25 watts

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Audiotex – for Sound-Good-Longer Sound

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SOUNDINGS

HIGH FIDELITY

Those Misleading Manuals

by Robert Long

The vast majority of the cassette decks (from whatever country of origin) that I see fail what I consider to be an important test: They don't include adequate information about the tapes that will deliver the performance level specified by the manufacturer. Without that information, the user must rely on luck to get the performance level he has paid for.

The solution seems obvious. If the American importers or distribution agencies would undertake to prepare the tape lists, the minimum advantage would be correct nomenclature for our market so that purchasers would know what to ask for. I also assume that the excellent American-made tapes that now are overlooked because of limited distribution abroad would be included. It would afford the distributor the opportunity to test his products with the tapes actually available here (since the same designation may be applied to formulations that differ from one market area to another) to give both him and the user some idea of which types will deliver the best results. And if the tape lists were to be printed on separate sheets and inserted into the manuals, it would be much easier to keep them up to date.

But I have said all that before. What I would like to propose here is a specific way of solving two of the inherent problems. The first is that deck manufacturers are loath to offend friendly tape manufacturers—those with whom they have worked closely in preparing their designs—by omitting any of the latter's formulations. The second, which grows out of the first, is that tape lists show how to get best results with those tapes but not how to get best results with the deck; the lists show which are the most appropriate switch settings for each tape but not which tapes will be flattest.

Let's say that a major tape manufacturer with international distribution and an engineering force that works closely with the component people offers two ferric formulations: Zip-Plus (a fairly cheap type of moderate coercivity and rather low sensitivity) and Super-X (with relatively high coercivity—and therefore requiring more bias current and/or different recording equalization—and sensitivity). Deck manufacturer A wants his ferric-tape specs to look good, so he designs for use with Super-X. But, since the deck will record (however poorly) with Zip-Plus, he lists it, too, in his manual, with the same bias and EQ switch settings for both, naturally, since both are ferrics. Manufacturer B, however, figures that chrome or similar tapes will be used for all true high fidelity recordings and that the straight ferrics will be chosen, when they are chosen, for their lower prices. He therefore adjusts his deck for the cheaper Zip-Plus but lists Super-X in his manual in case you want to record on it. If you buy both decks, you'll find that Deck A sounds grand with Super-X but is badly muffled—particularly with the Dolby switch on — with Zip-Plus; Deck B does quite nicely with Zip-Plus but sounds harsh and shrill with Super-X, though leaving the Dolby switch off helps somewhat. Yet both manuals list both tapes as equally appropriate. This state of affairs is, I submit, not only unacceptable, but remediable.

All deck manufacturers print response specs. Some aren't very useful, of course, because they don't tell you what level they're measured at or even how flat the response really is. (When the spec says " \pm 3 dB," it should mean that at least one response peak rises as much as 3 dB above midrange response; often it simply means that the implied 0-dB reference is arbitrarily placed below midrange response to eke out an extra kHz or so in the top-end figure with a curve that—for the same end frequencies —really should be specified as " \pm 1, \pm 5 dB.") But we can bypass those games if the manufacturer will supply his U.S. distributor with the reference curves on which the specs are based. He should do that anyway for any sort of quality control or warranty repair.

Using these curves as a reference, the importer could measure the available tapes. Any whose curves come close—say, no more than 1 dB worse than the reference—at all frequencies can be said to confirm specifications and should be listed 'as doing so in the manual insert. It can list recommended switch positions for other tapes as well, stating that these tapes will not necessarily match specs in all particulars. Brands that, for whatever reason, deliver poor results on the deck could be omitted. Or the importer could list the nonspec tapes generically ("all other low-noise ferrics").

It seems to me that a scheme of this sort would be as much to the manufacturer's advantage as the buyer's. When a major-brand tape doesn't sound right, it's often the deck that gets blamed. With a specific criterion for inclusion of tape on the "spec" list, the manufacturer is off the hook of having to assert that all of his friends' tapes are equally appropriate and therefore doesn't have to risk damaging his reputation with recordists for the sake of his valuable commercial friendships. If he adjusts his deck for Super-X, he can still list Zip-Plus among the also-rans without saying how far off spec it will be or in what respects. Meanwhile, you, as his customer, will know how to realize his ferric spec—with Super-X. Or am I being utopian?

Our 120's do something unusual. They work.

Anyone who uses 120 minute cassettes knows the tape is not only a lot thinner than the tape in a 60 minute cassette, it's also more susceptible to stretching, buckling, and tearing

A

mini

Yet few people realize the fault lies not in the tape itself, but in poorly constructed

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At Maxell, we build our cassettes to higher standards than the industry calls for. We use heavy-duty styrene in our cassette housing, special guide rollers with precision steel pins and Teflon slip sheets. All of which help eliminate sticking and jamming

So if you're looking for a 120, why look for trouble.

Try Maxell. The two hour cassette that's guaranteed to work.

Forever

HIGH FIDELITY NEWS



Bass gets a boost in KLH speakers

KLH's new line of computer-controlled speakers is designed around an electronic module called the Analog Bass Computer, which controls cone excursion by reading the power amp's output. The result, according to KLH, is distortion-free bass even in a small enclosure. The KLH-3 is said to produce bass flat to 40 Hz and has a recommended power range of 40 to 200 watts (16 to 23 dBW). A stereo pair of the KLH-3, with the Analog Bass Computer, costs \$420.

Circle 137 on Page 97

Dual joins metal-ready deck ranks

Dual's bid in the metal-ready cassette deck market is the 839RC, a front-loading Dolby model with automatic reverse in both recording and playback, electronic fade editing, and remote-control capability. The closed-loop dual-capstan drive system, with solenoid/logic controls, can be varied in drive speed and has memory stop in both fast-wind directions. Two LED displays indicate equalized recording levels. Other features include a switchable limiter, mike/line mixing, headphone level control, and a sixposition bias/EQ tape switch. Price of the 839RC is \$850.

Circle 117 on Page 97



Philips enters metal-tape market

Philips High Fidelity has re-entered the U.S. blank-tape market with five cassette tapes, including a metal-particle formulation with a rated coercivity of 950 oersteds, available in C-60 and C-90 lengths that cost \$8.50 and \$10, respectively. The nonmetal C-60 and C-90 tapes in Philips' line include Ferro (which also is available in C-120s), Super Ferro, Chromium, and Ferro Chrome.

Circle 139 on Page 97

Stereo on your headphones?

Kenwood has been doing some interesting research on why stereo doesn't sound like stereo with headphones and what to do about it. Or, to put it another way, the company has been attempting to pin down and collate all the diverse and sometimes vague knowledge that has been developed (particularly in the last few years) on the factors that alter our spatial perceptions so drastically when we turn off the speakers and put on the headset.

One of the new (to us) elements in this work is an attempt to compensate for head motions by adding or subtracting delays in the two channels so that, even when you (and the headphones) turn away, the sound source seems to stay right where it was. In addition, Kenwood has been working with equalization and reverberation to move the perceived sound out of the listener's head and around toward the front of the horizontal plane, where it would be in regular speaker-stereo listening.

Don't expect to buy a Kenwood superset based on these principles in the immediate future, however. The equations necessary to describe the phenomena the company has been investigating—and the circuitry necessary to accomplish the feats implied by the equations—are too complex to admit (at least for the present) of reasonable prices in any equipment based on them. But, since yesterday's laboratory phenomena are among today's commonplaces, who knows?

Continued on page 16

EVERY MUSICIAN SHOULD PLAY THIS KEYBOARD.



It controls the TEAC Model 124 Syncaset^{**}. Our first cassette deck that lets you record one track, then overdub the other to get two musical parts in perfect time. Later, you can mix live material with these two tracks and hear all three parts through your home sound system.

With the Model 124, you can accompany yourself or an existing piece of music, and record the result. Rehearse a tune or create one. Sharpen your ear for harmony and phrasing.

And develop your timing and playing skills while you're at it.

Dolby is a registered trademark of Dolby Laboratories, Inc.

After you've worked on your own music, enjoy the sounds of others. The Model 124 is an outstanding stereo cassette deck. High signal-to-noise performance. Low wow and flutter. Wide, flat frequency response. There's Dolby* NR (disabled in the "Sync" mode). Memory rewind for fast tape checks. And illuminated VU meters for easy level adjustments.

Probably better than anyone, we know the Model 124 can't give you all the multitrack flexibility and open reel performance you want. But at a third the cost of an open reel multitrack recorder, it could be the start-up tool you need. And when you consider the savings on tape alone, you'll find the Syncaset a handy, economical instrument to work with.

So try out the keyboard every musician should play. See your TEAC Multitrack dealer today for a demonstration of the Model 124 Syncaset."

TEAC Professional Products Group

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Circle 43 On Page 97

Nikko. Not Any Stereotype!



Unlike any stereotype. Nikko Audio actually delivers the seed of sound in our professional series.

The Gamma V Synthesized FM Digital Tuner has a LED readout showing lockedin MHz numbers. Accuracy on the button.

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6 HIGH FIDELITY



Set the stage for your sound

Soundstage has added two acrylic speaker stands to its line. The Grandstand will support a speaker weighing up to 125 pounds. Constructed of ¼-inch Lucite, the stand has a 15-degree tilt range to compensate for varying room conditions. The Grandstand costs \$49.95 in a clear finish, \$59.95 in bronze. Also available is a smaller model, the Adjustable, costing \$39.95 in clear and \$44.95 in bronze.

Circle 138 on Page 97

Tête-à-tête times three

Six heads—two each for erasure, recording, and playback—accommodate bidirectional recording and auto-repeat playback in Teac's X-10R open-reel deck, which offers two speeds (7½ and 3¾ ips), three motors, and a 10½-inch reel capacity. Rated frequency response is 30 Hz to 20 kHz. The X-10R also includes soundon-sound switching, tape monitoring, and a manual cue lever. It costs \$1,300.

Circle 141 on Page 97



Continued on page 18 Circle 7 On Page 97 ►



Phonograph record storage has two new facets from the technology of Discwasher Labs. Understanding the problems will make the cures very meaningful.



Cure for Record Sleeve Problems

Before VRP_M, record sleeves were generally paper, or "polybags," or "poly-lined" paper. Experiments show that paper can easily scratch records, and paper textures will imprint delicate vinyl under the conditions of summer heat. Many "polysleeves" and "poly-lined" sleeves will literally "ooze" plasticizers from the plastic onto discs and leave a clogging film. The polysleeve material generates static, and often sticks to the stored records.

The new Discwasher VRP_M sleeves are totally plasticizer-stable material that is measurably anti-static and so very smooth that records effortlessly "glide" out of the sleeve without scratching.

VRF_M−a refined record sleeve for recordings you value. Only \$2.75 for a pack of ten.





Cure for Storage Warp

Shelf storage at only 4° or 5° of slant will warp records even at room temperatures. And stuffing records into a tight shelf space makes album selection nearly impossible.

Enter the new DiscKeeper_™-a storage system of formed aluminum and solid walnut panels. Precision compression bars hold about 50 albums perfectly flat, perfectly upright, and pull forward to permit you to "page through" your entire stored collection as you would in a record store.

The DiscKeeper™ is \$65 of excellent furniture and unparalleled record protection.

Discwasher, the leader in high technology record care, now states the new art of record storage.



G discwasher, inc. 1407 N. Providence Rd.

Columbia, Missouri 65201

A home for your equipment

Akai's EQ-500 is one of five new equipment cabinets, all finished in hickory-grain laminates and offering varying degrees of flexibility. The EQ-500 comes with a smoked-glass door, three adjustable shelves, storage area for records or tapes, and casters. It stands 44 inches high, 23% inches wide, and 20 inches deep. All the models in the line, which includes a rack-mount cabinet, are user-assembled. Prices have not yet been announced.

Reversing 8-tracks

Frankly, we doubt that the decline of the 8-track cartridge's popularity can be reversed, but now its tape can, thanks' to a shell design patented by K. Rey Smith of KRS Magnetics. Until his shell came along, the only way you could back up the tape was by going the "long way around" the endless tape loop. REV-8, as the design is called, is available in 45- and 90-minute blank cartridges, and Smith says he hopes to see his shell used for prerecorded tapes in the near future.





Stay tuned with Rhoades Simulcaster

Rhoades' TE-500 TV-audio tuner delivers quality signals at levels appropriate for AUX inputs of the user's stereo system. There is no direct electrical connection to the television receiver; the 25-foot input lead gets its signal by picking stray radiation from the TV set's 4.5-MHz intermediate frequency. Thus whatever channel is tuned on the receiver will be picked up when the "probe" is placed near the receiver's IF strip (though usually outside its cabinet, according to Rhoades, which does not suggest use of its tuner in poor-reception areas). The tuner amplifies the IF signal and demodulates it. Separate mono and simulated-stereo outputs are provided. Rated frequency response of the TE-500 is 30 Hz to 15 kHz, and the price is \$129.95.

Circle 142 on Page 97

Superstation!

That's a word being used to describe the present status of a broadcast operation that has been in the forefront of FM (particularly, but hardly exclusively, classical-music FM) since this magazine was a pup: Chicago's WFMT. Considering its formidable reputation in both programming and signal quality, the epithet might have been applied earlier, but the specific reason for its adoption is that United Video is making the station available to cable operations nationwide via UV's channel on an RCA communications satellite. The FM station, multiplexed onto WGN-TV's signal (also from Chicago), can be picked up and distributed by any cable system equipped with a ground station for reception from the satellite. Thus WFMT is, in a sense, the nation's first "clear-channel" FM station



A as in Aardvark, B as in Bass....

The Bass Box from Aardvark Quark Audio uses transmission-line design and a 12-inch driver to add reproduction to the infrasonic range without interfering with the performance of the main system. According to AQA, placing the electronic crossover between the preamp and a separate bass amplifier allows a smooth transition between the bass unit and the stereo speaker pair by acting as an adjustable mixer/equalizer. Rated impedance of the Bass Box is 8 ohms, and recommended power is 75 watts (18¾ dBW). Price with the crossover is \$750.

> Circle 143 on Page 97 Continued on page 22

1979 TDK Electronics Corp. The standard bearers. IN OUT A INCOUT AIWA SHARP 介 A IN OUT NAKAMICHI 合 14 301 . AKAI IN OU TEAM A ONKYO TUNCOUT BIC OUT IN OUT A TECHNICS A IN JOLT IN OUT OPTONICA A CENTREX IN. OUT Â A TOSHIBA JVC N OUT PRIVEER IN OUT 合 IN OUT UHER Â 谷 KENWOOD ROYAL SOUND INE OUT 企 子 IN CUT YAMAHA OU A IN OUT LUX YORX NI OUT 子 SENSUI IN OUT Â A IN OUT 合 IN IOLET IN OUT SCOTT Â 备 MERITON SA **ATDK**

The high bias standard.

In the past few years, these fine deck manufacturers have helped to push the cassette medium ever closer to the ultimate boundaries of high fidelity. Today, their best decks can produce results that are virtually indistinguishable from those of the best reel-toreel machines.

Through all of their technical breakthroughs, they've had one thing in common. They all use TDK SA as their reference tape for the high bias position. These manufacturers wanted a tape that could extract every last drop of performance from their decks and they chose SA.



And to make sure that kind of performance is duplicated by each and every deck that comes off the assembly line, these manufacturers use SA to align their decks <u>before</u> they leave the factory.

Circle 42 On Page 97

Which makes SA the logical choice for home use; the best way to be sure you get all the sound you've paid for.

But sound isn't the only reason SA is the high bias standard. Its super-precision mechanism is the most advanced and reliable TDK has ever made—and we've been backing our cassettes with a full lifetime warranty* longer than anyone else in hi fi—more than 10 years.

So if you would like to raise your own recording standards, simply switch to the tape that's become a recording legend—TDK SA. TDK Electronics Corp., Garden City, NY 11530.





First Chair

That's the Jensen Separates car stereo speaker system. That's the thrill of being there.

First Chair. What better way to describe the Jensen Separates?

The finest, most accomplished car speaker system to date. With a revolutionary design that makes your car seat the best seat in the house.

It's a total departure from conventional car speaker design. Because acoustically, the interior of your car is nothing like your living room.

The Separates include two 6" x 9" woofers to be mounted in your car's rear deck. In this manner they utilize the large volume of the trunk to provide solid, deep bass response.

Two 2," phenolic ring tweeters mount high in the front doors to give you precise, transparent high frequencies. Two $3\frac{1}{2}$ " midranges beneath the tweeters let you enjoy all of the subtle-yet-important middle frequencies.

The Jensen Separates even come with an under dash control/crossover unit with individual controls for each tweeter and each midrange. This speaker system is also ideally suited for the advanced function of biamplification.

The Jensen Separates. The undisputed master of car stereo sound reproduction.

Artful, ever-faithful music. That's the thrill of being there. That's the Jensen Separates.



For more information, write Jensen Sound Laboratories, Division of Pemcor, Inc., 4136 N. United Parkway, Schilter Park Illinois 60176.



McIntosh

22

"A Technological Masterpiece..."



McIntosh C 32

"More Than a Preamplifier"

McIntosh has received peerless acclaim from prominent product testing laboratories and outstanding international recognition! You can learn why the "more than a preamplifier" C 32 has been selected for these unique honors.

Send us your name and address and we'll send you the complete product reviews and data on all McIntosh products, copies of the international awards, and a North American FM directory. You will understand why McIntosh product research and development always has the appearance and technological look to the future.

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If you are in a hurry for your catalog please send the coupon to McIntosh. For non-rush service send the Reader Service Card to the magazine.



The new OB-X from Oberheim is a polyphonic synthesizer of up to eight voices, with two oscillators per voice. Patches may be programmed direct to tape cassette for use with the 32-program memory. Other features are a five-octave keyboard, auto tune, polyphonic portamento and sample and hold, noise generator, and ADSR envelope shapers. Foot-pedal control connections include vibrato, volume, filter, sustain, and program advance. The four-voice version costs \$4,295, the six-voice \$4,995, and the eight-voice \$5,495.

Circle 145 on Page 97

Ibanez analog delay

Ibanez's AD-150 is a low-noise analog delay unit designed to achieve continuously variable delays of from 25 to 400 milliseconds. It features five front panel controls (input volume, delay time, repeat, delay level, output volume), an EFFECT/NOR-MAL mode switch, an on/off footswitch jack, and an output jack for mixing boards and special effects. The AD-150 can be used with virtually any audio source: electric guitars, keyboard instruments, mixing boards, or microphones. It sells for \$435.

Circle 146 on Page 97







Sound saver

Transcriber Company has developed a record-cleaning fluid that is said to remove microparticles without leaving a residue. The fluid is produced through a filtration, reverse osmosis, and de-ionization process; according to the company, it is at least ten times purer than waterbased fluids. Transcriber's Sound Saver Cleaner 1 is available in 1¼, 4, and 16 ounces, for \$2.25, \$6.00, and \$16, respectively. Bulk quantity refills are available for \$1,00 per ounce.

23

Circle 144 on Page 97

Two-story speaker from B&W

The Model 801, first in B&W's new Series 80 speaker line, is a three-way acoustic-suspension system constructed in two sections: The lower section contains a woofer that handles frequencies up to 400 Hz; a "head" assembly houses the midrange driver and tweeter, extending response up to 20 kHz. The crossover network is computer-calculated. Switchable attenuation controls are provided, as well as peak-sensing resettable protection devices on each driver. B&W expects to sell the 801 for approximately \$1,200.

Circle 140 on Page 97





The better your ear, the more you need new Audio-Technica VITAL LINKS! 24

Every wire, every connection in your stereo system is a source of trouble, a chance for losses which can keep your system from achieving its full potential.

Introducing three new Vital Link wire sets from Audio-Technica...each a positive step toward ideal performance and trouble-free operation.



Start at the cartridge with the AT609 Head Shell Wire Set. Color-coded, insulated wires with 14 strands of pure silver Litz wire, terminated in corrosion-free gold terminals. No losses, no Intermittents. Easy to install. Just \$6.95 and worth every penny.



Between turntable and amplifier (or any two stereo components) use new AT610a High Conductivity Cable. A stereo pair 60" long, plus an Independent ground wire with lugs. Each goldplated plug is colorcoded. Both resistance and capacitance are far

below ordinary cables. Only \$9.95.

For the most critical installations use our AT620 Superconductivity Cable Set. Two individual cables, each 48" long, with heavily goldplated plugs. Inside the wire shield is a second conductive



layer of polypropylene shielding. Special foam dielectric keeps capacity low, while superb conductivity is assured by using Litz-wire inner conductors with maximum surface area which reduces high frequency losses. The set lists for \$29.95.

From phonograph cartridge to loudspeaker, each audio system is a chain, no stronger than its weakest link. Connect your system with Vltal Link cables from Audio-Technica. At your A-T dealer now. Or write for our complete audio accessory catalog.







Pro disco mixer from Numark

Dubbed the DM-1300, Numark's new mixer achieves flexibility via two phono inputs, two line inputs, two microphone inputs, talkover capacity, and VU meters with switchable sensitivity. A dual-impedance headphone jack matches virtually any headset, and fader position markers facilitate level matching of several inputs. Suggested retail price is \$279.

Circle 147 On Page 97

Klark Teknik's Analogue Time Processor

DN-34 is a self-contained signal-processing device designed to achieve several effects: It will flange a signal (positive and negative), phase it, double-track it, change its pitch, add vibrato and chorus, and create Doppler effects. This Analogue Time Processor contains a compander, direct/delay-blend pot, feedback control, and sweep speed controls, as well as an LED headroom indicator. The manufacturer, Klark Teknik, rates the frequency response at ± 1 dB from 30 Hz to 15 kHz, the dynamic range at 90 dB, and maximum delay at 53 milliseconds. Suggested retail price is \$1,600.

Circle 148 On Page 97



WHICH NEW HIGH BIAS TAPE WINS WITH MAHLER'S FOURTH SYMPHONY?

Choose eight measures of Mahler's Fourth that are really rich in the high frequencies. The type of passage that high bias tapes are designed for.

Record it on your favorite high bias cassette, using the Chrome/CrO₂ setting. Then again on new MEMOREX HIGH BIAS.

Now play back the tapes.

We're convinced you'll have a new favorite.

New MEMOREX HIGH BIAS is made with an exclusive ferrite crystal oxide formulation. No high bias tape delivers greater high frequency fidelity with less noise, plus truer response across the entire frequency range.

In short, you can't find a high bias cassette that gives you truer reproduction.

Original menuscript sketch for the first movement of Gustav Mahler's Fourth Symphony. Courtesy of The Newberry Library, Chicago.

THE PLAN PLAN

MEMOREX Recording Tape and Accessories. Is it live, or is it Memorex?

MEMOREX 90

HIGH

HIGH BIAS

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HIGH FIDELITY

NEW EQUIPMENT REPORTS

Preparation supervised by Robert Long and Edward J. Foster. Laboratory data (unless otherwise noted) supplied by CBS Technology Center or Diversified Science Laboratories.

IN THIS ISSUE: Nakamichi 582 cassette deck, B.I.C. T-3 cassette deck, Sanyo RD-5370 cassette deck, Qysonic Array speaker, Sonus Gold Blue-Label phono pickup, Realistic STA-7 receiver.

IN PHOTOS AT RIGHT (from top): Nakamichi, B.I.C., and Sanyo decks.



Nakamichi Goes Metal

Nakamichi Model 582 cassette deck in metal case. Dimensions: 19% by 5% inches (front), 14 inches deep plus clearance for connections. Price: \$890; optional RM-580 wireless remote control, \$155; optional RM-10 remote control with 15-foot cable, \$60. Warranty: "limited," one year labor, four years parts. Manufacturer: Nakamichi Corp., Japan; U.S. distributor: Nakamichi U.S.A. Corp., 1101 Colorado Ave., Santa Monica, Calif. 90401.

There are three similar models in Nakamichi's current cassette-deck line. The 580 introduced the series; the 581 added the metal-tape recording capability and employs its separate recording and playback heads as though they were a combined record/play head; the 582's independent recording and playback electronics (which includes four Dolby circuits, as opposed to the 581's two) adds full monitoring to the 581's capabilities and \$120 to its price. Performance specifications for the two models are identical, however, and the only difference in front-panel features is the 581's omission of the SOURCE/TAPE monitor switch.

The 580 series mechanical transport is unusual in (among other things) approximating the sort of operation generally associated with solenoid/logic controls with no solenoids or electronic logic. A separate motor drives the elaborate cam that provides the "logic"; the main drive motor runs the dual-capstan system whose rotating parts are engineered to spread out rotational resonances so they don't act cumulatively to compound the flutter and modulation noise inherent in tape systems; a third motor drives the rewind and takeup hubs.

Independent screwdriver bias and recording-level (Dolby-tracking) adjustments are provided on the front panel for each channel, and for each tape type. The tapes are identified by the designations Nakamichi uses in its own brand: EX for ferric (specifically, a relatively high-bias ferric comparable to Maxell UD or UDXL-1, TDK AD, Scotch Master 1, or the like), SX for chrome and chrome-equivalent ferricobalts



INTRODUCING TI-IE IEMPIRE IEDR.9 PI-IONO CARTRIDGE. IT SOUNDS AS GOOD ON A RECORD AS IT DOES ON PAPIER.

It was inevitable . . .

With all the rapid developments being made in today's high fidelity technology, the tremendous advance in audible performance in Empire's new EDR.9 phono cartridge was bound to happen. And bound to come from Empire, as we have been designing and manufacturing the finest phono cartridges for over 18 years.

Until now, all phono cartridges were designed in the lab to achieve certain engineering characteristics and requirements. These lab characteristics and requirements took priority over actual listening tests because it was considered more important that the cartridges "measure right" or "test right"—so almost everyone was satisfied.

Empire's EDR.9 (for Extended Dynamic Response) has broken with this tradition, and is the first phono cartridge that not only meets the highest technological

Series IIIS.

In the U.S., SME tone arms are distributed exclusively by Shure Brothers Inc.

and design specifications—but also our demanding listening tests—on an equal basis. In effect, it bridges the gap between the ideal blueprint and the actual sound.

The EDR.9 utilizes an L. A. C. (Large Area Contact) 0.9 stylus based upon—and named after—E. I. A. Standard RS-238B. This new design, resulting in a smaller radius and larger contact area, has a pressure index of 0.9, an improvement of almost six times the typical elliptical stylus and four times over the newest designs recently introduced by several other cartridge manufacturers. The result is that less pressure is applied to the vulnerable record groove, at the same time extending the bandwidth—including the important overtones and harmonic details.

In addition, Empire's exclusive, patented 3-Element Double Damped stylus assembly acts as an equalizer. This eliminates the high "Q" mechanical resonances typical of other stylus assemblies, producing a flatter response, and lessening wear and tear on the record groove.

We could go into more technical detail, describing pole rods that are laminated, rather than just one piece, so as to reduce losses in the magnetic structure, resulting in flatter high frequency response with less distortion. Or how the EDR.9 weighs one gram less than previous Empire phono cartridges, making it a perfect match for today's advance, low mass tonearms.

But more important, as the EDR.9 cartridge represents a new approach to cartridge design, we ask that you consider it in a slightly different way as well. Send for our free technical brochure on the EDR.9, and then visit your audio dealer and listen. Don't go by specs alone.

That's because the new Empire EDR.9 is the first phono cartridge that not only meets the highest technological and design specifications—but also our demanding listening tests.

Empire Scientific Corp. Garden City, N.Y.11530

In Canada: A. C. Simmonds & Sons Limited,

Manufacturers of high fidelity components, microphones, sound systems and related circuitry.

Circle 38 On Page 97

HIGH FIDELITY

HIGH FIDELITY



New Measurement Standards: In

making comparisons between current reports and those published in the past, readers are cautioned to pay particular attention to the reference levels and similar test criteria cited. S/N ratios for electronics, in particular, are measured very differently now that we have adopted salient features of the new IHF amplifier-measurement standard. While we believe that the new technique (which also implies a saner approach to loading of all inputs and outputs) will result in measurements that more perfectly reflect audible, in-use effects, they cannot be compared directly to the numbers resulting from the former, more conventional lab measurements.

is a continuous tone present at the input when it is restarted. Cueing up to an existing recording with the intent of adding to it always is a problem with three-head decks because of the space between the playback gap (to which you cue) and the recording head (which adds the new material). The 582 makes it easy to cue in the fast-wind modes because, when you also press PAUSE, the tape slows and you can hear its output (at reduced level). Having cued the tape, however, it is harder than average to get into both RECORDING and PAUSE, ready to add your new material on cue; even when you master the required three-button sleight of hand, the timing of the PAUSE release (which, like solenoid decks, requires that you press PLAY) is a little trickier than with a conventional latching PAUSE lever.

If you are in the habit of cueing up cassettes to the end of the leader for maximum recording time, you may be taken aback by one other habit of the transport. Its "logic" includes automatic tensioning of any tape inserted into it, triggered when the cassette door is pushed closed. In the process, it winds some distance into the tape-well away from the spot to which it has been cued up. In playback, this means that you must either rewind to get to the head of the tape or CUE rewind (by pressing the PAUSE) to find the beginning of the selection you want. In recording, we discovered that it's easy to rewind, start recording (with no input signal), monitor the tape with maximum output (in most systems you will want the output knob near the center of its range for most purposes) until the hiss level goes up at the beginning of the magnetic tape itself, and press PAUSE. Now you're ready to begin recording within the first few inches of the tape.

Aside from these considerations (whose practical importance obviously will vary with both the user and the use], the 582 is an unmitigated joy to work with. Its response curves would have seemed incredible for a cassette deck in the days before the Model 1000 and are exceptional even today, particularly in terms of the frequency extremes. The stellar performer is, of course, the metal tape, whose midrange overload point (3% third harmonic distortion at 333 Hz) measures 5 dB above DIN 0—more than 1 dB beyond the top calibration of even the 582's generous meter range. High-frequency response measured by DSL at -10 dB is what we would expect from most deck/tape combinations at -20: down 3 dB at 16.5 kHz. In this sense, the metal-tape performance does give you the "10-dB improvement" the industry has been talking about, though its usefulness obviously depends on the high-frequency demands of the signals you're recording.

And the 582 is so capable with the other tapes that it actually nibbles away some of ZX's advantage by its superior results with SX, which at a recording level of -10 dB reaches 14 kHz before its response drops by 3 dB. But ZX still has superior midrange and high-frequency headroom (enough to more than offset the slightly higher absolute noise level) and somewhat lower distortion. The audible difference is not great, but it is perceptible. By driving metal tape (we tried 3M's Metafine and TDK prototype samples in addition to ZX) harder than normal to "use up" its extra headroom, we can get slightly lower playback noise levels than we can with the chrome group, though on both we occasionally lose a little clarity or openness in cymbal sounds and such with the tape so heavily recorded. So where the original signal quality warrants it and we want to pull all the sonic stops, we'd choose metal; for already mediocre signals in which we want no more mediocrity to intrude, a good ferric (UD, Grand Master, whatever) would probably be our choice. The controls on the 582 do indeed allow wide leeway in tape choice, though we (and Nakamichi) recommend standardizing on one brand in each group—and avoiding any sort of cheapies—for most predictable, and therefore satisfactory, results.

If you do standardize your tapes—and once you've done enough critical listening to obviate the need for a true tape monitor to tell you how and when the tapes you chose tend to overload—the 582 really has very little advantage over the 581, which also should be a superb performer. Live recording puts a premium on the 582's monitoring, of course, and it is a big help in assimilating the properties of a new tape when you do depart from your "standards." If you're used to another deck, don't be put off by the initial apparent kinkiness of Nakamichi's controls; in working with them we eventually found mutually acceptable techniques for doing just about anything we wanted done. And once we had, in a sense, learned to speak their language, we had gained access to one of the very best decks it has been our pleasure to test.

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30

There are many reasons for owning the new Sansui SC-3300.



Metal is just one.

Metal particle tape could be the most exciting thing that's happened to tape recording in years. But to get the full benefits of metal, you need a special cassette deck — like the new Sansui metalcompatible SC-3300.

The great thing about the SC-3300, though, is that even if you're not sure about metal or are wary of the software expense, this deck still makes a great deal of sense. Here's why:

SOUND QUALITY IS SUPERB. The SC-3300 is designed to get the most out of any tape, including the newest pure metal formulations. We're using a special alloy record/play head that's particularly immune to saturation from the high bias currents needed for metal recording;

and it's much more wear-resistant than even the strongest conventional heads.

The erase head, too, is special – a doublegap ferrite design that produces a 70dB erasure factor for beautiful low-noise recordings. Our new Roller Back holdback tension mechanism further improves sound quality by suppressing frequencymodulated distortion and reducing wow and flutter to a mere 0.04%.

OPERATION IS EFFORTLESS. The feather-touch controls of the SC-3300 are monitored by an LSIC logic chip tied to high precision solenoids. So you get the freedom you need to concentrate on the music you're making or taping. It's so foolproof that no matter how fast you push the buttons, the tape will



never jam or stretch.

The unusually versatile tape selector system provides separate switches for blas and equalization, with numerical indications of the optimum levels for normal, chrome and metal tapes.

And our 16-segment/channel LED peak-level indicators make it easy to set just the right levels for maximum signal and minimum noise. They're calibrated in dB and indicate red if a signal is too strong.

ALL THE EXTRAS, TOO. For added convenience, you can connect the SC-3300 to a timer, and the logic circuits will start recording or playing any time you want. Sansui's exclusive Tape Lead-In fea-

DIGITAL PEAK LINE

ture automatically skips over the unusable leader and beginning portion of each tape. And of course there's Dolby[™] noise reduction, memory rewind, variable output and a guese scatter

computer-assisted pause control.

The brushed aluminum face and simulated rosewood cabinet of the SC-3300 perfectly complement our new Double-Digital receivers. We also have a complete line of matte-black finish metalcompatible models that come equipped with rack-mounting handles.

So, whether you're a strong believer in metal or just looking for a new cassette deck, visit your authorized Sansui dealer to see the best.

DolbyTM is a registered trademark of Dolby Labs Inc.

SANSUI ELECTRONICS CORP.

Lyndhurst, New Jersey 07071 - Gardena, Ca. 90247 Sansui Electric Co. Ltd., Tokyo, Japan Sansui Audio Europe S.A., Antwerp, Belgium In Canada, Electronic Distributors



Quartz lock meets linear drive.

When Fisher introduced our radically new linear drive turntable two years ago, it was hailed as the most important advance in turntables since direct drive.

But now we've taken linear drive to a new level of performance, by combining it with a sophisticated quartzlocked speed control. Presenting the MT6250 Studio Standard turntable—we think the world's finest.

The MT6250 uses the same 120-pole linear motor direct drive system that has been thoroughly proven in other Fisher turntables. This system uses three precisely phased drive coils to propel a 120-pole magnetic strip encircling the turntable platter. And it is so elegantly simple and smooth that it would be difficult to improve upon. The overlapping drive pulses and large number of poles (compared with 12 or 16 in conventional direct drive systems) assure almost perfect smoothness,



freedom from "cogging," and lower wow & flutter.

For speed stability, Fisher engineered a unique, quartz crystal-controlled, phase locked loop speed servo. The servo electronically monitors the rotation of the platter thousands of times every minute, and keeps it locked in perfect sync with the crystal oscillator. This system is so stable that speed variation of the MT6250 is practically zero.

Of course, the rest of the MT6250 lives up to the perform-

ance standards set by its drive system. The fullycounterbalanced tonearm easily handles virtually any cartridge, and provides the convenience of automatic return and shutoff at end of record, or when reject is actuated. Built into the beautifully finished base are adjustable leveling feet and a bubble level which doubles as a stylus overhang gauge.

If you want the best performing turntable money can buy, see and hear the Fisher MT6250 at \$300.*

Quartz lock meets linear drive now at selected audio dealers or the audio department of your favorite department store. Don't miss the action.

*Manufacturer's suggested retail value. Actual selling price determined solely by the Individual Fisher dealer.

New guide to buying high fidelity equipment. Send \$2 for Fisher Handbook, with name and address to Fisher Corp., Dept. H, 21314 Lassen St., Chatsworth, CA 91311.

The first name in high fidelity.[®]





High-Speed Performance for Cassettes

B.I.C. T-3 at 1% ips



B.I.C. Model T-3 two-speed (1% and 3¾ ips) cassette deck in wood case with rosewood finish. Dimensions: 17¼ by 7 inches (front), 10% inches deep plus clearance for controls and connections. Price: \$529.95. Warranty: "limited," one year parts and labor. Manufacturer: made in Japan for B.I.C./Avnet, South Service Rd., Westbury, N.Y. 11590.

When B.I.C. announced its high-performance high-speed option, the industry was astonished. The idea was not new (Teac had shown a prototype with these same two speeds before it entered the cassette-deck market), but it was common knowledge that Philips would refuse to license the cassette format to any company wanting to dally with nonstandard speeds. The old legend passed down by every deck designer to his apprentices ran thus: Way back in B.D. times (before Dolby), Teac proposed that Philips turn its Compact Cassette into a high fidelity recording medium by running it at twice the normal speed, and Philips seemed pleased with the idea. But then came Superscope with another proposal-that the Compact Cassette be run at half its normal speed for doubled recording time. This time, Philips frowned and vowed that no licensee would compromise the cassette's performance this way. "But," said Superscope, "if you permit Teac its nonstandard speed, you must permit us ours." At last, Philips, Wotan-like, surrounded all nonstandard speeds with a ring of fire, there to remain anathema forever. Evidently the heat of Philips' struggle for standardization has cooled now that the cassette format has made it, for not only B.I.C., but other companies now offer two-speed models (including Superscope's Marantz line, which has added 3¾ to its top home decks, 15/16 ips to its portables).

The inclusion of the higher speed implies some complexities that may not be immediately apparent. Cassette tapes are formulated for use at 1%, and B.I.C. evidently has found that some alterations in standard approaches help to get best results at 3%. For example, the information in the excellent manual's tape chart shows that the bias switch position should be moved for some tapes but not for others. Chromes and chrome-compatible ferrics get HIGH bias, and ferrichromes NORMAL, at either speed; the high-performance ferric group requires NORMAL at 1% but HIGH at 3%. There also is a LOW position for what might be called the old-fashioned ferrics, though the manual isn't specific about them, presuming that they will be chosen to save cost, rather than for reproduction quality, and therefore used only at the slower speed.

The markings on the EQ switch appear to be based on the nominal playback values at 1%. In any deck, the actual values used in recording are indeterminate: They are those that will produce the best results in playback, which involve designer'schoice tradeoffs with bias-current values. A key factor in the choice is the way in which high-frequency headroom will be approached. At doubled transport speed, which inherently moves performance "up an octave" and therefore increases high-frequency headroom, more options are created, and B.I.C. has chosen to alter playback equalizations as well to make best use of these options. So at the higher speed, the 70-microsecond marking, for example, should be read as "equalization appropriate to those tapes that would require a 70-microsecond playback equalization at 1%." In practice, of course, this is not a point you need worry about; any tape that normally requires 70

The Bose[®] 901[®]Series IV: A new approach to room acoustics creates a major advance in performance.

It's well known that living room acoustics are a major factor in how any speaker will sound in your home. Recently, an ambitious Bose research program analyzed speaker performance in dozens of actual home listening rooms. The study showed that, while rooms vary greatly, their prinpipal effects can be isolated to specific types of frequency urbalances.

Based on this research, the electronic Active Equalizer of the new Bose 901[®] Series IV speaker system has been totally redesigned. New controls allow greater capability for adjustment of room factors than conventional electronics, and make possible superb performance in almost any home listening room.

These new room contiols also let us develop a basic equalization curve with ro compromises for room effects, allowing still more accurate tonal balance. In addition, an important improvement in the design of the 901 driver makes possible even greater efficiency and vintually unlimited power handling. These innovations combine with proven Bose concepts to preate a dramatic advance in performance: in practically any listening room, with virtually any amplifier, large or smal, the 901 Series IV sets a new standard for the open, spacious, life-like reproduction of sound that has cistinguished Bose Direct/Peflecting® speakers since the first 901.



The 901 Series IV Direct/Reflecting speaker creates a life-like balance of reflected and direct sound.



AUGUST 1979

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B.I.C. T-3 at 3% ips

DB RECORD/PLAY RESPO	ONSE, "CHRO	ME" TAPE (-	20 dB)
0			
-5			T-3 (5)
HZ 20 50 100 200	500 IK	2K 5K	IOK ZOK
L ch: +2%, -1	H dB 20 Hzt	0.20 kHz	
Rch: +3%, -Y			
RECORD/PLAY RESPO	DNSE, FERRIC	TAPE (-20 de	3)
DB			
0			
-5			T-3 (6)
HZ 20 50 100 200	500 IK	ZK 5K	IOK ZOK
L ch: ± 2½ dB	20 Hz to 20	kHz	
Rch: +2%,-1			
with Dolby noise redu			
L ch: ± 2½ dl			
R ch: +2½, -1	1 % dB, 20 Hz	to 20 kHz	
S/NRATIO (re DIN 0 d		and l	
S/ NRATIO DE DINO D	"chrome"	ferric	
playback	61% dB	56 dB	
Dolby playback	67% dB	64 dB	
record/play	55% dB	52% d8	
Dolby record/play	62 dB	59½ d8	
METER READING FOR			
"chrome" tape	1 3 10 0 13 10 1	>+5 di	
ferric tape		> +5 di	В

microseconds (and it's printed right on many cassettes today) gets that switch position in all uses. But herein lies a key to B.I.C.'s thinking: The standardization so dear to the industry and necessary to the user at 1% is unimportant and unavailable at 3%, which is conceived as a proprietary record/play medium. Prerecorded tapes at that speed are not envisioned; as other deck brands adopt it, they will make their own equalization decisions.

The tapes suggested by B.I.C. for testing the T-3 were both TDK: AD for the ferric settings and SA as the "chrome." As the test data show, they gave excellent results. The five other brands mentioned by name in the manual seem to give closely similar results, and we presume that that is why they are named. (The list includes no specific ferrichrome, and we included none in the tests on the ground that the data were complex enough already with two speeds to document.) The midrange distortion documented in the various curves is exceptionally low, but this is misleading to some extent. We show the third harmonic only, since in tape systems this is usually the limiting factor and very close to the total (THD) figure. Not so with the T-3, which introduces about 0.4% of the second harmonic (normally associated with the electronics, rather than the tape) into all the measurements. As a result, THD figures are not as low as the curves would suggest, though they are about what we would expect in a top quality deck.

The response curves, too, need some explanation. At 1% ips, the very extended and flat high-end response speaks volubly about the presence of a separate playback head; the bass response is equally excellent, the Dolby tracking very good indeed. The action of the multiplex (19-kHz) filter — which is not shown in the curves is very steep, leaving response virtually unaffected below 16 kHz. The upward shift in basic response at 3% means that an extended top end can be achieved (as it is here) more easily, but deep bass is harder to maintain. Though the bass rises higher above the midrange at this speed, it does not extend quite as deep. Dolby tracking is so perfect and response so extended with SA that there's virtually no difference in the curves whether the circuit is on or off, so at the higher speed we show Dolby response with the ferric tape instead.

The most important difference between the two speeds, however, is in high-frequency headroom. While it improves markedly with SA when you switch to the higher speed, the headroom curve can't be said to have shifted a full octave upward; with AD (whose 1%-ips high-frequency headroom curve on the T-3 already is better than that for SA, thanks, presumably, to the ferric's less aggressive recording pre-emphasis), the high-level record/play curves do indeed hold up for a full octave more at 3%. Midrange headroom, too, improves—by about 1½ dB at 333 Hz. This takes the actual 3% distortion point of both tapes a little beyond the top (+5 dB) of the meters' calibration and increases the total dynamic ranges (with noise reduction) to 65½ dB for SA and 63% for AD. These are impressive figures.

The well-damped peak-reading meters respond to within 3 dB of full readings for pulses over 12 milliseconds, while the peak LED (which normally glows green during recording) turns red to indicate overload on pulses over 15 milliseconds that are 3 dB higher in level than its steady-tone red threshold of DIN 0—or 2 dB above the meters' zero. This information, combined with the excellent remarks on meter use in the manual, means that there is not really much difference between the meter and the LED for signal elements sustained longer than about 10 milliseconds, though briefer and very high-level transients may trigger the LED. Our only complaint with the meters is that the pointers are somewhat more difficult to see, against the black background and illuminated scale, than those in most decks.

One nice touch in the recording controls is a three-position switch that, in addition to normal operation, offers a recording lockout (play-only) or recording mute. When the switch is in its normal recording-ready position, its pilot blinks red; it stops blinking when you start recording. The recording calibration switch turns on a built-in reference oscillator; the actual calibration (recording-level) adjustment is made—a bit awkwardly—at a pair of screwdriver pots on the back panel. The headphone level control will be welcomed by those who record live with headsets as monitors. The transport door can be removed (via two screws) for head cleaning and degaussing.

Using the deck is generally a pleasure, though the PAUSE is not swift enough for real edit-while-you-copy use in tight situations and leaves a muted space of about 1 second wherever it is used. In more general use, the feel is good and the switching amenities helpful. And when you switch to 3³, you can get recordings at least as good as any we've heard from cassettes and with somewhat greater dynamic 36

DISTORTION (third harmonic at -10 dB DIN) 94 0.5 07 T-3 (7) HZ 20 50 100 200 500 1K 2K SK. 10K 20K <0.71% 50 Hz to 5 kHz "chrome" tape ≤ 0.62%, 50 Hz to 5 kHz ---- ferric tape SPEED ACCURACY 0.6% fast at 105 VAC 0.3% fast at 120 VAC 0.1% slow at 127 VAC

WOW & FLUTTER (ANSI/IEEE weighted peak) average maximum record/play ± 0.03% ± 0.05%

Metal Tape (And Lots More) on a Budget

Sanyo RD-5370 cassette deck



L ch: +1½, -3 dB, 22 Hz to 20 kHz ----- R ch: +¾, -3 dB, 27 Hz to 20 kHz range, depending on input signal quality, because of the higher speed. (Incidentally, when you make the switch, the transport stops and thus reminds you to check whether the bias switch, too, should be changed.) Outside of audible hum at levels slightly higher than usual for the better decks, the results are superb. The cleanliness of well-recorded bells, for example (since they put a notorious strain on high-frequency headroom), is an agreeable surprise. Don't expect a huge difference, of course; the high speed shores up some weaknesses of cassettes without totally overcoming them, and care in setting levels and monitoring still is needed if you are to get best possible results.

HIGH FIDELITY

In short, the T-3 is a fine deck at the normal 1%, a special one (particularly for those who record live) at the higher speed. Since playing times for a given cassette are cut in half at 3%, most recordists probably will want to save it for "extra special" signals of one sort or another and stay with 1% for everyday uses. Indeed that seems to be the approach that B.I.C. had in mind when designing its two-speed line. To offer a product so signally different from anything on the market takes courage; if the product also is to be successful, it takes canniness. B.I.C. has demonstrated both in the T-3.

Circle 134 On Page 97



Sanyo Model RD-5370 cassette deck, in case with wood-grain vinyl finish. Dimensions: 17½ by 5½ inches (front), 11½ inches deep plus clearance for controls and connections. Price: \$399.95. Warranty: "limited," two years parts and labor. Manufacturer: Sanyo Electric, Japan; U.S. distributor: Sanyo Electric, Inc., 1200 W. Artesia Blvd., Compton, Calif. 90220.

While others sit on the fence awaiting developments, Sanyo has leapt fearlessly into the metal-tape fray with the new Model RD-5370—even before the dust had settled on the metal-tape-standards fracas. Gambling that 3M, which first introduced the metal-alloy cassette, will emerge victorious in the battle over coercivity, remanence, et al., Sanyo has based the RD-5370's biasing and equalization on the Scotch Metafine formulation. The three-head front-loader also provides for standard ferric, chrome, and ferrichrome cassettes.

Selecting the best ferric and chrome brands to use in testing the deck proved something of a problem since Sanyo, like many others, is uncommunicative on the subject. In the factory, Sanyo uses selected BASF tapes. Although we had their "house" numbers, no exact equivalents inhabit retail shelves. So we used those commercial tapes that BASF indicated were closest: BASF Chromium Dioxide and Studio (ferric), along with Scotch Metafine. Right-channel record/play response on Metafine is exceptionally good; head "bumps" create only minor irregularities in the low-frequency region. Response in the left (tape-edge) channel is not quite as flat. With the Dolby noise-reduction circuit operating, there is a shallow depression (–2½ dB) at around 3.5 kHz, suggesting a slight mismatch between the Dolby calibration and the sensitivity of Metafine, yet response still is quite respectable. Dolby calibration is a bit off the mark with BASF chrome tape, too; the effect, again, shows up mainly as a sag (–3 dB) at around 3.5 kHz. Here the two channels are better matched.

Surprisingly, BASF Studio outperforms the chrome product on the bench, with flatter response, more low-frequency headroom, better Dolby tracking, and (except at the highest frequencies) lower third harmonic distortion. Some intermodulation "birdies" intrude at the highest frequencies, as they do with chrome, but the multiplex filter helps to bring them under control. On the whole, the distortion is at least as low with Metafine as with Studio, and Metafine's ¾-dB better headroom and 1¼-dB lower noise—and excellent response—make it the tape of choice for critical recording.

One of the theoretical concerns with metal tape has been the difficulty of
An acknowledged world leader in loudspeaker design and engineering, KEF has developed a monitor-standard speaker system that is both small — only ¼-cubic foot in size—and truly "high" fidelity. While these objectives are not new, the Reference Series Model 101 speaker system represents the first time that both are available in one product.

The Model 101 is, therefore, ideal for use in locations where an accurate small speaker is required in keeping with the rest of a high quality audio system.

System Design

Despite all the ingenious ideas that have been proposed by various speaker manufacturers over the years, the three basic parameters of Enclosure Volume, Bass Response and Efficiency are still related by unchanged physical laws. What is different is the thorough manner in which KEF engineers have, with the use of advanced technology, optimized the relationships between these parameters.

Starting with the premise that prospective Model 101 users will have substantial amplification available, KEF engineers achieved a response from this small enclosure of $90Hz-30kHz \pm 2dB$ (-10dB at 47Hz).

KEF's leadership in computer-aided digital analysis techniques enabled them to optimize the design of the drivers, crossover network and enclosure to achieve a Target Acoustic Response without repetitious trial and error experimentation. Much of this technology, which did not previously exist, has been applied to the design and production of a small high fidelity speaker system for the first time in the Model 101.

Once the desired prototype was completed, KEF applied the same unique computer-aided techniques developed for the production of the critically acclaimed Model 105, so that the sound quality originally achieved in the laboratory prototype will be available to every user.

In addition, the high standards of the computer-aided production and assembly procedures enable precision-matched pairs of stereo loudspeakers to now be offered. For example: every Model 101 driver is tested and matched to tolerances of better than 0.5dB, and crossover networks to tolerances of 0.1dB; each pair of drive units is matched not only to each other, but to the other components in the system as well.

Loudspeaker Protection

The major problem with small, relatively less efficient loudspeakers is thermal overloading of the voice coils. KEF engineers have developed a unique self-powered electronic overload protection circuit, S-STOP (Steady State and Transient Overload Protector).

Musical peaks are generally of short duration, so tweeters can handle far in excess of their normal program rating. A similar situation exists with low frequencies and their effect on the bass unit. Consequently any form of fuse protection can reasonably limit the instantaneous peak handling ability of the system, yet fail to protect the system against a very high average power level. KEF's solution is to incorporate a protection circuit which takes into account the instantaneous power applied to each drive unit and also computes the length of time the signal is applied. The law under which it operates resembles very closely the temperature rise within the voice coil. A potentially damaging signal is immediately attenuated by about 30dB, and the full signal is automatically reconnected when it is safe to do so.

As a result, the Model 101, although only ¼-cubic foot in size, is fully protected against fault conditions when used with amplifiers of up to 100 watts per channel.

The Model 101 is obviously not your average "miniature" speaker system where the quality of sound or power handling capacity is compromised by the small size of the enclosure. Nor is it inexpensive. If you require a speaker system that



is both small and truly high fidelity, visit your authorized KEF dealer for a thorough demonstration. For his name, write: KEF Electronics, Ltd., c/o Intratec, P.O. Box 17414, Dulles International Airport, Washington, DC 20041.

KEF Reference Series Model 101:

Accurate, Small, Protected. 38

RECORD/PLAY RESPONSE FERRIC TAPE 1-20 dB DB 0 -5 RD-5370 (4) HZ 20 50 100 200 500 łĸ 2K 5K 10K 20K - L ch: +1%, -3 dB. 25 Hz to 15.5 kHz ----- Rch: +1%, -3 dB, 25 Hz to 15.5 kHz S/NRATIO fre DIN 0 dB: A-weighted ferric chrome metal playback (without noise reduction) 60% dB 59% dB 57% dB Dolby playback 65% dB 66 dB 64% dB record/play (without noise reduction) 56% dB 56% dB 55% dR Dolby record/play 63% dB 63% dB 62% dB METER READING FOR DIN 0 DB +51/2 dB METER READING FOR 3% DISTORTION (at 333 Hz) chrome tape +2% dB metal tape >+5 dB ferric tape >+5 dB DISTORTION [third harmonic; at - 10 dB DIN] 04 1.0 05 0.2 RD-5370 (5) HZ 20 50 100 200 500 1K 2K 5K 10K 20K chrome tabe < 1.62% 50 Hz to 5 kHz ---- metal tape < 0.65% 50 Hz to 5 kHz ---- ferric tape ≤0.89%, 50 Hz to 5 kHz ERASURE (333 Hz; re DIN 0 dB) chrome tape > 70 dB metal tape >66 dB CHANNEL SEPARATION (at 333 Hz) 46 dB SPEED ACCURACY 1.0% fast at 105 VAC 0.9% fast at 120 VAC 0.9% fast at 127 VAC WOW & FLUTTER (ANSI/IEEE weighted peak) average maximum playback +0.08% +0.12%± 0.10% record/play ± 0.13% SENSITIVITY (re DIN 0 dB; at 333 Hz 145 mV line input mike input 0.29 mV MIKE INPUT OVERLOAD (clipping) 10 mV OUTPUT (from DIN 0 dB) 091

HIGH FIDELITY

recording and erasing it. Judging by the relatively low distortion measured with Metafine on the RD-5370, Sanyo's sendust recording head is up to the task. And, although erasure is more complete on chrome than on Metafine, the 66 dB measured on the latter seems quite satisfactory. While we could not confirm 3M's claimed 10-dB improvement in low-frequency dynamic range with Metafine, there is a substantial increase in high-frequency, high-level recording capability. Compared with chrome, Metafine affords an extra octave of high-frequency response at recording levels of both 0 and – 10 dB on the RD-5370. And, since the noise level of the two products is essentially the same, Metafine's extra high-frequency headroom translates into an equivalent improvement in high-frequency dynamic range. Compared with the ferric product, Metafine increases effective bandwidth by half an octave on the deck and is 1¼ dB quieter.

While source signals feed through somewhat from the recording element in the head assembly to the adjacent playback element, the "leakage" level is not high (-37¼ dB), and the channel separation is excellent. Input sensitivity and line-output level compare with those of other high-fidelity equipment; the microphone-input overload level—like that of most home decks—is somewhat restrictive.

Tape speed, while essentially independent of line voltage, is just adequate in matching the 1%-ips standard. Flutter is close to inaudible even on sustained piano tones. The door of the front-loading "well" can be removed (via two screws) for head cleaning. The solenoid-operated transport (for which no remote control is available) has a positive control feel; its buttons should be pressed on their upper edges to assure good contact. The PAUSE starts the transport fairly quickly, but the recording level takes a fraction of a second to stabilize; and though a slight "thunk" is recorded on the tape when the transport comes out of PAUSE, you are likely to hear it only in the quietest passages. Atypically, the memory rewind cannot be overridden by pressing REWIND after the transport has backed up to "000" on the counter; MEMORY must be released before the transport will rewind further.

The meters, which are fairly small and limited in range, are keyed to the MONITOR: They read the input level whenever the switch is at SOURCE regardless of the transport mode. They read neither peaks nor true averages (despite their prominent "VU" legend)—a throwback to earlier times. Transients can slip by without being registered since the meters still read 3 dB low with a 27-millisecond tone burst, which is fairly long; longer bursts are likely to cause overshoot of as much as 2 dB. Given the basic limitations of this sort of ballistics, the meter calibration probably is well chosen. A full-scale indication (approximately +5½ dB) corresponds to a DIN-0 recording level on chrome—above the 3% distortion level with chrome but well below it with the other two tape types. Since the meter would have to extend 2½ dB farther to reach the ferric midrange overload point and 3¼ dB for the metal tape, the headrooms involved constitute protection rather than usable dynamic range.

Fortunately, the peak LEDs respond better than the meters. On continuous tones, they illuminate when the recording level is 2% dB below DIN 0, a level that insures no more than 3% midrange distortion even on chrome. With a tone burst 3 dB higher in level, the LEDs flash noticeably if the burst lasts 6 milliseconds or more. The canny recordist will rely more on the LED indications than on the meters. As a safety valve, the RD-5370 has a switchable limiter that clamps down on signals that rise above -3% dB DIN; a 10 dB increase above this threshold causes less than a 1½ dB increase in recorded level—which is too drastic to remain unobtrusive.

Clearly, the Sanyo RD-5370 produces its best results with Scotch Metafine. Disc dubs made on it, despite some differences in high-frequency clarity and noise level, closely approximate the originals. With the Dolby circuit on, residual noise is quite low, though cymbal sheen is slightly dulled and the slight response sag makes the sound a bit distant. If you don't want to go whole hog for the expensive metal product (Scotch's suggested retail price for a Metafine C-90 is \$8.95), you might just as well be thrifty and choose Studio over Chromium Dioxide. The noise level is somewhat higher to be sure, but the sound is more open on the ferric than on the chrome. Provided that the source material is not over endowed with high frequencies (which, at high level, tend to "shatter" on the ferric), copies on ferric are quite acceptable.

The RD-5370 demonstrates just how much can be packed into a relatively inexpensive deck. With it, Sanyo offers many of the advantages of metal-tape technology to recordists who find the premium models beyond their price reach. No one would reasonably expect its performance to be up to the level of higher-priced decks, but it is adequate for a wide spectrum of uses. And you would have to look hard to find another three-head, two-motor, four-tape, solenoid-operated deck at anything near this price.

Circle 131 On Page 97

This is just <u>one</u> of over 100 albums in the DENON catalog of PCM RECORDINGS.

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GRIEG:HOLBERG SUITE, Op.40 DENON BRITTEN:SIMPLE SYMPHONY BARBER:ADAGIO FOR STRINGS, Op.11 BAROQUE STRINGS ZURICH



Metal Tape or High Speed— Or Both?

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How Do We Pronounce Qysonic? Good.

Qysonic Array loudspeaker



APPROX. "POLAR TRANSIENT RESPONSE" CONTROL RANGE (re "flat") +4, -10 dB, 4 to 19 kHz B.I.C., as progenitor of the dual-speed deck, has pointed out that you should be able to get at least as good performance with a good (but not premium) ferric like Maxell UD at 3¼ ips as with metal tape at 1‰, and at a lower cost. On the basis of the three decks tested for this issue (and figuring around \$9.00 for 3M's Meta-fine C-90 and \$13 for TDK's metal-shelled counterpart), we would agree. But the higher transport speed hardly blows away the metal competition. In performance, we give a small but significant edge to metal over chrome and chrome equivalents, a very slightly larger one to 3¼ ips over 1‰.

For some users there may be a pre-emptive disadvantage to 3%: Since B.I.C. recommends nothing thinner (and longer) than C-90 tapes, maximum continuous playing times are reduced to about 22½ minutes (depending on the generosity of the tape manufacturer). You can copy most LP sides complete in that time span, but it won't hold the average symphony or concerto. Perhaps we have been spoiled by everlengthening strides between interruptions, but this does seem like a backward step.

The metal tape, too, may have hidden drawbacks. Early samples have been variable, and some seem to leave a residue on tape heads that, without frequent cleaning, inhibits high-frequency performance. While the deck manufacturers we've talked to on the subject all indicate continued (and continuing) improvements in the samples they see, it obviously would be rash to assume that a recordist who throws himself willy-nilly into this new technology either will or will not risk some unpleasant surprises along the way. It simply is too early to tell.

The recordist who wants to hedge all his bets for best possible signal quality can, of course, buy both the metal capability and the high speed. Several companies have announced metal-ready dual-speed decks. The first was—again—B.I.C.; during preparation of our T-3 report, we examined a prototype of the T-4 to see what inclusion of both would mean. In this case, it means a yet more sophisticated deck with (among other things) continuous bias adjustment and "bar-graph" metering. (Despite our reservations about this last feature, we liked the B.I.C. design quite well.) Having formed our own opinion, we asked whether B.I.C. was suggesting simultaneous use of both capabilities: metal tape at 3¾ ips. Not for regular use, came the answer; but in live recording the yet greater dynamic range, particularly at high frequencies, and lower distortion would be a plus. That is pretty much the way we had figured it, too. And, at \$9,00 or more for 45 minutes' total recording time, we expect most users to agree.

Qysonic Array floor-standing loudspeaker system, in walnut enclosure. Dimensions: 12½ by 47½ inches (front), 8¾ inches deep. Price: \$479 each (sold in symmetrical pairs only). Warranty: "limited," five years parts and labor. Manufacturer: Qysonic Research Corp., 920 S. Placentia Ave., Placentia, Calif. 92670.

Loudspeaker systems with complicated, oddball multidriver arrays, accompanied by elegiac prose at their introduction, have been around for as long as we can remember, and many have been distinctly wanting when we came to audition them. So we don't tend to go overboard when another one comes along. Qysonic's Array, on the other hand, turns out to be among the best of that description we've heard. Frankly, we're a little astonished, since we don't entirely understand why it is as good as it is.

Near the top of the front panel and even nearer to the inside edge (that is, the right edge of the left speaker, for example) is a cone midrange driver. Just below it and toward the outer edge is a cone tweeter. Below both is the first of two 8-inch woofers. Still farther down, and (like both woofers) centered in the panel, is a dome tweeter that Oysonic calls its "polar transient ultrahigh," though its effective range overlaps that of the cone tweeter. Finally, there is the second woofer, which appears to be somewhat differently loaded at the dust cap by comparison with the upper one. On the back are three balance controls, for the three top-frequency drivers, each continuously adjustable from 0 through A (so marked, evidently, because—as the nominally flat position—it is suggested for average room acoustics) to +5. Below the controls is a large plastic panel whose construction looks rather like corrugated cardboard. Actually it is Oysonic's Laminar Flow Vent System, a sort of multitubed port structure for the woofers' enclosure. At the bottom are spring-clip terminals.

CBS measured the speaker with its controls in the "flat" (A) position, and most of our listening was done that way, since we liked what we heard and could find no alternatives that seemed an improvement. Indeed, the lab's measurements of response in the extreme settings suggest that—particularly in adjusting the tweeter—response anomalies can be introduced if you do too much twiddling: What should be minima are maxima at some frequencies and vice versa, and oddities show up well outside the ranges in which, theoretically, the adjustments should be effective.

The efficiency (at a sound pressure level of 80% dB for a 0-dBW input) is in the moderate range. No signs of distress showed up in the maximum continuous-tone Circle 39 On Page 97 ►

The most powerful argument for our new receiver is not just power.



True, it's tempting to be swept up by our power.

150 watts per channel minimum RMS at 8 ohms, from 20Hz to 20kHz, with no more than 0.07% Total Harmonic are crowded together elbow to elbow. Distortion, is nothing to sneeze at.

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You get a combination of features and controls that are impressive on their own-but almost unheard of in a single machine.

To start with, we've built in a Dolby system, for decoding Dolbyized FM broadcasts.

The advantages of our tuner,

though, need no decoding. They include a normal and narrow FM IF bandwidth selector. It makes life simple for people in areas where their signals

In our preamp section, the V7 comes equipped with a special phono EQ circuitry. Thanks to Sony's high IQ, it allows for direct connection of a lowoutput, moving-coil cartridge phono source. Without calling for an external step-up transformer or pre-preamp.

When you're gifted with as much power as the V7, you need a way to keep track of it. This receiver keeps tabs with two power-output meters, monitoring the power being fed to the speakers. So overload can't result from oversight.

And all that power comes from our direct coupled DC power amp. And our power is stable, thanks to a high-efficiency, high regulation toroidal-coil transformer.

There's a lot more to the STR-V7 than power. This receiver takes the best that contemporary technology has to offer, and offers it in a single machine.

Other manufacturers may have the power to bring you power. But only Sony has the power to bring you more than just power.



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HIGH FIDELITY



APPROX: TWEETER CONTROL RANGE [re "flat"] +1, -3 dB, 1.5 kHz to 9 kHz (varies widely; see text)

APPROX. MIDRANGE CONTROL RANGE (re "flat") +2, -5 dB, 800 Hz to 3 kHz

Sonus Gold Bonanza

Sonus Gold Blue-Label pickup

FREQUENCY RESPONSE & CHANNEL SEPARATION (test records: STR-100 to 40 Hz, STR-170 above) Frequency response

L ch: +2%, -¥ dB, 20 Hz to 20 kHz R ch: +1%, -1 dB, 20 Hz to 20 kHz Channel separation ≥ 25 dB, 225 Hz to 2.1 kHz ≥ 15 dB, 20 Hz to 18 kHz test, with 20 dBW (100 watts) of input. With pulsed input at 30½ dBW (just over a kilowatt), speaker distortion was evident, but the output was up at 116 dB SPL with no sign of dynamic compression, so the dynamic range is good. While the Array is rated to handle 50 watts (17 dBW) of continuous tone, Oysonic says it should be driven by an amplifier rated at 30 watts (14¾ dBW) or more, with no maximum limit, since clipping an underpowered amp is much more likely to damage a speaker than hooking it to a superamp.

This is a reasonable approach, in our view, and one that the data seem to confirm. You will get somewhat more than the rated 8-ohm power from most transistor amps when they're hooked to the Arrays, whose impedance is under 8 ohms at all frequencies except those near bass resonance (60 Hz); for that reason, you also are very likely to get excessive current drain through the amp if you attempt paralleling pairs of Arrays from it, which we would not recommend. Measured impedance is very close to Oysonic's 6-ohm rating at all frequencies from 250 Hz up; the 3.7-ohm minimum measured by the lab (at 135 Hz) is not low enough (or spread broadly enough in frequency) to cause concern even with amps that are rated for no load lower than 4 ohms.

Driven by a 0-dBW (1 watt) input, both second and third harmonic distortion average roughly 0.2% from the bass (a little below 100 Hz) up, which is very good indeed. When drive is increased to deliver 100 dB SPL, distortion rises throughout the band, but above 100 Hz it still averages only about 0.5% second harmonic and 0.3% third. Pulses at 300 Hz are excellently reproduced; at 3 kHz, there is some hangover and what appear to be minor refractive "echoes," though both are well controlled.

The anechoic frequency response shows very flat and quite smooth omnidirectional response but suggests some on-axis frequency prominences and roughness toward the top that could contribute to a sense of "beaminess" as you move around the room. All this is only partially borne out in listening. The omnidirectional curve does fairly represent what we hear (as, in theory, it should), but the changes in coloration that occur, with shifts in listening position, though easily perceptible, are not as "nasty" and distracting as we might have assumed and certainly are not exaggerated in any sense. The general impression is, in fact, one of unusually clean, uncolored, extended sound and excellent stereo imaging.

Here is where we encountered the most noticeable peculiarity of the Array: a slight tendency toward vertical shift in some apparent sound sources. Perhaps the unusual placement of the drivers contributes to the effect, which probably would go unnoticed if the Array's imaging were not otherwise so clear and stable. In terms of the sound itself, a wide range of instruments reproduces with exemplary accuracy, from a clear, open top down through a vivid but not overbright midrange, to the extended, solid bass—which, though doubling can be detected in it, does an excellent job with both deep fundamentals and transients that require quick response. We noted what was variously described as a slight "buzziness" or "reediness" in solo voice (usually tenor or soprano), but the quality is, again, not unpleasant and certainly not severe. Indeed, our reservations are more than counterbalanced by our admiration.

All in all, we consider the Array to be an exceptionally good system, and our only real objection has to do, not with the sound at all, but with its physical proportions. It is very tall and thin, and Qysonic advises that it must be stood at least 5 inches in front of the back wall. With heavily padded carpeting—particularly area rugs as opposed to well secured wall-to-wall yardgoods—the Arrays can be toppled fairly easily. So we'd suggest that, even if you plan to stand them on the bare floor, you arrange furnishings to keep room traffic away from the speakers. Then you can sit in peace to enjoy—as we did—some uncommonly fine sound.

Circle 145 On Page 97

Sonus Gold Blue-Label magnetic phono pickup with multiradial diamond stylus. Price: \$154. Warranty: "limited," two years parts and labor. Manufacturer: Sonic Research, Inc., Sugar Hollow Rd., Danbury, Conn. 06810.

This cartridge might be called the top-top Sonus model. Of its newest Series II group, the Sonus Gold is the premium design; it is available with two styli, of which the Blue Label is the premium ("modified line contact") version, as an alternative to a more conventional biradial. And we are prepared to say right off the bat that we like it better than any other Sonus we've used and at least as well as any other fixedcoil model within our ken. In comparison with moving-coil models, there might be some argument; suffice it to say that the Sonus Gold is among the fixed-coil models that make us wonder how significant the much-bruited virtues of the moving coil really are.

Separate On/Off Double Player: **Exclusive Double** Exclusive 3-Stage 125 Watts Per Exclusive 5-Way Channiel RMS, Rated at 8 Ohms, 0.02% THD: super listen to one source while re-FM Air Check: Delta Pover: Blowout Frotec Tuner Switch: three independent power supplies allows receiver to be used like < t optimum retion the most cording levels to Euclible and visual cording from com lete protection system with fail safe signal. prevent excessive power drain, elimhigh power, super low distortion. another. separate amp and ignals with our wilt-in test tone. tuner inating d stortion. TONCA 0

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for the Optonica dealer nearest you. Why settle for mystique, when you can own something rare?



HIGH FIDELITY



SENSITIVITY (at 1 kHz)	1.05 mV/cm/sec
CHANNEL BALANCE (a	t 1 kHz] ± 2 dB
VERTICAL TRACKING A	NGLE 29°
LOW-FREQUENCY RES	ONANCE (in SME 3009 arm)
vertical	8.0 Hz; 4-dBrise
lateral	6.6 Hz; 2-dB rise
	LEVEL (re RIAA 0 VU; 1.5 grams)
at 300 Hz	>+18 dB
at LkHz	+15 dB
WEIGHT	5.5 grams
TIP DIMENSIONS	
tip radii	5.2 by 16.9 micrometers
scanning radii	5.2 & 6.2 micrometers

SOUARE-WAVE RESPONSE



The lab data document the Gold's excellence but not its superiority. There are no models in which the lab has found much lower distortion figures, though on the basis of the measurements alone we would not expect the sound to be unusually clean among premium pickups. In listening, however, we found that this cartridge could be compared to models measuring lower in both harmonic and intermodulation distortion. The bass resonance in the SME arm might occasion a qualm since it is a hair lower in frequency and (in the vertical plane, which is critical for warp tracking) less well damped than some of its competitors. Yet when the pickup was mounted in another relatively massive, undamped arm, its practical performance in tracking warps was very good. Still, on the basis of the data, we'd suggest use of a more modern, low-mass arm than these as a better match to the Gold's high compliance.

Sonic Research recommends a load of 47,000 ohms and less than 400 picofarads; the lab used 47,000 ohms and 250 picofarads in testing. The recommended vertical tracking force range is from 1.0 to 1.5 grams, and the pickup traced the "torture test" well at only 0.7 gram. When it came to measuring response and separation, however, the results (which can be influenced drastically by the test record, of course) appeared marginally out of spec at the median value of 1.25 grams, so the lab chose 1.5 grams (which produced only a small improvement) for the remaining tests. In the listening tests we used VTFs throughout the recommended range with excellent results.

In its microscopic examination, the lab found the alignment and polish of the stylus tip to be very good. The tracking angle will appear high, but remember that the measurement technique recently was changed and that, with the more accurate technique, measured VTAs regularly prove to be considerably higher than the theoretical (and insufficiently standardized) targets of 15 or 20 degrees (representing approximate cutting angles for Westrex and Neumann cutters, respectively). For what it's worth, the old (less accurate) technique gives a figure of 23 degrees for the Gold—on the high end of the usual range, which averages 20 degrees or so. The square-wave response shows the pickup to be quick, with ultrasonic ringing that could not be detected in the audible band.

Here, as elsewhere, words seem an inadequate vehicle for a characterization of the pickup since we must express ourselves in negatives: Its sound is uncolored and its behavior unexceptionable. Were it bright or given to mistracking or overly fussy about the preamp (which it doesn't seem to be, though we could try it only with a limited sampling), we would have something more positive (in the grammatical sense) to write about it. To say that it is a very fine pickup is true but rather vague. It reproduced everything we threw at it in excellent fashion without ever calling attention to itself. And that, perhaps, is just about the best thing you can say of a phono cartridge.

Circle 146 On Page 97



Realistic STA-7 stereo FM/AM receiver in metal case. Dimensions: 16½ by 3½ inches (front panel), 10¾ inches deep plus clearance for controls and connections. Price: \$159.95. Warranty: "limited," two years parts and labor. Manufacturer: Made in Korea for Radio Shack, Div. of Tandy Corp., 1400 One Tandy Center, Fort Worth, Tex. 76102.

Question: What receiver is roughly the size of a "micro" tuner and sells for about half the price? Answer: Radio Shack's Realistic STA-7. In fact, the STA-7 can be bought with two miniature speakers (the Minimus 7s) as the "System Seven" for well under what you might spend for a tuner alone. To be sure, this receiver sports neither the power nor the specifications of the new microcomponents, so we'd better confine the comparison to size alone: The 7's power rating (10 watts) and FM sensitivity, in particular, link it more closely to compacts than to the emerging micros. Even the inclusion of special equalization for the Minimus 7 speakers smacks of an idea that helped KLH to create the "hi-fi compact": When a back-panel switch is set for use with the

A Minireceiver for the Budget-Minded

Realistic STA-7 tuner section

FREQUENCY RESPONSE + 2. - 3 dB. 20 Hz to 13 kHz

STEREO CHANNEL SEPARATION ≥ 25 dB, 20 Hz to 11 kHz

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FM SENSITIVITY & OUIETING



	noise (quieting)		
mono i	v (for 50-dB noise suppr	and and	
	Bf at 98 MHz, with 1.3%		
	Bf at 90 MHz: 43 dBf at		
	for 50-dB noise suppr		
	at 98 MHz, with 2.7% T		
Stereo threshold		26 dBf	
Stereo S/N ratio		621/2 dN	
Mono S/Nratio		65% dB	
NONO S/ NTALIO		0374 00	
	C	1 % d B	
ALTERNATE-CH		60 dB	
The reaction of the set	NUMBER SECTOR	0000	
HARMONIC DI	STORTION (THD+N)		
	stereo	mono	
at 100 Hz	1.1%	0.53%	
at I kHz	0.85%	0.48%	
at 6 kHz	0.43%	0 34%	
STEREOPHOT	NTERMODULATION	0.438%	
JIEREO I IEOTI		0.450 10	
	v (mono)	0.074%	
	N	59% dB	
PILOT (19 kHz)	SUPPRESSION	68% dB	
SUBCARRIER (3	8 kHz) SUPPRESSION	63% dB	
	-		
Realistic STA-	7 amplifier section		

RATED POWER	10 dBW (10 w	atts)/ch.	
OUTPUT AT CLIPPING	both channels d	(riven)	
8-ohm load	11% dBW (14)	watts)/ch.	
4-ohm load	12% dBW (17 watts)/ch.		
16-ohm load	9% dBW (9% w	attsl/ch.	
DYNAMIC HEADROOM	vi id	в	
HARMONIC DISTORTIC	ON (THD; 20 Hz	to 20 kHz)	
at 10 dBW (10 watts)	≤0.3679	ж	
at 0 dBW (1 watt)	≤ 0.240%		
FREQUENCY RESPONS	E (at 0 dBW)		
	± 1% dB, 20 H;	z to 20 kHz	
	+1%, 3dB. <	10 Hz to 43.5 kHz	
RIAA EQUALIZATION	± 1% dB, 22 H;	to 20 kHz	
INPUT CHARACTERISTI	CS fre 0 dBW; A	weighting)	
	sensitivity	S/N ratio	
phono input	0.64 mV	74 dB	
auxinput	48 mV	78 dB	
PHONO OVERLOAD (1-kHz clipping)	113 mV	
PHONOIMPEDANCE	51k ohms at 11	kHz (complex)	
DAMPING FACTOR (at	50 Hz)	50	

Realistic speakers, response rises below 200 Hz and shelves off at +12½ dB at 30 Hz.

HIGH FIDELITY

Basic response of the amplifier, though not ruler flat, is reasonably well contained across the band between 20 Hz and 20 kHz. Similarly, the phono-equalization accuracy does not meet the expectations that years of super specs have engendered (though compared with loudspeaker response curves, it is a model of precision). All of these curves are modified by nondefeatable tone controls. The BASS shelves with reasonable symmetry about a turnover frequency of 500 Hz and provides a maximum boost of 15 dB, a cut of slightly less. The TREBLE hinges at approximately 3 kHz and attenuates more strongly than it accentuates when adjusted to the 9-o'clock and 3o'clock positions. The switchable LOUDNESS boosts both ends of the spectrum.

The STA-7 meets its rating of 10 watts (10-dBW) per channel with room to spare. An extra dB is available on a dynamic basis; a 1½-dB margin is available for continuous signals when driving 8-ohm loads. Harmonic distortion is well under the 0.5% rating at both 0 dBW (1 watt) and rated power. In all cases, the distortion is largely of the "soft," second-harmonic type, with higher harmonics present in lesser amounts at the higher frequencies and as the amplifier is driven harder. Up through 4 kHz, you can expect the distortion to be under 0.1%, which should make it hard to find by ear. Although there is no infrasonic filter as such, the phono preamp itself rolls off steeply; response is down by some 30 dB in the warp region, thus saving the STA-7's limited power resources for the music band, where they're needed. The comfortably high phono overload level constitutes a virtue in view of the circuit's propensity toward instability when overdriven. The input impedance varies with frequency in a less than ideal manner but, at 1 kHz, is reasonably close to the 47-kilohm design goal. Sensitivity is lower than average and noise a little higher.

The tuner section's performance strikes us as quite well balanced with that of the amplifier, which is to say that it is not stellar but sufficient for average situations. More signal level is required to achieve adequate quieting than on most FM components, and DSL found that the tuner limits gradually: On weaker stations, the audio output is less than it is on strong ones. In practice, this eccentricity turns out to be a virtue by reducing the level of interstation noise even though the STA-7 lacks a mute as such. The stereo threshold corresponds to 30 dB of quieting, so the receiver will not miss any stereo broadcast on which it can provide reception of even marginal quality. On the whole, the receiver exhibits somewhat better sensitivity at the upper edge of the band than in the lower region.

Distortion is more prevalent in the stereo mode than in mono—a normal situation. It is unusual, however, to find the tuner's midband distortion higher than that at 6 kHz, as it is here, and to find it generating more of the annoying third harmonic than of the soft second. Most stereo by-products are quite well suppressed, although the high stereo IM distortion suggests substantial interference between the audio signals and the 19-kHz pilot. This is substantiated by DSL's stereo frequency-response and separation measurements, which show that the multiplex circuitry is readily confused by modulation at 19 kHz and its submultiples (which create harmonics at 19 kHz). Those specific touchy points aside, the channel separation is adequate. Frequency response falls off quite rapidly above 12 kHz in both the mono and stereo modes. And, in the stereo mode, our test sample has a 60-Hz hum (-60 dB) that can be heard on speakers capable of reproducing it.

Selectivity and capture ratio are in keeping with the moderate price of this receiver. In use, we find them appropriate to the STA-7's limited sensitivity, and we experience little problem with alternate-channel interference. Tuning is done mainly by ear; there is no channel-center indicator, but the signal-strength meter has reasonably good range-from less than 27 to somewhat over 90 dBf.

Accustomed as we are to terrific specs, we wondered whether we could cotton to a receiver that doesn't claim to be in that league. It's refreshing (and thoughtprovoking) to discover that we can. Even with its line-cord FM antenna, the STA-7 provides sufficiently good reception of enough stations in our area to raise it well above the level of the table-radio/portable class and even many of the console receivers we've heard. The phono preamp is acceptable; so is the power amp if you don't try to drive your speakers too hard. (Although we are not reviewing the Minimus 7s, we did give them a cursory listen with the STA-7 and advise against using the "system" equalization provided on the receiver. The bass boost quickly saps its power reserve and relegates you to listening at low levels.) With reasonably efficient speakers and reasonably small rooms, the 10-dBW capacity of the STA-7 should provide an adequate listening level for many users. We suspect that the market for which the receiver is intended includes the budget-minded college student and those who want a recroom or vacation-home receiver, and the STA-7 seems a likely choice. HF

Circle 133 On Page 97

JBL'S NEW L150: ITS BOTTOM PUTS IT ON TOP.

JBL's new L150 takes you deeper into the low frequencies of music without taking you deeper into your budget.

This short-tower, floorstanding loudspeaker system produces bass with depth, power and transparency that comes incredibly close to a live performance.

> A completely new 12" driver was created for the L150. It has an innovative magnetic assembly, the result of years of research at JBL. It

uses a st if, heavy cone that's been coated with an exclusive damping formulation for optimum mass and density.

and density. And it has an unusually large 3" voice coil, which aids the L150's efficiency and its ability to respond to transients



(peaks, climaxes and sudden spurts) in music.

There's even more to the L150's bottom—a 12" passive radiator. It looks like a driver but it's not. We use it to replace a large volume of air and

contribute to the production of true, deep bass. Bass without boom.

If you're impressed with the L150's lows, you'll be equally impressed with its highs and mids. Its powerful 1" high-frequency dome radiator provides wide dispersion throughout its range. And a 5" midrange transducer handles high volume levels without distorting. The maximum power recommended is 300 watts per channel

The maximum power recommended is 300 watts per channe. The L150's other attributes include typical JBL accuracy —the kind that recording professionals rely on. Maximum power/flat frequency response. High efficiency And extraordinary time/ phase accuracy.

phase accuracy. Before you believe that you can't afford a floor system, listen to an L150. While its bottom is tops, its price isn't.

its price isn't. James B. Lansing Sound, Irc., 8500 Balboa Boulevard, Northridge,



HIFI-CROSTIC NO. 45

DIRECTIONS

To solve these puzzles—and they aren't as tough as they first seem—supply as many of the clue words as you can over the numbered dashes. Unless otherwise specified, the clue consists of one English word. "Comp." means compound, or hyphenated, word.

Transfer each letter to the square in the diagram that bears the corresponding number. After only a few correct guesses you should begin to see words and phrases emerging in the diagram, which when filled in will contain a quotation related to music, recordings, or audio.

The words in the quotation are separated by darkened squares and do not necessarily end at the end of a row.

Try to guess at these words and transfer each newly decoded letter back to its appropriate dash. This will supply you with further clues.

A final hint: The source of the quotation the author and his work—will be spelled out by the first letters of the clues, reading down. The answer to HiFi-Crostic No. 45 will ap-

pear in next month's issue of **HIGH FIDELITY**.

A. Composer Friedrich ______ (b. 1930): Serenade on Westminster

119 59 91 13

B. Former manager of N.Y. Philharmonic (full name)

90 52 198 32 22 115 173 122 139

153 192 107

C. U.S. distributor of Dual turntables (3 wds.)

196 6 84 127 138 29 182 71 20

45 149 104 37 114 159 78 170 99

D. Set of Granados piano pieces (Sp.)

69 11 82 39 172 202 124 102

E. Brand of do-it-yourself high fidelity components

151 19 41 136 7 147 180 204

F. Instrumental group resident at Juilliard (3 wds.)

105 81 201 62 188 100 193 24 160

126 40 2 150 54 92 12 169 183

142 120 111

G. The _____ Waves

121 21 207 108 73

H. The _____ Peacock, by Griffes

31 96 205 165 132

I. Jazz trombonist, Charlie

74 28 87 189 179

J. Soprano _____ Marshail

76 156 47 123

NI	F2	∨3	YY4	U5	C6		E7	MB	W/9		¥10	DII		F12	A13
T14		015	M16	YY17		N18	E19	C20	G21	822	Q23		F24	T25	
Z26	M2.7	128	C29	U30		H3 1	832	W33	¥34	M35	YY36	C37		P38	D39
	F40	E41	R42		043	M44	C45	L46	J47	YY48	U49		RSO	T51	852
M53	F5 4	555	C56	V57		K58	A59	U60	X61		F62	YY63		N64	M65
R66	¥67	Q68	D69		Z70	C71	172		G73	174	U75		J76	M77	C78
¥79	L80	F81	D82		M83	C84	Z85	Q86		187	X88	V89	890	A91	F92
ZZ93	N94	M95		H96	T97	YY98		C99	F100		M101	D102	U103		C104
F105	YY106	8107	G108		W109	V110	F111	К112	1	T113	C114	B115		Z116	0117
M118		A119	F120	G121	8122	J123		D124	U125	F126		C127	X128		M129
L130	1131	H132	X133		Q134	M135		E136	V137	C138	1 1	8139	ZZ140	N141	F142
P143		X144	M145	R146	E147	5148		C149	F150		E151	¥152	8153		0154
M155	J156	T157	V158		C159	F160	U161	M162		W/163	N164	H165		5166	K167
M168	F169	C170		R171	D172		8173	Q174	0175	M176		P177	¥178	1179	E180
ZZ 1 8 1		C182	F183	X184		L185	M186		W187	F188		1189	P190	K191	
B192	F193	X194		T195	C196	M197	8198	L199	W/200	F201	D202	Q203	E204	H205	V20e
G207															-

K. Luxuriant 58 167 191 112

L. After The, Dostoesvsky novel

- 199 80 185 130 46
- M. Symphonic poem by Richard Strauss popularized by 2001 (3 Ger. wds.)

Q. Virgil Thomson concertino on Angel

203 134 86 174 23 68

R. Viennese conductor, onetime San Francisco Symphony director

66 146 171 50 42

S. Ideology 55 148 166

T. Jazz pianist (1918–45), recorded with Louis Armstrong, Jack Teagarden (full name)

157 51 72 195 97 113 25 14

U. Eugene, conductor; Leon, oboist

49 161 5 60 75 103 125 30

V. Dvorák overture

110 158 137 57 3 89 206

W. Told a white lie

200 187 163 109 33 9

X. See Word YY.

144 128 133 184 88 194 61

Y. Italian composer (1723–95): Il Re pastore on Nonesuch

178 34 10 152 79 67

Z. Masque; pageant 85 116 70 26

- **YY.** With Word X, a trill of the written note with the one next higher
- 106 48 131 17 63 4 36 98

22. Russian composer (1835-1918)

181 93 140

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LETTERS

HIGH FIDELITY

Pro-AM



50

Like Sidney Feldman ("AM lgnored?", "Letters," May), 1 am concerned about the minuscule attention given to AM perform-

ance of tuners and receivers in most high fidelity publications.

Good AM performance expands your ear, so to speak, and gives access to programs, often from some distance away, that are well worth listening to. Millions of people live too far from large metropolitan areas to receive their FM stations. In most smaller cities both the AM and FM stations may offer limited fare—if one enjoys classical music, for example, forget radio in most towns. If one has to rely on AM to bring in good music, talk, and public-affairs programs, I think a tuner or receiver should do that capably.

Here in Chicago, the Metropolitan Opera broadcasts are on WGN, an AM-only station, serving a large body of opera lovers in the region. Other Illinois residents can tune in the AM University of Illinois station and receive classical music and other good programs. I'm sure most other states have university or public broadcast services that bring good entertainment and education to those well beyond the range of their FM outlets.

A high fidelity buff might suggest that those who wish to listen to AM switch on their portables or clock radios. But maybe we prefer to do our listening in our living rooms or dens, rather than a kitchen or bedroom. I often tape AM programs (such as the Metropolitan Opera), and my tape recorder is connected to my receiver. And even with AM's limitations, music still sounds much better coming out of my AR speakers than from the four-inchers in my other radios.

> Jack Burke Chicago, III.

R eaders interested in HF's view on the point raised in Mr. Burke's opening paragraph are referred to the May "Letters" column, in which we had our say in response to Mr. Feldman's letter.

> FM, NPR, COMSAT, and All That John Major's article "Whither Good

HIGH FIDELITY welcomes correspondence from its readers that falls within the scope of our coverage—music, recordings, audio componentry, and aspects of the general cultural milieu that relate to these. Letters may be edited in order to sharpen their sense and style and to pare their length, and we suggest therefore that correspondents confine themselves to 400 words. Please keep 'em comin' to the Editor, High Fidelity Magazine, The Publishing House, Great Barrington, Mass. 01230.

Coming in September

New Products for the 1980s A report from the Consumer Electronics Show and elsewhere

Preview of Forthcoming Recordings Who's recording what for the new season

CRI: Legitimate Record Company or Vanity Press? A look behind the scenes at Composers Recordings, Inc.

Record Distribution and the Vanishing Independent

Radio?" (May) was excellent. May I add a couple of observations to fill out the picture?

On the FM band, any station below 92 MHz will be noncommercial. Many such FM stations are operated by a college or university. This fact—which means a lack of money plus the fact that 88 MHz is the upper limit of television Channel 6 will often mean low power and hence short range. While it is not unusual for a station operating on a frequency above 92 MHz to have a power of 50,000 watts and a range of fifty miles, noncommercial FM stations often have 1,000 watts and a range of ten miles. There is nothing a person can do to assure regular usable FM reception from a station more than about eighty miles away. (Here in Western New York we now have an eighteen-hour-a-day concert music station, in stereo, operating at 105,000 watts on 94.5 MHz. This is the FM "arm" of the local PBS-TV station, which took over a commercial FM station.)

Few, if any, newspapers in this country go beyond listing frequencies and call letters for radio stations. In this area the only ways to find classical music are to twist the dial, ask a friend, or telephone the station.

Finally, for those near the Canadian border, Canadian stations on the whole tend to broadcast more concert music, even when they don't use higher fidelity, than U.S. stations.

> Charles N. Hubbell Kenmore, N.Y.

John Major's article was a substantial

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It can accurately reproduce the 120+ dB peaks that are found in some live music. That's more than just being able to play music loud. It can accurately reproduce the music bandwidth - from below 25Hz to 20kHz And the Interface: D's vented midrange speaker reproduces midrange sounds with the clarity and purity that allows precise localization of sound sources - both lateral and front-to-back.

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52

disappointment. Though the cover promised NPR and satellite information, the story was little but a press release from a commercial fine-arts station [Mr. Major is associated with Chicago's WFMT] that regards public radio as its chief competitor.

LETTERS

Major did not mention that seven states are served by public radio's classical Morning Pro Musica, seven days a week, with two or three live recitals weekly. He did not mention that the American centennial performance of Bach's St. Matthew Passion was heard live, in "satellite stereo," courtesy of NPR and PBS, from Symphony Hall in Boston to points as far away as Fairbanks, Alaska. He did not mention that public stations carry excellent examples of all kinds of "good" radio: the best radio news program in the country, All Things Considered, the classics at full length, folk festivals, jazz sessions, and a quantity of simulcasts, not to mention original and classic radio drama

Major did make clear, from the title on. that the small-minded approach to cultural values is, in fact, the chief threat to commercial fine-arts stations. For as long as concertmusic stations indulge in old-fashioned, snobappeal announcing, mixed up with the detritus of commerce, they will exclude from the enjoyment of great musical works all those who are not to their manner born.

> John Beck, President Eastern Public Radio Network Boston, Mass.

r. Major replies: Many college stations are 10-watters, too weak to reach very far, as Mr. Hubbell points out. But Broadcasting Yearbook 1979 lists no fewer than 125 noncommercial FM stations of 50,000 watts or moreincluding 64 of 100,000 watts or more. He also calls attention to the appalling neglect of radio schedules by newspapers. Fortunately, many classical stations publish their own program guides—30 of the 56 primarily classical commercial stations and many more of the noncommercial variety.

Evidently Mr. Beck missed my references to All Things Considered, Folk Festival U.S.A., and nine other outstanding NPR programs. Unfortunately I had to leave many others out, including Robert J. Lurtsema's superb Morning Pro Musica, which I enjoyed so much when I lived in Boston and which I am delighted to learn has spread over New York and New England. Commercial and noncommercial stations face the same challenge, that of attracting both listeners and business support, and they do compete for them. But that, after all, is what free enterprise is all about. Both types of stations have their share of "old-fashioned, snob-appeal announcing," but the more enlightened ones in both camps have put the perpetrators out to pasture.

Dept. of Rectification

Thank you for the review in BACKBEAT of our PW-5 Power Attenuator (April). We would like to correct two errors of fact contained in your article. First, the suggested retail price of the PW-5 is \$129.95 and not \$65 as stated in the review. Second, the PAD switch at the side of the Power Attenuator provides up to 30 dB of attenuation in addition to the main attenuation setting for the LINE OUTPUT and not for the main output, as one might infer from the review.

> Lance Korthals President, Altair Corp. Ann Arbor, Mich.

Shepard and Philly

The windup of Herbert Kupferberg's article, "The Untamed Philly" (May), inadvertently misses the point of my anecdote. It was I myself, in conjunction with an editing engineer, who selected, spliced, and mixed the Philadelphia Orchestra Feste romane Columbia released in the early 1960s, about which I remarked that, though it was recorded in three different locales, no one could detect that fact. The takes chosen, in fact, were significantly different from each other in all matters relating to pickup, ambience, frequency response, etc. The fact that this is almost impossible to discern on the finished product is a tribute to the sophistication that can be brought into play in order to make one recording locale sound like another. In other words, through the use of equalization and reverberation, etc., even in 1961 or thereabouts, it was possible to make the Academy of Music sound like the Broadwood sound like Town Hall.

I never claimed one hall sounds like another. I do continue to wonder if all the fuss is worth it if, in fact, one hall or two halls can be made to sound like a third hall. Making a good recording has less to do with snapping one's fingers in an empty auditorium than with the creative and intelligent use of modern equipment.

> Thomas Z. Shepard RCA Red Seal New York, N.Y.

Reference Monitor International, Inc., the company that distributes the Rogers LS3/5A speaker system reviewed in our July issue, is located in San Diego, not San Francisco as the review states



THE TAPE DECK

Peer Gynt Complete on Reel, More **Chrome Cassettes, Olympian Pianists** by R. D. Darrell

The new reelism.

R eborn open-reel activities, now domi-nated by Barclay-Crocker, take an adventurous turn with the simultaneous disc and reel release of a major work never before recorded complete. The full 1876 incidental music for Ibsen's Peer Gynt transforms Grieg from a folkish miniaturist to a near-Berliozian tonal dramatist. Even the twenty-three-item 1908 published score was never recorded in its entirety; now Unicorn has gone even farther, resurrecting all thirty-two numbers in the original score on two discs (UN 2-75030) and a double-play reel (Unicorn/B-C M 0361, \$16.95; notes with English texts only). Among the additions is such superbly evocative music as "Peer Gynt Being Chased by Trolls," the "Night Scene," and "Churchgoers Singing on the Forest Path," and the performance-by Norwegian soloists and chorus with the London Symphony under Per Dreier-is dramatically gripping as well as idiomatic. Near-ideal Dolby tape processing makes the most of the bright, clean, panoramic recording.

In any format there are misses as well as bull's-eve hits. For me, flawless tape processing only italicizes the old-fashioned romanticizations and diffuse tonal qualities of the first complete taping of the three Brahms piano quartets (Vanguard /B-C S 71221, two reels, \$27.95). Veteran string players Alexander Schneider, Walter Trampler, and Leslie Parnas, with the able young pianist Stephanie Brown, lack the lucidity, zest, and humor demanded to make these works less thickly "Brahmsian," in the pejorative sense of that term

I'm a lot happier to report that three Neville Marriner/Academy of St. Martin-inthe-Fields programs lacclaimed in their Argo disc editions sound better than ever in the Dolby reel format: Vivaldi's complete Op. 4, La Stravaganza (N 800, two reels, \$17.95); Christopher Hogwood's fascinating Bach-concerto reconstructions (M 820, double-play, \$16.95); and Telemann's Don Quixote suite, viola concerto, and Overture in D (E 836, \$8.95).

More chrome/super-chrome marvels. **B** ack in cassette realms, Advent's edition of the Empire Brass Quintet's Victor Ewald program (E 1066, \$8.95) provides an opportunity to judge how far deluxe chromium processing can surpass even the best nonchromiums. Sine Qua Non's own cassette release on TDK high-energy, low-noise tape (C 2012, \$4.98, October 1978, "Tape Deck") was technically first-rate; the new edition's extra cost is well justified for audiophiles by its superior lucidity and freedom from surface noise.

For wider musical appeal and arresting historical illumination, don't miss Malcolm Bilson's mercurial Haydn sonatas (Nos. 33, 35, 38, and 47; Advent E 1068, \$8.95). They're consistently delectable, and-since they're played on a Philip Belt replica of a c. 1780 Anton Walter fortepiano once owned by Mozart-they must closely approximate what these endlessly inventive works sounded like to the composer. It isn't often that historical. artistic, and technological rewards are so prodigally combined.

Returning to the spectacular Connoisseur-Society/In-Sync Laboratory series I hailed last month, the remaining three debut releases (\$10.98 each; notes on mail request) reaffirm these super-chrome tapings' command of the widest cassette dynamic range and most palpably solid lows, without quite matching Advent's surface quieting.

The musical appeals here are more specialized. Bartókians will rejoice in Michel Béroff's boldly played and recorded sonata (1926), Out of Doors suite, and several batches of Hungarian, Romanian, and Bulgarian dances (C 4006). And symphonic-organ aficionados will be stoned out of their minds by the thunders of Lionel Rogg's Liszt program on an unidentified but patently suitable organ (C 4005). But far more musically significant is the first-ever recording (made by Pathé Marconi around 1971) of Roussel's little-known but powerfully impressive Psalm 80 for tenor (John Mitchinson) and chorus, with the Orchestre de Paris under Serge Baudo (C 4008). Baudo's overside performance of the relatively familiar Bacchus et Ariane Suite No. 2 is vigorously if roughly done tand faces competition from Igor Markevitch's DG Privilege edition, 3335 325), but it's the Rhadamanthine psalm that's the prime attraction here

Vox cassettes.

n the year-plus since the Moss Music Group's takeover of Vox Productions (Vox, Candide, and Turnabout), cassette releases have become regular and have been expanded-and despite the bargain price of \$4.98, each cassette includes at least brief notes. Three current programs are characteristic. The all-Bruch CT 2233 brings novel repertory: the long-lost two-piano concerto and Op. 11 Fantasy, along with the piano fourhand version of the delightful Swedish Dances-all played with relish by Martin Berkofsky and David Hagan, with a routine concerto orchestra and only routinely recorded. Much better sonically are the warm yet ringing 1969 recordings of Abbey Simon's distinctive readings of Chopin's Second and Third Piano Sonatas (CT 2235). And of unique historical importance is the first taping of the magisterial 1953 Solomon/Kubelik/Philharmonia Orchestra mono version of the Brahms First Piano Concerto (CT 2227).

Pianistic classes and Schubertiad. Goffers two exemplars of near-super-Dhuman keyboard artistry: Maurizio Pollini's immaculate performances of the last five Beethoven piano sonatas (Prestige Box 3371 033, \$26.94) and Arturo Benedetti Michelangeli's crystalline delineations of the Debussy Preludes, Book 1 (3301 200, \$8.98). The only possible reservation in either instance is that such Olympian music-making may be just too awesomely exalted to be experienced often, especially if you prefer more Romantic Beethoven or more mistily "impressionistic" Debussy

From such stratospheres, it's a relief to descend to the earthier beer-and-dance pleasures of a Viennese café evening that evokes one of the legendary Schubertiads, when Franz and his friends indefatigably played and danced the night away. Of some 400 dance pieces Schubert remembered to write down, at least 159 mostly short waltzes (along with a couple of scherzos and a cotillion) are recorded, many surely for the first time, by a young Italian prizewinning pianist, Paolo Bordoni (Seraphim big-box 4X3G 6112, three cassettes, \$14.98). His playing is properly straightforward, if perhaps a bit heavyhanded and -footed in the more vigorous, largely chordal dances. The clean, ringing recording makes the most of his piano's tonal qualities: suitably lightweight, not too brilliant, yet substantial. HF

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Buying a Cassette Deck?

How To Decide Which Features You Really Want by Robert Long



The cassette-deck market is getting to be a jungle in which all sorts of technical fauna roam, screaming their characteristic cries—"metal-ready," "sendust," "peak-hold," and so on—in cacophonous chorus. Even the veteran stalker of such game may become bewildered; the neophyte sorely needs a guide. And, herewith, we present just such a guide.

Level indicators

VU meters Averaging meters

Peak LEDs

Peak meters

"Bar graphs"

Let's begin with a feature whose cries are particularly strident (and often misleading) at present: the level indicator. Signal evaluation is critical to the process of getting the best possible recording, and there is wide divergency in the sort of information that different types of indicators will give you. Meters are the "classic" sort, and even they diverge a good deal. If a deck claims "professional VU meters," ignore the phrase. What's good for the professional doesn't necessarily serve amateur interests, and not all so-called VU meters really are; they will be averaging meters, though not necessarily with the carefully defined "ballistics" of a true VU design. By definition, an averaging meter will not read instantaneous peaks, which must be allowed for in evaluating their indications.

Typical practice might put their "0 VU" indication about 6 dB below the actual midrange overload point of the tape on the theory that instantaneous peaks may run about 6 dB higher than the averages shown by the meter. On signals that have been compressed, as are many FM broadcasts, the actual peak-to-average ratio may be much lower; on live music they usually run to 10 dB or more. Thus if you slavishly follow the indications of an averaging meter—even a good one—you can be wasting some of the tape's dynamic range in recording from FM while getting distorted transients on Aunt Jennifer's piano playing.

For amateur purposes, I'm convinced that peak readings are more useful. Some decks with averaging meters also include a peak-reading LED (or a pair one for each channel) that fires near the tape-overload point. This is a help, though it requires you to watch two indicators—the meters for general program level (and/or any test tones used in setup), the LED(s) for peaks and transients. So-called peakreading meters substantially combine both functions. Their meter-drive circuits "hold onto" maximum instantaneous values long enough for you to read them; that is, they are driven quickly to the peak value and then eased back down so that the needle action isn't too swift to be visible.

The latest enthusiasm among deck designers is for liquid-crystal, fluorescent, or other displays—including rows of LEDs—of the type often called "bargraph" level indicators. Usually they're arranged in two horizontal stripes so that the left channel is represented immediately above the right. You really can see both at

Peak hold

Indicator range

Frequency & metering

Post-EQ metering

Spectral display

Sendust vs. ferrite vs. permalloy

Two heads vs. three

once with this scheme, whereas you can't with the typical dual-meter setup. In many, the portion of the "bar" that extends beyond the "zero" indication lights up in red or otherwise calls attention to itself when the signal exceeds the reference level, so the warning can be glimpsed even out of the corner of your eye. Some can be set to retain the highest value reached—either for a short time or until you reset the indicator manually—so that in copying a record or tape you can easily determine what the maximum level on it is and how you should adjust your deck to accommodate it.

All this is to the good, but bar-graph indicators can have drawbacks. Some, for example, are too sparsely calibrated in the critical 0-dB range, where their discrete indications should be no more than 1 dB apart. Don't be fooled by what appear to be separate elements in the bar, dividing it into 1- or ½-dB steps; they may light by twos or threes and hence only resolve steps as wide as 3 dB in this range. Also look at the way the display "pulls back" when the signal is removed. If the bar suddenly disappears—or even retracts very quickly toward the left—it will be very difficult to read signal values in swiftly changing dynamics. Look for a display that jumps over to its full indication but returns rather sluggishly to lower readings. And look for one that does not require concentrated watching to catch the moments when it advances into the over-zero range.

Whether the signal indicators are bar graphs, LED displays, or conventional meters, check the calibration range. Some go down to only -20 or so, giving you no useful measure of what's happening in low-level signals. I prefer being able to read values to about -40. If you do much live recording, this ability can be important, since signals that still don't read on the indicators are down near the noise and would profit from gain riding. On the other end, useful calibration to at least + 6 (again, preferably in 1-dB steps) is desirable, since the headroom of cassette tapes is being improved all the time, and without matching headroom in the meters you can't make best use of the tapes.

Even so, there is the question of the spectral demands the music places on the overload curve of the tape. No tape will accommodate as high a level at 8 kHz as it will at 800 Hz-nor should it, considering the typical spectral distribution of energy in music, which is what the tape/recorder system is engineered for. This means, however, that abnormally high energy levels toward the frequency extremes can overload the tape even when the indicator says that the music shouldn't. Some deck manufacturers meter the signal after it has received its recording equalization (preemphasis) and consequently come much closer to telling you how signal levels relate to the overload curve even when their spectral distribution is atypical. Another approach (first adopted by JVC) is to give you, in effect, a simplified real-time spectrum analyzer that will read separate frequency bands independently to help you judge signal demands relative to tape capability. To make full use of these sophisticated approaches, you must have a fairly detailed understanding of how a particular tape's capability relates to the display device at hand. This may be a bit much for many amateur recordists to assimilate, and for them a good peak-reading, pre-equalization meter's straightforwardness is hard to beat.

A great deal of fuss has been made over head materials, particularly since the announcement of the metal-particle tapes, which make extra demands on head design. Cases can be made for the superiority of this or that head material or design in this or that respect; we prefer to approach the question on a "black box" basis, examining results rather than means. If, for example, permalloy heads are to be chosen over ferrite for their superior saturation headroom, the headroom of the electronics must be comparable; superior head performance means nothing if the limiting factor is elsewhere in the total system.

More important to practical operation (and sometimes to performance) is the type and placement of the heads. There is a lot to be said for the conventional two-head design in which a combination record/play head occupies the center opening in the cassette shell, opposite its pressure pad. Response of the best designs is very good, and they avoid the mechanical complications that characterize three-head design. Some designers feel, however, that the extra high-frequency performance that can be eked out of a separate playback head is worth coping with the complications. And of course you cannot have simultaneous recording and playback off the tape—the so-called monitoring capability—without separate heads or head elements.

Some monitoring decks employ, in effect, two heads in a single housing, located in the same shell window occupied by the combination head. Thus much of the mechanical simplicity is retained and combined with the tailored gap widths (wider for recording than for playback) of separate heads. The two-in-one heads don't allow you to cue up a tape to the precise spot where you want to begin record-

Separate heads vs.	r
separate gaps	ł

Azimuth adjustment

Double capstans

Reversing drive

How many motors?

What kind of drive?

How many speeds?

And which ones?

EQ switches

ing—a capability that's available only with a combination head and important only if you want to do tight "electronic editing" via the pause control—and they tend to suffer more from the so-called contour effect (otherwise known as "head bumps") that introduce some response roughness into the bass and lower midrange. And if the shielding between the recording and playback elements is not very efficient, some of the recording signal can induce output at the playback head; while the sonic results may be a bit odd during tape monitoring, the leakage does not affect either the recording or subsequent playback of it.

Some three-head decks use completely separate recording and playback heads. They may be placed so close together that (like the two-in-one designs) they can share the cassette pressure pad in the central opening. Sometimes one head or the other is moved to another shell opening. This allows more leeway in design (for instance, to increase the size of the playback head for minimum contour effect), but it also puts a premium on tape tensioning for good tape contact on the head that is away from the pressure pad. And it allows more opportunity for the tape to wiggle and skew between the two heads, changing its effective azimuth. This is why some threehead decks have a user-adjustable recording-head azimuth—to give you recordings that, whatever skew tendency a particular cassette may have, will match the azimuth of the factory-set (and prerecorded-tape-compatible) playback head.

A closed-loop double-capstan drive is one way to control tape tension. The closed loop can, in fact, increase performance (especially in the left channel, which lies at the edge of the tape and therefore is subject to greater mechanical vagaries than the right) in any deck. Double capstans can be used for another purpose, however: bidirectional drive, in which they are not used simultaneously for closedloop control of tape motion. The ability to reverse drive direction, which is often coupled with automatic reverse or continuous play, has obvious practical advantages for hands-off continuity. But be warned that, even if you use leaderless tapes, there will be some break between cassette sides and that, if you rely on the AUTO REVERSE during the recording to get uninterrupted music, the biatus may fall more awkwardly than if you had made the side-switch manually at an intelligently chosen moment. And bidirectional systems tend to be more complex (and therefore more expensive and, potentially, trouble-prone) than unidirectional ones.

A great deal has been written about the virtues of two motors (one driving the tape via the capstan, the other to wind the cassette hubs) over one that must do all the work via a series of belts and pulleys and clutches. Some decks use a third motor, whether for a special purpose (e.g., the "logic cam" motor on the Nakamichi 582 in this month's "Equipment Reports") or to give each hub its own. Similarly, there are conflicting claims about direct capstan drive systems—with or without servo controls—and how they compare to the conventional belts. Here again, the proof of the drive system (including any special antiwow inertial design) is in the using and/ or the measuring. Fine results can be achieved with fairly old-fashioned technology; the newest wrinkle doesn't guarantee the best performance. You're best advised to buy by the specs and/or test results.

Until recently, all available cassette equipment ran at a single speed: 1% ips. Then B.I.C. (followed by others) announced that it would sell a two-speed deck offering 3% ips as well. Recently Marantz unveiled prototypes of a whole new line that included 1% and 3% ips in the home decks, 1% and 15/16 ips in some portables. At least three companies appear to be experimenting with 15/16 ips as a serious medium (with premium tapes) for home recording, so high-quality three-speed home decks may well be announced in the near future. Obviously 1% is an indispensible speed: The whole format, including tape formulations, has been engineered for it.

Some aspects of the highest speed are discussed in this issue's test reports; suffice it to say here that it offers a performance edge (arguably even with medium-priced tapes and in comparison to 1% used with the most expensive) but at the price of half the playing times per cassette side. The slowest speed obviously will entail some compromises—particularly in high-frequency response and distortion but with careful deck design and choice of tapes the tradeoffs may be so minor that you can still get good results with average-quality signals. And there are advantages: lower tape cost than with 1% (depending on how much more "premium" the tape must be for acceptable results at the lower speed), less print-through (if what would have been recorded on a C-90 is recorded on the thicker-based C-45 equivalent), and double playing times (for the same cassette length used at both speeds).

Some decks have separate playback equalization switches; some combine EQ with bias in a TAPE switch; some use automatic sensors to set equalization. The trouble with the latter is that ferrichromes and the early chrome cassettes (all of Bias switches Bias "tuning" Recording EQ with metal-particle cassettes: Early samples are without this well (or another that has been proposed for automatic bias adjustment), which may be required by future automatic-switching metal-tape decks. So the knowledgeable recordist who tends to jump into new cassette areas quickly will prefer separate manual EQ switching for greatest leeway in working with what eventually may prove to be nonstandard shells, while the casual recordist who moves in only after the dust has cleared may be better off with the automatic feature so he doesn't have to think about switch settings. This statement also applies to basic bias adjustments, which are handled

which normally are used with the 70-microsecond playback equalization) don't have the sensor well needed for automatic switching. Now the same thing is happening

(during recording only, of course) automatically by those decks having the sensors. But a wide range of bias settings is needed if you are to make best possible use of the many available tape types and brands. And there is the related question of recording equalization, which may not be the same for tapes that require the same playback equalization and must be accommodated somewhere in the bias/EQ adjustment scheme. So the more limited the scheme, the more limited the tape options or the more imperfect the performance if the tape is not chosen wisely to match the options available. This is not altogether bad, especially for the casual or novice recordist; it is a good idea to seek out and stay with brands that give good results with the deck.

The advanced recordist will want to try every "improved" tape as it comes along. And he will know that excellent results can be obtained from less-thanpremium tapes (as long as they are housed in shells of high mechanical quality) with correct adjustment. In general, the best sonic quality per dollar comes from the better (but not best) ferric group. Since it is in this group that bias requirements vary most and, in some cases, require the most exact adjustment for good results, some decks offer continuously variable bias settings only for ferrics. In other decks, the bias knob affects all tape settings, which allows you to control more tapes but is more likely to require readjustment each time you switch from a tape in one group to one in another. A few decks allow you to adjust bias independently for each group-the ideal arrangement, in my opinion, for the advanced recordist. Some decks give you "tuners" for recording equalization instead of bias current, with much the same effect because of the intimate relationship between the two parameters. Either way, home setup for ideal adjustment is not as easy as it sounds; while good results can be achieved with the single (high) frequency available in the test oscillators provided in such decks, very flat response can be assured only with more elaborate means, such as sweep tones, spectrum analysis, or even careful aural analysis via a three-head monitoring system.

Since the Dolby noise-reduction circuit is standard in the cassette format and is level-sensitive, best results with it require some adjustment for differences in sensitivity between one tape and another. The simplest decks include sensitivity compensation in their basic tape switching—which, again, puts a premium on sticking with tapes that you know. Others offer what are variously called DOLBY TRACKING OF CALIBRATION OF RECORDING-LEVEL adjustments that are user-accessible. And, again, the novice probably is best advised to go with the simpler scheme on the theory that whatever can be adjusted can inadvertently be left misadjusted. Where user adjustments are provided, I recommend separate adjustments for each tape type (so that you don't have to use them each time you switch from ferric to chrome) unless you're the sort of perfectionist who will tweak every control before beginning every recording.

In a sense (and although they are relatively insensitive to minor misadjustments of bias), the existence of metal-particle tapes makes all these tuning adjustments all the more important since it's not entirely clear just what direction the metal tapes may take. As the tape reports in this issue document, metal tape does offer a performance increment to the medium, but it's too early to tell how many recordists will be willing to pay the price for that improvement, how far (if at all) prices can be brought down in the future, whether still greater improvements can be realized with metal (or other) pigments-in short, whether metal tape is the wave of the future or the fad of the present. Today, the advanced recordist probably will covet the capability, but the casual recordist will approach the relatively expensive decks capable of recording on metal tape with caution since he will be hard put to tell the difference between it and the chromes. The ability to record on this group (many of which are ferricobalts, rather than chromium dioxides, of course) is surely a must for any high fidelity deck. So is a ferric (NORMAL, STANDARD, LOW NOISE, Or whatever) setting, in my view-both because of the good cost/performance ratio of the medium-priced ferrics and because the best ferrics usually deliver very fine perform-

Tape sensitivity

And for which tapes?

ance indeed despite the higher noise levels implied by their 120-microsecond playback equalization. Some decks also can get excellent performance with ferrichromes, though we generally have found them the least satisfactory tape group on the decks we have tested.

Noise reduction Dolby ANRS Super ANRS DBX Telefunken

Dolby FM/copy

MPX filters

Mike/line mixing

Headphone level

Output level

Recording mute

Fade controls

The Dolby circuit may be said to have created the high fidelity cassette deck by chopping 10 dB out of inherent tape hiss, and it is required for playback of quality prerecorded tapes. JVC's ANRS system can also be used for the purpose, since it matches Dolby within close tolerances; in addition, JVC offers what it calls Super ANRS, via a separate switch position that allows somewhat higher recording levels without undue high-frequency distortion. Teac, among others, has investigated the DBX system as an alternative to Dolby B. While DBX offers greater noise reduction and may be preferable for live recording, it is incompatible with Dolby tapes—whether prerecorded or in existing libraries. The most sophisticated noisereduction system yet proposed for cassettes appears to be one developed by Telefunken (and evidently, adapted by others) from its professional equipment. The claims that precede it (Dolby compatibility, 20 dB of noise reduction, level insensitivity, dropout insensitivity) appear almost incredible. But until it is available (first introductions are scheduled for Europe shortly and a variant has been announced by Nakamichi here), we will have to reserve judgment.

Some Dolby decks have switches that allow Dolby-encoded signals (from FM or other tapes) to be recorded as is, without decoding and re-encoding to make the new Dolby tape. The switch usually allows you to listen (without recording) to Dolby broadcasts—simply decoding the signal on its way through the deck, with or without the required broadcast de-emphasis change. If your receiver or tuner has a 75/25-microsecond de-emphasis switch, you won't need it in your deck's Dolby-FM feature; otherwise you will, or you will have to add an outboard EQ switch. If your purpose is to record Dolby-FM broadcasts and you *can* decode the signal before it reaches your deck, you probably are better off taking that tack, since it will restore control over your recording level (which is fixed with the Dolby-FM/ copy feature) for best possible results. If you intend to copy Dolby open reels, you had better have cassettes with extraordinary headroom plus a lot of luck, since open-reel peaks can easily go more than 10 dB above Dolby reference level and cassette tapes usually can manage no more than about 5 dB in the midrange and much less in the highs before overload sets in. Decoding and re-coding are strongly advised.

Dolby Laboratories licenses its noise-reduction circuit to deck manufacturers on the express condition that a filter be included to prevent the 19-kHz stereo (multiplex) FM pilot from arriving at the encoder in sufficient quantity to inhibit correct operation even though few quality tuners or receivers have anything like that much pilot in their output signals. The less expensive decks comply by building in fixed 19-kHz filters; the more expensive ones usually allow you to switch out the filter for the most extended possible high-frequency response. There seldom is much audible difference, but sometimes (particularly on midpriced decks) the highfrequency performance is cleaner with the filter in, because it inhibits intermodulation "birdies" even when no pilot is present. In such decks, you're better off using the filter, and its defeatability is no virtue.

If you do live recording, you may want mike/line mixing so that, for example, you can sing along with a prerecorded accompaniment. But if a deck you admire otherwise doesn't have it, you always can add it via an outboard mixer. You should have a headphone level control, however, since it implies an extra stage of amplification before the headphone jack to drive the phones loud enough to override ambient sound—a necessity if you're to sit anywhere near the sound source and still evaluate the signals you're recording. But it's not a common feature, and you may have to use a separate amplifier if you want to do serious monitoring during live recording. Many decks do have overall output level controls; even at their maximum, they may not drive headphones really loud and seldom could be considered a necessity, but they help to tailor signal levels from the deck to those delivered by other components in the stereo system.

A nice detail of some recent decks, especially for off-the-air recordists, is the recording mute, which can be cut in at the end of your recording to leave a patch of silence before you press PAUSE and get ready to record the next selection. Sometimes the MUTE is integrated with the PAUSE. As an alternative, some decks offer a fade feature so that, even if you don't hit PAUSE at the precise instant between the end of the music and the beginning of an announcement (an instant that may be filled with applause on a live broadcast anyway), you still will get a graceful segue. Some fades can be used on previous recordings to sponge away unwanted material at the end. Pause

Search & cue Auto search

Timer vs. counter Memory rewinds

Levers vs. solenoids

Timer operation

Remote controls

Limiters & ALC

Speed adjustment

But the most important feature for graceful beginnings and endings of your recordings is the almost universal PAUSE. If it will start and stop instantly without leaving aural clues (pops, silence, wows, or whatever) to its use, it is a tool by which you actually can edit music, even in the middle of a phrase, in copying from disc or tape. A slow-acting pause, which may take as much as a second or two to get up to speed, still is very useful in editing *between* selections or other program elements where there are breathing spaces to stop and start in. If the PAUSE has a built-in undefeatable mute, it usually is no better than regular start-and-stop operation for editing; if it leaves audible noise (such as a pop) on the tape, it may be worse.

Sometimes the PAUSE or other controls combine with the fast-wind modes to allow partial audibility of the program on the fast-moving tapes as a genuine aid to locating the spot you want. A few decks have microprocessor-controlled systems that hunt for, and stop at, the spaces between selections, usually with a programming control of some sort. This kind of deck may also have a display that reads out actual playing times instead of the arbitrary numbers that appear on the much more common "turns counters." But such counters can be fitted with "memory" systems that will stop the tape (sometimes in REWIND only, sometimes in FAST FORWARD as well) when the zero reading is reached; and some memory rewinds can be switched to recommence PLAY automatically when this happens, while some others will automatically do so unless you also press PAUSE during the rewind. All of these features can be conveniences, though their importance depends largely on the sort of uses to which you regularly put a cassette deck.

The main transport controls can be mechanical levers (which are cheaper) or switches—often capacitative contact switches—that control solenoids, which do the real work (and are more elegant of feel). While some differences in practical behavior are implied, careful design can imbue either with most of the virtues of the other, so neither has a pre-emptive advantage. Solenoid controls make it easier for the designer to fit the deck with automatic-timer operation so you can use it as an alarm clock, record FM programs when you're away from home, and so on—a useful feature for many recordists. And they're almost obligatory for full-function remote operation, whether via an umbilically connected control unit or via one of the cordless accessories (infrared, ultrasonic, etc.) that seem to be growing in popularity. Hands-on (or, rather, eyes-on) recordists who feel lost if they don't know exactly what the meters are doing may consider such remote controls virtually useless (unless they want to tape their own performances); armchair recordists may consider a remote a godsend.

If you make recordings of yourself—or any other live source whose levels are subject to changes that you may not be able to correct for at the deck—you should consider some sort of automatic level control, which may be called an ALC or a limiter without any particular regard for the technical difference between the two. A true limiter severely compresses all signals above its operating threshold, so that they never have a chance to reach the tape's overload level, but leaves lower levels unaltered. The result can be very mushy climaxes unless the levels are so cannily preset that you don't really need the limiter anyway. An ALC, as I would define it, quickly reduces overall gain whenever signal levels threaten overload and then slowly creeps them back up until they are once more bumped down by a new peak. The effect generally is much more natural, though widely varying signal levels can cause audible fluctuations in any constant background noise as the gain goes up and down. The only real way to tell what a feature of this sort does, however, is to try it.

And if you do live recording, you may be interested in one last feature: a pitch adjustment. It will allow you to record one part with the assurance that you can always tune it to whatever instrument may subsequently play along with it, even if the deck's transport speed is subject to variation with line voltage. The control also will let you correct (within reason) recordings made on off-speed portables. But be sure the deck gives you some way of getting back to correct speed when you want to; some adjustable decks of the past did not, leaving you in a limbo of doubt once the control had been moved.

Obviously a great deal of the trick in buying features is to be realistic (and honest, which isn't always so easy) about what you will need and really use about why you really want the deck in the first place. Don't be afraid to admit it if you're in love with a brand name or an array of switches; until you do, you're in danger of buying the wrong deck for the wrong reason. On the other hand, "It would be nice to have" is poor motivation by comparison with "I'll be able to hear the difference." So sort out your priorities carefully; your money and your years of enjoyment or disappointment are at stake.

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China Chronicles

by Leonard Marcus

Dolby in Henan, "Grease" in Beijing, Schubert in Shanghai, DBX in northern China, "Saturday Night Fever" at the Ming Tombs these are only a few of the surprises our editor uncovers in the People's Republic.

Last March 5 the first cultural delegation from the United States to be invited officially to the People's Republic of China since the establishment of diplomatic relations left New York for a tour of four major Chinese cities. The delegation, organized by the Center for United States-People's Republic of China Arts Exchange at Columbia University in collaboration with the Chinese Ministry of Culture, consisted of thirty-four musicians, artists, choreographers, stage and costume designers, film makers, art historians, impresarios, and stage directors, and one editor. Herewith is a report from the editor.

The most puzzling part of returning from an intensive tour of the People's Republic of China is trying to recall what one's prejudices used to be. Did I truly expect to find an oppressive, totalitarian regime in the P.R.C., similar to some in Eastern Europe? Do I remember being so surprised to meet people who daily received information from the West, some of it even provided by their government, and who talked freely about seemingly touchy subjects? How shocked was I to find an audio engineer in Beijing (Peking) who not only has heard of SQ, but reads this magazine each month? And what about television? Did I really assume it was unknown to the Chinese populace-or was that only color TV? I have to consult my notes to recall my reactions.

So different from my anticipations was the China I found that I hardly know where to begin. Each subject evokes a myriad others. Perhaps because our remarkably revelatory and encouraging mission left me with more questions than answers and ended with the onset of an ominously reactionary note, it would be best to start at the beginning and share with you my experiences interspersed with my reactions and recollections.

Our group went to China, under the aegis of the Ministry of Culture, to "break the ice" in arts exchanges. (As a matter of fact, within a week of our arrival, the Boston Symphony Orchestra also arrived in China.) We were constantly reminded in greetings from ministers, mayors, and other authorities of our status as the first such delegation since "normalization," the establishment of diplomatic relations between our two countries. We were to meet with our Chinese "counterparts" in Beijing, Nanjing (Nanking), Suzhou (Soochow), and Shanghai (they let us keep that one, maybe as part of "normalization") to learn about each other's cultural life and systems and to establish friendly relations with an eye to possible future joint projects. But what sounded suspiciously calculated in planning turned out to be freer in execution. We could, and did, discuss what we wanted with whom we wanted. With a few notable exceptions, we would be presented with a (usually private) performance,

A Note on Transliteration and Pronunciation

Beginning this year, the pinyin system of transliterating Chinese names officially replaced the Wade-Giles spelling long the standard in the West. HIGH FI-DELITY is adopting, whenever ascertainable, the new system, with the old spelling of names previously used in the West placed in parentheses with the first mention. In China itself, many people are still spelling their names the old way, and some of their spellings appear in this article. Even Chinese officials will, when speaking English, often refer to, say, "Nanking" rather than the Chinese "Nanjing," from force of habit. Some U.S. publications are making an exception with "Beijing," sticking with "Peking" because it has become ingrained here. This is unaccountable, for, of all the Chinese cities, Beijing is the one that Americans with longish memories remember as having had its name changed twice: to and from "Peiping" before and after World War II.

As for pronunication, if you remember that q is pronounced like ch, x like sh, and e like uh (as in her), you won't go far wrong.



At left, Peking Opera. Students at the opera company's "institute" present a scene from "The Tale of the White Serpent" as audio engineers in the pit record the performance. Below, Shanghai Opera. In "The Jade Hairpin," the bride harangues the groom for not paying attention to her.



asked for our "criticisms and suggestions," and then encouraged to enter into brief individual discussions with the artists, on a catch-as-catch-can basis, before being whisked off to another performing arts institution, sightseeing trip, or banquet.

But yes-to answer the question I have been asked most often since my return-although most of us, most of the time, traveled as a group to the places the Chinese invited us, we could go freely around the cities we were in and meet individually with whomever we chose. A few delegates, wandering around town, were asked into homes of Chinese they met in the street. Those in our group with Chinese backgrounds, like the composer Chou Wen-chung (he was coleader of the delegation), basso Sze Yi-kwei, and electronic sculptor Tsai Wen-ying, visited friends and relatives along the way. In fact, Wen-chung's wife, Yi-an, met her in-laws for the first time on the trip.

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We enter China by landing in Urumgi (Urumshi) to refuel both the plane and ourselves. It is a desolate area near the northern border, with hardly a house, car, or factory visible from the airport. And yet-is it possible?-I'm sure I smell pollution. (I later find out that Urumqi is in an industrial and mining region with more than 300,000 people, a fact detectable, from where we stand, mainly by the nose.)

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Our China Airlines plane was American-built, a Boeing 707, with the "Seatbelt" and "No Smoking" signs in both English and Chinese. Except for the sign, we were strictly on our own regarding seatbelt safety. Two weeks later, our flight from Shanghai to Guangzhou (Kwangchow, or more familiarly, Canton) would take off with passengers still standing in the aisles. We had been asked not to shoot pictures from the plane while above the P.R.C., but when we flew over particularly dramatic scenery, like the Tien Shan rangewhich makes the Alps look like the Catskills-permission to photograph it was freely given.

Most of our traveling within

China was by train, comparable to the better European ones. For years I had read of the awful music and announcements Chinese train passengers are subjected to. Not so. If you don't like it, you can turn the sound down or off.

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In the airport all the cameras go back into action. Not that there is much to photograph, but everybody, like Don Giovanni, wants the first excursion into new territory recorded. The Chinese are extraordinarily curious about us. Airport personnel make brave attempts to avoid staring at us, but our fellow passengers are more open. A group of them surrounds Martin Segal, our other tour leader. He has brought along a Polaroid camera, and a color photo of one of the Chinese is beginning to appear on a piece of film he is holding.

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Both of our tour leaders had latemodel Polaroids with them, as did Bernard Jacobs, chairman of the Shubert theatrical organization. Most of their photos, though-at least of the Chinesenever got back home; instead they were presented to the subjects, who stared with amazement and delight as their images gradually emerged on film. Of 150 Polaroid shots Bernie was to take, he ended up keeping ten. From Urumgi down to the southern border town of Shenzhen (Shumchun), where we exited, what we soon dubbed "Polaroid diplomacy" proved to be the most surefire way to "break the ice" and "establish friendly relations" with Chinese of all ages and backgrounds.

Marty, who has worked for every New York mayor since Fiorello La-Guardia and was recently chairman of the advisory board to the city's Cultural Commission, impressed us all as an effective and charming spokesman for our group throughout China. He managed the near-impossible task of making those of us trying to ferret out sometimes sensitive information behave diplomatically. If he ever decides to run for office himself, I will be sorely tempted to move back to New York in order to be able to vote for him.

In Beijing, I conclude that it was pollution I smelled in Urumgi, because here it is considerably worse. In fact, if you consider noise as well as air pollution, this may be the most polluted city I have ever visited; it is certainly the noisiest, with such an incessant, insistent cacophony of car horns that one could almost imagine cars crowding the streets. There are actually relatively few motorized vehicles-nobody owns hisbut they all seem to be powered by honk. (Reason: The streets are congested with 2 million bicycles, and cars, buses, and trucks are continually trying to warn them, and pedestrians, out of the way.)

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Other Chinese cities turned out to be just as noisy. During our stay, a report emerged from what was billed as the country's first national conference on acoustics. Acoustician Ma Dayou testified that the major Chinese cities are significantly noisier than New York, London, Rome, or Tokyo. Tokyo has fifteen times as many cars as there are in Beijing-not to mention airplanes, of which we heard practically none.

Curious, I timed beeps in taxis I took in both Beijing and Shanghai. The rate seemed fairly constant: one per car every 1.2 seconds. Now imagine just ten or so vehicles within close earshot! (To save gas, each of my taxi drivers would turn off the motor at red lights. Also, presumably to save light bulbs, vehicles were driven at night with only their parking lights on.)

About that air pollution: It's not that China has secretly become a major industrial society, but that the Chinese burn coal both to heat their homes and to power their factories. The result, it seems to me, does not augur well for some of the proposals to solve our own energy crisis.

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We enter the hotel room to find it stocked for our pleasure with beer, tea, water (hot, cold, mineral), orange sodaand a color television set. By "we," I mean my multitalented roommate, David Bailey, and myself. Because of the shortage of hotels in China (Shanghai, with about 6 million inhabitants in the city proper, has only eight "suitable for

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foreigners"), the delegates must double up, and I have the good fortune to be paired with David, jazz drummer, transport pilot, and now executive director of Jazzmobile.

Few individuals own TV sets. which can be seen in factories, communes, hospitals, apartment house dayrooms, and other community centers. The one in our room has four channels and four radio bands: three shortwave and one AM. All the markings are accompanied by English translations, including the legend "Made in the People's Republic of China." International news must flow slowly to China, for frequencies, too, are specified in English megacycles (Mc) and kilocycles (kc) rather than in the international "hertz" that even Englishspeaking countries have long since adopted.

I turn on the TV. Apparently alltube, it takes a while to warm up, but once on, the image is quite good. Channels 1 and 2 are now transmitting only the color bars; 3 and 4 are showing the same program-an English lesson, which is soon followed by one in electronics. (English, I later learn, is a required subject for all college-level students in China.) Channel selectors are of the touch-sensitive type, although they do not work consistently. It helps to breathe on my fingers, but I soon find that the most effective way to change channels is to rub my feet on the rug and touch the chassis.

Itry the radio. Only the AM and one SW band are receiving programs, and these are all in a language that sounds like Chinese to me or are broadcasts of Chinese music. I must try to find out if the government jams foreign broadcasts. For all I can tell, I am hearing the Voice of America in Chinese.

Later that evening, a Peking Opera excerpt is televised, with the dramatic makeup and brilliant costumes characteristic of Chinese opera blazing with color on the tube. How accurately, of course, I can't say. By 9:30 p.m., Beijing's TV programming is over.

The huge lobby of the Peking Hotel (like Peking duck and Peking Opera, it seems not yet to have been *pinyin-ized*) houses shops of all sorts. One sells books and records. Except for a few



Inside the major audio store in the Chinese capital one man waits on customers while another repairs a cassette recorder.

guidebooks in French and German, most of the literature not in Chinese is in English. The half-dozen or so different LP albums, all mono, have liner notes only in Chinese and are of traditional Chinese music. They cost 2.40 yuan, or \$1.54, each.

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That price held in the department stores I visited, in both Beijing and Shanghai, the only other places I saw records for sale. It is a not inconsiderable sum for a Chinese. According to those I spoke with, wages in the capital, presumably among the nation's highest, range from \$32 to \$160 a month, depending on such things as ability, education, seniority, and in some fields, like the arts, prizes won. Consider, however, that in China nearly every adult works, so a family may have three or four wage earners, the average family income in Beijing reportedly being between \$64 and \$96 per month. In the country as a whole, wages vary wildly. According to the New China News Agency, a high Tibetan functionary, Bangen Erdini, stated his salary at 500 yuan, or \$320 per month, "among the highest for cadres in China." This April the New York Times reported a deputy minister's complaint in The People's Daily that, in at least six rural provinces, per capita income was \$32-one-tenth the Tibetan's monthly

salary—per year! So much for a generation of Mao's economic egalitarianism. The government has recently also instituted that ultimate Marxist-Maoist heresy: a system of bonuses to encourage better work. Who gets the bonuses, I was told, is determined by votes of one's fellow workers.

Prices of necessities are low, with rents taking only about 5% of a family's income. New apartments in Shanghai go for 25 fen (16 cents) per square meter, making the rent for a moderate threeroom apartment \$6.50 per month. One of our hosts in Nanjing, a young man with a wife and two children, earns \$42 per month. But he needs only \$16 of it to live on and banks the other \$26 (at 3% interest!) to save the \$640 to \$960 necessary for a color television set. ("Perhaps by the time I save up," he said, "we'll be making decent sets in China. Ours are not so perfect yet.") Prices for blackand-white sets begin at \$128, about a month's salary for a professor. Phonographs start at \$25, as do portable transistor radios and the cheapest cassette recorders.

Other incidental costs were \$96 and up for the obligatory bicycle, bolts of pure silk from \$3.85 to \$6.40 per meter, depending on weight, 89¢ for an army hat (3¢ extra for the red star), and 6¢ for a combination toothpick and earpick made of camel bone. A few days af-

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Talking with the help of a young woman interpreter, electronic-music composer Vladimir Ussachevsky explains a point to Chinese film composer Hsu Ching-chi, who had expressed interest in the electronic medium.

ter arriving in Beijing, at a cocktail party we gave for our Chinese hosts, Broadway choreographer and director Michael Bennett, creator of *A Chorus Line* and *Ballroom*, caused a sensation when he entered the room wearing a perfectly tailored Chinese military uniform. It cost him only \$25.

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Wandering about Beijing, I find that its major audio store is right around the corner from our hotel. Mainly an outlet for tubes, raw speakers, and electronic parts, its shelves also hold a few components, all mono: a 100-watt receiver for \$512, a 150-watt receiver for \$620, a 100-watt integrated amplifier for \$908.80, and—apparently for real people rather than institutions—a cheap-looking ten-inch turntable standing in contrast to its neighbors at \$47.70. At those prices, one hand of the Chinese governmental establishment isn't washing the other, it's soaking it.

Most of the customers are either buying parts or bringing in those portable transistor radios, cassette recorders, or cheap phonographs for repair. Outside, the window display includes two big multichannel radios from Spring Thunder, which seems like an appropriate name, and a combination record player/radio under the Chang Feng brand, both Chinese trademarks. One of the radios is marked "stereo."

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That "stereo," on further investi-

gation, merely indicated that there was a speaker at either end of the radio's chassis and a balance knob to control what proportion of the sound comes out of each. Stereo is not yet marketed in China.

Some fortunate few Chinese do, however, own stereo records and equipment-acquired on trips to other countries, from friends or relatives coming from abroad, or in similar ways. I met one young Shanghainese audiophile who boasted that among his equipment was a 1961 Dual turntable, which he recently bought from the former West German am bassador for 400 yuan (\$256) when the latter was recalled home-no doubt for fleecing, if the story is true. When I expressed my shock at such a price for an old turntable, the young Chinese replied, "But I consider myself lucky. I have a stereo player."

Cassette equipment is scarce and in great demand, most of it, an engineer informed me, made in Shanghai. I was also told that several Japanese companies had negotiated the building of cassette-recorder and other audio factories in China and that one Hongkong company had arranged to have 50 million cassette tapes assembled at a factory in Beijing. Although, since my return, I have read that the Chinese are beginning to pull back from previous agreements, Matsushita (Panasonic), TDK, Toshiba, and Hitachi had already negotiated to build television factories, the last two also agreeing to consider constructing nuclear generating plants in China. Now

there's Yankee gumption for you!

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The following day we board our Japanese-made bus to the sound of Lenski's aria from Act II of Tchaikovsky's Yevgeny Onegin—but Lenski is singing in Chinese! His aria over, the music moves into a Strauss waltz and then an instrumental snatch from Bizet's L'Arlésienne. I ask our guide and interpreter, Fu Xukun, where the music is coming from. The radio, he replies. When I tell him I could find no Western music on the radio last night, he explains that it is broadcast only at selected times.

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In Beijing, we heard Western music on our bus every day for a week. The Central Radio Station there is network and programs for the entire country. In addition, throughout China there are local radio stations. While we were in Shanghai, two employees of the Shanghai People's Radio Station visited my room: Cheng Shung-nien, program director, and Lee Sze-chiao, head of the Music Group (a position akin to a U.S. station's music director). Cheng proudly told me that they program Western music four times a week, from tapes they make of records contributed by visiting friends or Chinese performing arts groups returning from trips abroad. They make the transfer to tape via a Chinese-made "professional" turntable that recently replaced an old Garrard; they have just ordered an Ampex ATR-100 professional tape recorder.

When I asked what Western music they broadcast, Lee remembered that week's Sound of Music soundtrack. Did they ever play rock or disco? Yes, I was told, "Sometimes we program Stephen Foster, because he understood the plight of the Negroes." (I asked a choreographer at the Shanghai Ballet whether he knew jazz, and he, too, answered, "Yes, we have heard Stephen Foster.") For better or worse, at least the Chinese don't pigeonhole our music.

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Fu Xukun, a man in his forties, accompanies us around the nation's capital wherever we go as a group. He laughs and jokes with us and has such an ingra-

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tiating smile that the very rare act of his turning it off, as when asked a particularly prickly political question, chills the bus. But he talks freely about anything we want to discuss. In response to a query stimulated by our passing Democracy Wall, he proudly claims that "anybody can post anything on it. That way the people can let their steam off. Even the Iranians put up posters there a few weeks ago."

I ask him about the jamming of foreign broadcasts. He insists that there is none and that "many Chinese" listen to the Voice of America to get their news. What about Russian stations? "Nobody listens to it because it's all rubbish." I am reminded that every adult in China is a government employee.

Mr. Fu likes to tell us of current events and to spice his speech with quaint Americanisms, at which he himself laughs. He informs us that China has announced that its "counterattack provoked by the Vietnamese expansionists" is over. We applaud. He smiles and adds: "We just wanted to give them a big bang on the head." The smile widens. "To beat them black and blue....to teach them a lesson."

I sit back in my seat. In the pouch on the back of the seat in front is a twenty-six-page mimeographed pamphlet of news bulletins that the Chinese government has supplied us. I really don't need any more propaganda but glance at it out of curiosity. The first item makes me sit up again. It begins: "Laos has joined Vietnam and the Soviet Union in accusing China of threatening its security by sending several army divisions to the common border and smuggling commandos and spies into Laos."

I turn the page and look at the second item: "Hanoi claimed victory over the Chinese drive and said Vietnamese forces inflicted 'heavy casualties' on the invasion troops."

"Invasion"? What happened to "counterattack"?

All told, a third of the two dozen stories deal with the Sino-Vietnamese war and nearly all conflict with China's own news releases. The pamphlet is titled News from Foreign Agencies & Press.

"Who can get this?" lask one of our guides.



A performer on the two-string er-hu.

"Anybody." I make a mental note to check on that.

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Asking around, I was told conflicting stories; there does at least seem to be some sort of Chinese version-not an exact copy of the one we had, but based on it and used primarily for reference purposes. This "reference press" costs very little to subscribe to: "only a few yuan a month," maybe a dollar or so. Apparently many cadres and managers get it, and even ordinary workers and peasants, according to some accounts, can read it at their factory or commune, most of which may subscribe. When I didn't see a copy at the one factory and commune I visited, a guestion to one of our official hosts elicited the response that a Chinese is not allowed to show it to a foreigner. The availability of our foreign version seems to be limited, among Chinese, to researchers and cadres.

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What about Western recordings? I am told that none are imported for sale in China but that embassies provide records and films to anyone who can use them. One problem is that few Chinese can use Western stereo recordings without ruining them. Another is that the embassies are all in Beijing (although consulates are scheduled to open in Shanghai and Guangzhou). Foreigners are able to purchase some Western records in foreign-language bookstores, but "it is difficult for a Chinese to buy them."

Still, East is West and West is East. Ben Dunham, executive director of Chamber Music America, Jim Mason, president of the Music Educators National Conference, and I shop for Chinese musical instruments. The likely purchase seems to be the two-string er-hu, whose bow's hair is looped between the strings. While we Americans are trying to eke out melodies bowing the er-hu, blowing the sona (a piercing double-reed), alternately blowing and sucking the sheng (a mouth organ made of bamboo pipes), and plucking the pi'pa (a cross between a mandolin and a lute), a Chinese teenager comes in, selects a guitar, and begins strumming "Red River Valley" on it.

Sightseeing, the group tours the fifteenth-century Temple of Heaven, home of three remarkable open-air acoustic phenomena. Outside the Imperial Vault of Heaven on the site are three large stones inlaid next to each other in the ground. If you stand on one stone and clap your hands, you hear one echo; if you do so standing on the second stone, you hear a double echo; on the third stone, you hear three echoes. Surrounding the area is an Echoing Wall. You can talk quietly to this wall, and someone with his ear to it, even at the opposite side of the large courtyard, will be able to hear you very clearly. Finally, outside the courtyard is the Circular Mound, consisting of three terraces. On top of the middle one, if you stand on the center stone and sing a note, you will hear your voice reverberate louder than you sing, as though through an echo chamber.

The wall's properties may have come about unintentionally, but the fact that at the other spots stones are placed precisely—just a foot away the phenomena do not occur—would indicate that half a millennium ago the Chinese could plan acoustical properties better than many of today's concert hall designers.

At night we have our first of seven banquets. It is a thirteen-course meal, and I count forty-nine different foods. For more than two weeks, among the seven banquets and our "ordinary" meals, which generally comprise from eight to twelve dishes, there is hardly any duplication.

I am much moved as Yi-an, sitting

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Two of the acoustic phenomena at the Temple of Heaven. Basso Sze Yi-kwei, a professor at the Eastman School of Music, enjoys the echo-chamber effect of his singing as he stands in the middle of the Circular Mound.

next to me, begins to cry. She had not been to China since her pre-Liberation childhood (everybody calls the Communist ascendancy "the Liberation"), when she and her family had been "one of the privileged few. We never mingled with the ordinary people but saw them—sick, poor, dirty, with sores on their bodies begging in the streets. And now they all look so healthy, so happy. And did you see their beautiful teeth? Can you wonder that I'm crying?"

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Chinese food, at least in hotels and restaurants, is infinitely varied and unbelievably delectable. Everything tastes as if prepared with loving care and nothing is wasted. For instance, Peking duck, possibly China's most famous gourmet dish, makes use of every part of the duck from its brains to the webbing of its feet ("everything but the quack," one Chinese musician quipped). Among the most delicious treats served to us turned out to be fish stomach and sea slugs.

Banquets have the added distinction of speeches and toasts, made with mou-tai, a sort of Chinese vodka, or with a sweet wine akin to kosher varieties. At one feast, I sat at a table with Zhao Feng (Chao Feng), jovial director of Beijing's Central Conservatory who, starting with



Visitors listen to the Echoing Wall to hear conversations from the other side of the courtyard.

a toast to Schubert that was answered with one to Beethoven's quartet, Op. 18, No. 1, urged us on to nineteen toasts with mou-tai. Those who wish may toast with a very sweet orange soda, the teetotaler's punishment, which, depending on the part of China you are in, tastes of varying strengths of chlorine. It is the same soda we found in our hotel rooms and is more common in China than tea. Excellent beer, too, is plentiful. Mou-tai, incidentally, is 120 proof!

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The following day, we attend a rehearsal of the Central Philharmonic. Han Zhong-jie (Han Chung-chieh), a man in his early fifties, leads it in a special performance for us of Beethoven's Fifth Symphony. His orchestra comprises 20 first violins, 16 seconds, 10 violas, 12 cellos, 10 basses, and four each of the winds, except of course for a single piccolo and contrabassoon. The musicians play with great enthusiasm, but while they pay much attention to dynamics, they execute these nuances, and phrase, with little subtlety.

After the Beethoven, we are left to offer our "criticisms and suggestions" to the musicians. What follows is an unforgettable scene, with visitors and performers rushing together like long-separated lovers. David gathers a crowd as he demonstrates some modern jazz drumming, while the electronic composer Vladimir Ussachevsky draws another group of Chinese by sitting down at an old two-manual harmonium and improvising on Russian folksongs. (If that isn't ironic enough, the harmonium owes its invention, early in the nineteenth century, to the importation into Europe of the sheng. And here it is, back in a now officially atheistic country, because it was originally returned to China in its keyboard form by missionaries to accompany hymns.) One Chinese lady takes out a ch'in, a sort of zither, to demonstrate to us, and another, a violinist. having asked if anyone in our group knows how to "dance disco," takes one who replies in the affirmative aside for instruction in the latest steps. During this pandemonium, I fall into conversation with Maestro Han.

IT'S A SMALL WORLD DEPARTMENT. We have a mutual friend in New York, the Chinese-American violinist Ma Sihon. Si-hon and I were fellow students at Tanglewood thirty years ago, but Han knew him even before that.

"Many of our players are conservatory graduates," Han says. "Our flute player studied in Leningrad as well as Shanghai. But some of our players are self-taught, because of all those years when the conservatories were closed by

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the Gang of Four, like the universities, and you couldn't play Western music. For eight years we had to play the same four pieces, by Chinese composers, over and over again. You see our concertmaster there? That's Yang Binxen [Yang Ping-hsen]. He was in jail—*in jail*—for over nine years, because he said something the Gang of Four didn't like. He was released only last year. And that tall fellow over there? That's Liu Shikun [Liu Shih-kun]. He came in second to Van Cliburn at the Tchaikovsky piano competition in Moscow. He was in jail for six years.

"Me, I was luckier. First I was sent to the ballet, but then I was under house arrest for three years, with no job, no freedom, hardly enough to eat, and for six months it wasn't even at my house and all because I was the conductor."

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One cannot understand musical life in China today, or indeed contemporary China at all, without knowing something about the Gang of Four. Three years after their downfall, they continue to exert the most profound influence on Chinese society, in much the same way that King George III did on the United States of the 1780s—as a symbol of what to shun and oppose. Almost everything perceived as wrong in China is blamed on them, often with justification.

The Gang's most notorious figure was Jiang Qing (Chiang Ch'ing), the widow of Mao Zedong (Mao Tse-tung). In late 1965, Mao, finding political opposition within his party, encouraged a Cultural Revolution. Originally promoted as a movement to eliminate educational differences between rural and urban youths and between manual and mental careers, to uproot the entrenched, and to shake up the bureaucracy, in the hands of Jiang and her colleagues it soon degenerated into a tenyear reign of terror. Emboldened by their government to embrace the attractive adolescent philosophy that "the people" were more skilled at all practical activities than "so-called experts," teenage gangs known as Red Guards evicted their teachers from schools and other professionals from their positions, often beating them and sometimes killing them. The intelligentsia were ordered to

perform menial labor, while the less well trained took their places. (The conductor of the Shanghai Symphony, I was told, had the task of watching the bicycles outside the concert hall, while a lesscompetent musician conducted the concerts.) Perhaps most momentous of all, schools and conservatories were closed, and those allowed to remain open, or to reopen, had to maintain a distinctly antiintellectual, but politically correct, bias. Consequently, a generation of young Chinese ended up undereducated.

From Beijing to Shanghai, I heard horror stories: that only two of the Shanghai Conservatory's department heads at the beginning of the Cultural Revolution remain alive; that the parents of the pianist Fou Ts'ong (Yehudi Menuhin's son-in-law), like the relatives of many Chinese who made successful careers in the West, were driven to suicide; that thousands, maybe hundreds of thousands, of teachers were arrested or killed and their students dispersed to farms. Today, it is almost a point of honor to have been persecuted by "the followers of Jiang Qing."

In 1976, after Mao's death, the Gang of Four was itself arrested and the current liberalization of Chinese society initiated. The still young Red Guards were relegated to the menial positions their political leaders had once encouraged them to force upon their professional betters. They are themselves a tragic generation, finding a still younger but better qualified generation of students about to leapfrog them to the country's more attractive jobs, and now they too bitterly blame the Gang of Four for their present plight and bleak future. Even the reputation of the once-worshiped Chairman Mao has become soiled for allowing the Gang of Four to act in his name. While he is still honored as the founder of the P.R.C., people find it necessary to assert apologetically that, during the last ten years of his life, Mao did not have all his faculties, had outlived his great service to his country, and-according to one Communist-"should not have been in charge of China" during that period.

On the other hand, Zhou Enlai (Chou En-lai), who did his best to oppose the Cultural Revolution, seems to have captured the affection of the Chinese people. Though I needed to bring up the subject of the parochial-minded Mao in order for anybody to discuss him, everyone poured out humanistic stories of the cosmopolitan Zhou and how he tried to save this scholar or that general "during the Gang of Four." While we were in Beijing, Mao's mausoleum (an eyesore constructed in the middle of the magnificent Tien An Men, the world's largest public square, covering nearly 100 acres) was "closed for repairs"-several cadres told me his body had begun to decompose-and bookstore windows displayed more copies of Zhou's writings than of Mao's. At the capital's major film studio we were shown rushes of a large-scale movie then being shot, based on an episode in Zhou's life; nobody was promoting any movies about Mao. (Incidentally, the head of China's film industry, at yet another banquet, told me that fifty-four feature films are being produced there this year; that's more than are shot in the U.S., excluding those made for television.)

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When I ask Han why he uses such a huge orchestra for the Beethoven, he replies, "Wait till next week, when the Boston Symphony comes; we will be playing it with both orchestras together." The Philharmonic's repertoire has traditionally been strictly warhorse, with a sprinkling of Chinese composers thrown in. "We played Beethoven's Third, Fifth, and Seventh, Dvořák's Eighth and Ninth, Tchaikovsky's Pathétique. When Russia invaded Czechoslovakia, we played The Moldau. The Czechs didn't come, of course, but they all bought tickets."

The orchestra, formed in 1951, was officially registered five years later. In 1973, "the same year that the Philadelphia Orchestra and the Vienna Philharmonic visited here," Han bitterly emphasizes, "Jiang Qing criticized the orchestra when she found out we were secretly rehearsing Western music." As a result, "the orchestra played nothing" until the Gang was toppled. "Now we have to learn everything over again, and our sight-reading isn't so good. But we give about fifty concerts a year."

Tickets range from 20 to 60 fen,





During a break at the Central Philharmonic in Beijing, two musicians perform on traditional Chinese instruments. At left, Wang Li demonstrates the ch'in. Liu Dehai performs on the pi'pa in front of the orchestra. Behind Liu, at far left, is the Philharmonic's concertmaster, Yang Binxen, who was imprisoned for over nine years during the Cultural Revolution.

about 13 to 40 cents. Everybody can afford it, and, I was told, the Philharmonic plays to packed houses.

The lady with the ch'in comes to the middle of the room and begins to play for us. Her name is Wang Li, and she is a whiz of a virtuoso. But somehow I keep hearing Western triadic formations and chord progressions. She is followed by another top-notch virtuoso, Liu Dehai (Liu Te-hai), whose instrument is the pi'pa. Again, I think I hear Western-influenced Chinese music. Has nothing been left uncorrupted by Western music, I wonder?

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At a subsequent banquet, hosted by the minister of culture, Huang Zhen (Huang Chen), I sat between Maestro Han and pianist Liu Shikun. Liu, famous for his unsmiling face, understands a bit of English but doesn't speak much. We communicated, with the help of Han, in a mixture of pidgin and mime. I told him that, during the Cultural Revolution, stories circulated in the U.S. that the Red Guards had broken his fingers in prison and that we still read about it in the press. No, he replied, but they often used to beat his arms and hands. He informed me that the following week he would accompany the BSO back to Boston, where they would accompany him in Liszt's E flat Concerto. (Both Messrs. Liu would

return to Boston with its orchestra, Liu Dehai to play a pi'pa concerto. It has also been announced that both are scheduled to repeat the concert at Tanglewood on August 3. Next month we hope to have a review of the recording the two Lius made for Philips during their Boston visit.)

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SMALL WORLD DEPARTMENT: 2. We had heard of a "disco" right in the heart of the Chinese capital, and on a Saturday night a few of us go out to examine it. As we enter we are confronted by "We Go Together" from the soundtrack album of *Grease*! I look around for Bill Oakes, but he doesn't seem to have come along. A pity, because Billy produced that recording.

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SMALL WORLD: 3. The following day, visiting the Ming Tombs about thirty miles north of the city, we would come across a most startling scene. In the site's huge, empty temple, a half-dozen teenagers were dancing, pseudo-rock style, to music provided by their Sanyo radio/cassette player. The cassette was playing a selection from Billy's other hit album, "Saturday Night Fever"! Who's he trying to impress, anyway?

The tape segued into "Red River Valley" and "Santa Lucia." All this music seemed to be of a piece to the Chinese youngsters, and they showed no differentiation of dancing styles. Later, they described themselves to us as "revolutionary students from Northern China." They were making a political statement by purposely blaspheming the temple. I speculated that only a few years back these same orthodox student "revolutionaries" would have been demonstrating against the very U.S. imperialistic, bourgeois music they were now using as a symbol to demonstrate with.

On that trip to the countryside, passing a farm, we saw a dog for the first time. China's cities appear to lack dogs and cats, and one sees very few birds except for chickens, which play on some sidewalks outside their owners' houses.

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At the "disco," which is patronized almost exclusively by local and overseas Chinese, Koreans, and other Asians, the music moves deftly from the *Grease* excerpt to a hodgepodge of waltzes, rumbas, and fox-trots. I dance the set with Anna Sokolow. This is the legendary dancer and choreographer, colleague of Brecht's, member of Martha Graham's dance company before organizing her own, original choreographer of *Candide* and *Street Scene*, and mentor of such luminaries as Julie Harris and Marlon Brando. Here she is, making her de-

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but in China—and I am partnering her. Let George Plimpton, or even Gene Lees, top that!

A "song-and-dance show" intervenes. It is a very popular type of Chinese entertainment, but for this occasion two emcees walk onto the stage, a woman to introduce the acts in Chinese, a man to do the same in English. The latter is our own Mr. Fu, who turns out to be the Ed Sullivan of Beijing. A pair of beautiful young women, wearing the first dresses and lipstick I have seen in China, come on-stage to sing duets: Yugoslavian folksongs, "La Paloma," and the like. Not once do they acknowledge each other's existence, but stare straight ahead at the audience. A somewhat older woman follows, to sing "Do Re Mi" from "the film Sound of Music." Then come a male quintet singing Latin American hits of the 1940s, never looking at each other, and a young man who gives a cheng recital of "old Chinese songs," but all of it totally Western in harmonies. I am enjoying the awfulness of it all. Then -----.

"Wong Kai-ping, famous tenor soloist" and star of the chorus of the Central Radio Station, is announced. Not a tenor at all, he turns out to be a handsome basso in his late thirties, with a magnificent, controlled voice. He starts with a Japanese song, naturally harmonized à la Rachmaninoff, and follows it with "Ol' Man River" and Mussorgsky's "Song of a Flea."

After the show I talk to him and find, sadly, that the repertoire of Beijing's star basso seems to be based primarily on old Chaliapin 78s. He knows popular arias but not a single complete opera. Why?

"I would like to learn them, but for so many years the conservatories were closed, and now there are no good teachers." He would like to study abroad, but at his age it is probaby too late to start. What a shameful waste, I think. With his tall stature, good looks, dramatic instincts, and, most of all, superb natural instrument, Wong could have made a world-class Boris.

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We saw song-and-dance shows in Nanjing and Suzhou as well. "Do Re Mi" is popular all over. I noticed a curious phenomenon regarding its performance in those two cities. In Nanjing the soprano who sang it for us was accompanied by an accordionist who apparently couldn't maneuver the secondary dominants that begin at "Sol, a needle pulling thread," thus forcing the singer away from the melody's accidentals. In Suzhou, the singer was accompanied by a small orchestra, with the notes written down, yet the arranger seemed not to have known about secondary dominants either, forcing that singer as well to avoid any hint of modulation. Perhaps in Eastern China the song first was written down by some C+ student doing the best he could, and subsequent arrangements perpetuated his mistakes.

These shows contain about half Western, half Chinese music. The one in Suzhou also included a pair of comics who mocked various aspects of Chinese life, from the confusion of dialects to the once sacred "Little Red Book" of Chairman Mao. Five years ago they could have been jailed, or worse, for that.

Chinese opera is also very popular, as are movies. In fact, one film that brought crowds to theaters in the eastern cities of Nanjing, Suzhou, and Shanghai was of a Nanking Opera, San Xiao (Three Smiles). Judging from the movie, Nanking Opera is a more bumptious genre than Peking Opera but without the acrobatics. The plot and acting were reminiscent of old Ritz Brothers/Alan Jones movies, though in mandarin costume and with Chinese songs emanating from that province. (This sort of "reactionary" entertainment, showing mandarins in positive roles, has been possible again only during the present liberalization.) Significantly, at no point did the lovers touch each other, except once by accident, and this became a major incident in the story. Their courtship consisted of the title's "three smiles." The Chinese audience, usually undemonstrative (at most of the public performances we would attend, we were the only ones to applaud), reacted audibly, with laughs and gasps throughout.

Charlie Chaplin has recently been discovered by the Chinese, and one of the favorite films in Beijing was The Great Dictator, while Modern Times was making a hit in Nanjing. At the same time, Futureworld was playing both of those cities and Shanghai, and Convoy was pulling them in in Beijing. A popular film will run around the clock, and a Chinese will not think it odd to take in a show at 1:00 a.m.

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SMALL WORLD: 4. There is a knock on my hotel door. I open it to find a Chinese gentleman in the usual unisex garb. "Hello, Leonard, I'm Chi Chao-chu." We have not seen each other since 1950, and I recognize him only because his face had been all over America's press and television during the recent visit of Vice Premier Deng Xiaoping (Teng Hsiaoping), for whom he acted as interpreter. We had been housemates in college, but when the Korean War broke out, Chaochu left for China. The next thing I knew



Liu Shikun smiles! The reputedly always dour pianist (left) belies his reputation as he, the author, and Han Zhong-jie, conductor of Beijing's Central Philharmonic, enjoy a banquet.

HIGH FIDELITY



In Nanjing, some of the older Little Red Flowers perform. Note the accordion and cello in the traditional Chinese orchestra.

of what had happened to him was twenty-two years later; he was on the front page of the *New York Times*, sitting between President Nixon and Chairman Mao, whose interpreter he had become. Today he is the Foreign Ministry's deputy director of the Department of American and Oceanic Affairs. (The position of director is vacant.)

We talk about old times and contemporary events. China's invasion of Vietnam was a counterattack, he insists: "Vietnam has been shelling Chinese soldiers for a year, thinking they were safe because the Soviet Union was behind them."

Why didn't we hear about it in America? China would have at least had better public relations if it had announced to the world that it was being attacked and would counterattack if Vietnam didn't stop.

"We warned everybody. It was in the papers, even the New York Times. It was also on TV. We brought American reporters to see the shelling." As for the public-relations aspect, "our communications are terrible.... Nobody has been able to believe it, or us, because it's all been gobbledygook. But we're changing it, both internationally and with our own people."

I tell him I am impressed with those fair-minded news releases we daily receive and ask if they really are available to the Chinese. Yes, he answers, but in a different version and only by subscription. "We don't publish it for the newsstands because in our society, if we publish something, people take it to be the government position. But anyone can read it."

Isn't that dangerous for a monolithic society?

"Only if people are free to read everything are they able to make up their minds." For a moment I feel as though I am talking with Thomas Jefferson. But then again, Chao-chu was raised in the U.S., on New York's Lower East Side. "We're not afraid of people misunderstanding. We tell them the truth in our papers."

How did he manage to prosper during the Cultural Revolution with such views?

"At the time, I was just an interpreter. But with my background, I would have been accused of spying, of being an imperialist agent. It would have been the end of me, but they had to leave me alone, because I was close to Mao."

With the post of director of his Foreign Ministry department vacant, does he think he will get the job?

He laughs. "Oh, no. I'm too junior."

I ask him if he saw the editorial about him in the *Times* after the Deng delegation left New York. "Yes." Then another laugh. "But did you see, they made me fifty-three? I'm only forty-nine."

When he leaves, we exchange addresses.'He writes down his name, then says, "I suppose I'd better give it to you the new way, too." He adds: "Ji Chaozhu."

Then, pointing to my open collar in contrast to his Mao jacket: "That's still more comfortable to wear."

The following day, March 12, we hear that the BSO has arrived in Shanghai.

SMALL WORLD: 5. Out of the more than 200 million Americans, there are now some 150 official guests of the Ministry of Culture in China, and four of us live or lived within six houses of each other on a rural road in the small western Massachusetts town of Lenox, including my present and former next-door neighbors.*

We are at the Peking Opera, and the students of its "institute" put on a special presentation for us: three scenes from the traditional Chinese opera The Tale of the White Serpent. As in all the many theaters we would attend, there are screens on each side of the stage, onto which a projector flashes subtitles so that the Chinese audience can understand the sometimes incomprehensible dialects on-stage. These marvelously trained actors, acrobats, and singers are from the class that entered the school in 1973, during the Cultural Revolution, when such operas were banned in favor of contemporary political works. Now the students, and the company, perform both traditional and contemporary works. (They will study at the institute for eight or nine years, and the best of them will be assigned to the company. In China, of course, the government assigns all jobs. One can request a change, but few, I was told, are granted. Naturally, there is little likelihood that a Chinese ballet student will ask not to be assigned to the company.)

The orchestra of traditional Chi-

^{*}The others: Andy Pincus, music critic for The Berkshire Eagle and part of the BSO press contingent, Tom Morris, manager of the BSO, and conductor Seiji Ozawa, who lived in the Morrises' house before they bought it.
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nese instruments (plus cello) is in the wings, while the pit is given over to two audio engineers taping the show. The tape recorder, a four-channel open-reel machine, has the name Sunflower on it and cost about \$250 "some years ago." Their six-channel mono mixer has no visible name, but the speakers are marked "Feile." All are made in China— Shanghai, the engineers believe. They let me know that experimental stereo recordings were once made at the Peking Opera.

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At both the Peking Opera and at the Shanghai Opera we would visit the following week, as with the Shanghai Ballet and the Nanking Opera movie, it was plain that performers playing the lovers would not touch each other. It was rare for characters on-stage even to interrelate. The Shanghai Opera we saw, Bi Yu Jan (The Jade Hairpin, in which the hairpin functions much as the handkerchief does in Othello), includes an opening act in which the bridegroom sings accusingly, for perhaps a quarter of an hour, to his bride (but at the audience), who sits, veiled, without reacting. Later in the opera, she gets even by singing a fifteen-minute solo to him while he retaliates by refusing to react to her. Dramatically static, perhaps, but after a while the music begins to grip you. (How long does the Immolation Scene take?)

The cello seems to have become a Chinese musical instrument. At the Shanghai Opera, one was included among the plucked pi'pas, bowed erhus, ban-hus, and other hus of different sizes, and wooden Chinese flutes that surrounded the active percussion section. It appears to act as a link between the bowed and plucked string instruments but most usually as a bass hu. The student traditional orchestra at the Central Conservatory had both a cello and a double bass, and in Nanjing, in remarkable performances by a children's folk ensemble, the Little Red Flowers, an accordion and a cello were both part of the traditional Chinese orchestra. Another Westernism one could notice in Shanghai Opera was again the intrusion of harmonic progressions. When one scene ended blatantly on a major triad, the Chous and Lexchanged glances. "So



A historic moment: Benjamin Stevenson, director of the Houston Ballet, introduces the Shanghai Ballet to passion as he steps in to dance Siegfried in "Swan Lake" with the company's prima ballerina.

much of this is not authentic," explained Wen-chung.

The lack of interaction of performers may be legitimate in Chinese stage productions, but it detracts from their progress in trying to develop a Western tradition. Our little delegation, in the person of Ben Stevenson, director of the Houston Ballet, may have planted the seeds from which a dramaturgic revolution might grow. At the Shanghai Dance School, which produces both the Shanghai Ballet and the Shanghai Dance Troupe, we were shown, besides sword dances and folk ballets by the troupe, the Swan Lake pas de deux by the company, which was preparing it for the first time, at least since the Cultural Revolution. As we could have expected, Siegfried and his swan barely acknowledged each other and touched each other as little, and as gingerly, as possible.

When the usual request for "criticisms and suggestions" came, Ben commented that these two were supposed to be in love. Taking the Chinese prima ballerina in his arms, he danced Siegfried with her, clasping her closely or looking at her with passion. The bystanding swans giggled continuously, never having witnessed such eroticism. Ben then switched roles; he was a bit bulky for a swan perhaps, but nevertheless got the dramatic idea across. Later that day we received a request from the Shanghai Ballet. They wanted Ben to restage Swan Lake for them. He spent the next two and a half days doing so.

When we finally left Shanghai, a delegation of students from the ballet school boarded our bus and presented Anna with a sword. She too had been spending those days at the school, introducing the young dancers to what was, for them, the avant-garde world of modern dance (and Michael had been giving classes in Broadway choreography).

As for Western opera, we saw none, hearing in Beijing that the Central Opera Company had not yet "recovered from the Gang of Four" sufficiently to show us anything. But what most brought home the impact of that debilitating decade 1966–76 were visits to the country's two major conservatories, in Beijing and Shanghai.

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Central Conservatory president Zhao Feng, he of the nineteen mou-tais, and his department heads greet us, applauding as we get off the bus. Following protocol—we are now old hands at this, having been similarly greeted by the Peking Opera, the Central Philharmonic, and the Peking Film Studio—we applaud back. Once inside, he explains that there are more than ninety "feeder" schools to the conservatory and that last year 17,000 students applied for the 200 openings. "It was a tragedy for those not admitted. My two main problems are lack of space and bureaucracy."

The students all live in, and there are 616 of them, with a faculty of 300 and a total staff (cooks, janitors, etc.) of 700. "Before he died," Zhao continues, "our beloved Premier Zhou Enlai had already assigned the land next door for our development." The proposed new building will have 400 practice rooms. "It will solve our immediate problems, but for the size of our country it still will not be enough."

The fortunate students accepted by the conservatory enter, at least theoretically, between the ages five and eight. After five years of study, those who qualify continue for another five years in the middle school. Top students there go on to college level for four years, the rest being assigned to "other units" like the Central Philharmonic or the traditional orchestras, depending on their specialty. (The eight departments include both "orchestral" and "national" instruments; the others are composition, conducting, piano, vocal, opera, and history.)

In practice today, this pattern is only an ideal. Because the conservatory was closed for several years, students are being accepted at all levels. Many departments are decimated; Red Guards destroyed much music as well as sets and costumes for Western operas. "Before the Cultural Revolution," one faculty member told me, "we produced *The Queen of Spades* and *Traviata*. We are planning for the future, when the vocal department will again put on operas, but now it's too difficult."

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A vocal teacher in the Shanghai Conservatory later echoed that sentiment: "We don't yet teach operas, just an aria here and there. Perhaps later we'll have full operas. After all, we've had only two and a half years to get used to Western music." Meanwhile, vocal students throughout China still seem to learn only the popular arias, as basso Wong had done.

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We see a movie recently made at the Central Conservatory. In it a sevenyear-old boy violinist matches, in virtuosity, the young Ricci or Menuhin. A girl pianist only a few years older is as musical as any Chinese I have heard. According to the movie, during the reign of the Gang of Four, her family had to draw the blinds and place cloth between the hammers and strings of her piano when she practiced her Chopin or other Western music, so that nobody could hear it outside.

Like the Central Conservatory, the Shanghai Conservatory had to turn away an inordinate number of applicants. Deputy director Tan Shujen gave us the figures: 300 accepted last year out of 7,000 applicants. That, in fact, is now half the student body, about the same size as the Beijing school, because during the Cultural Revolution, the Shanghai Conservatory, too, was closed down-for seven years-"and we are now trying to rehabilitate our school." Students are copying parts from scores that some brave musicians hid from the Red Guards, but it is a hard struggle. Tan is hoping to be able to send his best students abroad for further study and is proud that next year, "we will enter our students in the Chopin Piano Competition."

Opened in 1927, this is one of the oldest conservatories in China. (There are seven altogether.) Its faculty numbers 400, with another 100 staff members, and its departments are similar to the Central Conservatory's: composition and conducting, orchestral instruments, traditional instruments, piano, vocal, and a "research institute" that encompasses Chinese music history and theory, Western music theory, and "national music"—that is, various Chinese folk traditions.

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In a classroom at the Central Conservatory a group of advanced students presents a recital. The pianists have a particularly hard time, for the old Bluthner, the best piano in the school except for a new concert grand Baldwin onstage, has a dynamic range between mezzo piano and forte, and no subtlety or variety of color can be forced from it. Only the best students are permitted to use this piano, so, paradoxically, only they can have their technique harmed and musicality impoverished by it. The only thing one can say in its favor is that the school's other pianos (like nearly all those at the Shanghai Conservatory) are worse. The administration, aware of the problem, is ordering nearly a dozen new Baldwins from the West.

An eighteen-year-old violinist shows that he can play most of the notes to Ravel's Tzigane in tune, but he is no match for the little kid in the movie. Most impressive is twenty-one-year-old contralto Guo Yin-yu, who delights us with "Che farò senza Euridice" from Gluck's Orfeo ed Euridice. The opening and closing numbers are performed with traditional instruments. A young man starts the entertainment with a pi'pa solo that, though announced as "a 2,000year-old melody," is obviously a modern arrangement. When asked about this, a teacher explains that "it has been updated over the years." The recital ends with two "updated" duets for er-hu and vang-ch'in, which differs from the plain ch'in in that the strings are struck with light sticks rather than plucked-it's a sort of Chinese cimbalom. Teenage performers on the traditional instruments appear to be very well trained, while the adolescents playing Western music seem to be struggling, with the younger among them showing more promise than the older. The impact of the policies of the Gang of Four is brought home to me.

Before we break for lunch, the student orchestras, both traditional and Western, perform music by contemporary Chinese composers. Both works are very colorful, the Western music sounding as though written by a pretentious Leroy Anderson. But the kids! The innocence and freshness of their playing is totally captivating. In some ways they perform more musically than the Central Philharmonic.

The same Chinese musical syndrome was evident in Nanjing and Shanghai. Almost invariably, the youngsters, even those playing traditional in-

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struments or singing "in praise of socialism, our leaders, and the beautiful life of the people," as one of them proudly proclaimed, showed more sheer musical talent than most of the adults. In Nanjing the day after we saw the Little Red Flowers-one of five similar children's groups there—some of their members performed for us along with local adult artists. Whether the city has any professional musicians, I can't say, but all the adults selected to regale us worked at, and were representing, restaurants or department stores and generally practiced and performed their music after hours, like the students. Some of the more prominent of these are combined into troupes to bring performances to outlying areas—or to visiting dignitaries.

In Shanghai, the conservatory students also gave a brief concert. A marvelously gifted baritone, a soldier taking a refresher course, sang a knowledgeable rendition of "Di provenza" from Verdi's La Traviata. (Of course he doesn't know the rest of Germont's role.) A student tenor followed with Leoncavallo's "Mattinata" and "E lucevan le stelle" from Puccini's Tosca (ditto Cavaradossi's role).

A violinist and pianist in their late teens showed what they could do, one with Saint-Saëns's Hapanaise, the other with a few Chopin preludes, but again, the most startling virtuosos were a tenyear-old cellist and an eleven-year-old er-hu player. Perhaps even more remarkable was a quintet of teachers, playing the Trout movement from Schubert's quintet (like the old Kolisch Quartet, and the early Quartetto Italiano, without music), wherein the lady pianist miraculously made the Mao-forsaken piano sing. I regret that I didn't get her name. (Instrumentalists, we were told, can actually major in chamber music here. American music schools, please note!) I asked the players if they had ever heard any Western guartets play, and they responded that the school had some Budapest Quartet recordings from the early '50s.

It was in Shanghai, almost two weeks into our trip, when I began to question my own reaction to Chinese "traditional" music. After all, who did I think I was, carping about the Chinese having tainted their music with Western instruments and techniques? As Paul

A rehearsal of the student traditional orchestra at the Shanghai Conservatory.

Henry Lang pointed out in his article on performance practice last month, the modes of performing old music should not be determined by scholars. And the Chinese, it was obvious, are keeping their traditional art not only alive, but enchanting to their audiences, who flock to operatic and other performances. So what, I try to convince myself, if future sinomusicologists note the influence of nineteenth-century European music on the Chinese tradition? Who today complains that what we now think of as authentic Chinese music was "corrupted" by that of the Mongol invaders in the fourteenth century? And yet, I cannot help but regret that Western harmony has proved so powerful that it has at best homogenized, and at worst devoured, all other musics it has touched, from Asia to Africa

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The highlight of my stay in Beijing, perhaps in all of China, occurs when we return to the Central Conservatory after lunch. As we get off the bus again, a Chinese gentleman unexpectedly pulls me aside and beckons me to follow him. He leads me down a long corridor, opens a door, and suddenly I am confronted with a classroom of people who arise to applaud me. An interpreter among them introduces his colleagues: professors at the conservatory, administrators of the Central Radio Station, and editors of the Chinese music magazines. I am expected to lecture to them, then conduct a seminar, on all three of their specialties for three hours.

After warning them that I intend to learn more from them than they from me, and being answered by smiles and another round of applause, we get down to business. In this mono-only country, I explain the various philosophies of stereo production. And since I hear that stereo is supposed to come to China within a year or so, as a fillip I give a basic description of quadriphony. A gentleman raises his hand: "Do you mean SQ?"

Flabbergasted, I reply, "How do you know about SQ?" I feel as though I have been describing oil to an Arab.

"I read HIGH FIDELITY each month." How he manages that, I can't guess, since we have no subscribers in China, but in the class I don't pursue the matter. He also gets the Journal of the Audio Engineering Society and some German and Japanese publications. The man is Tien Chen-tau of the Central Radio Station, and he and his colleagues tell me that, yes, there are "radio shops" throughout China where one can buy amps, preamps, speakers, and other components—although most phono-

HIGH FIDELITY



Beneath the gazes of past and present Communist party chairmen Mao Zedong and Hua Guofeng, a ten-year-old cello virtuoso at the Shanghai Conservatory symbolizes the hope for the future of Western music in China.

graphs in China "are all one unit." And there are stores where mono records are for sale; they are all Chinese, and even those of Western music are only by Chinese artists and "not much available."

All broadcasts are mono, of course, but "we have made experimental multitrack recordings. When we do, we use cassettes with Dolby B." I see that the music professors and magazine editors, bored with the technical turn our seminar has taken, are itching to ask questions about their own fields ("We are only the consumers of these broadcasts, not the producers"), but I am fascinated by what I am hearing. "We produce Dolby A in Henan (Honan) Province, in the city of Jiaozuo (Chiaotso), for the radio stations. We have done so ever since 1971, but in large numbers only since 1973." I wonder if Ray Dolby knows about that.

> "What do you call it in Chinese?" "Dolby."

Moreover, "in northeast China we make DBX for radio stations, film factories, and other important institutions. Our Dolby A can better the signal-tonoise ratio by 15 dB, but our DBX can better it by 30 dB—unfortunately the frequency response is not so good."

From there on, I juggle the three fields as best I can, and if I am surprised when an official enters the class and tells me it is already time to go, I am overwhelmed almost to the point of tears when the class reacts by begging me to stay, some of the "students" restraining me physically as I head for the door. Outside, the reputedly undemonstrative Chinese embrace me as I board the bus. It is not me, of course, but personal communication with America, the "beautiful country," they don't want to release. Comparing notes with others of the day's lecturers, I found the reaction near-universal. Still, I am elated, and I take that elation with me to tonight's banquet.

SMALL WORLD: 6 and 7. As we drink our final toast in Beijing, a youngish Eurasian in Chinese clothes comes to our table and starts whispering to one of the officials. I have not seen his face before, but he approaches me. "I understand you met my uncle," he accuses. The accent is definitely U.S.

"Who?" I ask him.

"Ji Chaozhu. He told me to look you up at tonight's banquet. I'm Emile Chi." The reason the "Chi" not only is un-pinyin-ized, but remains where an American family name belongs, is that Emile lives in New Jersey. He is spending the year teaching computer science at Peking University. He tells me that music and high fidelity are among his major interests. Then comes the clincher: "You know Harris Goldsmith?" A moment's pause while I try, literally, to orient myself. (Am I really in the middle of China?) "Of course. He's one of HIGH FIDELITY's contributing editors. I've known him for over fifteen years. Why?"

The nephew of one of the top officials of the People's Republic of China then tells me, "Harris and I grew up together. He was my closest friend. It was Harris who first got me interested in music, and he initiated me into high fidelity. Say hello to him for me when you get back."

* * * * *** *** * * * * * * * * * * *

On March 22, the day we crossed from China into Hongkong, the Hongkong Standard had a startling juxtaposition of items on page 5. At the top was a photograph of the Bostonians being welcomed, along with Liu Shikun, back home by Arthur Fiedler. But directly below was a story that reported a speech made six days earlier by Vice Premier Deng-himself once a victim of the Gang of Four and still a symbol of his country's new liberalization-denouncing those who danced with foreigners, "sold them secrets," or went to foreign embassies. According to the paper, Deng insisted they "should be arrested," and the day after the speech, exactly a week after our visit to the "disco," Chinese "authorities" evicted those of their countrymen found dancing with foreigners at the International Club. Other sources reported that officials in Beijing had taken down the more critical posters from Democracy Wall and elsewhere. A sign of encouragement was that the protesters were putting their posters right back up, in spite of the authorities.

What these recent events indicate, I cannot tell. Obviously and fortuitously, our trip to China coincided not only with a honeymoon in U.S.-P.R.C. relations, but with the flexing of the Chinese people's cultural and intellectual muscles during the exercise of their newfound artistic freedoms and personal liberties. Whether that period proves to be the herald of China's future or just an aberration is anybody's guess. For the sake of the artists I met, the students I saw, and the friends I made, this honeymooner can only hope.

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On Conducting French Opera

by Julius Rudel

It has sort of sneaked up on us, but it's true nonetheless: Julius Rudel has to be rated the day's best conductor of French opera. Columbia's new recording of Cendrillon, reviewed in this issue, is his third full-length Massenet opera, and it occurred to me while observing some of the sessions last summer in London that his sugar-free approach makes the strongest possible case for a composer who is often more abused by his friends than by his detractors. (1 was thinking too of the almost Mahlerian intensity of his RCA Thais.) We talked at the time about this French affinity, which was even more conspicuous in the fall, when he conducted a uniquely passionate and lyrical Pelléas et Mélisande with the New York City Opera and made his Met debut with an overpowering Werther

How does it happen that a Viennese-born and -trained conductor becomes such a persuasive advocate of a style usually thought all but inaccessible to non-natives? Rudel took time out from his final season as director of the City Opera (of which he is now principal conductor, at the same time taking over the music directorship of the Buffalo Philharmonic) to write about his approach to this elusive repertory. **K.F.**

am going to try to put into words something I have never really thought about before but have only done, to a very large extent, intuitively. By now, I have many more than 100 operas in my conducting repertoire, of which about twenty are French. Asked, on the eve of the release of my new recording of Massenet's *Cendrillon*, to write about conducting French opera, I feel a bit like that legendary paralyzed centipede, and I'm glad no one ever asked me to do this before I recorded the work. I might never have made it. Conducting live performances at a moment's notice or recording works I have never heard (as was the case with *Cendrillon*) holds far fewer terrors for me than trying to put into words what has always come so naturally without them.

·I have always thought of opera as divided into three unequal parts: the story, the music, and the style. All of these convey to different extents, and in different ways, a sense of drama-or are, to put it another way, carried by a dramatic pulse. It is this central pulse, comic or tragic, that all three elements express and that provides the direct line to our emotions. In opera, the story is the least important of the three and, in fact, since the words are rarely comprehended (being often poorly enunciated or in a foreign language), the most readily dispensed with. Is this sacrilege from a man whose pride was the dramatic cohesion of his productions? Not really: Literalness was never my aim, nor was elevating to the level of literature stories like those of I Puritani or even the ever touching Butterfly. The stories, which are at least worth knowing, provide a framework, rational or not-so-rational props for the vast display of emotions: love, licit and illicit, fraternal, paternal, maternal, and patriotic; joy, pain, passion, anger, and the finality of death. Untimely or sacrificial death are usually the best moments to bring the curtain down. Opera was obsessed by sex and violence long before television picked them up as surefire ingredients. The difference between opera and soap opera, in fact, lies in the two other factors in opera, the music and style.

But this is supposed to be specifically about French opera, and that involves us primarily in the question of style, the manner or mode in

which the essential ingredient, the dramatic impact, is conveyed. Nineteenth-century musical style is keyed to the nationality of the composer-mainly French, German, Italian, Russian, or English. Each composer had his individual style, of course, but particularly in opera. where the sound of the language colors the musical phrasing somewhat, his nationality strongly affected (and inflected) his creative output. The French were supreme stylists, and one approaches a French composition differently from any other, with a strong commitment to achieving that special sound. Where I may differ from some other interpreters is that I try never to lose sight of the emotional impact that must be expressed, not negated, by that style. So often the message, the dramatic pulse, gets lost in the concern with manner, a precious subtlety that vitiates what the composer sought to convey.

Let us consider Debussy's Pelléas and Mélisande, the most stylistically French of all French operas, atmospheric and haunting, more mood than content, more shadow than substance. But what a compendium of emotions it seeks to convey, thick with sex and violence, from the mere suggestion of violation in the trembling, tattered Mélisande to the gradually growing heat between her and Pelléas, the gnawing anger of Golaud to the first kiss and final fratricide. Even the quiet death of Mélisande seems rather a willful wrench from a life more suffocating than the grave. Within the pale colors in the shimmering orchestration, one must suggest not only the somberness of the castle and surrounding forests, but also the penetrating light and heat. While not as in Italian verismo, one must still give rein to the underlying dramatic pulse and build the terrifying climaxes out of the lovely pastels Debussy provided. When Mélisande says, "Je ne suis pas heureuse," the suffering must be as intensely felt as a mad scene elsewhere.

After all, there may be as much brooding drama, as much potential for the tragic, in an Impressionist painting as in a blood-drenched "realistic" canvas. One can find as much joy expressed in a sun-filled landscape as in a peasant dance, as much passion in a mosaic of tiny brush strokes as in broad, long strokes. The means (the styles) may be different, but if the works are any good, the pulse of life must be there. The miracle of art lies in the infinite means man has found to express the emotions at the core of his existence.

A precious, small-scale, colorless approach to French opera deprives it of this vital core, substituting style for expression instead of making one the vehicle for the other. In a simple, repeated phrase one can find an aura of mystery or mounting tension, not in any literary sense, but in keeping with what I have called the dramatic pulse. The composer may not have thought of either (perhaps the notes were just repeated because he couldn't think of anything else at the moment), but that is indeed the crux of interpretation: to find in the artist's work the range of its possibilities. This is true of any music, but particularly French, where a degree of understatement leads to much misunderstanding.

Cendrillon, Massenet's version of Cinderella, is a fairy tale, replete with operatic improbabilities and a fairy godmother, but it is nonetheless the universal dream (or at least it was until the women's movement). As such, it celebrates to the hilt in very beautiful, sensuous music just about every emotion—and, even with a happy ending, tells us much about human suffering, from the pain of the hen-pecked husband to the longing of each lover for the other when only an oak tree divides them.

There, in the context of that unmistakable French style, one must feel the warmth between father and daughter, sharing as they do the wrath of the others. In the pathos of Cendrillon one must sense also her pride, her strength. Like French opera itself, she may not be hysterical, but she is never bland. As I believe Massenet intended, everyone in this fairy tale seethes with human passion while luxuriating in the sensuousness of the orchestral colors. That's what I tried to convey-very much in the French style. **MF** Rudel and scenes from two of his Massenet performances: Right, Henry Price as Des Grieux swings Catherine Malfitano (Manon) at the New York City Opera; the Metropolitan Opera's production of Werther has Placido Domingo in the title role and Elena Obraztsova as Charlotte.







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Len Cariou and Angela Lansbury recording Sweeney Todd

Sweeney Todd Triumphs on Disc

RCA's two-disc original-cast recording reaches the heart of Stephen Sondheim's brilliant and unclassifiable masterpiece.

by Alan Rich

Sweeney Todd, the demon barber of Fleet Street, has suffered the wrongs of a corrupt society and, with his trusty razor, dispatches an impressive number of Londoners in his one-man war of vengeance. Yet, in the musical masterpiece precariously ensconced

SONDHEIM: Sweeney Todd, The Demon Barber of Fleet Street.

CASI:	
Sweeney Todd	Len Cariou
Anthony Hope	Victor Garber
Beggar Woman	Merle Louise
Mrs. Lovett	Angela Lansbury
Johanna	Sarah Rice
Tobias Ragg	Ken Jennings
Pirelli	Joaquin Romaguera
The Beadle	Jack Eric Williams
Judge Turpin	Edmund Lyndeck
37 1	

Vocal ensemble, orchestra, Paul Gemignani, cond. [Thomas Z. Shepard, prod.] RCA RED SEAL CBL 2-3379, \$13.98 (two discs, automatic sequence). Tape: CBK 2-3379, \$13.98 (two cassettes). (at least at this writing) in Manhattan's Uris Theater, there is yet another victim: Stephen Sondheim, who has had the audacity to be brilliant in an artistic medium where mediocrity is highly prized, and unclassifiable in a world divided by journalists into neat categories.

This is Sondheim's second brilliant. unclassifiable show in a row, and Sweeney Todd repeats almost every error that consigned Pacific Overtures to the dustbin after its pathetically short run three seasons ago. Again the staging by Harold Prince is prodigally inventive, this time involving the installation in the theater of an entire moving scaffold purchased from a defunct iron foundry on Long Island. Once again the script-this time a Hugh Wheeler adaptation of a Guignol-style story whose origins are lost in time-tends to zap the senses with its interlock of satire and irony; as with Pacific Overtures, the real target of Sweeney Todd is the complacent, nasty, urban upper class, the very tired businessman (in other words) from whom support of the Broadway musical traditionally comes. And, above all, once again Sondheim has created an abrasive and complex musical score, with tunes that refuse to fall into easy-to-remember patterns and lyrics that demand the exercise of attention and memory. What is it with Sondheim & Company, one may justifiably ask: a death wish?

Whatever the eventual fate of *Sweeney Todd* in the theater, on records the stature of Sondheim's accomplishment has been preserved with exceptional intelligence. Barring a few short passages of negligible import, every note of the score has been recorded and set into context in a fairly drastic but intelligent pruning of Wheeler's book. By so honoring the extent of both the score and its dramatic impact, RCA's producers have begged the burning question of whether this is, or is not, an opera. It is a question that richly deserves to be begged—or, better yet, banned. For years Broadway's journeyman journalists have flung "opera" as an awestruck compliment at any score that cannot be whistled on first hearing (including, ironically, Sondheim's own Anyone Can Whistle). And, for just that many years, Broadway's ticket-buying public has taken the reviewers' "opera" as a synonym for "plague."

Call his work by whatever name you wish, it is Sondheim's level of creativity-beginning, actually, with the vastly underrated Anyone Can Whistle in 1964-that has sustained the hope of many serious critics that perhaps something like a free and innovative musical drama might someday eventuate in commercial theater. Lord knows there hasn't been much outside of Sondheim to sustain that hope. And from a serious critical standpoint, Sondheim as composer/lyricist-apart, that is, from the somewhat variable quality of the books-has steadily risen in stature, in variety of techniques mastered, in subtlety and genuine depth of style from Anyone Can Whistle to Sweeney Todd. (I have not forgotten the 1962 A Funny Thing Happened, etc. It was a grand show for reasons that included Sondheim's contribution, but it was obviously conceived as a vehicle, as none of his later shows were.)

Whistle was astounding for its vitality and, specifically, for its many extended scenes in which music and action moved continuously from one set of materials to another, as against the customary song-dialogue-song format. Yet, how much more freely Sondheim was later to manage this matter of musical continuity—the "Girls Upstairs" scene from Follies, "Weekend in the Country" from A Little Night Music, the gorgeously conceived "Chrysanthemum Tea" and "Something in a Tree" scenes from Pacific Overtures, and now virtually all of Sweeney Todd.

It is this continuity above all-and you're perfectly welcome to think of it as operatic if it makes you any happier-that gives his latest show its almost breathless momentum. In a sense, the entire score is a musical unit, given its shape by the "Ballad of Sweeney Todd" that introduces the show, closes it off, and recurs at key moments along the way. The device is that of the "Morität" in the Brecht-Weill Dreigroschenoper, but Sondheim's musical style owes nothing to this earlier model. His ballad is, in fact, a set of marvelously spooky choral variations on a theme unmistakably derived from the Gregorian Dies Irae, each variation a brilliantly devised change both of music and of character.

The scope of *Sweeney Todd* is broader than anything he has yet dealt with. The setting—Dickensian London, its milling crowds, its folk tunes and street crles, the Victorian blandnesses of its young peoples' love songs gives him the chance to create an un-

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commonly full background of genre pieces to set off the bitter ironies of the story up front. Some of the music for the juveniles has an ingenuousness, an almost childlike quality, that was first tried out, I would guess, in the "Pretty Lady" in *Pacific Overtures*; I don't recall anything like it in earlier scores. Toward the end there is a neat parody of your basic "row dow diddle dow day" parlor ballad, here used with devastating effect to offset a moment of high dramatic conflict.

But the great music in Sweeney Todd is the stupendous, iridescent suite of numbers for the principals: Len Cariou as Sweeney, invested by his music, if not always by the book, as a figure of genuine lyric, tragic stature; Angela Lansbury in the role of her life as the piemaker who cooks up a method of disposing of the barber's victims. They are cleverly introduced in successive songs: Sweeney's apostrophe to London. "a hole in the world like a great black pit," hard by Mrs. Lovett's wrenching lament about her "worst pies in London." From this initial mismating of sentiments, the movement-musical, dramatic, lyrical, however it may be taken-of these two characters toward a mingling of purpose, culminating in the sweeping waltz ("A little priest ") that brings down the first curtain, seems almost like an unbroken line, and the effect is dazzling. That waltz, by the way, is a wonder: its lyrics a paean to the joys of cannibalism; its icy, slithering music a panoply of creative heat.

On records, as not nearly so well in the theater with its vulgar overamplification of stage sounds, it is also possible to note the considerable impact of Ionathan Tunick's brilliant orchestration: here an instrumental obbligato supplying an almost Mozartean commentary, there an overpowering, inexorable tread like the distant growl of doom. There is, indeed, much to study in Sweeney Todd, and it is to RCA's credit that its generous recording reaches the heart of this remarkable show as have few original-cast ventures. The intricate counterpoint out of which some scenes are constructed-the montage of dissimilar material that opens the second act is an astounding example-is nicely laid bare in the spacious, clean sound. A masterly, original piece of musical theater has, for once, been given its due. (A pity that RCA and the industry let discrete quadriphonic discs lapse into oblivion. Prince's staging and guad would have been a marriage made in heaven!)

For what the information is worth, I'm told at my local record hangout—one of the few connoisseur's shops left in Manhattan that Sweeney Todd and Philip Glass's Einstein on the Beach are its best-selling items. I interpret this as a victory for unclassifiable musical theater, at least on records—whatever Broadway's tired businessman, and Broadway's tired phrase-maker, may think.



Massenet's Cendrillon: A Delectable Discovery

In Columbia's premiere recording, conductor Julius Rudel ideally blends human and supernatural elements.

by Dale Harris

The Massenet revival has brought to light nothing more delectable than *Cendrillan*, an operatic version of the Cinderella fairy tale by the seventeenth-century French poet Charles Perrault. Responding with all his sensitivity to what in essence is a folk tale about the eventual triumph of misprized merit, Massenet created both a tender little love story and a vision of fairyland. *Cendrillon*, in other words, is a further development of that fusion of the human and the supernatural that Massenet had presented some ten years before in *Esclarmonde*.

Whereas the earlier opera was heroic and grand, however, *Cendrillon* is domestic and intimate. Magic in *Cendrillon* is a projection of the universal beneficence that encompasses the lives of those who, though humble, are morally worthy, and that can undo the harmful effects of mischance, spite, and ignorance. In this subject Massenet clearly found exactly the change he needed after the veristic passions of *La Navarraise* and *Sapho*, *Cendrillon*'s immediate predecessors. To the task of sumnioning up Elfland he brought imagination and technical brilliance, creating out of Cinderella's Fairy Godmother and her train a glittering web of sound, made up of the airy flights of a soprano leggiero, backed by a gentle women's chorus, and enveloped in an orchestral tissue of the greatest delicacy. The final scene of Act III, in which the Fairy Godmother, hidden in an enchanted oak tree, separates the young lovers with a wall of flowers and finally brings them together, is a wonderful flight of fancy.

But like the work as a whole, it derives its conviction from the emotional sympathy Massenet felt for his heroine. All the fantasy in this opera has direct reference to her emotions and ultimate happiness. Massenet's susceptibility to her plight may be gauged by the quality of her melancholy Act I aria "*Reste au*

MASSENET:	Cendrillon.
CAST:	
The Fairy	Ruth Welting (s)
Noémie	Teresa Cahill (s)
Cendrillon	Frederica von Stade (ms)
Mme. de la Haltièr	e
	Jane Berbié (ms)
Dorothée	Elizabeth Bainbridge (ms)
Prince Charming	Nicolai Gedda (t)
Dean of Faculty	Paul Crook (t)
The King; Herald	Claude Méloni (b)
Prime Minister	John Noble (b)
Pandolfe'	Jules Bastin (bs)
Master of Ceremo	nies
	Christian du Plessis (bs)

Ambrosian Opera Chorus, Philharmonia Orchestra, Julius Rudel, cond. [Roy Emerson and Paul Myers, prod.] COLUMBIA M3 35194, \$23.98 (three discs, automatic sequence).

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foyer, petit grillon" ("Stay by the hearth, little cricket"), the piece that establishes her character in the opera and one of his most touching inspirations. Prince Charming, too, is finely imagined, and the love music has a chaste rapturousness that is very persuasive.

The sympathy Massenet feels for Cendrillon also informs his depiction of her father, who, abused by his second wife and her two daughters, plans to run away with his beloved child to the farm where they once knew happiness. In Massenet's fairy tale there is neither evil nor real cruelty, however. Cendrillon's stepmother is vain and a scold, but she is no villain. She and her daughters are included in the glow of good fellowship with which the opera ends. It is a matter of real satisfaction to have, at long last, a complete recording of so charming a work.

That Columbia's recording is so successful may be attributed, above all, to the musical leadership of Julius Rudel, who



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achieves a perfect balance between the human and supernatural elements and from beginning to end is the soul of elegance. Alike in the court dances (where an attractive element of seventeenth-century pastiche predominates) in the fairy scenes, and in the love music he shows complete mastery of what today has become an elusive idiom.

As Cendrillon, Frederica von Stade is always intelligent and often appealing. Less white of tone and tricky of manner than I've heard her in some time, she sings out in a very attractive, direct way for a good deal of the time. Every so often she sounds oversophisticated, and once in a while she chooses—for dramatic reasons, I imagine—to fall just shy of the correct pitch (for example, just before Cendrillon falls asleep in the final scene of Act I); such moments put my teeth on edge. But for most of this performance she is at her very considerable best.

Nicolai Gedda does well. His voice is no longer youthful in timbre or entirely adept at changing gears, but despite some key passages that lie uncomfortably low for him he copes skillfully with an impossible assignment-impossible because the role was written for a dramatic soprano. To give it to a tenor is to impose upon the opera a realism remote from Massenet's precisely calculated, stylized intentions, which may be compared to those of the traditional English Christmas pantomime, in which the hero is invariably played by a shapely girl in tights. Columbia's notes excuse the switch on the flimsy, and rhetorically shaky, grounds of the "oral delineation of character." I hope they are not, on the same grounds, planning to give us a Rosenkavalier with Gedda in the title role.

Ruth Welting as the Fairy Godmother is competent, but I would like to hear a soprano with a purer, more even sound in this key role. Neither Jane Berbié nor Jules Bastin commands all the vocal refinement required by the roles of the stepmother and the father, but they are lively performers. The rest of the cast is satisfactory, as is the chorus. All the non-French singers have been well drilled in the correct pronunciation. Under Rudel the Philharmonia sounds excellent.

The recording is very good. The pressings—I have tried three sets—are intermittently noisy. The libretto comes with a "singing" translation. The notes are less helpful than they might be, and the booklet containing them and the libretto is printed in small blue type on pink paper. The proofreading leaves something to be desired. Now that Columbia is in the vocal and opera market for good, I believe it owes its customers more care in this department. **HF**

Conductor Julius Rudel writes about his approach to Cendrillon and to French opera in general in this issue.

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CLASSICAL REVIEWS

BEETHOVEN: Concerto for Piano and Orchestra, No. 4, in G, Op. 58.

Charles Rosen, piano; Symphonica of London, Wyn Morris, cond. [Isabella Wallich, prod.] PETERS INTERNATIONAL PLE 110, \$7.98.

BEETHOVEN: Concerto for Piano and Orchestra, No. 4, in G, Op. 58.* Sonatas for Piano: No. 19, in G minor, Op. 49, No. 1; No. 20, in G, Op. 49, No. 2.

Radu Lupu, piano; *Israel Philharmonic Orchestra, Zubin Mehta, cond. [Ray Minshull and Richard Beswick, prod.] LON-DON CS 7108, \$8.98. Tape: CS5 7108, \$8.98 (cassette).

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

Alicia de Larrocha, piano; Los Angeles Philharmonic Orchestra, Zubin Mehta, cond. [Ray Minshull, prod.] LONDON CS 7121, \$8.98. Tape: CS5 7121, \$8.98 (cassette).

Charles Rosen's account of the Fourth Concerto is a big improvement over the previously issued *Emperor* (Peters International PLE 024, September 1978). The piano sounds appropriately weightier, the orchestra fuller, and in fact the orchestral playing sounds more assured and shapely. All in all, this warmly sympathetic reading-lyrical but with an engaging gruff angularity at times-takes its place with the most distinguished versions of this beloved masterpiece.

I had high hopes too for Radu Lupu's account, in view of the more purposeful playing heard in his recent Schubert sonata recordings coupled with his obvious lyrical penchant. Those hopes aren't realized. Lupu plays beautifully in the first movement, though even there his lightweight sound seems a bit on top of the keys, his metrical symmetry shy on emotional depth—uncomfortably reminiscent of Gieseking's rather perfunctory prewar recording with Böhm.

Even worse is the drab, monotonous playing of the Israel Philharmonic under a conductor who here shows precious little conception of style or structure. The plodding, aimless orchestral framework seems to infect the soloist in the final two movements, which in addition are separated by a side break, thus shattering one of music's most beautiful elisions. Lupu's accounts of the two Op. 49 Sonatas revert to his erstwhile bloodless, mincing overrefinement. Admittedly, the scale passages in Op. 49, No. 2's first movement are not marked legato, nor are the left-hand ostinatos accompanying the theme of the Tempo di Minuetto, but must these figurations be ticked off in such an insipid, undervitalized manner? I much prefer the robustness of the Artur Schnabel (in Seraphim IC 6065) and Claude Frank (in RCA Victrola VICS 9000).

Alicia de Larrocha's Emperor Concerto,

issued in celebration of her Golden Jubilee as a pianist, is tasteful but lacking in intensity and tonal weight. I wish De Larrocha had brought to this performance the weight, drama, and personality of her coupling of the Liszt sonata and the Schumann C major Fantasy (CS 6989, October 1978). Although Mehta's *Emperor* accompaniment is not appreciably better shaped than his Fourth Concerto, the Los Angeles Philharmonic plays more vigorously than the Israel Philharmonic. **H.G.**

BEETHOVEN: Symphonies: No. 2, in D, Op. 36*; No. 7, in A, Op. 92⁺. The Creatures of Prometheus, Op. 43: Overture.*

Royal Philharmonic Orchestra, Antal Dorati, cond. MERCURY SRI 75122* and 75120*, \$7.98 each.

easured against his heartfelt recording of the Pastoral (Mercury SRI 75119, May 1978), neither of these latest installments in Dorati's unfolding Beethoven symphony cycle shows the conductor at his best. The Second Symphony begins with impressive authority-with judicious shaping of phrases and good timing-but after a few bars one gets the uncomfortable impression that everything is a shade too punchy and incisive, and this spiky execution is put at a disadvantage by engineering that drains the ensemble of color and makes the strings unalluring. This is less evident, but even so still more damaging, in the Larghetto, where one longs for a melting cantabile that never quite comes off. The Prometheus Overture, however, is a success, its perpetuum mobile string writing imperiously rattled off. Like Dorati's earlier recording, with the London Symphony, it is a reading much influenced by Toscanini's classic 1944 account

Dorati's previous Seventh Symphony (with the London Symphony, Mercury SR 90523), never reviewed in these pages, was a brisk, sternly controlled performance very much to my taste. My principal reservations about that recording-balance that favored strings over brass and percussion, and an aura of overcalculation that curbed the frenzy essential to a really great performance of this work-remain problematic in this more richly reproduced remake. (The strings, I should note, have the fullness of tone lacking in the companion Second Symphony.) And I miss the concision and bite of the earlier versioncasualties of the more cushioned sound or of the conductor's "mellowing." This time the first movement's Vivace, although the dotted rhythm is well realized, verges on heaviness. Similarly the scherzo-which on the older disc sounded revelatory because of its true presto tempo (an approach in which Dorati has since been successfully joined by Carlos Kleiber, DG 2530 706, and Riccardo Muti, Angel S

reviewed by Scott Cantrell Abram Chipman R. D. Darrell Peter G. Davis Robert Fiedel Alfred Frankenstein Harris Goldsmith David Hamilton Dale S. Harris Philip Hart Paul Henry Lang Irving Lowens Robert C. Marsh Karen Monson Robert P. Morgan Conrad L. Osborne Andrew Porter H. C. Robbins Landon Patrick J. Smith Paul A. Snook Susan Thiemann Sommer



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BACH: Toccatas, Vol. 1. Gould. Columbia M
35144. Keyboard Works. Kempff. DG 2530
723. Well-Tempered Clavier. Loesser. Telarc
5029-5 (5). July.
BEETHOVEN: Fidelio. Flagstad, Walter (1941).
Metropolitan Opera MET 6 (3), July.
BEETHOVEN: String Quintets, Opp. 4, 104. Suk
Qt, Spelina. Supraphon 1 11 2128, July.
BRITTEN: Peter Grimes. Vickers, Harper, C.
Davis. Philips 6769 014 (3), July.

BUSONI: Piano Sonatinas (6). Jacobs. Nonesuch H 71359, July.

CHOPIN: Etudes, Opp. 1, 25. Costa. Supraphon 1 11 2188, May.

HANDEL: Alexander's Feast. Soloists, Harnoncourt. Telefunken 26.35440 (2), May. MASSENET: Le Jongleur de Notre-Dame. Vanzo, Boutry. Angel SBLX 3877 (2), June. MILHAUD: Protée Suite No. 2; Les Songes. Abravanel. Angel 5 37317, June. MONTEVERDI: Madrigals, Book VII. Soloists,

Leppard. Philips 6747 416 (3), July. MUSSORGSKY: Pictures. SHOSTAKOVICH: Pre-

ludes.Berman. DG 2531 096, July. MUS5ORGSKY: Songs. Nesterenko. Columbia/ Melodiya M 35141, July.

RAVEL: Vocal and Instrumental Works. De-Gaetani, Kalish, et al. Nonesuch H 71355, June. SCHUBERT: Alfonso und Estrella. Mathis, Schreier, Suitner. Angel SCLX 3878 (3), May. SCHUBERT: Symphonies (8), et al. Karajan. Angel SE 3862 (5), May.

SIBELIUS: Four Legends. Ormandy. Angel S 37537, July.

SMETANA: Má Vlast. Talich (1956–57). Rediffusion HCN 8001/2 (2). Neumann. Supraphon 4 10 2021/2 (2). July.

STRAVINSKY: Petrushka (1947 version). C. Davis. Philips 9500 447, June.

SWEELINCK: Harpsichord Works. Koopman. Telefunken 36.35360 (3), May.

TANEYEV: Symphony in B flat; John of Damascus. Fedoseyev. *ABC/Melodiya* AY 67043, June.

TCHAIKOVSKY: The Sleeping Beauty. Bonynge. London CSA 2316 (3), May.

VIVALDI: L'Olimpiade. Zempléni et al., Szekeres. Hungaroton SLPX 11901/3 (3), July. TERESA BERGANZA: Zarzuela Recital. Zambra ZL 505, July.

EDWARD TARR and GEORGE KENT: Baroque Masterpieces for Trumpet and Organ, Vol. 3. Nonesuch H 71356, July.

SUPERMAN. Film score by John Williams. Warner Bros. 2BSK 3257 (2), June. 37538)—seems more or less like everyone else's in the fractionally slower, less alertly executed remake.

As before, Dorati dutifully heeds all repeats except that in the third-movement trio the second time around, and I still do not want to hear them all. H.G.

BERG: Lulu (incomplete version).

CAST: Lulu Anja Silja (s) **Countess** Geschwitz Brigitte Fassbaender (ms) The Schoolboy Trudeliese Schmidt (ms) Wardrobe Mistress Margarethe Bence (ms) Alwa Josef Hopferwieser (t) Horst Laubenthal (t) The Painter Werner Krenn (t) The Prince Manservant Heinz Zednik (t) Dr. Schön Walter Berry (b) Schigolch Hans Hotter (b) Animal Trainer Kurt Moll (bs) The Athlete Manfred Schenk (bs) Stage Manager Alfred Sramek (bs) The Doctor Harald Pröglhöf (spkr) Vienna Philharmonic Orchestra, Christoph von Dohnányi, cond. [Christopher Raeburn, prod.] LONDON OSA 13120, \$26.94 (three discs, automatic sequence).

Tape: OSA5 13120, \$26.94 (two cassettes). COMPARISON:

DG 2709 029 Lear, Fischer-Dieskau, Böhm

R egrettably, the most necessary point to be made about London's impressive new recording of Lulu is this: Although issued subsequent to the Paris premiere of the complete work, incorporating Friedrich Cerha's "realization" of the third act, this set contains the old familiar stopgap version, the third act represented only by the Variations and Adagio from the Lulu Suite. It's necessary to emphasize this because London's packaging is, to say the least, disingenuous. Two years ago, a recording of this torso might fairly have been labeled simply as "Berg: Lulu"-but no longer. Given the timing of this release, some innocent buyers are likely to suppose that they are getting the whole thing.

That's too bad-and so are the circumstances that brought it about. Clearly the Decca/London folk had irrevocably committed themselves to recording the stopgap version of the opera in the fall of 1976, when the death, late in August of that year, of the composer's widow made it likely that at long last the manuscript materials for the third act would be made available. Not long thereafter, it was announced that the Austrian composer Friedrich Cerha would undertake the necessary work of editing, orchestrating, and otherwise making useable the third act (which Berg had composed in every significant detail, and even orchestrated in part), and that this would be first performed in Paris, under the direction of Pierre Boulez, in early 1979. (The London



Anja Silja as Lulu Firm confidence in this part

booklet is less than candid about all this as well; indeed, the statement about the third act in Rudolf Klein's essay is false in nearly every particular.)

As we all know, these events came to pass as planned, and the fact that Deutsche Grammophon subsequently recorded the Paris production would seem to make Dohnányi's recording something of a lame duck. Perhaps so, but because it turns out to be, as far as it goes, a commandingly eloquent performance of the work, from an interpretive stance surely rather different from that of Boulez, it is certainly worth serious attention. In fact, I hope that Decca/London may feel impelled to protect its undoubtedly very substantial investment in this project by getting the cast together again as soon as possible to record the third act. (Granted that a thoughtthrough three-act performance might well involve interpretive decisions about the first two

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acts different from those made here, I still think it's worth trying.)

The place in which the new recording so decisively outshines its predecessors is, as it were, the orchestra pit-by which I mean not only the playing of the orchestra, but also the registration of its sound. All previous recordings of the opera were made at live performances: the old mono Columbia set at a 1949 Vienna concert that constituted the work's first hearing since the 1937 Zurich stage premiere: both the Ludwig/Hamburg State Opera (Angel, deleted) and the Böhm/ Deutsche Oper Berlin at stage performances around 1967-68. In all three, the balance is tipped rather drastically in favor of the voices, and the internal balances of the orchestra itself are also compromised in various ways.

This is important. Lulu belongs to that Wagnerian tradition in which the orchestra carries the brunt of the musical continuity: It creates the context for the drama, supports the singers, paces and articulates the action, at once generating and reflecting its intensity and density, further supplying emphasis, reminiscence, implication, or other comment when desirable. This is the first recording of Lulu in which those roles have been fully realized. To begin with, the Vienna Philharmonic is a greater orchestra than either the competent Berlin pit band or the rather scratchier Hamburg ensemble. Dohnányi has induced it to play Berg's music with the same fluency and tonal luster that it brings to Wagner and Mahler. Finally, Decca/London has allowed the sound to come off the discs with a wide dynamic range, convincing balance, and utter clarity of texture.

All of which is not to say that we have here merely a symphonic poem with incidental voices: rather, that the orchestra's potential to make vivid and expressive the dramatic action, to give that action form and contour, is fully realized for the first time on records. When the Animal Trainer introduces Lulu in the Prologue, her "entrance music" (as George Perle has dubbed this recurrent material) sings out with a memorable radiance of tone-not only because the Vienna Philharmonic strings play it that way, but because the recorded balance permits it to rival the Trainer's voice in impact, as it cannot in the DG recording (where, although almost any relief from Gerd Feldhoff's unvaried ranting has a lot going for it, the orchestra simply lacks presence). The elaborate percussion passages accompanying the demises of Lulu's first two husbands come clean as never before, their rising and falling intensity precisely limned.

And so on throughout the score. Above and beyond the obvious gains resulting from superior engineering and controlled studio circumstances, or even from the virtuosity of the players, there is the cohesive sound of an orchestra that has learned to play this music as fluently, musically, and expressively as it plays standard repertory—or perhaps even better, for Lulu has not yet become a matter of routine. In short, they play it, not as if it were "modern music," but simply as music. Throughout, there is more dimension, more detail to the writing than we have heard before, more shapeliness to the playing (the Viennese ancestry of Berg's melos has never been more apparent)—and more color, ambience, tone to the drama.

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Dohnányi obviously deserves much credit for this, and for controlling the flow of the work with a hand both sure and flexible. Here and there, the flexibility briefly stretches, even contradicts Berg's very explicit tempo markings, but never in a way that I found problematic; a tendency to luxuriate in certain cadences seems to fit with the overall tonal ambience of this performance (and will, I feel confident, be counterbalanced by a comparable asceticism in the Boulez performance). The scenes build firmly and excitingly or would do so if two disastrously chosen side breaks did not interfere: in the middle of the "Monoritmica" of Act I, Scene 2, and at the dramatic pause when Geschwitz enters just before Dr. Schön dies in Act II, Scene 1 (this last malfeasance also committed by the DG editors). In both cases, a scene in full cry is shot down; since the cassette edition apparently has fewer and much better breaks, it is worth investigation by those equipped to handle it.

Also presumably to Dohnányi's credit is the remarkably consistent and convincing attention paid by the singing cast to Berg's distinctions among various degrees of speaking and singing, and to contours and pitches as required within those degrees. Even Walter Berry, the scattershot protagonist of Boulez' *Wozzeck* recording, here speaks when he should, half-sings when he should, and, when he sings, sings the written pitches! None of the other recordings carries this through so faithfully; the piece makes better sense this way, and sounds better too.

Anja Silja is a firm, confident Lulu who avoids the kittenish inflections that occasionally trivialize Evelyn Lear's intelligent portraval (DG). Neither of these ladies is particularly comfortable in the upper reaches of the writing, nor fluent in the coloratura, which Berg hoped (according to Willi Reich) would in its "dreamlike virtuosity" suggest her special nature. Both Anneliese Rothenberger (Angel) and Ilona Steingruber (Columbia) coped better with those vocal demands, but then they didn't project much sense of this woman who, "right" or "wrong," is always quite sure of herself. Silja commands a range of verbal inflection to match Berg's musical variety; her light touch, playing against the similarly expert Hans Hotter (Schigolch) at the start of Act I. Scene 2, is particularly winning. Nobody has yet encompassed all the demands and possibilities of this part, but Silja has a good hold on its central core.

Opposite Lear in the DG set, Dietrich Fischer-Dieskau played a strenuously ag-



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gressive Dr. Schön, pitching nearly every scene several degrees too high on the emotional scale and thus running prematurely to hysteria. Berry avoids that, and remains a vivid, as well as more valid, presence. As already noted, his is an accurate performance, no mean achievement either.

Countess Geschwitz is a role that, as far as it goes in this version, always seems to be done well (and always seems to enlist the sympathy of the audience, to judge from applause at curtain calls); Brigitte Fassbaender is no exception. Schigolch is more difficult; I thought that Josef Griendl (DG) made rather heavy weather of it despite his musical precision, whereas Hotter seems to me to hit just the right dry note in portraying this asthmatic old lecher.

Alwa Schön is a problem. For his music in Act I, a Spieltenor might almost serve, though in the sextet near the end he must cope with some extended soft phrases around and above the break. Then, in Act II, his love scenes with Lulu demand the ability to put out melodic lines all around an area of more than two octaves including top C, ranging freely over many wide skips-and doing this with a good, full, romantic sound. The usual solution is to skimp on the last requirement. Josef Hopferwieser sounds more substantial than his predecessors, though obviously the microphones may have had something to do with that (there's no biographical note, and I have no idea of what his normal Fach in the theater may be). It isn't an exceptionally alluring sound, and the firm if squeezed top doesn't relate well to the rest of the voice; still, there is some sense for the grace of the melodic lines, some semblance of the desired weight. Unlike most Alwas, Hopferwieser doesn't sound as if he'd be more comfortable singing the Painter (who is here managed capably by Horst Laubenthal).

The lesser parts are well taken, with a special bow to Kurt Moll for his strong Animal Trainer; I'm sorry he wasn't asked to make the specified doubling with the Athlete, though Manfred Schenk is certainly adequate in the latter role. (None of the other doublings requested by Berg—though not indicated in the currently available score—are observed here; the most important of them, in any case, involve the third act and are thus not germane to the version recorded.)

Though in general I agree with the proposition that good live-performance recordings may contain something important that often proves elusive in the studio, I think that it's mostly valid for works well assimilated into the performers' consciousness and technical command. Most live performances of difficult contemporary music are still preoccupied with "getting the notes" or, if they somehow get the general sense of the work, often miss so many of the notes that a recording, though it may preserve some emotional impact, can hardly be said to represent the **HIGH FIDELITY**

piece in question. While the difference between the live and studio recordings of Lulu is generally not that extreme, there is certainly a sense in which the new set is a "first" recording of important aspects of the opera, and we should be grateful to Decca/London for at last taking Lulu into the studio. Like encountering a great painting freshly and accurately cleaned, hearing this recording is an experience in which the familiar is refreshed and renewed, made richer and more fascinating than before. But of course there is still more to come, with Act III waiting in the wings.

London thoughtfully provides a new and literal translation, which seems to me quite good (Angel and DG had used Arthur Jacobs' singing version); I'm sorry to see "Frau Medizinalrat" translated as "Mrs. Goll," since Berg almost completely expunged the Medical Councillor's real name from the libretto—but English doesn't permit anything comparable to the German idiom: "Mrs. Medical Commissioner" will not do. Less thoughtful is the inclusion of an essay frequently incorrect and often misleading; your appreciation of *Lulu* will be positively enhanced if you do *not* read this article. D.H.

BERLIN: Songs.

Joan Morris, mezzo-soprano; William Bolcom, piano. [Sam Parkins, prod.] RCA RED SEAL ARL 1-3089, \$7.98. Tape: ARK 1-3089, \$7.98 (cassette).

Always; The Girl on the Magazine Cover; That Mysterious Rag; All Alone; Oh, How I Hate to Get Up in the Morning; Supper Time; White Christmas; Pack Up Your Sins and Go to the Devil; Not for All the Rice in China; Cheek to Cheek; Let's Have Another Cup of Coffee; It's a Lovely Day Tomorrow.

GERSHWIN: Songs.

Joan Morris, mezzo-soprano; William Bolcom, piano. [Marc J. Aubort and Joanna Nickrenz, prod.] NONESUCH H 71358, \$4.96.

I'll Build a Stairway to Paradise; Love Walked In; How Long Has This Been Going On?; My Cousin in Milwaukee; Nice Work If You Can Get It; The Man I Love; By Strauss; Just Another Rhumba; Someone to Watch Over Me; The Lorelei; Fascinating Rhythm; Isn't It a Pity?; They All Laughed; Love Is Here to Stay.

My first reaction to these records was gratitude that serious-minded performers like Joan Morris and William Bolcom would take the songs of Irving Berlin and George Gershwin seriously. Then the idea that one could feel grateful for conscientious performances of old favorites like "White Christmas," "Cheek to Cheek," "Fascinating Rhythm," and "They All Laughed" began to seem decidedly strange. Yet as the age in which such numbers were bred grows more and more remote, those of us who love them and consider the popular songs of the years between roughly 1910 and 1950 to be among **AUGUST 1979**

this country's most genuine musical achievements will no doubt give an increasingly warm welcome to any signs of serious regard for them.

Morris and Bolcom have long since proven themselves to be the sort of popular-music performers who never condescend to their material. Of these new records, the one devoted to Berlin is for me the better. Both Berlin's musical language and his song texts are more direct than those of George and Ira Gershwin and therefore easier for Morris to deal with. The clever lyrics of Ira sometimes tempt her to sacrifice the line of a song (and thus its necessary forward inpetus) to verbal emphasis.

Not-that Berlin is in any way inferior to the Gershwins. I am in complete agreement with Robert Kimball, author of the excellent notes for both albums, when he says that "Berlin is incontestably our greatest songwriter." The range of his subjects and moods remains a source of astonishment even now. So do his ability to sum up the general feelings of an age ("Oh, How I Hate to Get Up in the Morning") or of a season ("White Christmas"); his gift for making the words seem perfectly natural, perfectly simple, and yet irresistibly vivid ("Always," "All Alone"); the poker-faced way he puts across rhythmic and harmonic complexities so that we never tend to think of him as brilliant, but only as moving or affective ("Pack Up Your Sins," "Cheek to Cheek." "White Christmas").

The Gershwins' brilliance is more readily apparent. Indeed, very often our emotional satisfaction and exhilaration derive from awareness of their virtuosity ("Someone to Watch Over Me," "Fascinating Rhythm," "They All Laughed").

Morris sings many of the Berlin songs very well. She is especially enjoyable in the memorable waltz-ballads "Always" and "All Alone." She is good to hear in "White Christmas" and "The Girl on the Magazine Cover," and the way she deliberately drags the rhythm on the second syllable of "Heavv-en, I'm in heavv-en" (the opening phrase of "Cheek to Cheek") is masterly. Less successful are the songs that call for stamina, of which she is in short supply.

The Gershwin songs that call for energy, extroversion, ebullience find her at a loss, too ("Fascinating Rhythm," "My Cousin in Milwaukee," "I'll Build a Stairway to Paradise," "Just Another Rhumba," "The Lorelei"). Try as she may, she cannot convince me when she declares in the latter song, "I want to bite my initials on a sailor's neck." But the chorus to "How Long Has This Been Going On?" is exemplary and so is that to "The Man I Love." In the end one is forced to conclude that her vocal resources are simply too slender for a lot of this material.

Yet that isn't quite the point. To compare Morris' rendering of "Someone to Watch Over Me" with Gertrude Lawrence's (especially the 1936 New York version, with piano) is to discover that she is less effective than a singer with possibly even less voice. The same holds true for Adele Astaire (with brother Fred) in "Fascinating Rhythm," Irene Bordoni in "It's a Lovely Day Tomorrow," and Berlin himself in "Oh, How I Hate to Get Up in the Morning." Something beyond voice is lacking in Morris' performances. Perhaps that hypersensitive feeling for rhythm without which no rendition of a popular song ever becomes memorable. And personality, the instantaneous imposition of individuality that was the gift of so many of the singers who first performed (or launched) these numbers: Astaire, Ethel Waters, Helen Morgan, even the gravelvoiced, unforgettable Berlin.

On the other hand, I wouldn't part with either Morris disc. The songs are wonderful. Bolcom is excellent. Morris is dedicated. And Nonesuch, typically, has even included the words. D.S.H.

BRUCH: Scottish Fantasia, Op. 46; Konzertstück for Violin and Orchestra, Op. 84.

Salvatore Accardo, violin; Leipzig Ge-

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wandhaus Orchestra, Kurt Masur, cond. PHILIPS 9500 423, \$8.98. Tape: 7300 641, \$8.98 (cassette).

his is, to the best of my knowledge, the T first time that the Scottish Fantasia has run over onto a second side. Lest one grumble about skimpy playing time, let me hasten to point out that the never-before-recorded Konzertstück supplies one of the biggest reasons for obtaining this new release. It turns out to be vintage Bruch-a passionate, well-constructed. melodically fresh, harmonically rich work that on first hearing impresses as being equal in quality to the Scottish Fantasia, the Op. 83 Eight Pieces for clarinet, viola, and piano (when are we going to be given an integral recording of that collection in its original instrumentation?), and the deservedly beloved G minor Violin Concerto.

Both of these performances are of a piece with the recent Accardo/Masur collaboration in the first two Bruch violin concertos (Philips 9500 422, March 1979). Accardo's lean, pure tone has a cutting edge that is nicely complemented by the dark, massive sobriety of Masur's fine orchestra, here illuminated by close microphoning that I much prefer to the usual drab East German pickup. Now I hope Philips and Deutsche Schallplatten will continue with first recordings of works mentioned in the extensive liner notes for this disc: the Third Violin Concerto, Op. 58; the Romanza, Op. 42; the Adagio appassionato, Op. 57; the Adagio In Memoriam, Op. 65; the Serenade, Op. 75; and the Songs and Dances on Russian and Swedish Folk Tunes, Op. 79. H.G.

CHARPENTIER, M.A.: Messe de minuit; Sonate à six.

Boston Camerata, Joel Cohen, cond. [Joel Cohen, prod.] DESMAR DSM 1016G, \$8.98.

While the exact date of its composition remains a mystery, Charpentier's Midnight Mass must by now have passed its tercentenary. This would be unremarkable, of course, were it not for the extraordinary freshness with which the work still falls on the ears. The lilting *noëls* on which it is based have lost none of their charm, and Charpentier's evocation of the peculiar joys of Christmas--the joys of humility exalted and might humbled-remains no less vivid.

Without knowing for which occasion and performing forces the Mass was composed, one is not really certain whether to approach this as a ceremonial work in the grand style or as a piece of intimate chamber music. David Willcocks, in his recording with King's College Choir (Angel S 36528), favors the former conception, using numerical forces at the upper end of what Charpentier might have expected. This new version by the Boston Camerata, on the other hand, is very much the chamber music affair, with only thirteen sing-

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ers (4-3-3-3) and ten instrumentalists.

Each approach can be justified, and both performances have much to recommend them. What distinguishes the Boston account is the attempt-and here I quote loel Cohen's liner note-"to re-create the spirit and style of music-making in seventeenth-century France." Period instruments (or modern reconstructions) have been used, necessitating a lower pitch, and singers and instrumentalists are properly restrained with the use of vibrato. It is much to Cohen's credit that the effect of all these niceties is so disarmingly natural and unaffected, which is just as it should be. I am disturbed by the sometimes uncertain intonation-more a problem with the singers than with the instrumentalists-and by the lack of truly idiomatic organ sonorities in the solo settings that follow the Kyries, but there is much to enjoy in these sensitive and affectionate performances.

The sonata included as a filler is beguiling fare, too, and the recorded sound, (German-pressed) surfaces, and visual presentation are up to the high standard we have come to expect from Desmar. S.C.

LISZT, CHOPIN: Piano Works.

Gyula Kiss, piano. [lstván Juhász, prod.] HUNGAROTON SLPX 11852, \$8.98. LISZT: Harmonies poétiques at religieuses: Funérailles. Valses oubliées (3). сно-

Polonaises: No. 5, in F sharp minor, Op.
44; No. 6, in A flat, Op. 53. Mazurkas: in A minor, Op. 17, No. 4; in G minor, Op. 67, No. 2.

One interesting feature of this recording is that it enables one to hear in close succession Liszt's "Funérailles" and the Chopin polonaise (the A flat) it so obviously commemorates. Nor do the second and third Valses oubliées get played as often as the first.

Kiss is more impressive here with Liszt than with Chopin. He builds up "Funérailles" in an intense, angular manner, dweiling on the bass line in the opening passage and really exploding on the central octaves (a derivative of the middle section of the Chopin polonaise). The fanfares cut incisively, and the sonority, while purposefully gray, has contrast and singing line. The Valses are deftly shaped and provocatively colored, their surrealism thoughtfully rendered. Kiss balances whimsy with welcome sobriety and purposefulness.

In the Chopin polonaises, however, I found his approach spasmodic and tortured. There is too much fussing with the line, and the bigger gestures are repeatedly compromised by finicky adjustments of phrase, to the extent that everything sounds stiff and musclebound. The two mazurkas, smaller-scaled works, survive this treatment better.

The sound is a bit hard but serviceable. H.G.

MASSENET: Cendrillon. For a feature review, see page 81.

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STEPAN: Sonatas for Piano: in A; in G; in B.

Rudolf Bernatík, piano. [Jan Vrána, prod.] SUPRAPHON 1 11 1836, \$8.98.

Here is another recording to tease your more knowledgeable friends with: Josef Antonín Stěpán writes in a style expectable from his dates (1726-97)—which is to say, mostly analogous to Haydn. The Andantino of the B major Sonata is thematically closely related to the slow movement of Haydn's G major (*Gypsy Rondo*) Trio, and the Allegro non molto of the A major Sonata is full of Haydnesque fingerprints, albeit with a few ambiguous smudges and questionable turns of harmony that make you suspect someone else. There are also curious hints of early Romanticism, particularly the Allegro non molto of the B major Sonata.

When I encountered works by another forgotten Czech composer of slightly later vintage, Jan Voříšek (an impromptu played by Rudolf Firkusny on Candide CE 31086, October 1975; the B flat minor Sonata played by Vladimir Pleshakov on Orion ORS 75178, October 1976), I speculated that we had perhaps come upon a neglected giant. While I do not get such an impression from Stepán's music recorded here, there is solid worth to these expert works, particularly as rendered by Rudolf Bernatik's heady, sharply contoured, exuberant playing of a rich-toned and plangently reproduced instrument. The wide dynamic contrasts and the biting, rippling passagework are very much in order for this kind of repertory. H.G.

TCHAIKOVSKY: Chamber Works.

Borodin Quartet; Genrich Talalyan, viola*; Mstislav Rostropovich, cello*. [David Gaklin and Valentin Skoblo, prod.] ODYS-SEY/MELODIYA Y3 35237, \$11.94 (three discs, manual sequence).

Quartets for Strings: in B flat; No. 1, in D, Op. 11; No. 2, in F, Op, 22; No. 3, in E flat minor, Op. 30. *Sextet for Strings, in D minor, Op. 70 (Souvenir de Florence).

TCHAIKOVSKY: Quartets for Strings, Nos. 1-3.

Gabrieli Quartet. [Richard Beswick, prod.] LONDON TREASURY STS 15424/5, \$7.96 (two discs, automatic sequence).

T chaikovsky's interests clearly lay more in the orchestra and the theater than in the intimate world of chamber music. The liner notes in the London Treasury set of the string quartets quote the Russian critic Ivan Knorr's comment about "homesickness for the orchestra," though perhaps "nostalgia for the theater" would be more to the point here, for Tchaikovsky's most effective orchestral music is as theatrical as his best operas and ballet scores.

Nevertheless, it was Borodin and Tchaikovsky who lifted Russian chamber mu-

HIGH FIDELITY

sic out of salon triviality and laid the foundation for the later highly individual work of Taneyev and Shostakovich in creating a strongly Russian style in genuine chamber-ensemble idiom. After a single movement for string quartet composed as a conservatory graduate in 1865, using a Ukrainian folk melody as its main theme (this early work is included in the Odyssey/Melodiya set), Tchaikovsky wrote his three full-scale quartets between 1871 and 1876, the period of his early maturity-a period that also produced the First Piano Concerto, Swan Lake, and the first three symphonies. Like the symphonies, the quartets pay homage to the Central European tradition from Haydn and Mozart through Schumann and Mendelssohn. Sonata forms are treated in an almost academic manner, and much of the writing for ensemble is more correct than imaginative. Now and then Tchaikovsky resorts to tremolo for climactic effects, and he can occasionally be almost comically pedantic in introducing fugal passages

The First Quartet, in D (1871), was written for a concert that he planned on a modest budget and for which he needed a large-scale work as a centerpiece. Its slow movement, the popular Andante cantabile, combines Russian folk material with something of a throwback to the old salon tradition. The Second Quartet, in F (1873-74), was a favorite of the composer, who said of it, "No other work of mine flowed from me so simply and so easily." Perhaps that is why, with two exceptions, it seems to me rather bland. The two special features of the quartet are the introduction, dominated by rather ornate firstviolin scoring, and a fine scherzo notable for its rhythmic variety and combinations (said to be typically Russian). In both the First and Second Quartets, the fast sections of the outer movements are weakened by Tchaikovsky's apparent timidity with this idiom.

The Third Quartet, in E flat minor (1876), was composed in memory of Ferdinand Laub, who had played in the premieres of the two earlier quartets. Its mood is elegiac rather than tragic, foreshadowing the A minor Piano Trio that Tchaikovsky dedicated to the memory of Nicholas Rubinstein a few years later. The work opens with another fine introduction, the second melody of which suggests a funeral march. After a brief and rather subdued scherzo, the long slow movement is appropriately marked Andante funebre e doloroso con moto. Despite some inspired moments, it loses interest in stretching out its material to fill the arbitrary requirements of the form. The finale, primarily in the major keys, dispels the mood of the previous movements with considerable vigor.

For me, Tchaikovsky's quartets as a whole do not quite come off. Aside from his apparent awe of classical tradition, his weakness in voice leading stands out in this exposed context: Long stretches where one instrument

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is simply accompanied by the others are interspersed with attempts to write contrapuntally, but I hear no consistency of texture or conception. Perhaps, as suggested, he was "homesick" for the orchestra and its more brilliant colors, stronger dynamics, and richer texture. It is significant that he wrote no string quartets during his full maturity—after the Fourth Symphony.

When he did return to the string ensemble in later years, it was to produce the rather curious Sextet in D minor, which he titled Souvenir de Florence (1890). It is apparently a "memory" in the most literal sense; the only connection one can establish between this very non-Italianate music and Florence is that it was written shortly after Tchaikovsky's return to Russia from that city, where he had composed The Queen of Spades. Equally difficult to fathom is his choice of six strings, for he complained that "to use six individual yet similar instruments is incredibly difficult." His solution was to rely heavily on solo writing with the other instruments accompanying, and to create climaxes with unison scoring.

Both the Gabrieli and the Borodin Quartets give rather bland readings. The Borodin has more bite in such places as the fine scherzo of the F major Quartet, while the Gabrieli enjoys somewhat fuller and brighter recorded sound. Choice between the two sets will probably depend on whether one wants only the three full-scale quartets, which London Treasury offers on two discs, or one wants as well the 1865 guartet fragment and the sextet. In the latter, violist Genrich Talalyan and cellist Mstislav Rostropovich seem to add vigor to the Borodin performance, which is on a par with the Guarneri/Kroyt/Schneider one (RCA ARL 1-2286). The RCA recording, though dated, is a shade more brilliant and full-bodied than the Melodiya, which is not new either-it of course predates Rostropovich's departure from the Soviet Union. P.H.

TCHAIKOVSKY: Symphonies (6).

Los Angeles Philharmonic Orchestra, Zubin Mehta, cond. [Ray Minshull, prod.] LONDON CSP 10, \$44.90 (six discs, manual sequence). Tape: CSP5 10, \$44.90 (six cassettes).

Symphonies: No. 1, in G minor, Op. 13 (Winter Dreams); No. 2, in C minor, Op. 17 (Little Russian); No. 3, in D, Op. 29 (Polish); No. 4, in F minor, Op. 36; No. 5, in E minor, Op. 64; No. 6, in B minor, Op. 74 (Pathétique).

C omparing the earlier Mehta/Los Angeles recording of the Tchaikovsky Fourth (London CS 6553) with the one included in this set provides a good measure of the joint growth of conductor and orchestra over something like a decade. The earlier record was one of the first this team made for Decca/London in 1967; the complete cycle was taped in the year or so before Mehta left to take over the New York Philharmonic.

Although some credit for the sonic su-

periority of the new release must go to advances in recording technique, the most impressive aspect is the substantial improvement of the Los Angeles Philharmonic. The principal woodwind players, who have a lot to do in these symphonies, are all stronger. The brasses, which had intonation and ensemble problems in the earlier Fourth, are now a cohesive unit from the top of the trumpet range to the superb tuba of Roger Bobo. The string sections have a glow that is the mark of a first-rate orchestra. The whole ensemble sounds with an impact and unity shaped by Mehta into the rather forward sound he prefers.

Whereas a certain tentativeness of sonority and attack afflicted the earlier record, both conductor and orchestra now give the impression of confidence and drive. Mehta's tempos in the Fourth are marginally slower in the new version, but the music moves faster than it did before. He is still characteristically literal in his readings of these symphonies, apparently reluctant to allow the music to expand and breathe when some relaxation might be called for. His intensity, especially in the outer movements of the last three symphonies, is such as to make one miss the shifting perspective and expansive warmth that Abbado brings to this music.

In the first two symphonies, Mehta lacks the lighter touch projected by Muti (on Angel S 37114 and S 37472) and Abbado (in his deleted DG No. 2), who are more sympathetic to Tchaikovsky's lighter and on occasion more balletic style. Mehta is not alone in failing to bring the diverse and rambling Third Symphony into focus and formal cohesion. In the Fifth, his no-nonsense approach prevents his falling into the banality traps with which this music abounds, but it also prevents his getting *anything* out of the Big Tunes in the outer movements.

As a complete set carrying nearly full price, this release cannot be recommended any more than those of Rozhdestvensky, Rostropovich, Maazel, or Bernstein. Like them, Mehta certainly has a point of view, which he projects consistently through the series, but that point of view does not serve the music equally well. In fact, were these records available separately, there are only two performances that would be strongly competitive, the Fourth and the Sixth.

In the Fourth, Mehta conveys the structural coherence of the outer movements extremely well, and both inner movements are extremely well played. But in his more straightforward approach, he misses the expressive touches that, by their cumulative effect in a beautifully organized rendition, make Abbado's (DG 2530 651) one of the great Tchaikovsky performances on records. In the *Pathétique*, Mehta is slightly less successful with the first movement, where his sound structural sense is belied by some lack of contrast and diversity of expression. The 5/4 movement is projected with fine rhythmic



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sense and orchestral color. He takes the third movement in the kind of strict tempo that Toscanini did, without unauthorized tempo changes to exaggerate the effect, and it is a stunning performance. The finale has a singleminded drive from first note to last that produces an extraordinarly tragic impact.

To sum up the Tchaikovsky symphony situation on records. I make the following recommendations. In Symphony No. 1, Muti or Michael Tilson Thomas (DG 2530 078) for the lighter touch, Bernstein (Columbia M 30482) for a more muscular approach. In the Second, both Bernstein (Columbia M 31195) and Abbado give excellent though quite different performances. The Third, a problematic piece in any event, is a difficult choice. Muti's straightforward, lyrical account (Angel S 37496) is spoiled by opaque, colorless sound-at least in the domestic edition-which leaves the field by default to Bernstein (Columbia M 31727).

In the last three symphonies, Mravinsky's readings (DG Privilege 2535 235, 236, and 237) have an exceptional individuality and, for better or worse, an idiomatic Russian sound. If I find Karajan (DG 2530 883, 2530 699, and 2530 774) occasionally too precious, I find Bernstein (Columbia D3S 781) overindulgent emotionally. As noted, I favor Abbado in the Fourth, with Mehta a strong contender. In the Fifth, I still prefer Szell (Odyssey Y 30670) and Monteux (RCA Gold Seal AGL 1-1264). Giulini (Seraphim S 60031), Monteux (RCA Gold Seal AGL 1-1522), and Mravinsky have all produced good, honestly expressive readings of the Pathétique, but Mehta's new performance is an excellent modern version.

This London set contains no fillersjust the six symphonies. The sound is firstclass, with the clarity and impact lacking in Rostropovich's Angel set (SGE 3847, December 1977). P.H.

TCHAIKOVSKY:	Yolanta,	Op.	69 .	
CAST				

Yolanta	Tamara Sorokina (s)
Brigitta	Klara Kadinskaya (s)
Marta	Nina Grigorieva (ms)
Laura	Larisa Nikitina (ms)
Vaudemont	Vladimir Atlantov (t)
Robert	Yuri Mazurok (b)
Ibn-Hakla	Vladimir Valaitis (b)
Almerik	Alexander Arkhipov (b)
Bertrand	Valery Yaroslavtsev (b)
King René	Yevgeny Nesterenko (bs)

Bolshoi Theater Chorus and Orchestra, Mark Ermler, cond. [Valentin Skoblo, prod.] COLUMBIA/MELODIYA M2 34595, \$15,98 (two discs, automatic sequence).

chaikovsky's last opera, the one-act Yolanta, and his last ballet, the two-act Nutcracker, were given their first performances on the same December evening of 1892 at the Maryinsky Theater in St. Petersburg. Oddly enough, the former went down a good deal better than the latter. "The opera,"

HIGH FIDELITY

Zubin Mehta His Tchaikovsky demonstrates growth

Tchaikovsky wrote to a colleague, "was evidently very well liked, but not the ballet." Time, of course, has reversed the public's estimation of their relative merits, and Yolanta, after enjoying a certain currency in Russia during the Nineties, has subsequently had to endure, not merely neglect, but contumely, even the most devoted admirers of Tchaikovsky finding it an unredeemable artistic failure. Gerald Abraham, a distinguished Tchaikovsky advocate, called it "often pretty, but dramatically inadequate and rather characterless."

Conrad L. Osborne, however, described Yolanta as "a moving little work" in his Russian-opera discography (HF, December 1974), and I find the opera delightful-a convincingly sustained lyrical meditation on the transfiguring power of love, a vocal-orchestral rhapsody rather than a dramma per musica, if you like, but exquisitely conceived and beautifully made. If symptoms of creative fatigue are to be sought in the compositions immediately preceding Tchaikovsky's final symphony, they can be found more readily, it seems to me, in the second act of Nutcracker than in Yolanta.

Tchaikovsky, it is true, responded with something less than fervency to this tale of a fifteenth-century Provençal princess who overcomes her blindness through love. "Medieval dukes and knights and ladies," he said after having completed the work, "capture my imagination but not my heart." But whereas it is evident that the products of Tchaikovsky's passionate identification like Yevgeny Onegin are among his greatest achievements, those that derive from the engagement of his imagination like The Sleeping Beauty are by no means

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negligible. Yolanta, a slow-moving, dreamlike pageant, is above all sensuous and beguiling. Single-mindedly rhapsodic it is, for all the sophistication of its technique, decidedly folkloric in its effect.

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Mark Ermler and his starry Moscow cast give the music a grippingly taut performance. It would sound even more convincing, I believe, with an approach that accorded greater importance to the lyricism of the score. The vocal casting, with a single exception, is very strong. Alas, the exception is Tamara Sorokina, whose performance of the title role is dramatically alert but so tight-voiced as to be thoroughly unwinning.

Sorokina, nevertheless, is the only leading singer in the cast to understand the essentially reflective nature of this music. Her wooer (and savior) is sung by Vladimir Atlantoy, the possessor of an impressively rich tenor that he has trouble modulating (he takes the final phrase of his aria falsetto). He is surely far too overbearing in manner, and after a while his ponderous portamentos, especially the upward ones, become tiresome. Yevgeny Nesterenko, in the role of Yolanta's father, also makes a great show of traversing upward intervals, but he is undoubtedly a fine singer. Yuri Mazurok, for all his vocal splendor, sounds unrelentingly insistent. The small parts are well handled, especially that of Yolanta's nurse (Nina Grigorieva).

The sound is oddly balanced, with the lows coming out more cleanly than the highs. The pressings are smooth. The booklet includes notes, libretto, and translation—as so often with Columbia, not carefully enough proofread (e.g., Side 2 begins earlier than indicated in the libretto, and the creator of the heroine's role back in 1892 was Medea Mei-Figner, not Maria Figner). **D.S.H.**

VERDI: Un Ballo in maschera.

CAST:

Amelia	Montserrat Caballé (s)
Oscar	Sona Ghazarian (s)
Ulrica	Patricia Payne (ms)
Riccardo	José Carreras (t)
A Judge	Robin Leggate (t)
Renato	lngvar Wixell (b)
Silvano	Jonathan Summers (b)
Amelia's Servant	William Elvin (b)
Samuel	Robert Lloyd (bs)
Tom	Gwynne Howell (bs)

Chorus and Orchestra of the Royal Opera House, Covent Garden, Colin Davis, cond. PHILIPS 6769 020, \$26.94 (three discs, manual sequence). Tape: 7699 108, \$17.96 (two cassettes).

Like the Muti/Angel set (SCLX 3762, February 1976), this new Ballo in maschera appears at first sight to be a spinoff from the 1975 Covent Garden production, which was originally conducted by Claudio Abbado. Angel illustrated its album with Covent Garden photographs, and had Reri Grist, Placido Domingo, Piero Cappuccilli, the Sam





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(Gwynne Howell), and the chorus in common with the stage performances. Earlier this season, Patricia Payne and José Carreras appeared in the production (and Ingvar Wixell was billed, but didn't show); the conductor was Charles Mackerras, and the soprano Sylvia Sass. Montserrat Caballé hasn't sung Amelia there, nor has Colin Davis conducted the piece. So in fact this should be regarded as a "Philips cast" (cf. Davis' *Tosca*), rather than a Covent Garden cast: a studio performance assembled, not a stage production captured.

Davis has ideas about the opera-not always good ideas, but I'll get to that later. He expresses them in his choice of tempos and in the weight, emphasis, and coloring he gives to the accompaniment. His three principals, the soprano, tenor, and baritone, don't seem to be interpreters with strong, formed ideas about their roles, and so they all get on well enough. But the result is perhaps the least emotionally gripping of all the Ballos on record: a conductor who cares, but three singers who appear to have regarded the drama as an assignment to be competently and professionally fulfilled, not as a passionate adventure of heart and soul. There's no sense of give-and-take, no mutual flare of rapture, defiance, or anguish. Ballo is usually an opera that seizes a listener at the start and holds him securely. Not here.

Carreras is never less than an agreeable performer. He is in free, easy voice, doesn't strain, doesn't force, phrases nicely, makes a good sound. The only positively bad thing he does is occasionally to divide what should be two elided vowels. But Riccardo is the most various of Verdi's tenor roles. Carreras at the end of "Mase m'è forza perderti" sings two consecutive phrases, one marked pp (cupo) and the other ff, in an all but identical way; this is but the most evident demonstration that, throughout his performance, tone color, dynamics, manner, and emotional charge are insufficiently varied.

Caballé is not in her best voice. In "Ma dall'arido stelo." the timbre is sometimes hollow, bitter, narrow, and the loud high notes are apt to be unsteady. The Caballé speciality, softly floated notes at the peak of a phrase, produces an exquisite sound at "Deh! mi reggi, m'aita, o Signor" and at other predictable places. The sotto voce C-major arpeggios in the duet ("Ahil sul funereo letto") are ravishing. In the solo strophes of this section, both Carreras and Caballé observe the portando to the A, but in the a due strophe that should crown the effect they break off, to bang out the A on a new breath. Soprano, tenor, and conductor haven't worked out a pacing that keeps this long, sectional number together as a single emotional progress. "Morrò, ma prima in grazia" is rhythmically limp and therefore unmoving: The slow tempo is justified by the marking, but it should also carry a charge of urgency.

Wixell gives a decent, carefully studied, securely sung performance. All that's wrong is that the sound is in itself unexciting.

HIGH FIDELITY

An "Eri tu" with no note of fury in the timbre becomes inexpressive. In the first aria, he simplifies the written cadenza. After the unmasking in the Act II finale, this Renato pronounces his wife's name in four distinct syllables.

Sona Ghazarian, a Lebanese soprano, makes a deft and accurate Oscar (though her trills are slight). Davis takes "Volta la terrea," marked by Verdi at a single allegro, at two distinct tempos, andante and allegro brillante, and his "Saper vorreste" is rather slow. Ghazarian does not really have the mischief and sparkle in her timbre or in her words which would be needed to animate those tempos. Payne's Ulrica is a disaster—a British contralto in full, strenuous, but unsteady hoot.

In an album note, Julian Budden draws an interesting parallel with *Don Giovanni*: "Throughout danger appears not only when least expected but in an utterly unexpected form. . . . In a word, *Un Ballo in maschera* is Verdi's *Don Giovanni*." Davis' reading stresses the dark, demonic note, and emphasizes the contrasts. His Preludio makes a slightly dragging effect, but the "*La rivedrò*" theme on the G string is played with fervent emotion. Reviewing the Muti set, I remarked that while a few of Muti's tempos seemed too slow, many of them seemed too fast, and few of them natural. Davis never seems too fast, but often he does seem a shade too slow.

Usually he can point to the metronome markings in justification-but these markings themselves are a puzzle. In some editions, "Alla vita" is guarter-note 40, and in some quarter-note 80; the former is impossibly slow, and the other rather too fast for an andante. Eighth-note 72 produces a slow "Ma dall'arido stelo." The different editions of Ballo present many other puzzles-of phrasing, of instrumentation, of actual notes (Carreras sings "M'ami, m'ami" with C naturals, not C sharps), and it might be as well now to declare a closed season on Ballo recordings until the critical edition has appeared to determine the composer's text. And that might be the moment to invite Abbado to record the opera. When I heard him do it at La Scala last year, I thought he would probably be the person to conduct what has eluded the record companies for some twenty-five years: a satisfactory modern recording of the piece.

Davis takes the work very seriously, and that's all to the good except when it leads him into a solemnity that becomes heavy and portentous. He misses what Verdi himself described as "that quality of brilliance and chivalry, that aura of gaiety that pervaded the whole drama, made such a fine contrast, and was like a light in the darkness surrounding the tragic moments." The conjuration trio is staid, not hair-raising; the finale is pompous.

And so, as I said when reviewing the Muti album, my recommendations for *Ballo* remain the 1943 Seraphim (IB 6026) with Gigli and Bechi, conducted by Serafin; the 1954 Toscanini on RCA (out of print domestically but available in the German edition, AT 300);

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and the 1956 Seraphim (IC 6087) with Callas, Di Stefano, and Gobbi. Those partial identifications indicate their respective strong points. The new Philips set is, however, the best recorded of all: wide-ranging, big, full, and natural, voices and orchestra in admirable balance, quite unfussy, effortlessly excellent. A.P.

Recitals and Miscellany

ELLY AMELING: Souvenirs.

Elly Ameling, soprano; Dalton Baldwin, piano. [Steven Epstein, prod.] COLUM-BIA M 35119, \$7.98

ROSSINI: La Danza. CANTELOUBE (arr.): Chants d'Auvergne: Brezairola. RODRIGO: De los álamos. vuillermoz: Jardin d'amour. Rach-MANINOFF: Spring Waters, Op. 14, No. 11. HAHN: La dernière valse. IVES: Memories. SCHOENBERG: Gigerlette. NAKADA: Oyasumi na sai. purcell: Oedipus: Music for awhile. WELDON: The Wakeful Nightingale. BRITTEN: O waly, waly. MARTIN: Unter den Linden. LISZT: O lieb, so lang du lieben kannst. SIBELIUS: Våren flyktar hastigt, Op. 13, No. 4. ANON.: Moeke. HULLEBROECK: Afrikaans Wiegeliedjie.

On this recital Elly Ameling sings in eleven languages and dialects, including Swedish, Japanese, Dutch, *auvergnat ("Brezairola")*, and medieval German (*"Unter den Linden")*. To me her German and French sound thoroughly idiomatic, though her English has a slight (and charming) accent. Perhaps the latter is also true of the other languages with which I'm not familiar. In any case, the opportunity to hear a first-class artist in so wide a range of material—as well as simply to hear so many good but unfamiliar songs—is not to be missed.

What this highly enjoyable record attests to, above all, is the narrowness of our musical experience when it comes to the art song, the near exclusion of anything but the most familiar German (and, if we are lucky, French and possibly Russian) composers from our recital halls. There are several welcome discoveries to be made through this disc, from lves and Schoenberg to the more fragile charms of Vuillermoz and Hahn. The Dutch folksong "Moeke" ("Mother") is delightful, and Hullebroeck's pleasing "Afrikaans Lullaby" introduces the work of a Belgian composer whose huge output of folklike songs is well worth investigating.

Ameling is virtually the only singer of today who could bring off a program as varied as this, requiring as it does precisely the sort of selfless musicality, intelligence, and resource95

she possesses. Rachmaninoff's fulness "Spring Waters" is full-hearted, dark-voiced, intense; Hahn's "Dernière valse" wistful and intimate: "Moeke," with its amusing dialogue between mother and daughter, vividly characterized. Not all of her singing passes muster, though. At this stage of her career both lowand high-lying music give her a certain amount of trouble. She is also defeated by Purcell's long-breathed ...elodic line, by Rossini's fast, light-fingered music, and by the boisterous first part of lves's brilliant "Memories," where her English, usually admirable, turns into spinach. But on the whole she is in splendid form, communicative, artistically serious, spontaneous,

Dalton Baldwin, no less various and sensitive, is also technically brilliant; listen, for instance, to his silken introduction to "La Danza." The recording occasionally sounds a little too close for comfort. Texts and translations, the latter mostly of the "singing" kind—all printed in a microscopically small typeface. (One curiosity in the jacket copy: In the quotation from Ameling's thoughts about Dutch singers, she is made to refer to one Broadus Erlus. Somebody appears somehow to have scrambled the great Dutch tenor Jacques Urlus and the distinguished American violinist and pedagogue Broadus Erle.) Recommended. D.S.H.

HELMUT WALCHA: Organ Masters Before Bach.

Helmut Walcha, organ at Cappel (West Germany). [Gerd Ploebsch, prod.] ARCHIV 2712 004, \$35.92 (four discs).

Helmut Walcha writes, "With these recordings I should like to bring to a close the long series of records which have made up my life's work." Having established an international reputation some years ago as a Bach player, Walcha turns his attention to music that strongly influenced Bach, especially in his younger years: the North German/Dutch organ literature of the seventeenth and early eighteenth centuries. Within the confines of a four-disc anthology the selection could hardly be improved, for we are given examples of virtually all the characteristic forms-toccata, fantasia, prelude, fugue, chaconne, passacaglia, chorale prelude, and chorale variations-and the composers represented include Böhm, Bruhns, Buxtehude, Lübeck, Pachelbel, Scheidt, Sweelinck, and Tunder. Pachelbel, who really belongs to another "school," is the odd man out here, but his contributions are none the less welcome.

That Walcha has returned to the famous Arp Schnitger organ at Cappel (where he began the first of his two complete Bach recordings nearly thirty years ago) provides a nice sense of "closure" for his valedictory statements. The instrument is ideally suited to the music, of course, and its recent restoration by the late Rudolph von Beckerath seems to have been entirely sympathetic.





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The only drawback as far as authenticity is concerned is the equal temperament, a nineteenth-century modification, but we are told that space limitations prevented the lengthening of individual pipes necessary for restoration of the original unequal temperament. (This organ was built in 1680 for the vast Johanniskirche in Hamburg and moved to the much smaller church at Cappel only in 1816.) The sound is probably more ingratiating to most present-day ears on account of the equal temperament, but it does have something of an emasculating effect on music conceived for a very different system of tuning.

Walcha's rather austere Bach performances represented a pointed reaction against the excessive romanticism of many early twentieth-century interpretations; while this was doubtless a healthy antidote at the time, I have always thought it rather too much of a good thing. To a considerably lesser extent, I feel something of the same reservation with these new recordings, but it must be admitted that, in an area generally served by mediocre performances, Walcha's readings are enjoyable, and they do reveal more rhythmic freedom than I have previously associated with his style. Tempos are always eminently sensible, registrations are nicely contrasted, and Walcha's smoothly polished technique seems not to have suffered with age (he is now seventy). I would have preferred a bit more sheer abandon-to animate the boldly rhapsodic and virtuosic elements, and to accentuate the more introspective sensibilities-but in any case the present performances are both assured and affectionate.

The recorded sound is commendably atural, and the substantial documentation acmpanying the album includes an essay on

music, an illuminating interview with Clcha, and a good deal of information on the In. S.C.

heater d n

WEENEY TODD. For a feature review, 80.

CK ROGERS. Original film soundtrack

nposed, conducted, and produced illips. MCA 3097, \$7.98. Tape: C (cassette); T 3097, \$7.98 (8-track

pleasant surprise of his Battlestar a TV score (MCA 3051), Stu esses me again with the conquality of his writing for the

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throwaway fantasy film Buck Rogers. If anything, his musical flair and inventiveness are more in evidence here, once again especially in the colorful use of woodwinds and the clever blending of electronic and conventional instrumental sounds.

Following an admittedly lame vocal signature tune called "Suspension," the music launches into a display of varied moods—now awe-inspiring, now ominous, occasionally humorous. The score is symphonically conceived; Philips not only has plenty of ideas, but also knows just how to clothe them orchestrally and present them in a dramatically compelling manner. None of these relatively short cuts is overblown or repetitious. All lovers of superior movie background music are urged to hear this "sleeper."

Performance and recording are fully satisfactory. P.A.S.

THE GREAT TRAIN ROBBERY. Original film soundtrack recording.

Composed by Jerry Goldsmith; National Philharmonic Orchestra, Jerry Goldsmith, cond. and prod. UNITED ARTISTS LA 962H, \$7.98. Tape: CA 962H, \$7.98 (cassette); EA 962H, \$7.98 (8-track cartridge).

B ecause Jerry Goldsmith is generally thought of as the most fecund and sophisticated movie composer currently at work, any new soundtrack recording of his automatically commands attention. For *The Great Train Robbery*, a leisurely, tongue-in-cheek costume thriller, he has turned in his normally craftsmanlike job, but there is nothing particularly memorable or provocative about this release.

Practically the entire score derives from the main title, a jaunty and propulsive motif whose momentum and rhythmic displacements identify it immediately as Goldsmith's. Though he is just as inclined to write a score with multiple themes, he is also a practiced hand at getting the ultimate in dramatic range and mileage out of a unifying and dominant musical idea, as in *The Hour of the Gun* and *Chinatown*. But here he leans rather too heavily—and at times in an embatrassingly Prokofievian manner—on his main theme.

There are those who will argue persuasively that Goldsmith's chameleonlike ability to adapt his musical language to the requirements of the film at hand—and to do this without totally sacrificing an underlying measure of individuality—is one of his outstanding strengths as a film composer. Still, this project does not not seem to have stimulated his creative energies beyond the level of assured professionalism we have come to take for granted from him. I would gladly trade this disc for such unrecorded Goldsmith scores as Seconds, Damnation Alley, and last year's Magic.

Performance and recording are fine, and the pressing is a distinct improvement over United Artists' problematic product of the recent past. **P.A.S.**

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BACKBEAT

Little Feat's Lowell George:

"He's a master of rhythm, he's a rock 'n' roll king."

by Sam Sutherland



The house itself is nothing special: a one-story California Anonymous structure perched precariously atop the narrowing spur of a ridge that overlooks Topanga Canyon. It is screened from the twisting road by a few trees. some ragged shrubbery, and the unexpected. leviathan bulk of a trailer truck that someone has managed to guide down the rutted gravel driveway without tipping it into the canyon below. On a clear day, you can see a sweeping crescent of coastline and Catalina Island from here. Today, the mountain ridges surrounding the house dissolve into a spectral haze.

Inside the trailer, an assistant engineer is getting ready for a remote recording session to be held in what used to be a garage. The interior of the truck is dark, illuminated only by the meters and pilot lights of the multitrack console and the outboard racks of state-of-the-art paraphernalia flanking the board. The engineer tells me that Lowell George is in the house.

At the door I am greeted by bearded, bespectacled session guitarist Fred Tackett. George, draped in the rumpled off-white coveralls that have become his preferred mode of dress, finishes a phone call. As his record company's ad department has lately proclaimed. George needs no introduction, at least to the fervent constituency that has gradually carried his former band. Little Feat, into the R.I.A.A.'s precious metal leagues.

That feisty Angeleno sextet derived more than its name from the stocky guitarist, songwriter, and producer with a diminutive shoe size. During his brief tenure with the Mothers of Invention. George's slippery. buzz-saw slide guitar playing and eccentric songwriting prompted Frank Zappa to tactfully recommend that he start his own

band. And together with Mother bassist Roy Estrada, keyboard player Bill Payne, and hard-knocks drummer Richie Hayward, he formed Little Feat. The band landed a recording contract in 1970 with Willin', a demo that was strong enough to wind up virtually intact on its first album. It has since been covered by the Feat again, by Linda Ronstadt, and by a few other tasteful rockers who anticipated its eventual status as a low-life anthem. By the third album, the epochal "Dixie Chicken." George had moved into the producer's chair, and while Little Feat's records continued to earn critical praise and commercial indifference, his trademarks—a sometimes gruff. but elastic singing voice, that surprising downward slide guitar attack, and the off-center meter of his songs—were already being adopted by other musicians.

The Feat's cult following gradually swelled to a respectable nation of fans. but the survival of the group was endangered by something more than those prolonged salad days of record company red ink. George's focal position within the initial quartet, and his blueprint for the revamped sextet that made its debut on "Dixie Chicken." tempted admirers to cast him in the role of rock & roll auteur, a distinction that clearly had a ring of truth, but also generated internal friction. Between 1973's "Dixie Chicken" and the overdue commercial breakthrough earned by its successors. "Feats Don't Fail Me Now" and '75's "The Last Record Album." the band nearly imploded. Lowell's solution was to yield to the democratic imperative, and while he continued to oversee production, his profile as writer and lead vocalist was reduced to allow second guitarist Paul Barrere and keyboardist Payne to emerge as composers and singers.

The revised balance of power kept the band together until a few months ago, when Barrere, Payne, and Hayward announced plans to leave, stranding the projected Feat LP in limbo and perhaps spelling its demise. But sitting in his living room in the band's final days George was philosophical about the group's inner workings: "See, to me a band is made up of people, really, and there could be a guy who's behind it all, but basically the guiding force is everybody in it and how they deal with the music they write."

He diplomatically avoids criticizing his partners for their mid-'70s emphasis on extended, jazz-flavored instrumental work-outs, allowing only that he "always gets off on really good songs" himself. "The stuff that I was writing on my own really wasn't acclimatized to the band," since he favored the more traditional pop song forms.

The common thread between Little Feat's records and George's solo project is the perspective that shapes the songwriting—one that breaks from mythic Californian archtypes and explores a more human-scaled and often comic array of characters and situations. His western landscape extends beyond the familiar natural-elements backdrop of conventional West Coast rock to reflect cultural diversity and urban and pastoral elements. It's a grittier vision than most, and it's certainly grittier than that of naturalized citizens.

eorge was born and raised here, the son of a furrier. He attended Hollywood High and started his musical career as a flutist, a source point that survives today in his unabated reverence for such decidedly unfunky precursors as Charles lves. In step with the era, Lowell turned his back on academia in his late teens, switching to guitar at twenty, playing his first session at twenty-three, and placing his first song with a recording artist a year later. By the time he emerged as the Feat prince, he had passed through L.A.'s crazed hippie milieu as a member of the Factory (where he met drummer Hayward via an *L.A. Free Press* classified ad) and the Standells, and recorded with the Fraternity of Man.

Though his self-restraint within Little Feat might suggest that his first solo album would be a repository for pent up indulgences, last spring's release. "Thanks. I'll Eat It Here," proves otherwise. The first side in particular avoids guitar grandstanding to make room for the playing of George's favorite session musicians. It also favors recent outside classics like Allen Toussaint's *What Do You Want the Girl to Do*? and the Ann Peebles/Willie Mitchell chestnut. *I Can't Stand the Rain* as much as it does George's own songs. There are relatively few lavish production numbers, the primary emphasis being on his melismatic, r&b-inflected style.

The Lowell George that sings from the grooves of the first Little Feat record bears little resemblance to his current work. "The first album, I never got a



George on the cover of "Thanks"

"Thanks I'll Eat It Here" took three and a half years to complete. chance to do much. It was like two takes and good-bye. The second one, [producer] Teddy Templeman let me take three or four passes to get some kind of vocal attitude. By 'Dixie Chicken' I finally said, 'Well, gee, there's a certain way you have to go about this, and I gotta go about it the right way.'"

His emergence as a lead singer was actually more accidental than planned, arising from the embryonic Feat's needs more than his own ambition. "Well, you know," he begins, "everybody said, 'Who's gonna sing?' And they all pointed at me. You're in front. I can't sing and play the drums.' "

His initial solution for achieving vocal polish conformed to the overall production aesthetic that had been a principle cause of the auteur tag. "Dixie Chicken" was characteristic of his obsession with perfection, its sly, syncopated title song achieving an atmosphere of morning-after wisdom not through loose *audio vérité*, but through extended cut-and-paste overdubbing. By the final mix, eveything but Sam Clayton's conga accents had been wiped from the tape and replaced with new parts.

"Thanks I'll Eat It Here" has taken three and a half years to complete. That might imply that George has pushed his perfectionist's standard to a new limit, yet he sees both this work and the perhaps forth-coming Little Feat album, now being mixed in the garage, as products of a more documentary approach that has evolved since 1974's "Feats Don't Fail Me Now." Still intent on a pristine production finish, "Thanks ..." was mastered at half-speed, and Lowell proudly notes that the groove is "a four-mil cut." nearly twice as deep and more durable than the average album. He has come to view the feel of a track as the ultimate test.

What, then, delayed completion of the album? "Um, hepatitis virus, infectious, Type B. A bunch of Little Feat albums, the Grateful Dead album ('Shakedown Street,' produced by George though mixed by John Kahn), a little Valerie Carter (whose debut LP he also helped produce), a lot of touring." By the time "Thanks" was ready for mixing and mastering, George had gone through two engineers (George Massenberg and Donn Landee), enlisted a third (Ray Thompson), and shifted from using conventional studios to mobile installation. As a result of his discovery that the trailer control room speeds up the process, the Little Feat album was recorded entirely by the Filmways/Heider truck. Basic tracks were cut in a larger room than his garage, but overdubs and final mixes are all being done at Lowell's house.

"If there's someplace you feel comfortable, you ought to go there and work. It's really unnecessary to pack everything up and go to a studio and sit around three hours while the tape's being repaired, or a machine breaks down," he says. "Without that a lot of people can't get into it. It's 'when do we start working?"

But with the truck "you get almost twice as much accomplished. On some tunes, Bill [Payne] would take three or four hours to get an overdub right. This time we went through five tunes in about, oh, two, three hours, one right after the other." That new momentum has led to plans for Lowell's own mobile unit, which he says is being built by friend and engineer Massenberg, who is constructing his own L.A. studio as well.

owell George the producer may take a more collaborative approach now than he once did, but as a songwriter, he has always worked with other lyricists and composers. Sitting quietly across the room is Martin Kibbee, his thinning hair and perpetually half-open eyes suggesting an eccentric academic more than a veteran rock lyricist. He has long worked with Lowell, as well as with another George partner, Van Dyke Parks. For the first Little Feat songs, Kibbee was listed under the nom de plume of Fred Martin, in the hope that the "George-Martin" credit might lure prospective fans interested in songs by the Beatles' producer.

Parks, Kibbee, and George have proven an apt troika, due to a shared irreverence and verbal playfulness. But Lowell's most affecting recent collaboration was with his eight-year-old son, Jed, who is listed on "Thanks" as cowriter of 20 Million Things, a ballad that recalls the mixture of slapstick and pathos captured by early Feat classics like Trouble.

"Yeah, George recalls with a laugh, "that was really an amazing situation. We gave him this cheesy cassette player (uh, I mean a cassette player—he'll read this and say, 'What does he mean, *cheesy*?') and he and a friend sat around and figured out the chorus." What George thought would be a starting point ended up as the finished

lyric. "The things that they do are so simple and to the point. I try for days and days to rethink the idea: '20 million things to do, 20 million things, and all I can think about is you, with 20 million things to do.'

"I thought, 'Okay, how can I change that and make it more of a *statement*." He chuckles at his own pomposity. "And I worked and I worked and worked, and filled up three or four legal pads with nonsense, and came to the end of it saying, 'Not a chance, there's nothing I can do. That's it.' "

Will the child be father to the man? Possibly. "There's a new song that he and Fred Tackett's little boy have come up with called *I Always Leave the Girls Smiling*." He shakes his head in proud amazement. "You know, ten years old and eight years old—it's hard to believe."

Lowell, Kibbee, and Fred Tackett grow playful when we compare another track from "Thanks," Jimmy Webb's *Himmler's Ring*, to the Fascist undercurrents of the latest Elvis Costello album. By the time Feat percussionist and basso innuendo Sam Clayton arrives and begins taping his fingersnaps in preparation for an overdub, Lowell's husky laughter is competing with the conversational cross-fire among the half-dozen or so people in the room. Engineer Ray Thompson, who has been sitting quietly by the fireplace, heads off to the trailer, and a second engineer beckons Lowell to the control board. Excusing himself, he apologizes, saying, "Just when we were getting going," as if our dialogue on the implications of Nazi bubblegum as a new pop genre was near the heartlands of the artistic process.

In terms of style, if nor content, such whimsy fits Lowell George and his self-mocking demeanor, one reflected in the often Chaplinesque protagonists of his songs. Even so, it's hard not to perceive a little of his own fire in the hero of an old Feat crowd-pleaser, Rock 'n' Roll Doctor: "Two degrees in bebop, a Ph.D. in Swing ... he's a master of rnythm, he's a rock 'n' roll king."

Lowell's most affecting recent collaboration was with his eight-year-old son.

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Circle 31 On Page 97



The Teac 124: A Cassette Deck with Sync



Teac's Model 124 Syncaset: instant demos

he Syncaset starts out as a conventional cassette deck, with all the normal features: record, fast forward and rewind, tape counter, bias and EQ selectors. Dolby B noise reduction, pause, etc. As such, it is very respectable—versatile and completely satisfactory. It's not outrageously expensive (\$450), and it's goodlooking and easy to use. But there's more. The innovative part begins with a couple of extra buttons on the front panel labeled SIMUL-SYNC and CROSS-FEED, proceeds through the electronics, and comes out of your speakers with a type of program you've never heard before from a cassette machine: discrete overdubbing.

The original multitrack overdub process, developed by Les Paul and the Ampex Corporation, was called Selective Synchronization-Selsync for short. It permitted you to hear prerecorded material on one track while recording fresh material on another simultaneously. This made possible what was then called "postmixing" or "remixing" and is now just called "mixing." Prior to the development of Selsync, the only way to add information to a tape program was to play back the original, sing or play along with it, and record the combination on a second recorder. Needless to say, Selsync completely turned the recording industry

around—today there are 24-track studios in every major city in the U.S.; some studios have the capacity to overdub 32, 48, and even 64 tracks of information.

Though the Syncaset will not replace the professional recording studio, it does enable singers, songwriters, language students, and just plain folks to make perfectly synchronized cassette recordings at home. As such, it should be of interest to those who have trouble handling (or coming up with the purchase price of) an open-reel system with the same capability. Here's how it works: You record your basic program on the left channel, from either a line source (a record, tape, or radio broadcast) or a microphone; when it's completed, you rewind the tape to the beginning, press SI-MUL-SYNC—which defeats the record / playback head's potential for recording on the left channel but activates its playback potential-and record the second pass on the right channel while listening to the left. As a result, both channels will play back in perfect sync. But wait! Having recorded the original program on the left channel and an overdub on the right, the program would normally come out of a stereo system as "two-track mono": one sound is over there, and the other over here. Not the most desirable of mixes, you

by Fred Miller

say? Teac has thoughtfully included a cross-feed switch to blend the outputs of the two channels enroute to the inputs of your amplifier, and so to the speakers. It may sound mono (it is), but it's a more sensible way of listening to most programs so recorded.

This capability, then. is the essence of the Syncaset and is what makes it unique among cassette recorders. The possibilities are numerous, and it would seem to be an invaluable tool for songwriters: Concentrate on the accompaniment and record it on the left track: play it back and overdub the vocal on the right. Instant demos.

In addition to the usual cassette and Simul-Sync features, the Syncaset offers mike / line mixing. so you can record yourself singing along with a true stereo line source like an instrumental recording. Mike / line blending is achieved by selecting a line input, plugging your microphone into the left mike input, and turning up MIC BLEND. This control, when rotated clockwise, permits the mike signal to be blended or balanced with the line signal. The signal will feed equally to both channels and appear at the center of the stereo image. If you want to use the mike input for a voiceover-to sing along with a cassette but not record on it-vou just keep the deck in PLAY

The back panel has pin jacks for input and output plus an attached AC cord. There is also a DIN connector for those systems that require a multipurpose hookup. On the front panel are the usual tape counter and a memory function, so that a specific place in the tape may be located automatically by pressing MEMORY and rewinding. The SIMUL-SYNC and CROSS-FEED buttons are located under the tape counter, as are the left- and rightchannel mike inputs. which are guarterinch phone jacks. The two large VU meters light up when recording and playing back. and the left meter's light goes out in the Simul-Sync mode. providing an additional visual indicator. There are four switches below the meters: INPUT (MIC-OR-

104

POP-POURRI

Disco: The Medium Is the Message by

by Stephen Holden

DIN LINE) BIAS and EQ (CHROME/NORMAL) and DOLBY N/R (in/out), which will encode your recording or decode a Dolby cassette for playback. LEDs indicate recording and Dolby status, and alongside the MIC BLEND volume-control mentioned before is a headphone jack. The Syncaset weighs about 16.5 pounds and measures about 16 by 6 by 12 inches.

Teac's audio specifications include wow and flutter of 0.07% (NAB-weighted), frequency response from 30–16,000 Hz with chromium dioxide tape, and a signalto-noise ratio of 55 dB, which is improved by using the built-in Dolby system. Line input is 50,000 ohms, and use of a microphone rated between 600 and 10.000 ohms is recommended.

I was impressed with the Syncaset. It works very well in any of its three modes, and it's extremely simple to use. The touch of the transport controls is not as smooth or sure as I would have liked, and the buttons feel very lightweight. In fact, the whole unit has a fragile sense for the type of machine that will get more wear and tear than the average cassette deck. Still. I used my sample in a huge variety of situations-original stereo recording, copying. in its sync mode. for Dolby stereo playbacks-and it functioned well all through them. Subjectively, it sounded better than three other cassette decks I compared it to and was a breeze to handle. And it does what the others don't do. The Model 124 Syncaset is a very good idea-and, with a list price of \$450. an affordable one.

Circle 121 on Page 97



D isco has presented the biggest challenge to the media through which we receive music since the birth of rock & roll. Although conventional wisdom assumes that the high fidelity revolution is winding down, the profound effects of disco technology on the very form and substance of pop suggest otherwise. Being the ultimate environmental music (inside a club, music is the environment), disco dramatizes the fact that all pop is environmental—a designed background music for the home. the car, the street, etc.

Disco began as a rebel style, a populist upsurge against the complacency of radio, led by a visionary new breed of media freak, the disco deejay/producer. Until its rise, mass-market pop had adapted itself totally to the needs of radio. which demanded short-form songs with subliminally appealing hooks-an aural style basically similar to the medium's sales pitches and appropriate for the three basic types of audio: home high fidelity, car-radio medium fidelity, and lowfidelity portable transistor. The continuous wraparound sound and viscerally programmed structure of club music answered a need for deeper musical involvement than home audio and radio formats could provide. But it was only after the phenomenal record sales of in-disco hits forced the issue that radio jumped on the bandwagon.

Disco's appeal being visceral rather than subliminal, the music could only have evolved within its own special club environment, presided over by the rebel leaders. There, it could be continuous and amplified on a level impractical as well as impermissible anywhere else. With its emphasis on a pile-driving sexual rhythm. disco gave the beat unprecedented supremacy. The pop song, like most other Western European musical structures, was a rough (and in radio's case, a shortened) parody of the sexual act, but it still retained its traditional linear form. Disco's elongated chant dispensed with melodic line in favor of a hook-break structure whose aim was to suspend the dancer in a vertical, timeless pulse embellished with sound effects. The result was a very literal.

in-depth sexual parody, not a superficial one.

he very essence of disco is surrender to rhythm and, indirectly. to a thoroughly technological environment. The techno-world evoked by Donna Summer and her producers, Giorgio Moroder and Pete Bellotte, is a sexual amusement park in which the synthesizer is an erotic toy and the sexual ideal a mechanically quantifiable orgasm. Abba's formally cherry pop/disco recalls the benign regimentation of a perfect grade school. And Chic's producers. Bernard Edwards and Nile Rodgers, are the ultimate examples of disco producers as environmental designers. They sketch a luxurious home setting by hanging aural decor behind the voices; what matters above all is ambience.

As disco has become corporate and radio discofied, the conflicting demands of clubs and radio have necessitated compromises, and the music has had to be altered to serve both mediums. Clubs are provided with lengthened disco mixes of pop songs, while radio requires shortened. four-minute edits of in-disco hits. The effect of disco radio on the rebel music has been to defuse the rebellion by making it more hook-oriented, highended, and accessible, freezing out the more experimental electronic manifestations of Eurodisco that swept the market three years ago. But notwithstanding these accommodations, disco has still deeply affected pop radio's sound and style. For the first time in the history of radio, the steady pulse is more important than the hook. Even on portable transistors, the sound suggests the heartbeat of modern urban life.

These developments all signal pop's move away from linear, scripted forms toward aural, electronically received imprints of a preprogrammed, packaged, transmedia sound no longer tied to acoustical models. This is space age pop—the aural equivalent of TV. What Marshall McLuhan once said about TV now applies as much to the interdependent technologies of radio, records, and disco: "The medium is the message."

The Brinsley Schwarz Legacy: Nick Lowe, Ian Gomm, the Rumour

by Sam Sutherland



The Rumour: Bodnar, Belmont, Schwarz, Andrews, Goulding

Nick Lowe: Labour of Lust Nick Lowe, producer Columbia JC 36087 Ian Gomm: Gomm with the Wind Martin Rushent, producer Epic JE 36103 The Rumour: Frogs, Sprouts, Clogs and Krauts The Rumour & Roger Bechirian, producers. Arista AB 4235

New waves can carry in old survivors, and for a defunct British band called Brinsley Schwarz, that has literally been the case: Five years after its formal demise, that maverick quintet's stylistic legacy is proving far more influential than at any point during its active recording life. Guitarist and namesake Brinsley Schwarz and keyboard player Bob Andrews went on to form the Rumour, Graham Parker's dazzling backing band; bassist Nick Lowe embarked on a prolific career as producer and solo recording artist; and guitarist lan Gomm likewise began recording under his own name. Among them, they've had a hand in creating some bracing modern rock, and this trio of current albums underscores their shared heritage as well as a new divergence in thematic perspectives.

Between their late-'60s debut ("Brinsley Schwarz") and their mid-'70s demise ("New Favourites"), the original Brinsley Schwarz moved from American country/rock stylings toward a trim, warmly melodic rock style grafted from a broad range of British and American sources. The Beatles, Phil Spector, Motown, and the Band were only the most conspicuous influences. Less obviously, to American fans, the band elevated that synthesis beyond mimicry by injecting their own decidedly updated point of view, especially by deflating the exalted, self-im-



Lowe: humor and economy

portant "high art" pretensions of progressive rock. Windy pronouncements and noodling guitar solos simply didn't figure into a rock vision that prized the form's absurdity as much as its majesty.

Gomm, Lowe, and the Rumour have all sustained that healthy irreverence, as well as the guitar-dominated pop that sparked the last Brinsley Schwarz records. Of their graduates, though, the most sharply sardonic is Lowe, whose association with another veteran English producer/performer, Dave Edmunds, extends back to Edmunds' production work on "New Favourites." That provides only a partial explanation for the clear thread connecting that earlier album's tongue-incheek anthems (like Peace, Love and Understanding, recently covered by Elvis Costello in a production by Lowe) and the infectious but tough-minded songs on "Labour of Lust."

Where Lowe's first solo album,

"Pure Pop for Now People," suggested a conscious effort to produce a smorgasbord of rock and pop styles, his new record narrows the musical range a bit and the lyric content considerably. At first listen, rock intellectuals will be disappointed that Lowe has apparently settled for a collection of love songs. But as the title indicates, these songs probe below the belt, debunking their own surface sentiment with erotic twists. On the set's best song, American Squirm, that double vision yields a wonderfully ironic lushness. Sweeping acoustic rhythm guitars, a piquant guitar solo, Beatled bass triplets. and Lowe's deadpan croon provide a soaring, triumphantly romantic backdrop for the author's contemptuous perspective ("I made an American squirm, And it felt so right"), one lending sexual conquest a wry sense of nationalism.

Cruel to Be Kind and Love So Fine complement that sense of erotic politics, the latter with possibly inflammatory directness. (One marginally unprintable line will draw easy feminist fire, despite Lowe's clear sarcasm.) If "Labour of Lust" does stumble at moments where his balance of sharp lyrics and rich music dips toward the commonplace, its creator's arch humor and pop economy are still very much in evidence.

In contrast to Lowe, whose irreverence has proven influential through his work with nominal New Wave acts, Ian Gomm views his good-humored rock songs as alternatives to those of the current generation of rock rebels, rather than as testaments of support. Yet his musical links to Lowe's transatlantic pop are manifold: Arguably the best vocalist on any of these records, he continually alludes to the same British and American source points in both songs and arrangements. Moving from a new version of an older song written for Brinsley Schwarz (Hooked on Love, here spiced with horns) to new originals and canny interpretations (Chuck Berry's Come On and the Beatles' You Can't Do That, both slowed to a moody crawl), Gomm emerges an earnest, if often disarmingly hapless, rock Evervman.

Most impressive of all, though, is the Rumour, which takes a sharp and productive turn in their songwriting approach for their second album. The first record without Parker, 1977's "Max," showcased their razor-sharp ensemble style through relatively orthodox originals and covers bespeaking a conservatism similar to Gomm's. With "Frogs, Sprouts, Clogs and Krauts," it's no longer possible to view the band as players first and writers second, for this collection of material written by Schwarz, Andrews, guitarist Martin Belmont, and bassist Andrew Bodnar poses a new toughness and coherence bound by the album's underlying conceptual feel. This time around, the thematic focus emerges from a backdrop of the chaotic, comical, and sometimes menacing new Europe.

If that milieu recalls Elvis Costello. so does much of the playing, which extends the Rumour's musicianship to include a more atmospheric use of Andrews' keyboards and synthesizers clearly shaped by New Wave and avant-garde rockers. Schwarz and Belmont likewise tailor their guitar work with a new sense of texture epitomized by the former's liquid rhythm work on Emotional Traffic, yet there remain moments of classic solo elegance as well. And on One Good Night, they too reveal a fondness for British rock's mid-'60s glory days as well as a tongue-in-cheek sensibility shared with former bandmates Gomm and Lowe

Most important, the Rumour integrates both old classics and new fashions in its playing, rather than point up contrasts as Lowe and Gomm do. The album's production finish is the most lucid and contemporary of the three and never resorts to gratuitous studio effects.

David Bowie: Lodger

David Bowie & Tony Visconti, producers. RCA AQL 1-3254 by Crispin Cioe

On "Lodger," the cover photo and liner snapshot depict David Bowie as halfdead, being treated for unspecified wounds. These are juxtaposed with a postcard Renaissance painting of the dead Christ, other more obscure dead bodies, someone's baby picture (Bowie's?), and another postcard of two Omega watches that appear to be ticking. Yet for all the images of death and time passages, this album is not particularly depressing or obsessive. Bowie's messages, however enigmatic, are increasingly humanistic, and "Lodger" most certainly takes him to new artistic heights. Long gone are the dour pronouncements of



David Bowie

cultural decadence that gave "Ziggy Stardust" and "Diamond Dogs" their gloomy oomph. Gone also is the calculated suavity of "Station to Station," with the singer posing as a nouveau-Sinatra. Bowie's current concerns still involve ultramodern, even futuristic issues, but his music and themes have taken on an international flavor, as if he seeks now to illuminate a vague but intensely threatening horizon that looms ahead for the entire world.

This is no small artistic goal, and his continued association with Brian Eno ensures that the music is as sophisticated and foreboding as the conceptual thinking behind it. Bowie and Eno cowrote most of the music here, building on the menacing synthesized drones that spiced their first collaboration, "Low." Some of the songs are impressionist scenarios, often described from a veiled first-person standpoint. Fantastic Voyage, the first cut, is a surprisingly earnest, straightforward plea

for sanity in "a very modern world." In what certainly sounds like his own character. Bowie sings "In the event that this fantastic voyage should turn to erosion and we never get old, Remember—it's true. dignity is valuable."

And that sincerity is what makes "Lodger" so forceful. African Night Flight sounds like it's told from the viewpoint of a German cruise missile (now actually being tested in Africa). as it is "getting in the mood for a Mombasa night flight skimming over rhino ... over the bushland, over the trees." Eno plays prepared piano, à la John Cage, and its jagged. clanging rhythm is juxtaposed first against Bowie's machinelike monologue and later over a chanting African chorus. The effect is eerie, and the message, after several listenings, becomes frighteningly clear. On Red Sails, Carlos Alomar and Adrian Belew create a dramatic guitar duel that's the perfect sci-fi backdrop for a tale of an "action boy" sailing on "thunder ocean." where the "red sail take me. make me sail along." Eno's synthesized guitar and Dennis Davis' rolling drums conjure up a disturbing world of roiling oceans and rearranged continents. and William Burroughs' influence on Bowie's lyrics was never stronger.

There's also a lighter. almost satiric side to this album. D.J. is a funky profile of a disc jockey who has lost his job. and now sits at home, mumbling "I am a deejay. I am what I play." Boys Keep Swinging is the other side of the coin from Alice Cooper's Only Women Bleed with Bowie invoking an apt pomp-rock stance. Drummer Davis and bassist George Murray keep solid rock & roll underpinnings going throughout, with distortion and dissonance left to the guitars and synthesizers. In this way. Bowie and Eno achieve a constant tension between the solid familiarity of rock and the disorienting edginess of twentieth-century art music and harmonies. With this stance. Bowie. along with Robert Fripp, once again leads rock's aesthetic vanguard.

John Hiatt: Slug Line Denny Bruce, producer. MCA 3088

by Sam Sutherland

Although John Hiatt recorded two albums at mid-decade. "Slug Line" might as well be viewed as his debut. Whereas the earlier Hiatt crafted a rounded, coun-



Hiatt: urgent rock & roll

try- and folk-edged style, these new songs are dominated by hard edges and driven with pure rock & roll force. Once compared to Randy Newman. he must now be pitted against British rockers like Elvis Costello and Joe Jackson. both for his urgent. glottal vocal delivery and the stripped-down firepower of the arrangements. That's tough, and admittedly trendy. competition, but Hiatt acquits himself impressively.

If first listens link him to those comparatively grim New Wave avatars, the perspective of his songs offers a sharp twist. "Slug Line" shares the critical, unsympathetic focus central to Costello's work. but Hiatt builds his images from a more intimate universe. Costello's tone of pitched hysteria and seething anger pays for its force with constricted range; Hiatt. by diverging from the intently moral and political vantage point attempted by his British peer, successfully moves from scathing diatribe (Sharon's Got a Drugstore) to tender vet unromantic sympathy (Washable Ink). He even makes that transition in the space of several verses on Take Off Your Uniform.

Along the way. he skewers the mindless fun of American culture: Radio Girl is a deceptively cheery rocker built around a classic Bo Diddley riff. and (No More) Dancin' in the Streets will enrage Bee Gees fans. He offers erotic longing without romantic apologies on You're My Love Interest. Throughout. his rage is laced with empathy—on Sharon's Got a Drugstore. an abrasive. uptempo song propelled by slashing guitars, the title heroine's drugged passivity ("She cannot hold you tight") is both indictment and epitaph.

Producer Denny Bruce, best known for his work with Leo Kottke, brings the same sense of scale to a radically different subject and achieves equal success. "Slug Line" is charged with an unadorned, lifesized energy that doesn't rely on studio overdubs or intricate production effects for its impact. What we're left with is urgent rock & roll of high quality, its surface as hard and unrelenting as its sharply observed content. Don't let those initial resemblances to Hiatt's overseas rivals fool you: This is a distinctive. and distinctly American, rock poet, and "Slug Line" is as direct and effective as a punch to the solar plexus.

Tom Robinson Band: TRB Two Todd Rundgren. producer Harvest ST 11930 **by Ken Emerson**

Nice guys don't necessarily finish last, but sometimes it can be tough for them to place ahead of the pack. Among the British punks and New Wavers that washed up on America's shores a year or so ago. Tom Robinson was one of the most admirable: Openly gay and patently intelligent, he had his heart and mind as well as his beat in the right place. Unfortunately, perversity—be it Bob Dylan's, Mick Jagger's, the Sex Pistols'. or Elvis Costello's—makes far more powerful music than mental and moral health can usually muster.

Robinson is so eager to make homosexuality socially respectable that he domesticates his music. It's high-energy, to be sure, but it never exceeds the boundaries of good taste. Despite the protest of his lyrics, his songs abide by the musical rules. "We don't need no aggravation." runs the chorus of one of the songs on "TRB Two." but aggravation—tension, conflict. drama—is precisely what great rock & roll demands.

"TRB Two" lacks the raw and raucous energy of Robinson's first album, "Power in the Darkness." and this shortfall can be chalked up in part to producer Todd Rundgren, who has made a career recently of tugging eccentric artists (the Tubes. Patti Smith) into the musical mainstream. Time and again. Robinson's un-



TRB: Kustow, Parker, Morgan, Robinson

conventional lyrics ("Swing low, Iscariot my friend") are undercut by conventional arrangements and even by gratuitously caterwauling female choruses. A sing-along like *Blue Murder* is a dull echo of the first album's mordant *Glad to Be Gay*, and nothing here has the snap of 2-4-6-8 Motorway. "I'm gonna hold out till I find my own way." Robinson sings in his gruff, scrawny voice, but he hasn't found it quite yet.

He's certainly found a good new keyboard player, though, in Ian "Quince" Parker, who seems to have absorbed all the lessons of masters of the original British invasion: Alan Price, Rod Argent, Steve Winwood, et al. The greatest delight "TRB Two" offers is the resourcefulness of the solos Parker rips off. One only wishes that Robinson would take to heart the epigram by Oscar Wilde that he quotes on the album jacket: "A little sincerity is a dangerous thing, and a great deal of it can be absolutely fatal." If Robinson ever cuts loose, he could be dangerous and fatal.

Ray Stevens: The Feeling's Not Right Again Ray Stevens, producer Warner Bros. BSK 3332 by Todd Everett

Ray Stevens is just short of a renaissance man of contemporary music: He sings, plays piano, arranges, writes, publishes, and runs his own Nashville studio. He also has a keen business sense.

Trouble is, Stevens can't edit worth a damn. He and his writing staff have some good ideas, some mediocre ideas. and some downright terrible ideas, and all of them eventually find their way to vinyl. The good ones become part of his long line of hits that began in 1961 with the talking novelty Jeremiah Peabody's Polyunsaturated Quick Dissolving Fast Acting Pleasant Tasting Green and Purple Pills and continued through Ahab the Arab, The Streak, Everything is Beautiful, and, of late, I Need Your Help Barry Manilowwhich is this album's sole raison d'être. Along the way, there have been one great album ("Have a Little Talk with Myself"), a couple of pretty good ones, and a lot of dreck

It would appear that the last category is a result of Stevens' belief that writers under contract to him are the best writers around-next to himself, of course. This is true in the case of Dale Gonvea. and part of the fun of his I Need Your Help Barry Manilow is trying to figure out whether he and Stevens are kidding. (The story-line has the singer in such depression that only a Manilow ballad can lift him out of it.) In any case, Stevens has provided an exceedingly deft Manilow-ish orchestration that includes a huge-by Nashville standards-string section. Even the Warner Bros. art director has gotten into the spirit with an album cover that is a parody of Manilow's "Trying to Get the Feeling" LP. (The back cover even depicts Stevens in a T-shirt that reads, "I love bagels.")



Stevens of Manilow fame

Buy the single—the sleeve is a blueon-white knock off of the Barry Manilow II cover. You'll have the hit, and you'll be spared a lot of the glop. If you haven't heard the songs on "The Feeling's Not Right Again" before, you're not missing much. Feel the Music is pretty rousing, and Om ("... as close to the universal vibration as humans can make") is perhaps unintentionally hilarious. And if you, like me, have so much faith in Stevens that you'll forgive major hunks of garbage, you already have everything here: The entire album, save for the single, is lifted from Stevens' last three Warner Bros. efforts.

Link Wray: Bullshot

Richard Gottehrer, producer Visa 7009 **by Nick Tosches**

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While it's a voice that might not work with one of Judy Collins' quieter songs. it sure as hell works with the grinding chords and whiplashing bent notes of his notorious guitar.

The most effective vocal performances are the manic Good Good Lovin^{*}, the menacing torch song The Sky Is Falling, and Leiber-Stoller's Don't (in which Wray shows that he's more than casually acquainted with Elvis' version). His voice fails him only once—a vast improvement over his attempts at singing in the early Seventies—and that's with Dylan's It's All Over Now Baby Blue, a song Wray should have left alone to begin with.

A new version of his 1959 hit. Rawhide, and a pair of other instrumentals (Snag. which jumps: Switchblade. which growls) prove that he is still the king of the black-leather guitarists. Producer Richard Gottehrer, who is better known for his work with Blondie. is to be commended for recognizing Wray's particular kingship and for not trying to New-Wave him into ignominy. And. of course. it's always good to hear Rob Stoner. whose electric bass could have made even the Fifties rock harder.



Airto: Touching You . . . Touching Me Bob Monaco & Airto Moreira. producers. Warner Bros. BSK 3279 by Don Heckman

Lord. we could use a few more Airto Moreira's in this business. At a time when we seem to be overwhelmed by desperate-for-survival old rockers and all-lwant-to-do-is-boogie disco freaks. Airto keeps inviting us to share in the sheer exuberance he experiences every time he picks up one of his flea-market percussion shakers. "It's fun to make music." he seems to be saying. "Come join the party!"

And so we should. Only Airto could pull off a piece (Amajour) that revives Herb Alpert with an updated Tijuana Brass sound without making us want to head in other directions. And only Airto could find the edge of satire that has always existed (despite what Bob Marley's press agents would have us believe) in reggae music; check out his outrageous jabbering on Move It on Up. That he does all



Airto: sheer exuberance

this in the context of first-rate jazz/rock with first-rate performers—saxophonist Joe Farrell, pianist George Duke, the Sweet Inspirations, and Flora Purim—is obvious testimony to the fact that his irrepressible high spirits are founded on solid, personal musical excellence. In less capable hands, such an all-star array could have resulted in a faceless, slick professionalism. Instead, on "Touching You... Touching Me," everything is touched with the bright colors of Airto's musical enthusiasm.

Barrett Deems and the Hottet: Deemus

D. Besser & J. Hayden, producers Claremont LJH 1001 **by John S. Wilson**

The old Benny Goodman quartet records have, by now, worn pretty thin, and Benny's current personal appearances do not always match those of the old days nor do they add to his repertory. (Avalon seems to be permanently burned into his brain.) For those who still hunger for the old sound, vibist Don De Micheal has, for several years, been involved with groups that have attempted to feed on BG nostalgia. And on "Deemus" he plays in a band led by drummer Barrett Deems, who toured with Louis Armstrong in the '50s and '60s.



Barrett Deems

But here, the Goodman influence is one step removed. Romping, stomping Steve Behr, for instance, is on a completely different kick from most of the Goodman pianists (Wilson, Powell, Bushkin). He is closest to Jess Stacy, with traces of Joe Sullivan and Earl Hines. Chuck Hedges is an eclectic clarinetist who includes the Goodman thrust and cry in his mixed bag of ideas but whose natural inclination is toward a more swirling. circular attack that works well with Bud Freeman's tenor saxophone. DeMicheal may count Lionel Hampton among his vibes favorites, but he has a more fluid, less deliberately punched out style than Hampton. And the group's guitarist, Bob Roberts, has virtually no relationship to Charlie Christian, who was added to the original Goodman guartet.

Though the Hottet has chosen a program that is almost totally drawn from Goodman, the group comes out of it with some personal distinction. A gloriously swinging After You've Gone builds and sweeps, winding up with three ensemble choruses that pile energy on energy. It is hindered only by Deems, who is a steady ensemble player but, as he used to demonstrate with Armstrong, is no soloist. The group gets away from the Goodman feeling completely in a warm and deliberate version of Hoagy Carmichael's New Or-Continued on page 114

R&B

by John Storm Roberts







Patti Austin: Live at the Bottom Line Creed Taylor, producer CTI 7086

I'm still in love with Patti Austin. She may not be the Great Creative Genius of the age, but she sings an uncommonly wide range of material with sensitivity and an uncommonly flexible voice. She's also an uncommonly funny lady, an aspect that's underplayed here.



Parlet: Invasion of the Booty Snatchers George Clinton & Ron Dunbar, producers NBLP 7146

If Clinton isn't careful, he's going to run into trouble with the antitrust laws. Trouble is, he does his various things so well. Parlet swings and is funny in the bargain, specializing in a low-key space-funk romp that may give birth to a new disco dance sensation: the Chuckle. Minnie Riperton: Minnie Henry Lewy, Dick Rudolph, & Minnie Riperton, producers Capitol SO 11936

A strange album, indeed, with backing by Stevie Wonder and José Feliciano (who leaves Minnie with egg on her face in a version of *Light My Fire*), among other heavies. The target is presumably the classier realm of pop that has long been Capitol's stamping ground. Alas, Riperton comes over too ornate and cute to be convincing, despite a fine set of pipes.

Betty Wright: Betty Travelin' in the Wright Circle

Betty Wright, producer Alston 4410

Betty Wright, part of the stable that produced KC and the Sunshine Band. is a powerhouse r&b vocalist who means what she says and knows just how to say it, whether it's git-down music or gospel/soul ballads. No frills, no affectations, just very fine singing with tight, effective backings. She's worth two of half the heavily hyped ladies who make the charts so regularly.

Dee Dee Bridgewater: Bad for Me

George Duke, producer Elektra 6E 188 Ms. Bridgewater has won raves from eminent jazz critics, which shows that jazz is very short of good singers these days. George Duke is a dull producer, and together he and Dee Dee have come up with a proficiently ho-hum album. Billie, thou shouldst be living at this hour....

Natalie Cole: I Love You So Chuck Jackson, Marvin

Yancy & Gene Barge, producers. Capitol SO 11928

Natalie Cole's Dad was also a fine performer who decided he could live by bread alone. High-gloss pap does indegd sell, but I'm glad I caught Natalie's first New York concert, back when she was more concerned about making music than money.

Townsend, Townsend, Townsend & Rogers Ed Townsend, producer

Chocolate City CCLP 2007

Townsend, ditto. ditto & Rogers are basically soul balladeers with a downstage approach to contemporary happenings. At moments they go a little soft-focus, but at their best they are a real class act, possessed of the intelligence that is missing in most contemporary ballad singing. They are also given a powerful boost by some equally intelligent band arrangements.

The Trammps: The Whole World's Dancing

Ronald Baker, Norman Harris & Earl Young, producers. Atlantic SD 19210

At their best, the Trammps still put over classic group-soul shouting. At their worst, trying to fall in with watsappnin, they fall prey to the disco-trappings Syndrum syndrome and get boring. But tracks like *Teaser*, *My Love*, *It's Never Been Better*, and *Soul Bones* (with that busy bee Stevie Wonder on harmonica) more than make up for the dull stuff.

The Undisputed Truth

Norman Whitfield, producer Whitfield WHK 3202

What makes a good disco/funk band? Drive, fresh touches in the backings, a creative lead singer, and a general air of conviction. Undisputed Truth is a good disco/funk band by all these criteria, thanks above all to a female lead (Marcy Thomas) who adds a sense of black music's breadth to good chops.

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leans. And, in its most effective transition. it plays Benny's *Six Appeal* (based on the old blues. *My Daddy Rocks Me*) without the clarinet, instead featuring guitar, vibes, and piano. It's a lovely, gutty, laid back treatment that shows how far and how successfully Goodman's material can be removed from his aura.

Urszula Dudziak: Future Talk Michal Urbaniak. producer

Inner City 1066

I'm not sure what it is that has kept Urszula Dudziak from receiving the attention that she unquestionably deserves. Perhaps it's the difficulty in pronouncing her name or, possibly, the absence of any real sex appeal in the way her music has been packaged. Whatever it is, there are an awful lot of people who have been missing out on the astounding talents of this gifted young Polish performer.

The wife of violinist / saxophonist Michal Urbaniak, Ms. Dudziak was first known as a kind of freaky vocalist with her husband's group-"freaky" because she used her voice with an echo-effects box in somewhat the same fashion John Klemmer uses his saxophone. But "Future Talk" should firmly establish her as a major performer in her own right. Not coincidentally, it probably will also straighten the hair of anyone who hasn't heard her before. On four unaccompanied tracks-Future Talk, Chorale for One, By Myself. and Double Bounce-she sings with her self in pure, real-time improvisations by feeding her voice through a harmonizer, an octave box, and echo loop. They are astounding and at least as fascinating as some of the more highly publicized and similarly derived music of Terry Riley and Philip Glass.

Other tracks showcase stunning work from Dudziak's accompanists, especially her husband on electric violin and lyricon and Zbigniew Namyslovski on alto saxophone. One of the finest moments comes in *Klick*, a brief, astonishingly articulated duet between her voice and Urbaniak's lyricon. "Future Talk" is Dudziak's debut for Inner City, and her brilliant performance is matched by her husband's production and Peter Robbins' crystal-clear engineering. It's already a good candidate for one of the best jazz albums of the year. D.H.



Dudziak: coming out

Zbigniew Seifert: Passion Jerry Schoenbaum & Chris Hinze. producers. Capitol ST 11923

Sadly, this recording by Polish jazz violinist Zbigniew Seifert will have to be a memorial to his considerable skills: He died of cancer in February 1979, three months after the record was made. The loss is ours. Seifert was just beginning to make a reputation in the West after spending too much time in the shadows of performers like Jean-Luc Ponty and Michal Urbaniak. As good as he was as a jazz improviser, there was always something more than jazz in his playing—a whisper of Chopin, the flashy rhythm of a czardas, the exuberance of a full-tilt, dancing polka.

If Seifert's energies were running low at the time "Passion" was made, there is no evidence of it in his performances. which are filled with fire and fury and lifeaffirming energies. If you have any doubts, listen to the title track or to Pinocchio on Side 2. The most interesting pieces are Kilimanjaro and Escape from the Sun. Seifert's scores for both string ensembles and rhythm stretch the definitions of jazz in almost the same way that the Moody Blues stretched the definitions of rock. Classical influences creep in here and there, but before they can dominate they are replaced by garish, movie-style melodrama; then, just as suddenly, his Polish heritage establishes itself with a gypsy melody in the strings. Finally, almost symbolically (for this European musician), a jazz rhythm overcomes everything.

Capitol, as well as producers Chris Hinze and Jerry Schoenbaum, should be commended for providing a clean, open, opportunity-filled environment for Seifert. He obviously made the most of it—and that's to all our benefit. D.H.

TEAC

YOU CAN'T TAKE ANY MACHINE AT FACE VALUE.

Every tape recorder is a machine by definition. Pretty faces, knobs. and buttons are incidental to the recorder's fundamental responsi-

bility. To move tape. And that is where a TEAC shines. Twentyfive years of specialization has taught us that balance is the critical factor in determining how accurately and for how long a tape recorder will move tape.

Balance means no part stands alone. It also means delicate physical relationships. Good drive motors produce tremendous energies, magnified in fast modes. The slightest imbalance will cause vibration and audible deterioration.

Our hysteresis torque motors, one on each reel, maintain the delicate balance between start-up, back torque and running torque to prevent tape stretch and breaking. Precise tape-to-head contact is maintained to pre-

vent high frequency loss. That's why a TEAC sounds better initially and maintains its sonic integrity after years of use.

The most important part of any drive system is the capstan assembly, where balance, again, is crucial. For accurate tape speed, the size and roundness of the capstan shaft are of utmost importance. So we use automated lathes to form that are tested under each shaft. Then microgrind each one to a

of 0.2 micron (0.000008 inch). Our hysteresis synchronous capstan motor is specifically designed for speed accuracy. Deviations (wow & flutter) are kept to the absolute minimum. Our massive flywheel is dynamically-balanced and coupled to the drive Audio Specialist mechanism with belts the most severe temperature, humidity and

tolerance

atmospheric conditions to assure dimensional stability for years to come.

For fast action and positive feel, we use highly responsive micro-switch transport controls. They activate solenoids almost twice as powerful as those in other machines. You can even hear the distinctive sound of a TEAC mechanism in action.

Our erase, record and playback heads are secured to a steel mounting plate-itself a product of over 20 years of design refinement-then aligned in the three critical planes.

Finally, we mount everything to a ¼-inch high density duralumin base plate. Physical relationships must remain constant. Especially in the tape world of micro-tolerances.

To us, it's a matter of craftsmanship. To you, a matter of decision. That's why we invite you to look beyond mere face value. Peel away the cosmetics and you'll find the real measure of any tape recorder. Especially OUTS.

For more information, see your TEAC dealer or write us at Dept. HF-8.



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And each Hi-Speed receiver has unique individual features that make a real difference in the tonal quality of music. Like dual power supplies that eliminate crosstalk distortion. Or a pulse count detector that digitally reduces FM distortion by half



Distorted waveform response produced by conventional receiver. while significantly reducing background noise. Or a built-in equalizer with ten turnover frequencies for full acoustic control.

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Square waveform response of Hi-Speed receiver.



HI-SPEED

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