

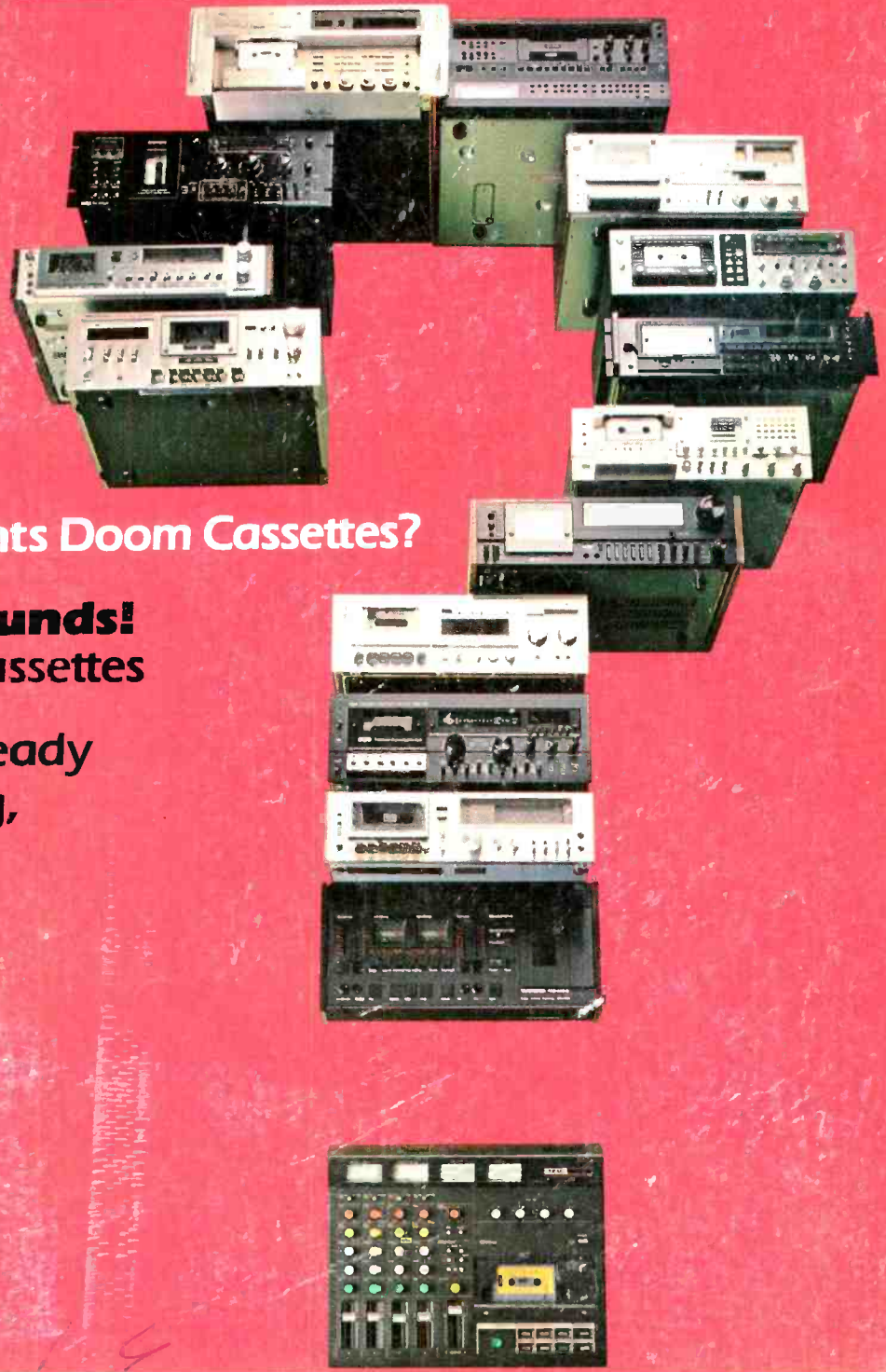
\$1.50 February 1987

Don't Buy a Tape Deck Until You Read...

HIGH FIDELITY

ICD © 08398

Special Tape Issue



The Great Cassette Question

Do New Improvements Doom Cassettes?

Sounds! What Sounds!
16 Top Prerecorded Cassettes

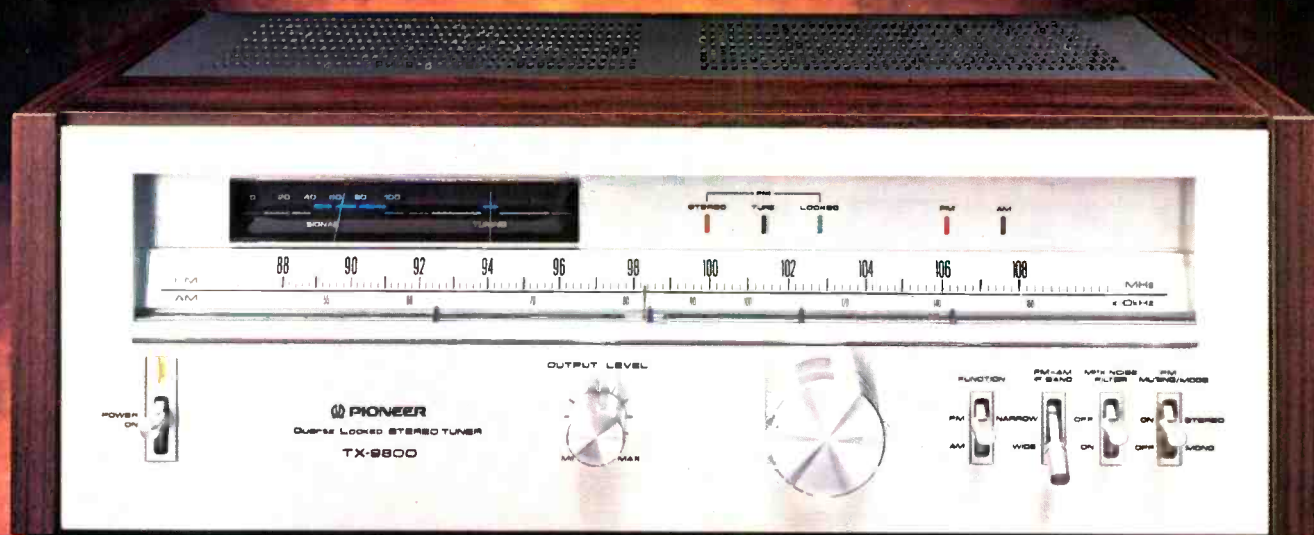
Lab Tests: Metal-Ready
Tapes from Tandberg,
and Optonica

Build Your Studio
Under \$2,000

**the Art of
Cassette Design**

ANTONIA N Y
ANTON ST
JAN
278039AUC 80 1 03
13820





AND SO IS THE FIGHT ABOUT TUNERS.

At one time the struggle between amplifiers was won by the amp that had the most muscle. And the tuner that brought in the most stations also brought in the most acclaim.

Today, there's one series of amplifiers whose technology has put it in a class by itself. And now, with Pioneer's new TX 9800 tuner it's met its match.

While other tuners offer features that just sound great, every feature in Pioneer's TX 9800 helps to produce great sound.

Unlike ordinary tuners that are content with ordinary circuitry, the TX 9800 has a new Quadrature Discriminator Transformer that works with Pioneer's exclusive PA 3001-A integrated circuit to reduce distortion to 0.05% at 1 KHz and raise the signal-to-noise ratio to 83 dB. Whew!

Many of today's tuners use sophisticated low pass filters to remove the 19 KHz pilot signal that's present in every stereo broadcast. But while they're effective in removing the pilot signal, they're also effective in removing some of the music.

The TX 9800 has Automatic Pilot Canceling Circuitry that makes sure every part of the music is heard all of the time. And that distortion is veritably unheard of.

The crowning achievement of most tuners today is the sensitivity of their front end. And though it's much to their credit to bring in weak stations, it means nothing unless they can do it without spurious noise or other interference.

The TX 9800's front end has three dual gate MOSFET's that work with our five gang variable capacitor to give you an FM sensitivity of 8.8 dBf. And also make sure that your favorite music is not disturbed by what's playing elsewhere on the dial.



SIGNAL STRENGTH AND CENTER TUNING METERS FOR A DRIFT-FREE PERFORMANCE.



INSTANTANEOUS FLUOROSCAN METERING THAT LETS YOU WATCH EVERY PERFORMANCE WHILE YOU HEAR IT.

And while most tuners today give you one band width for all FM stations, the TX 9800 gives you two. For both AM and FM. A wide band that lets you bring in strong stations loud and clear. And a narrow one that finds even the weakest station on a crowded dial and brings it in without any interference.

All told, these scientific innovations sound mighty impressive. But they wouldn't sound like much without an even more impressive tuning system.

The TX 9800 has a specially designed Quartz Sampling Lock Tuning System, that fortunately, is a lot easier to operate than pronounce.

Simply rotate the tuning dial to your desired station. When the station is tuned exactly right a "tune" light comes on. By releasing the tuning dial you automatically lock onto that broadcast. And automatically eliminate FM drift.

By now, it must be obvious that the same thinking that went into Pioneer's new amplifiers has also gone into their new line of tuners.

So just as Pioneer ended the class struggle between amps, they won the fight between tuners. With a technical knockout.

PIONEER®
We bring it back alive.

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High Fidelity Components
85 Oxford Drive, Moonachie, N.J. 07074.



PIONEER STEREO AMPLIFIER SA-9800

SPEAKERS
OFF
A/B

METER
L MIND 0000 0000 0000 0000
R

FILTER
SUBSONIC HIGH
OFF OFF OFF

VOLUME
0 10 20 30 40 50 60 70 80 90 100

FUNCTION
TAPES
DUPLICATE MONITOR
PHONO 2 PHONO 1
TUNER
AUX

METER
ON
POWER ON

BASS
TURNOVER
0 1 2 3 4 5 6 7 8 9 10
400 800

TONE
TURNOVER
OFF ON
8 7 6 5 4 3 2 1

TREBLE
TURNOVER
0 1 2 3 4 5 6 7 8 9 10

BALANCE
LEFT RIGHT
3P 2P 1P

MODE
STEREO
PHONO L/R

CARTRIIDGE LOAD
10K 20K 30K 40K 50K 60K 70K 80K 90K 100K

THE STRUGGLE BETWEEN THE CLASSES IS OVER.

For years people have clashed over which amplifiers are best. Class A or Class B.

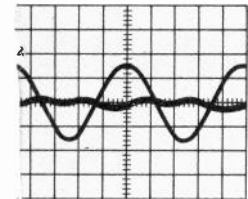
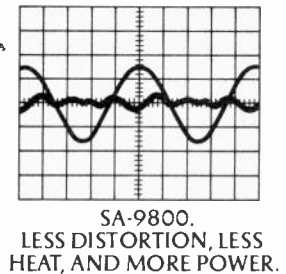
Expensive Non-switching Class A amplifiers are known to offer the lowest levels of distortion. At the same time, they also offer the highest operating temperatures.

And while Switching Class B amplifiers increase efficiency, they also increase distortion.

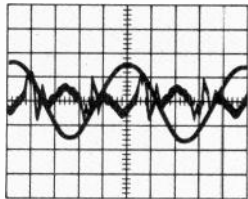
So if you're not paying through the nose for a heat-producing Class A amplifier, you'll be paying through the ear for a distortion-producing Class B.

At Pioneer, we believe most of today's Class A and Class B amplifiers are pretty much in the same class. The class below Pioneer's SA 9800.

Pioneer's Non-switching SA 9800 offers the efficiency found in the finest Class B amplifiers. With a distortion level found in



CLASS A AMPLIFIER.
LEAST DISTORTION
BUT MOST HEAT.



CLASS B AMPLIFIER.
MOST DISTORTION
BUT LESS HEAT.

the finest Class A. An unheard of 0.005% at 10-20,000 hertz.

And while you're certain to find conventional power transistors in most conventional amplifiers, you won't find them in the SA 9800. You'll find specially developed ET (Ring Emitter Transistors) transistors that greatly increase frequency response. So instead of getting distortion at high frequencies, you get clean clear sound. Nothing more. Nothing less.

Instead of slow-to-react VU meters that give you average readings or more sophisticated LED's that give you limited resolution, the SA 9800 offers a Fluoroscanning metering system that is so fast and so precise it instantaneously follows every peak in the power to make sure you're never bothered by overload or clipping distortion.

And while most amplifiers try to impress you with all the things they do, the SA 9800 can even impress you with the one thing it simply doesn't do. It doesn't add anything to the sound it reproduces. An impressive 110dB S/N ratio is proof of it.

While these features alone are enough to outclass most popular amplifiers, the SA 9800 also offers features like DC phono and equalizer sections and DC flat and power amps that eliminate phase and transient distortion. Cartridge load selectors that let you get the most out of every cartridge. And independent left and right channel power supplies.

Obviously, it took revolutionary technology to build the SA 9800. But the same technology and skillful engineering that went into the SA 9800 goes into every amplifier in Pioneer's new series.

At Pioneer, we're certain that others will soon be entering the class of 9800. And though they all may be built along similar lines, in terms of value Pioneer will always be in a class by itself.

PIONEER®
We bring it back alive.
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High Fidelity Components,
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The Evolution of Excellence

In 1947, Pickering built the first magnetic cartridge and holds 13 U.S. and numerous foreign patents on cartridge design. In 1976, Pickering launched a new modern high fidelity era by introducing the first of a new generation of phono cartridges, the Pickering XSV/3000, acclaimed a top performer by critics and reviewers worldwide.

Now Pickering takes the Stereohedron® Series one step beyond excellence with the new XSV/4000. Technical advances in both design and construction have made this degree of perfection possible.

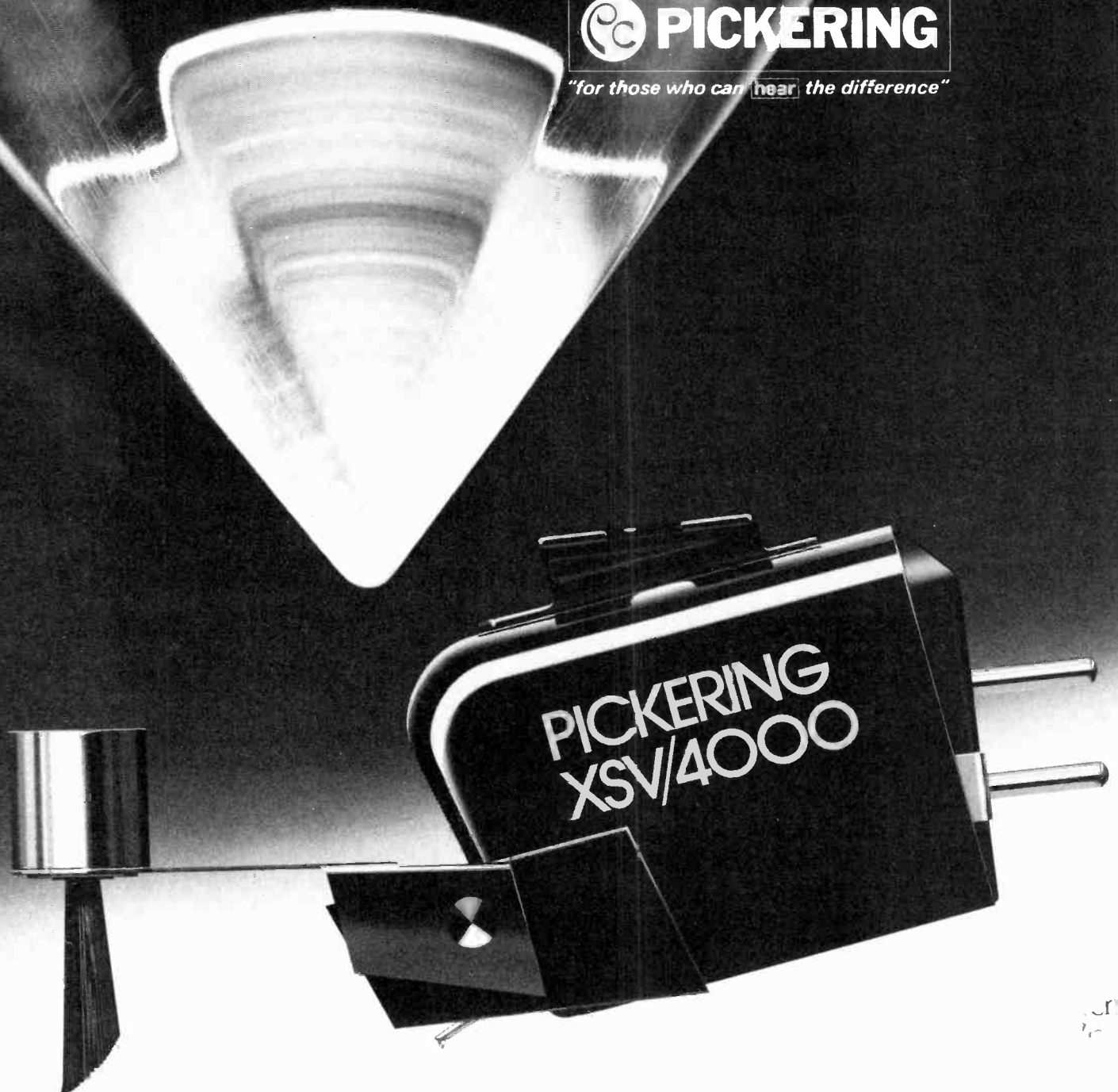
A lightweight, high energy, samarium cobalt magnet and shaped-for-sound Stereohedron Stylus tip are major innovations that eclipse previous performance standards in four crucial areas. Improved tracking ability. Expanded frequency response range. Wider channel separation. And featherlight treatment of the record groove.

XSV/4000...the next generation of sound.

For further information write to: Pickering & Co. Inc., Sunnyside Blvd., Plainview, N.Y. 11803

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"for those who can hear the difference"



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SOLUTION TO HIFI-CROSTIC NO. 50

John Gay: The Beggar's Opera

My Love is all Madness and Folly,
Alone I lie,
Toss, tumble, and cry,
What a happy creature is Polly!

Was e'er such a Wretch as I
With Rage I redden like Scarlet,
That my dear inconstant Varlet,
Stark blind to my charms,
Is lost in the Arms
Of that Jilt, that inveigling Harlot!

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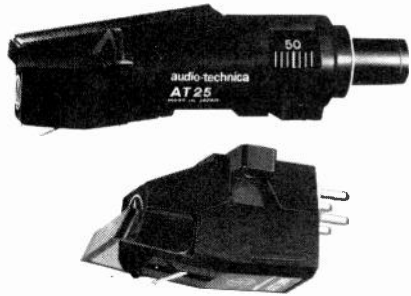
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No matter how good your present stereo system, we can improve it! Here's proof.



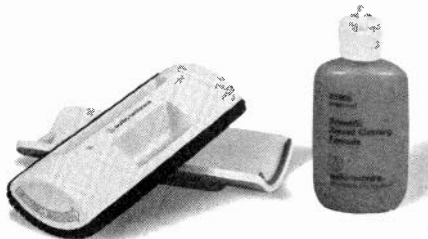
 Add effortless clarity and transparency with our new Aligned™ Omnitec™ series Vector-Aligned™ dual magnet cartridge or AT30E moving coil cartridge with user-replaceable stylus.



Laboratory precision is the hallmark of every A-T tone arm for home, studio, or disco.



You might pay \$1000 or more for speakers almost as good as these remarkable electret stereophones.



Use our complete line of record and stylus cleaners to keep your collection sounding great years from now.



LIFESAVER is the first truly complete record preservative. Stops static and record wear for years.



Create your own "Grammy award-winning" tapes with studio-quality Audio-Technica microphones.



Make it all worthwhile with thrilling direct-to-disc and digitally-mastered performances from around the world.

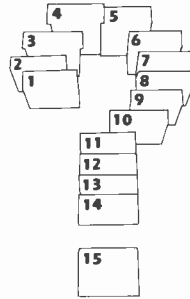
When you add Audio-Technica, you multiply listening enjoyment. At leading audio stores. Write for catalog and dealer list, today.

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AUDIO-TECHNICA U.S., INC., Dept. 20H
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4 HIGH FIDELITY

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4. Phase Linear 7000-Series II
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7. Dual C-839RC
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10. SAE C-4
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Technics

If you want a frequency response with more dynamic range and more high-end extension, you'll want nothing less than metal tape. And for about \$380 there are many metal tape decks to choose from. But if you want more than just metal, you'll want what most other comparably priced decks don't give you. The 3 heads and double Dolby† in Technics RS-M63.

The RS-M63's 3-head configuration lets you do what most other comparably priced decks don't: Monitor your recordings while you're recording. And, since our separate HPF record and playback heads are precisely gapped and enclosed in a single housing, you won't get azimuth error. What you will get is an extremely wide frequency response with CrO₂ tape and an incredibly high response with metal tape.

Wow and Flutter	Frequency Response	S/N
0.05% WRMS	20Hz-20kHz(metal) 20Hz-18kHz(FeCr/CrO ₂) 20Hz-17kHz(normal)	67 dB Dolby in

As good as that sounds, double Dolby will make it sound even better, because there are separate Dolby circuits for recording and playback. So you can monitor your tapes with the full effects of Dolby Noise Reduction. That means a lot when it comes to accurate recordings.

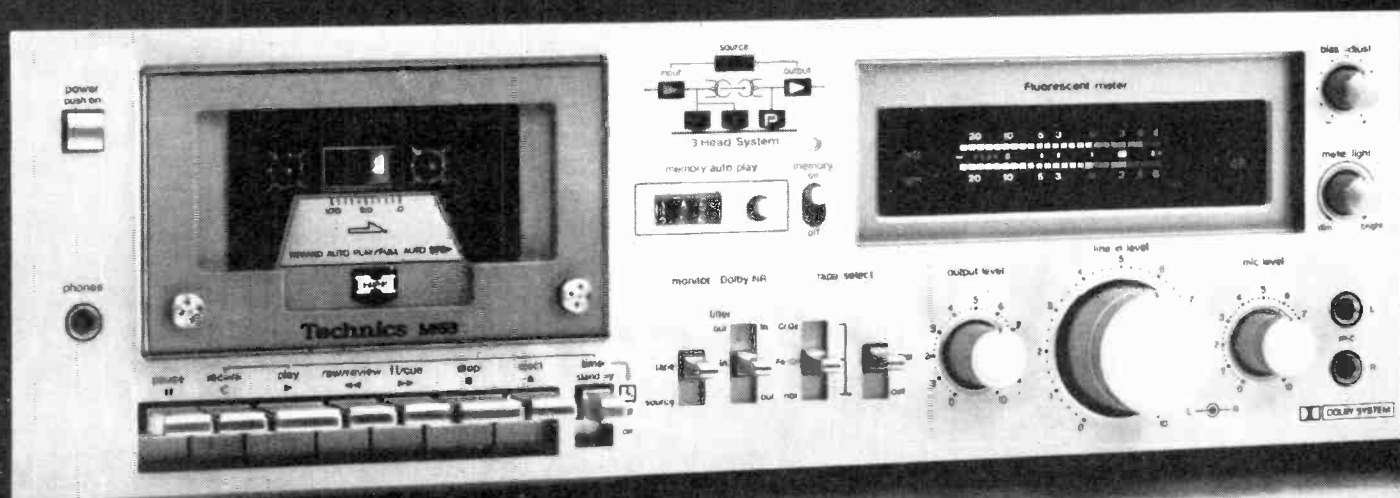
So do the RS-M63's fluorescent (FL) bar graph meters. Especially when it comes to dynamic range. Because with their device attack time of just 5-millionths of a second, they can respond to the most sudden musical transients.

To help you make the most of all this performance, the RS-M63 has a fine bias adjustment, so you can get the most out of all kinds of tape. And you'll spend more time listening to music and less time searching for it, because we include the memory features you need. Like auto-rewind, auto play and rewind auto play.

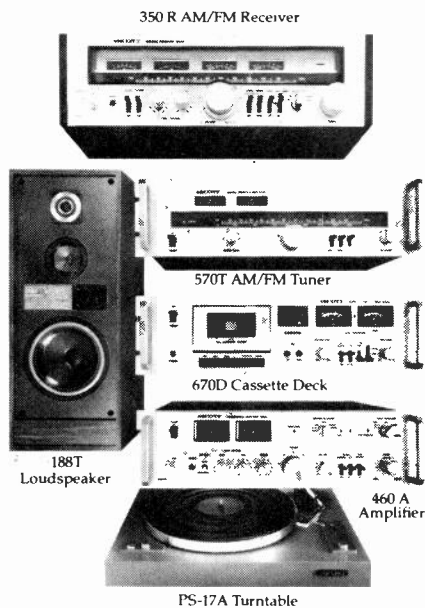
Technics RS-M63. The only deck to consider when you consider what you get for the price.

* Recommended price for Technics RS-M63, but actual price will be set by dealers.
† Dolby is a trademark of Dolby Laboratories.

Before you spend \$380* on a metal tape deck, make sure it has 3 heads and double Dolby.



Scott's best sellers are your best buys.



These six best selling selections from Scott's full line of 30 high fidelity components give you the optimum combination of price and performance. Get a best buy for yourself, get a best seller from Scott. You won't get a better value from anyone. We know because we've been around longer than anyone.

For your nearest Scott dealer call (617) 933-8800, or write H.H. Scott, Inc. 20 Commerce Way, Woburn, MA 01801.

SCOTT
The Name to listen to:
Makers of high quality high fidelity since 1947.

Circle 42 on Page 95

Good Luck, ACS of the AD of the CEG of the EIA!

If all went as planned, about a month ago the Institute of High Fidelity will have celebrated the beginning of its second quarter-century by ending its existence as a separate entity and emerging—I hope not submerging—as the Audio Components Subdivision of the Audio Division of the Consumer Electronics Group of the Electronic Industries Association. For both the quality-conscious IHF and the large, wealthy EIA the merger makes sense: The latter will be adding many prestigious names to its pedigree, the former will have large resources on which to draw.

The Institute's main glory over twenty-five years has been its image as an organization of manufacturers and importers dedicated to the proposition that their products, or class of products, were better than others', and its determination to do its best to demonstrate that premise. Simply by differentiating themselves from the mass producers of audio equipment and holding up the banner of Quality, member companies have done consumers a service, for if that banner was meant to impress customers, those who waved it could ignore what it proclaimed and implied only at the peril of losing their special attractiveness.

It was during the waning days of 1954 that representatives of some two dozen companies making high fidelity components met in New York to form a mutual defense alliance. The enemy? Unscrupulous manufacturers and merchants who were trying to cash in on the hot new term "high fidelity," thus debasing it for their own benefit but to the detriment of responsible component manufacturers—and consumers. The main purpose of the new association, called the Institute of High Fidelity Manufacturers until 1963, was to spread the gospel of quality components, and to that end it almost immediately began to produce high fidelity shows wherein the public could hear the latest in the best of audio equipment.

Over the years the Institute embarked on many other commendable programs, the most directly beneficial to consumers being its establishment of standards. These are not standards of performance—which would probably result in *lowering* the industry's level of quality (historically, such standards have been devised to satisfy an industry's lowest common participant)—but standards of honest measurement of specifications. Amplifier and tuner standards were developed as early as 1958, and while in the early years we carped about their lack of rigor, we have applauded their most recent revisions. And now, for the first time, IHF committees have been activated to create measurement standards for tape recorders, turntables, phono cartridges, and—God help them—loudspeakers.

One might even argue that the IHF's indirect influence has been even more important. While its forty or so general members are only a small fraction of manufacturers of high fidelity components, the organization has always served to remind the mass merchandisers of audio products of all the companies that make quality goods and of the importance of the market they serve. Elitism and clubbiness generally receive bad press, but in the high fidelity industry they have led to benefits for all.

Perhaps, then, the most important function of the IHF was to exist. Let's hope that it will continue to do so, and with vigor.

Leonard Marcus

INVEST IN METAL.

AKAI's new metal decks with Super GX™ Heads significantly improve specs with all tape formulations.

Once in a great while, some truly important advancements in tape recording technology are introduced.

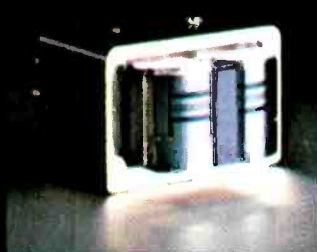
Metal tape is one of them. AKAI's new Super GX Head is another.

Found exclusively on all new AKAI metal-capability cassette decks, Super GX Heads reproduce unsurpassed, crisp sensitive sound.

Guaranteed* for 150,000 hours, Super GX Heads improve frequency response by up to 2,000 Hz, signal-to-noise ratio as much as 6 dB and expand dynamic range, as well. With every tape formulation you use.

With a head this impressive, we had to design a full complement of metal decks to match. The GX-F90 is our top-of-the-line, loaded-with-features edition. With the 3-head performance of our Super GX Combo Head, High Current Erase Head to accommodate metal tape,

*limited warranty
†™Dolby Labs, Inc.



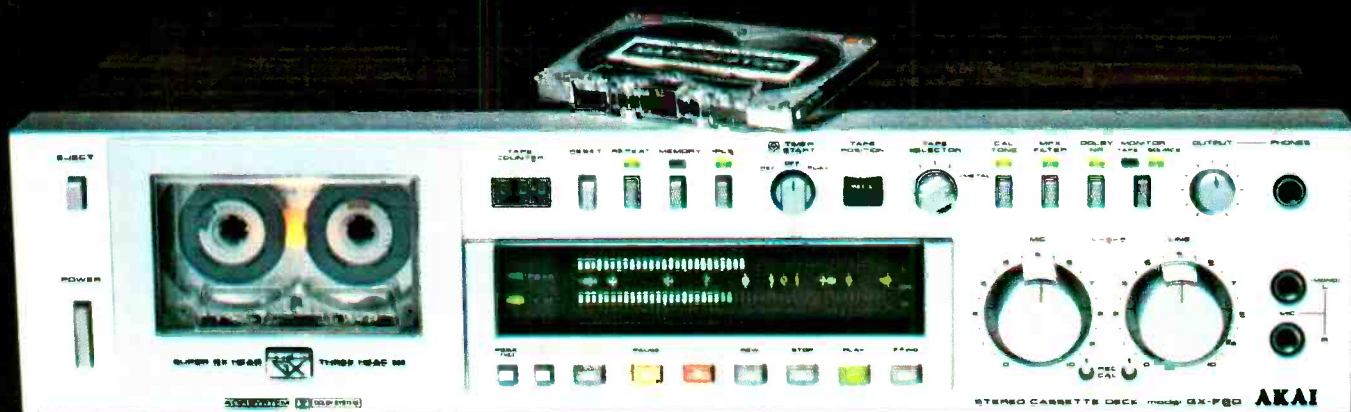
Instant Program Location System, Dual Process Dolby,† two-color fluorescent bar meters, tape/source monitoring, fine bias adjustment, mic/line mixing, memory rewind and auto-repeat, just to name a few. And take a look at these specs: Frequency Response 25-21,000 Hz (± 3 dB using metal tape), S/N Ratio 72 dB (Dolby on) at metal position, Wow/Flutter less than 0.03% WRMS.

The other three new decks share many of the same outstanding specs and features. But no matter which one you choose, you can feel confident that dollar-for-dollar, spec-for-spec, you've made a sound investment you'll want to live with for a long time.

See for yourself at your AKAI dealer, or write AKAI, P.O. Box 6C10, Compton, CA 90224; in Canada, AKAI AUDIO VIDEO CANADA, 2776 East Broadway, Vancouver, B.C., Canada V5M 1Y8.

AKAI

You never heard it so good.



Synthes

Sony's new receiver creates higher-fi with a computerized

Dream up a stereo test and compare our new STR-V55 receiver work of art with any other receiver you care to hear. Or view.

The measure of the receiver you invite into your home should feature unusually intelligent versatility. Ample power. Inaudible distortion. And an attractive design that speaks with a quality "finish."

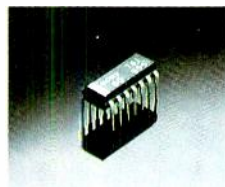
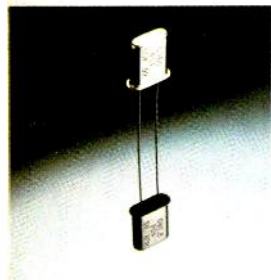
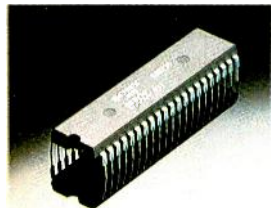
Of course, we'd like to recommend our STR-V55 because we synthesized our newest technology to give you the incredible accuracy of frequency synthesized

tuning, a versatile microcomputer and silent, uninterrupted power. The tuner section is so sophisticated that a highly stable quartz-crystal oscillator locks in AM and FM signals for brilliantly faithful reproduction of broadcast programming. And the microcomputer gives you tuning options that simply don't exist anywhere else.

Memory scan is our latest exclusive tuning advance to span the bands automatically. Press a button and preset stations are automatically tuned in sequence for approximately 3.5 seconds each. Hands-off tuning lets you automatically monitor your favorite stations and simply pressing the appropriate station button tunes in your selection for continuous listening.

Choose auto tuning to capture stations with frequencies that you don't know for certain. A touch of a button precisely finds the next station encountered up and down the frequency band.

Manual tuning lets you approach known frequencies at high speed and then obtains the exact frequency in precise, discrete steps.



And preset tuning instantly recalls any of the eight stations that are stored in our new MNOS (metal nitride oxide semiconductor) memory that can't be accidentally erased.

Our beauty is not only designed for easy viewing, it's coordinated to be proudly displayed. Bright electrofluorescent digits display frequencies. Bright green LEDs in a five-step array show signal strength. And red LEDs pinpoint your favorite stations at a glance.

Consider the power of 55 watts per channel that propels the intimacy of the original performance through Sony's advanced DC amp technology. And a high-gain low-noise phono

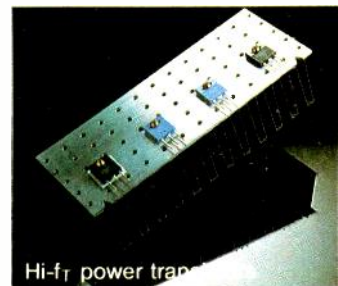
ized Art.

tuner, a DC power amp and Pulse Power Supply.

And highly responsive Hi-ft power transistors artfully reproduce complex wave forms even at high frequencies and full output power.

Sound is so clear that quiet intervals are *quiet* even at the highest listening levels.

Sony's STR-V55 is more of a receiver because you demand to hear more of your music. Own our masterpiece.



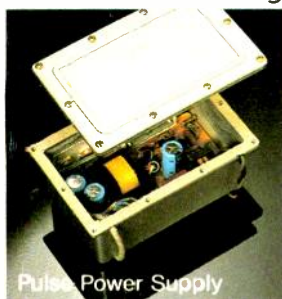
Hi-ft power trans



STR-V55

amp in the preamp section enables you to even use an MC cartridge with your turntable to capture the subtleness of the softest, most delicate music.

It's also important to know that an efficient, compact Pulse Power Supply provides stable DC power even at peak levels.



Pulse Power Supply

SONY®

TDK's new improvement has nothing to do with the sound. It's the package.



Each TDK package is now designed to catch your eye as never before. Clean, modern lines. Bright new colors. Bolder designations in front. Full tape description in back, including sound characteristics, formulation, bias and a frequency response chart to let you know precisely what you're buying without having to hunt for a salesman.

And don't expect the improvements to stop there. Inside there are complete recording and cassette care tips. Invaluable for preserving the life of each cassette, even though each TDK cassette is protected by a full lifetime warranty.* There's also a convenient, tear-out index card to help you build a perfect reference system.

Once inside, TDK couldn't stop improving. There's now a wider cassette window.

Through it you'll be able to watch two red double hub clamps registering tape direction as they turn. Just when the improvements seem to end, TDK tape technology begins. TDK SA's cobalt adsorbed gamma ferric formulation continues to set the high bias standard around the world. TDK AD, the tape with the hot high end, is now Acoustic Dynamic. You'll see it in brand new blue and silver colors. TDK D, another member of TDK's dynamic series, makes many premium normal bias cassettes sound ordinary and overpriced.

That's all we have to report for now. But there will be more to come. Part of TDK's philosophy is: when every improvement has been made, improve again.



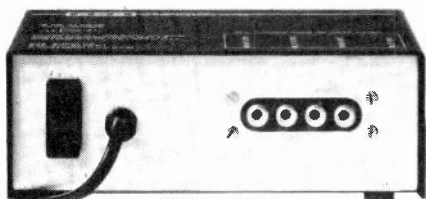
Supplier to the U.S. Olympic Team



TDK
The machine for your machine

*In the unlikely event that any TDK cassette ever fails to perform due to a defect in materials or workmanship, simply return it to your local dealer or to TDK for a free replacement.

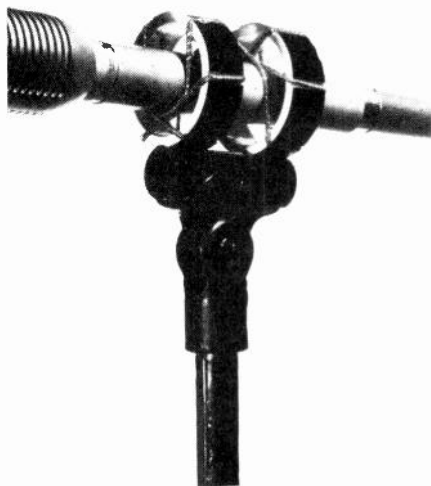
High Fidelity News



Ace's Dual filter

Ace Audio's Model 4100 active electronic filter is designed to eliminate frequency interference both above and below the audio band. According to the company, the infrasonic filter cuts off at 18 dB per octave below 20 Hz and the ultrasonic filter at 12 dB per octave above 20 kHz to handle such effects as those caused by record warps, turntable rumble, RFI, and switching transients. Intermodulation distortion is rated at less than 0.025% from 20 Hz to 20 kHz. The 4100 is available in kit form for \$66.50 or wired for \$97.

Circle 145 on Page 95

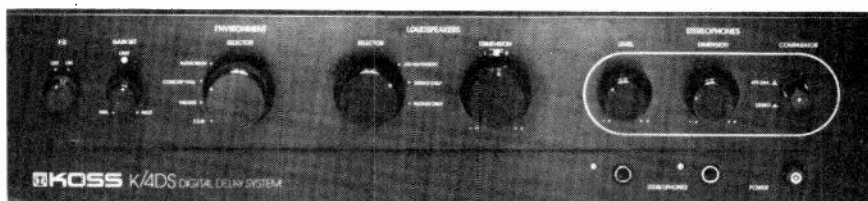


Mike mounting from Brewer

Tensimount from Brewer Instruments is a microphone mounting system that adapts any mike to fit a standard 3/4-inch clamp. Its elastic elements are said to provide more than 20 dB of mechanical shock isolation. Tensimount can be used as a hanging holder, in a stage floor stand, on a boom, or as a hand-held isolator. With storage box and instructions, Tensimount costs \$9.95.

Circle 143 on Page 95

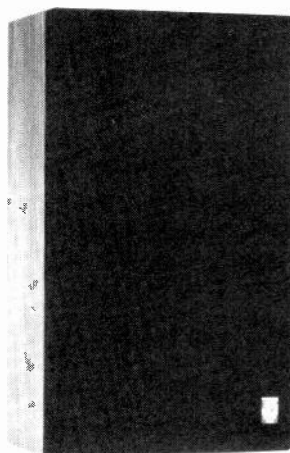
◀ Circle 51 on Page 95



Koss bows with ambience

Koss Corp. makes its debut in signal-processing society with the K/4DS digital delay system, incorporating two 15-watt amplification channels to power back speakers, plus a headphone circuit for private listening with the ambience-enhanced signal. "Environmental" settings range from small club to auditorium, and an EQ switch provides bass compensation for the rear speakers. The delay time is created by a single-circuit conversion chip that can store nearly 17,000 bits of information. Price of the K/4DS is \$500.

Circle 136 on Page 95



Encore performance

The Encore speaker line from Electro-Voice consists of three acoustic-suspension systems, including the two-way Model 55 with a 10-inch woofer. Its frequency response is rated at 40 Hz to 18 kHz, with the crossover at 2.5 kHz. The output rating is 92 dB SPL from 1 watt, measured at 1 meter; recommended amplifier power range is 5 to 60 watts (7 to 17 1/2 dBW). The Model 55 is finished in walnut-grain vinyl and costs \$175. The Model 33, at \$120, and Model 77, at \$215, complete the line.

Circle 138 on Page 95



Pocket-sized cable tester

The CT-3 microphone cable tester from Altair has an XLR-style connector in each end and is automatically switched on when inserted into a cable path. It tests all three of the cable's conductors simultaneously and signals a short, open circuit, or cross-wiring condition via two LEDs. A remote accessory allows testing of mike cables without bringing their ends together after a sound system has been set up. The CT-3, powered by a mercury battery, is priced under \$50.

Circle 142 on Page 95

If you read the specs, you won't believe the prices:

*MS-10 Loudspeakers:
\$330.00* a pair*

*DA-C7 Tuner-
Preamplifier:
\$360.00**



*DP-EC7 Turntable: \$300.00**

*DT-10
Cassette Tape Deck:
\$370.00**

*DA-A7DC
Power Amplifier:
\$330.00**

**Manufacturer's suggested retail price.*

If you read the prices, you won't believe the specs:

DP-EC7 Turntable:

Drive	20-pole direct-drive DC Servomotor
Speeds	33 $\frac{1}{3}$ and 45rpm
Speed selection	Automatic/manual
Wow and flutter	Less than 0.03% (WRMS)
Speed adjustment	$\pm 3.0\%$
Signal-to-noise ratio	Better than 73dB
Tone arm, S-type	static balance
Effective length	227mm (9")
Overhang	14mm (9/16")
Tracking error	+2.9° - 1.5°
Offset angle	22°
Headshell	fiber reinforced plastic (FRP)
Anti-skating mechanism	Dial setting
Possible cartridge weight	5.0-10.5 gr.
Tracking force adjustment	0-3.0 gr. (0.1 gr. step)

Special functions: Auto lead-in, Auto return from lead-in, Auto lead-out, Free lift/cue, Free L-R traverse, Cue prevention in absence of record, Auto speed change.

MS-10 Loudspeakers:

System/cabinet finish	2-way/walnut
Impedance	6 Ω (min. 5 Ω at 2kHz)
Power handling capacity	100W (IEC rated power)
Frequency response	35-20,000Hz ± 4 dB
Speakers	
Woofer	25cm (10") cone, GFRP honeycomb
Tweeter	5cm (2") cone
Output acoustic (pressure level)	87dB/W @ 1 meter

DA-A7DC Power Amplifier:

Note:	All measurements are for 8 ohms output unless otherwise stated.
Minimum continuous output power	75W per channel, both channels driven, from 15Hz - 20kHz, with no more than 0.01% total harmonic distortion.
Total harmonic distortion	20Hz - 20kHz
At 40W per channel	0.004%
Intermodulation distortion	(70Hz: 7kHz, 4:1)

DA-A7DC Power Amplifier: (cont.)

At rated power	0.008%
Power bandwidth (IHF) (10Hz - 60kHz)	(0.05% THD)
Frequency response	
At rated power	+0, -0.1dB
At 0.5W per channel	20Hz - 20kHz
At 0.5W per channel	+0, -1dB DC - 150kHz
Input sensitivity	1V
Damping factor	100, 20Hz - 20kHz
Channel separation	
At 1kHz	80dB
At 20kHz	60dB
Signal-to-noise ratio at rated power	
IHF-A closed circuit	122dB

DA-C7 Tuner-Preamplifier:

FM Tuner Section	
Usable sensitivity	
Mono	11.2 dBf (2.0 μ V)
Stereo	23.1 dBf (7.8 μ V)
50 dB quieting sensitivity	
Mono	20dBf (5.5 μ V)
Stereo	40dBf (55 μ V)
Signal-to-noise ratio	
Mono: 76dB	Stereo: 73dB
Stereo: 76dB	Stereo: 73dB
Frequency response	+0.5, -1dB
Stereo	30Hz - 16kHz
Total harmonic distortion at 1kHz, 65dBf	(figures in brackets for 'narrow' setting)
Mono	0.08% (0.25%)
Stereo	0.1% (0.5%)
Capture ratio	1dB (2dB)
Alt. channel selectivity	50dB (75dB)
Stereo separation (1kHz)	45dB (35dB)

AM Tuner Section

Usable sensitivity	200 μ V/m (bar ant.)
Selectivity	25dB
Total harmonic distortion	1%
IF response ratio	40dB

Preamplifier Section

Input sensitivity/impedance	
Phono 1/2	2.5mV/50k Ω
Aux, Play 1/2	150mV/50k Ω
Output level/impedance	

Preamplifier Section (cont.)

Rated	1V/600 Ω
Maximum	10V
Rec 1/2	150mV/600 Ω
Signal-to-noise ratio, IHF-A network	
Phono 1/2	87dB (10mV)
Aux, Play 1/2	99dB (closed circuit)
Total harmonic distortion at rated output, attenuator at -20dB, 1kHz	
All inputs	0.003%
RIAA deviation	± 0.2 dB, 20Hz - 20kHz
Tone controls boost/cut	
Bass	± 10 dB at 100 Hz
Treble	± 10 dB at 10kHz
Subsonic filter	18Hz (-6dB/oct)

DT-10 Cassette Tape Deck:

Tape speed	4.75cm/sec (1 $\frac{7}{8}$ ips) $\pm 1\%$
Wow and flutter	
(playback)	0.06% wrms
Fast forward/rewind	80sec (C-60 tape)
S/N ratio +3VU, weighted, 400Hz	
(200pwb/mm)	
Dolby out: 56dB	Dolby in: 64dB*
Erase ratio	
(1kHz)	70dB
Crosstalk	
Between channels	
(500 - 6,300Hz)	35dB
Between tracks	
(1kHz)	65dB
Harmonic distortion, 400 Hz	
(160pwb/mm)	1%
Frequency response	
Normal tape	40 - 12,000Hz ± 3 dB
Special tape	40 - 15,000Hz ± 3 dB

*Dolby is a registered trademark of Dolby Laboratories, Inc.

The "Economy" audio system from Mitsubishi. Hear it at your dealer's now. And don't bring a lot of money.

 **MITSUBISHI**
AUDIO SYSTEMS

For the name of your nearest dealer, please call (800) 621-5199 (in Illinois, (800) 972-5855). For more information write Melco Sales, Inc., Dept. 45, 3010 East Victoria Street, Compton, California 90221. In Canada, contact: Melco Sales Canada, Markham, Ontario.



More Shure pickups

Shure Brothers has announced an economy line of phono cartridges plus an addition to the V-15 Type III line. The Type III-HE (pictured above) is fitted with hyperelliptical stylus designed for optimum tip-groove contact and costs \$115; the VN-35HE stylus is available separately for \$38 and can be used with all Type III cartridges. The economy pickups include the M-72EJ and M-72B, priced at \$51 and \$45.70, respectively.

Circle 147 on Page 95



High-end preamp from Bauman

In the PRO-400 preamp, Bauman Research Instruments offers separate facilities for two high-level inputs, fixed- and moving-coil pickups, and two tape decks. The tone controls are defeatable. A switchable infrasonic filter provides a rolloff of 18 dB per octave below 15 Hz. Fixed-coil cartridges can be loaded by 47,000 or 100,000 ohms and 50 to 350 picofarads; loads of up to 1,000 ohms can be chosen for moving-coil models. The tape recording outputs are buffered. The price of the PRO-400 is \$1,050.

Circle 135 on Page 95

It sounds like it's made better. It is.

There's less than an inch from the stylus tip to the connector pins on the back of a cartridge. But what's in that inch determines what reaches your ears. And it's why you'll hear such an improvement when you try an Osawa MP cartridge.

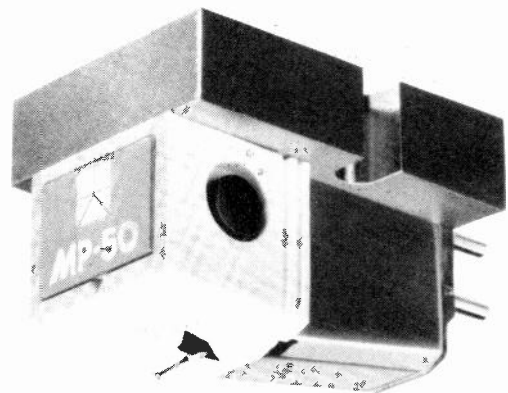
Non-resonant structure. The MP-50's aluminum cartridge frame has a precisely machined, squared oversize mounting flange for perfect contact with your cartridge headshell. It assures that all the stylus vibrations reach the magnetic circuit for a strong, clear signal. The stylus doesn't just clip to the cartridge—it's held securely by two Allen fasteners to maintain perfect alignment with the cartridge body.

Cobalt/permalloy magnetic circuit. All Osawa MP cartridges employ a unique Moving Permalloy element that modulates the magnetic field generated by a Samarium cobalt magnet. This powerful combination gives you high S/N ratio and high compliance. Stereo separation is dramatic.

Multi-laminated pole pieces of 0.1mm super permalloy reduce eddy currents to provide unusually good sensitivity and strong high frequency output.



Unique cantilever structure. Made of Boron in the MP-50, MP-30 and MP-20, it's exceptionally strong and weighs almost nothing. And it's machined to micron tolerances for linear response with minimum distortion.



If you want to see how better sounds are made, visit your Osawa dealer.

OSAWA

Osawa & Co, (USA) Inc.

521 Fifth Avenue

New York, New York 10017

Distributed in Canada by

Intersound Electronics, Montreal, Quebec

The dawn of a new recording era

Auto Azimuth Alignment

Undoubtedly the most advanced and sophisticated innovation in cassette-recorder technology, *Auto Azimuth Alignment* launches a new era in high-fidelity recording. For the first time, you can be assured of perfect record-head azimuth alignment—on any cassette—at the flip of a switch. And, with that perfection comes an unprecedented frequency response—22 kHz at standard speed, 15 kHz at half speed!

Auto Azimuth Alignment—designated by the ZX in the model number—is available now on three revolutionary decks—the 680ZX, 670ZX, 660ZX. Each features exclusive Nakamichi Discrete 3-Head technology, 4-Motor, Dual-Capstan, Asymmetrical, Diffused-Resonance Transport, Random Access Music Memory and 22-kHz response at standard speed. And, the 680ZX—joining the popular 680 with manual alignment—matches its unique *half-speed* recording response of 15 kHz! *Auto Azimuth Alignment*—Nakamichi's commitment to excellence in the fine art of recorded sound.



680ZX Auto Azimuth Alignment

The premier Model 680ZX—half-speed response that rivals that of other decks at full speed! And, at standard speed, a full 22-kHz! High-resolution, wide-range FL level indicators and 18 program F.A.M.M. Choose your speed, choose your program. The 680ZX does it all!

670ZX Auto Azimuth Alignment

Full off-tape monitoring facilities with Double Dolby* and two complete sets of electronics. Single-speed operation to an astounding 22 kHz! Nine program RAMM and wide-range, peak-responding meters. Outstanding performance.



660ZX Auto Azimuth Alignment

Performance identical to the 670ZX. Every feature except off-tape monitoring. Exclusive Nakamichi *Auto Azimuth Alignment* and Discrete 3-Head design. Master record-level fader too. An extraordinary value!

*Dolby is the trademark of Dolby Laboratories.

The new



Direct Drive and solenoid controls in a new cassette deck.

Here is the very latest cassette deck technology. The new Fisher DD300 Cassette Deck has direct drive tape transport for lasting, unvarying performance, feather-touch solenoid electronic controls for superior operation and metal tape compatibility for the ultimate in frequency response. There's an incredible amount of advanced engineering packed into this new Fisher cassette deck.

Direct Drive tape transport.

The rugged capstan on the DD300 is directly driven by a high-torque 18-pole brushless, coreless DC flywheel motor, optimized for the critical record and play transport functions. It glides silently at a steady 360 RPM. And, it eliminates the problems of conventional high speed DC brush motors and drive belts. Wow and flutter are down to an amazingly low 0.04%. A separate motor is provided for fast forward and rewind. No compromise.

Feather touch electronic controls.

Goodbye to the old "clunk-clunk" of

manual controls. A feather-light fingertip touch sets the DD300 in motion. An IC logic circuit actuates the solenoid transport function for instant, silent, positive action. LED's light up to continuously display what functions are in operation.

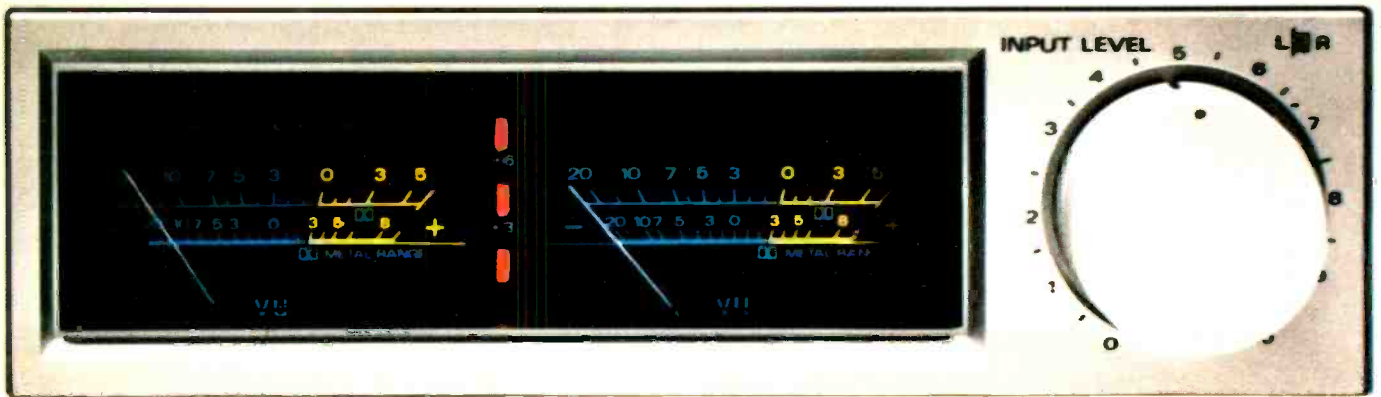
Metal tape compatibility. If you want to try the new metal particle tape you've been hearing so much about, the DD300 is ready. Get set for an astonishing improvement in signal-to-noise, dynamic range and a frequency response of 30Hz-18kHz \pm 3dB.

Get set, too, to make recordings that rival studio-produced tapes.

FISHER

Studio - Standard by  **FISHER**

DD-300



OUTPUT LEVEL

TIMER STAND-BY

DOLBY NR

TAPE SELECT

INPUT SELECT

MIC



REC OFF PLAY

MPX
ON OFF
ON OFF

METAL NORMAL FeCr
C.O. EQUAL

LINE MIC

LEFT MONO

PHONES



RIGHT

Drive coils provide pulsating magnetic field to propel flywheel.

18-pole permanent ring magnet is bonded to back of flywheel.

Separate motor operates fast forward and rewind functions.

Sensing coil between driving coils and flywheel magnet continuously monitors speed in DC servo circuit.

Dynamically-balanced flywheel weighs over 1/2 lb. helps maintain speed accuracy, low wow and flutter.

Capstan shaft is directly connected to, and is part of the flywheel. There are no belts, no pulleys.

Instant, silent, positive tape transport functions are operated by solenoids.

It's what you'd expect from the new Fisher. We don't have the space to list all the other features of the new Fisher DD300. Features that are indicative of the high technology of the new Fisher. We invented high fidelity over 40 years ago. And we've never stopped innovating. If you're ready for the latest cassette deck technology, see the new DD300 at your Fisher dealer.

Fisher Corporation, 21314 Lassen Street, Chatsworth, CA 91311



FISHER

The first name in high fidelity.

© Fisher Corporation, 1980

AD-6700

AD-L40



AD-6900MK II



Put metal tape where it will do the most good.

Again AIWA leads the way toward the ultimate in cassette technology—with three of the most sophisticated metal-capacity decks you can buy: the AIWA AD-6900MK II, AD-6700 and AD-L40.

Performance is simply unparalleled.

At -20 dB recording, AIWA's state-of-the-art AD-6900MK II boasts a frequency response of 20~20,000 Hz with metal tape. Even at 0 dB, frequency response is an exceptionally broad 25~12,500 Hz ± 3 dB.

This superb performance is maximized by AIWA's extremely durable Ferrite Combination V-Cut (CVC) playback/record head. With the best possible gap widths of 5 microns for recording and 1 micron for playback.

The AD-6900MK II's unique 3-head design not only lets you compare source with tape during recording—it also permits the most precise bias adjustment available today for FeCr, CrO₂ and all other LH/Normal tapes: AIWA's exclusive FLAT RESPONSE TUNING SYSTEM.

And only AIWA's AD-6900MK II and AD-6700 offer advanced feather-touch logic controls including Cue & Review—plus exclusive full-function wireless remote con-

trol from across the room. Both decks also feature AIWA's exclusive Double Needle Meters for simultaneous monitoring of Peak and VU.

AIWA's newest AD-6700 and AD-L40 are just as sophisticated.

The AD-6700 offers 2-head design, convenient Auto/Repeat with Memory Switch, full-function wireless remote control and an amazingly accurate 9-point LED peak power display in three dramatic colors.

AIWA's ultra-modern AD-L40 offers the only 20-point LED horizontal peak power bar graph you can buy—for instant three-color warning of distortion.

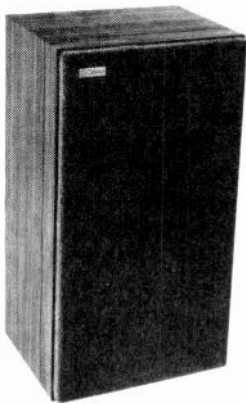
All three decks were designed with a special Ferrite double-gap erase head and high-power erase circuitry.

So if you're ready for metal tape, put it where it will do the most good. Inside AIWA's incredibly advanced AD-6900MK II, AD-6700 or AD-L40.



Upgrade to **AIWA**[®]

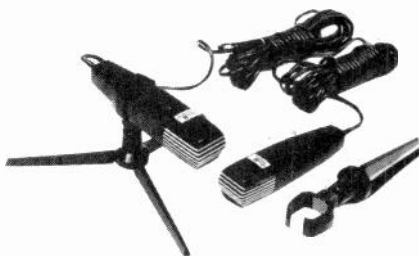
Distributed in the U.S. by AIWA AMERICA INC.
35 Oxford Drive, Moonachie, New Jersey 07074.
Distributed in Canada by: SHIRO (CANADA) LTD.



Ditton line expands

The latest addition to the Ditton line of speakers from Celestion is the 332, a three-way acoustic-suspension system using a newly designed woofer with a mechanical limiting element and long voice coil. The 332 is claimed to produce a sound pressure level of 90 dB at 1 meter for a 2.8-watt input. The 8-ohm system has a rated frequency response of 50 Hz to 20 kHz and is designed for continuous power handling of 20 dBW (100 watts). The Ditton 332 is priced at \$370.

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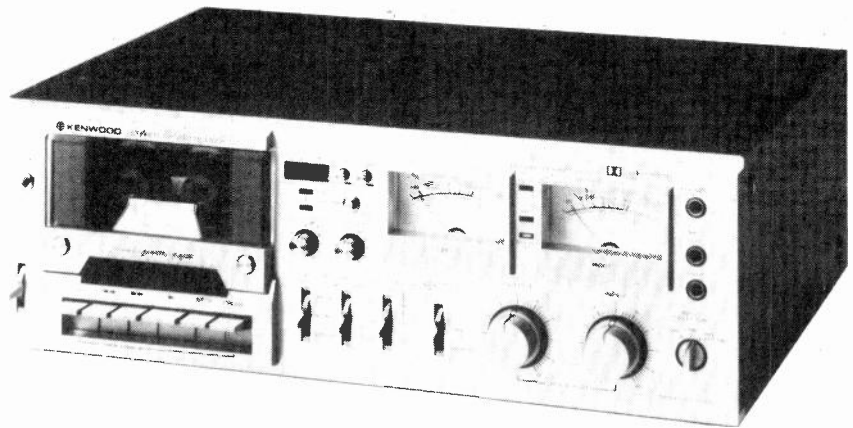


Beyer semipro mike

The M-818LM is a highly directional dynamic microphone with a rated frequency response of 150 Hz to 16 kHz, made by Beyer for semiprofessional, general purpose recording. A gradual rolloff below 150 Hz is designed to attenuate room rumble and breath effects. Impedance and output level are rated, respectively, at 500 ohms and -55.8 dBm. M-818LMs are sold in matched pairs, with clamps, table stands, stereo adapter cable, mounting bar, and case, for \$150. Foam windscreens and impedance-matching transformers are optional.

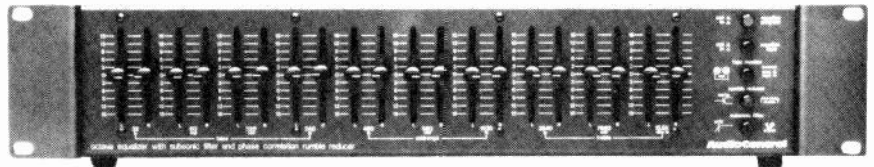
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◀ Circle 1 on Page 95



Kenwood shows its metal

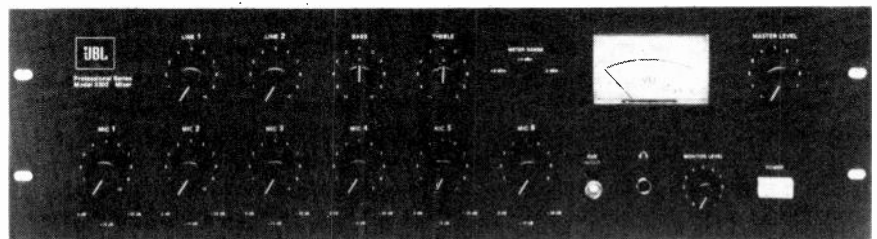
Kenwood's metal-ready cassette deck, the KX-1060, offers a variable bias adjustment control with built-in test tone oscillator. Double Dolby noise-reduction circuits and a separate playback head make precise monitoring possible. A double back tension system increases tape-to-head contact for extended frequency response, according to Kenwood. The transport mechanism employs a DC servo motor and a two-belt drive system. Other features of the deck include memory index and two VU meters with peak-responding LEDs. Price of the KX-1060 is \$450.



Audio Control's octave equalizer

The C-22 is called the first ten-band equalizer on the American market with an infrasonic filter rated at 18 dB per octave and a bass-summing circuit. Believing that most home equalizers are used to increase bass response, Audio Control designed a switchable filter to eliminate any accompanying infrasonic boost and thus to prevent speaker damage. The switchable summing circuit combines channels below 200 Hz to cancel vertical rumble components with no loss in overall bass response, according to Audio Control. The C-22 has a total harmonic distortion rating of 0.04%, 20 Hz to 20 kHz, and costs \$249.

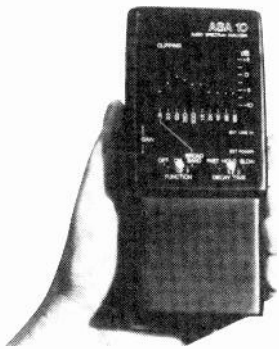
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A JBL mixer/preamp

The Model 5302 from James B. Lansing Sound is designed for fixed-installation sound reinforcement applications. It has two line and six microphone channels, accepting unbalanced, high-impedance inputs. An accessory transformer, Model 5901, allows conversion of all inputs to low-impedance balanced-bridge use. One of the mike inputs can be switched to accommodate a magnetic cartridge, and a dual phono jack is provided for program input from a stereo source. Equipped with individual level, master gain, monitor level, and tone controls, the 5302 costs \$438; the 5901 transformer is \$33.

Circle 141 on Page 95



Gold Line analyzer

The first home audio product from Gold Line, a company long involved in the communications industry, is the Model ASA-10 spectrum analyzer with built-in frequency-compensated mike. The hand-held, battery-operated unit covers a 10-octave range and offers selectable response times with a HOLD for freezing signal readings. Gold Line claims a dynamic range of 35 dB for the adjustable display. Price of a wired ASA-10 is \$199.95; it is also available in kit form for \$139.95.

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Prerecorded metal tapes are here?

A statement made a year ago—prematurely, as it turned out—that at least one duplication-equipment company was gearing up for metal cassettes stirred up a good deal of interest. When we last updated you on the subject, we were assured that no tape producer had actually delivered a single pancake of raw tape for duplication and that no regular production equipment was available for the purpose.

Recently, however, we received a metal cassette from Japan. Under the imprimatur of Victor Musical Industries, Inc. (Japan Victor, or JVC here), it contains the Spyro Gyra album "Morning Dance," recorded and licensed by Infinity Records of New York. It is Dolby-encoded and appears to be duplicated on a TDK MA metal cassette, judging from the box style and so on. The outer cardboard sleeve carries a list price of 4,000 yen—more than \$16, depending on the exchange rate at the time you read this. So far, there's no word from JVC or Infinity about possible marketing plans (let alone prices) of metal cassettes in this country.

fact: ERA IV Began... and nothing remained the same

fact:
viscous-damping
straightens out
all your records

your favorite record may be a tangle of warps

The Shure V15 Type IV is the first cartridge in the world designed specifically for the problem of record warping. The Dynamic Stabilizer has something that a shock absorber, damping the path of the stylus, cannot provide. It's the Dynamic Stabilizer, which absorbs the shock of the record's warping and returns the stylus to its normal position. The result is a straighter path, a more accurate reproduction of the original recording.

the role of the Dynamic Stabilizer:

The Shure V15 Type IV Dynamic Stabilizer works by absorbing the shock of the record's warping and returning the stylus to its normal position. The result is a straighter path, a more accurate reproduction of the original recording.

V15 Type IV
the viscous-damped cartridge by

SHURE

Shure Brothers, Inc. 222 Harley Ave., Evanston, IL 60204 • Canada: A. C. Simmonds & Sons, Ltd., Vancouver, B.C. • U.K.: Shure Brothers, Ltd., London, W.12 • France: Shure Brothers, S.A., Paris • Germany: Shure Brothers, GmbH, Munich • Japan: Shure Brothers, Ltd., Tokyo • Mexico: Shure Brothers, S.A., Mexico City • Sweden: Shure Brothers, AB, Stockholm • Switzerland: Shure Brothers, Ltd., Zurich • West Germany: Shure Brothers, GmbH, Munich

fact:
calling this a "brush"

is like calling this a "radio"

we call it a Dynamic Stabilizer...critics call it a major innovation

For the first time in the history of the V15 Type IV cartridge, Shure has introduced a new feature: the Dynamic Stabilizer. This revolutionary new feature is a shock absorber that absorbs the shock of the record's warping and returns the stylus to its normal position. The result is a straighter path, a more accurate reproduction of the original recording.

Each one of the 15,000 cartridges in the world is made by hand. The Shure V15 Type IV Dynamic Stabilizer is a major innovation in the history of the V15 Type IV cartridge. It is a shock absorber that absorbs the shock of the record's warping and returns the stylus to its normal position. The result is a straighter path, a more accurate reproduction of the original recording.

V15 Type IV...the stabilized cartridge

SHURE

Shure Brothers, Inc. 222 Harley Ave., Evanston, IL 60204 • Canada: A. C. Simmonds & Sons, Ltd., Vancouver, B.C. • U.K.: Shure Brothers, Ltd., London, W.12 • France: Shure Brothers, S.A., Paris • Germany: Shure Brothers, GmbH, Munich • Japan: Shure Brothers, Ltd., Tokyo • Mexico: Shure Brothers, S.A., Mexico City • Sweden: Shure Brothers, AB, Stockholm • Switzerland: Shure Brothers, Ltd., Zurich • West Germany: Shure Brothers, GmbH, Munich

ERA IV BEGINS!

fact:
the IV does more...
...much more!

The creation of the new Shure V15 Type IV is a result of the Shure V15 Type IV's unique design. The Shure V15 Type IV is a shock absorber that absorbs the shock of the record's warping and returns the stylus to its normal position. The result is a straighter path, a more accurate reproduction of the original recording.

- Microelectronically-revised record surface
- For more information on the appropriate new cartridge, write for the V15 Type IV Product Brochure (AL 888)

New! Shure V15 Type IV SUPER TRACK IV
Shure Brothers, Inc. 222 Harley Ave., Evanston, IL 60204 • Canada: A. C. Simmonds & Sons, Ltd., Vancouver, B.C. • U.K.: Shure Brothers, Ltd., London, W.12 • France: Shure Brothers, S.A., Paris • Germany: Shure Brothers, GmbH, Munich • Japan: Shure Brothers, Ltd., Tokyo • Mexico: Shure Brothers, S.A., Mexico City • Sweden: Shure Brothers, AB, Stockholm • Switzerland: Shure Brothers, Ltd., Zurich • West Germany: Shure Brothers, GmbH, Munich

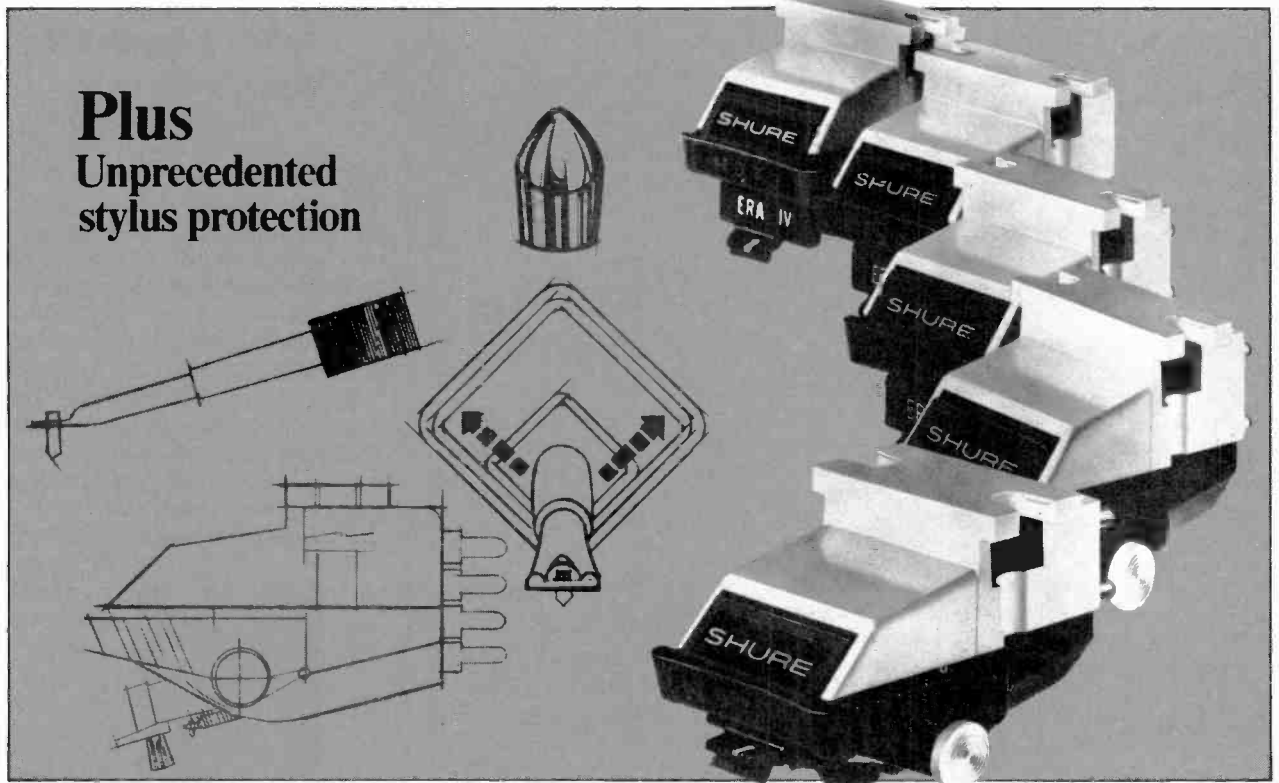
The V15 Type IV astounded the audio community with such technological breakthroughs as the Dynamic Stabilizer, the telescoped stylus shank, and the Hyperelliptical stylus tip. It was these innovations that helped the V15 Type IV set new standards of performance in trackability, ultra-flat frequency response, and low distortion.

The result: incredible critical acclaim; an enthusiastic audiophile following. The New Era had begun!

NOW! ERA IV continues in five new mid-priced cartridges!

fact: five new Shure Cartridges feature the technological breakthroughs of the V15 Type IV

**Plus
Unprecedented
stylus protection**



the M97 Era IV Series phono cartridges

Model	Stylus Configuration	Tip Tracking Force	Applications
M97HE	Nude Hyperelliptical	¾ to 1½ grams	Highest fidelity where light tracking forces are essential.
M97ED	Nude Biradial (Elliptical)	¾ to 1½ grams	
M97GD	Nude Spherical	¾ to 1½ grams	
M97EJ	Biradial (Elliptical)	1½ to 3 grams	Where slightly heavier tracking forces are required.
M97B	Spherical	1½ to 3 grams	
78 rpm Stylus for all M97's	Biradial (Elliptical)	1½ to 3 grams	For 78 rpm records.

Shure has written a new chapter in the history of affordable hi-fi by making the space-age technological breakthroughs of the incomparable V15 Type IV available in a *complete line* of high-performance, moderately-priced cartridges: the M97 Era IV Series Phono Cartridges, available with five different interchangeable stylus configurations to fit every system and every budget.

The critically acclaimed V15 Type IV is the cartridge that astonished audiophiles with such vanguard features as the Dynamic Stabilizer—which simultaneously overcomes record-warp caused problems, provides electrostatic neutralization of the record surface, and effectively removes dust and lint from the record—and, the unique telescoped stylus assembly which results in lower effective stylus mass and dramatically improved trackability.

Each of these features... and more... has been incorporated in the five cartridges in the M97 Series—there is even an M97 cartridge that offers the low distortion Hyperelliptical stylus! What's more, every M97 cartridge features a unique lateral deflection assembly, called the SIDE-GUARD, which responds to side thrusts on the stylus by withdrawing the entire stylus shank and tip safely into the stylus housing before it can bend.

**NEW! M97 Series Era IV Phono Cartridges...
Five new invitations to the new era in hi-fi.**



Shure Brothers Inc., 222 Hartrey Ave., Evanston, IL 60204 In Canada: A. C. Simmonds & Sons Limited
Outside the U.S. or Canada, write to Shure Brothers Inc., Attn: Dept. J6 for information on your local Shure distributor.

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



Going solo with Sennheiser

The MD-431 from Sennheiser is a highly directional cardioid microphone

with a rated frequency response of 40 Hz to 16 kHz. Designed to limit feedback in solo stage work, it can be used close to loudspeakers. It is equipped with a built-in low-cut filter to suppress stage noises such as impact sounds and a "pop" screen to control explosive sounds; an inner suspension system is credited with reducing shock and handling noise. The MD-431 also features a removable on/off switch and sells for \$339.

Circle 139 on Page 95

HIGH FIDELITY



AKG's hybrid headphone

AKG's K-340 headset is a two-way system in which high frequencies are reproduced by a fixed-charge electrostatic element and low frequencies by a dynamic transducer. Five passive diaphragms are designed to extend bass output down to 16 Hz. A secondary sound chamber and circumaural ear pads are said to contribute to a sense of "free field" listening without any loss in bass response. The rated impedance is 400 ohms; no polarizing voltage source is required. Weighing in at 13.5 oz. less cable, the K-340 costs \$189.

Circle 146 on Page 95

EXPECT THE UNEXPECTED.

Slip on a set of our new HD 420 or HD 430 Open-Aire® headphones and you'll hear sound you simply never heard before. Because, quite simply, there have never been headphones like these before.

Instead of trapping the sound with uncomfortable airtight seals as some headphones do, or robbing you of frequency extremes, as often happens with others, Sennheiser headphones actually *free* the sound. By combining new materials, to bring you an entirely new standard of accuracy and comfort.

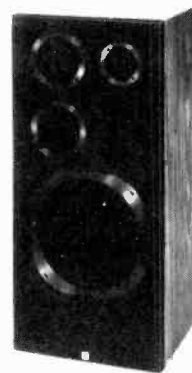
A unique, thin-film diaphragm, operating in a free-air environment closer to the ear, offers improved transient characteristics. Extended response. With clarity and detail surpassing that of even the most expensive speakers. Yet, our headphones are so light it's easy to forget you're wearing them.

But don't take our word for it. Or, for that matter, the rave reviews and top ratings our headphones have already received. Try a pair at your Sennheiser dealer... and expect to be pleasantly surprised.

SENNHEISER

ELECTRONIC CORPORATION

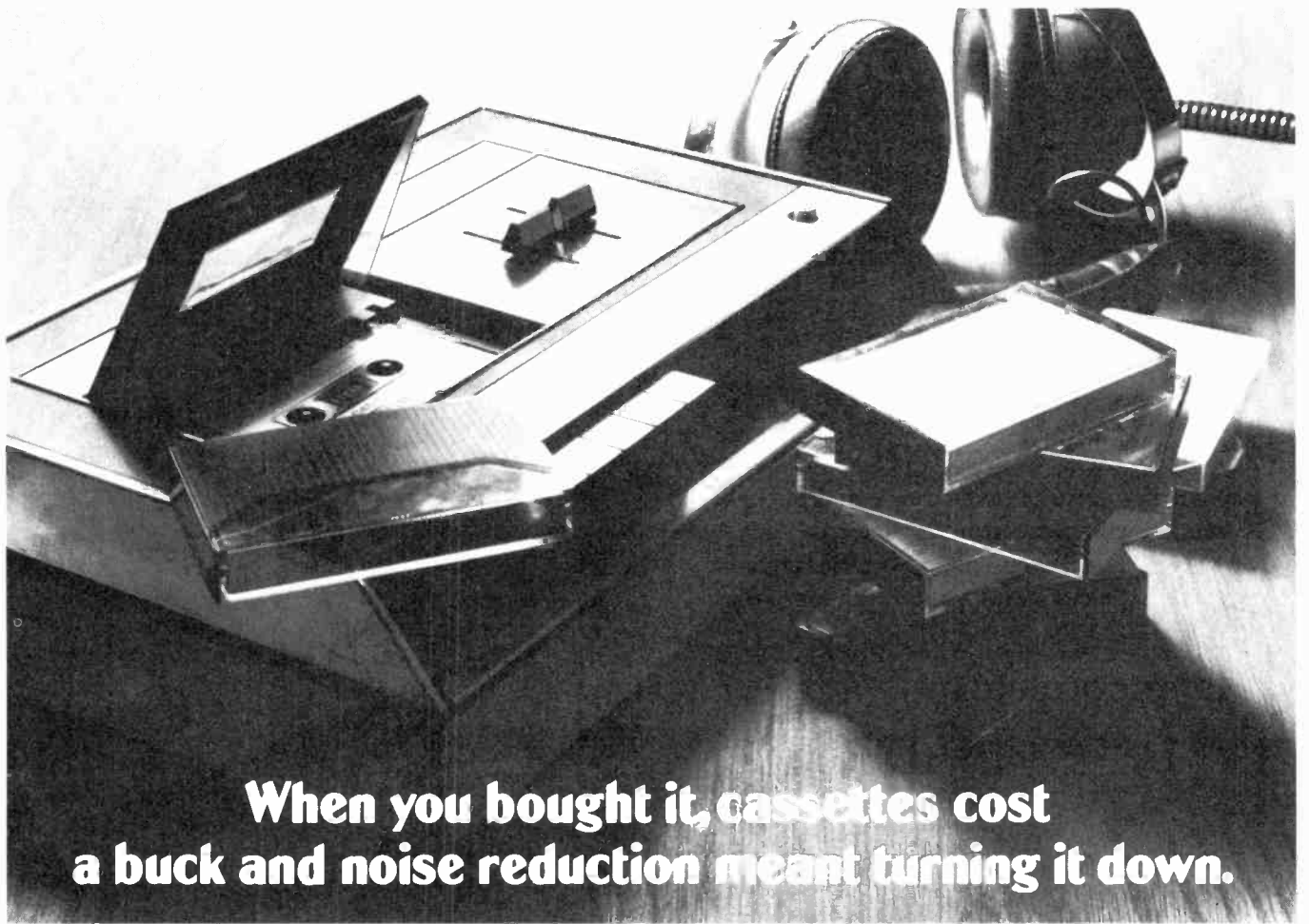
10 West 37th Street, New York, NY 10018 (212) 239-0190
Manufacturing Plant: Bissendorf/Hannover, West Germany



USS goes public with AES speaker line

United Speaker Systems, a 25-year-old manufacturer of proprietary loudspeaker systems for various companies, has introduced its own line of speakers under the name Audio Electronic Systems. Heading the line is the 50T, a three-way acoustic-suspension system with two soft-dome midrange drivers. Recommended amplifier power is 50 to 125 watts (17 to 21 dBW), and impedance is rated at 4 ohms. The midrange and tweeter have three-position controls; crossovers occur at 600 Hz and 2 kHz. The 50T costs \$399.

Circle 144 on Page 95



**When you bought it, cassettes cost
a buck and noise reduction meant turning it down.**

Now you're ready for JVC's new metal-compatible decks.

Aren't you glad you waited to get a new cassette deck?

Because the ultimate technology is here: metal particle tape.

Less tape hiss, higher highs, lower lows, louder output, a wider dynamic range of loud and soft passages... in short, you can finally record a cassette that's virtually indistinguishable from the source.

But getting this kind of performance out of metal tape means putting special circuitry and tape heads into the cassette deck.

That's why most other manufacturers have only added metal compatibility to their expensive top-of-the-line decks.*

Only JVC is far enough ahead to offer you six metal models starting at under \$300, suggested retail price.

Packed with features like ultra-harc, low distortion Sen-Alloy heads, Spectro-Peak and Multi-Peak metering, systems that let anyone record a perfect cassette, Super-ANFS noise reduction and B.E.S.T., an automatic computer that finetunes tape to deck in less than 30 seconds.

So before you consider metal tape an unaffordable audiophile's luxury, call 800-221-7502 (in N.Y. State call 212-476-8300) for the name of your nearest JVC dealer. Or write to US JVC Corp., 58-75 Queens Midtown Expressway, Maspeth, NY 11378.

He'll prove to your ears and your pocketbook that you're ready for metal particle tape technology.

*Correct at time of printing

JVC[®]
US JVC CORP.



KD-A8 with B.E.S.T., KD-A3, KD-A5

Now you're ready for JVC.

Put Sound Guard[™] on trial.



Sound Guard Record Preservative is a clear, colorless liquid that is safe for use on all types of vinyl records. It is designed to protect your records from dust, dirt, and other contaminants that can cause wear and tear. Sound Guard is also safe for use on other types of audio equipment, such as cassette tapes and CD/DVD discs. For more information, please visit our website at www.sound-guard.com.

Take up to 30 days to try Sound Guard on your records. Get your money back if not fully satisfied.

Judge the effectiveness of Sound Guard Record Preservative for yourself. Use it on your records for up to 30 days. Discover the long-lasting anti-static properties that work to reduce surface dust accumulation . . . and the newly designed buffer pad that more efficiently distributes the ultra-thin lubricant across the record to cut down friction, virtually eliminate record wear—and provide your music with long-lasting protection.

We're so confident you'll be pleased with Sound Guard Record Preservative that we can dare to give you a 30-day, money back offer. If you don't like what you hear, or for any reason are dissatisfied, send us your preservative kit,* a copy of your dated sales slip and we'll refund your money—no questions asked. That's an offer no other record care product seems to be making.

Our confidence also extends to the entire line of Sound Guard record care products: like the Record Cleaning Kit, Stylus Care Kit and Total Record Care System that contains both the preservative and cleaning kits.

You could spend your hard-earned money on all those other record cleaners, preeners, washers and brushes—or you can try Sound Guard at absolutely no risk. We think our offer is the best way to decide which one to try. You've got everything to gain—clean, better-sounding records—and best of all, nothing to lose.



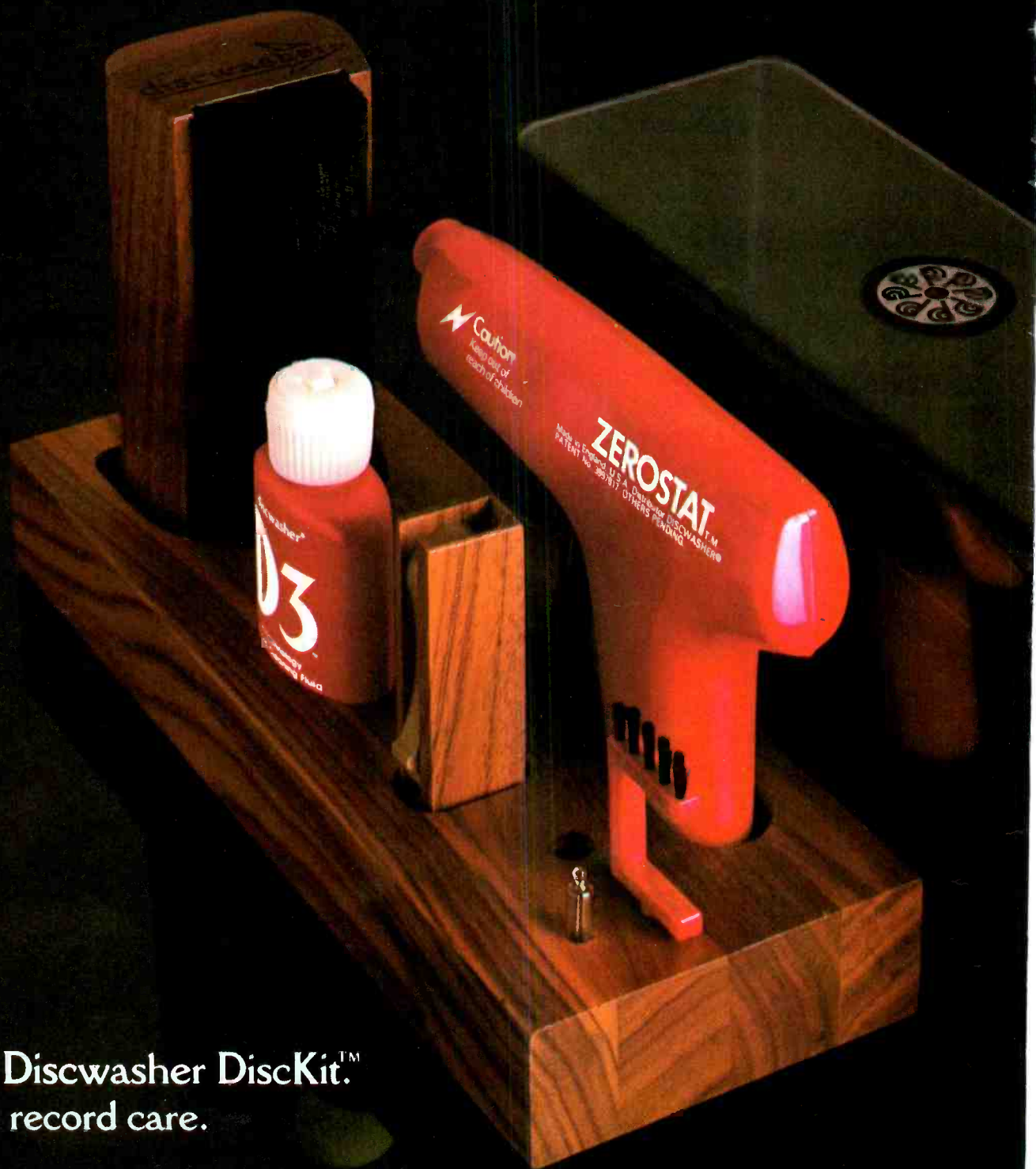
Sound Guard™ preservative—Sound Guard™ cleaner—Sound Guard™ Total Record Care System. Sound Guard is Ball Corporation's registered trademark. Copyright © Ball Corporation, 1979, Muncie, IN 47302.

*Return to: Sound Guard, P.O. Box 5003, Muncie, IN 47302. Offer expires April 30, 1980.

Circle 47 on Page 95



D i s c K i t



The Discwasher DiscKit™ Total record care.

The DiscKit™ includes the famous Discwasher D3 Record Cleaning System, the SC-1 Slylus Cleaner, the Zerostat Anti-Static Instrument and the Discorganizer walnut storage tray with dust cover.

These products are also available separately.



discwasher®

PRODUCTS TO CARE FOR YOUR MUSIC

1407 North Providence Road, Columbia MO 65201

DIRECTIONS

To solve these puzzles—and they aren't as tough as they first seem—supply as many of the Output words as you can in the numbered dashes following the Input. Unless otherwise specified in the Input, the Output 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 in the Output. This will supply you with further clues.

A final clue: The source of the quotation—the author and his work—will be spelled out by the first letters in Output, reading down.

The answer to Hifi-Croctic No. 51 will appear in next month's issue of HIGH FIDELITY. Solution to last month's HIFI-Croctic appears on page 3.

U	1	N	2		C	3	P	4	L	5	D	6	G	7	W	8	H	9		K	10	X	11	N	12	M	13	G	14	
		J	15	E	16	P	17	A	18		I	19	X	20		B	21	D	22		M	23	P	24	G	25	N	26		
R	27	W	28		S	29	N	30		C	31	V	32		P	33	M	34	Y	35	T	36		O	37	K	38			
N	39	I	40	U	41	G	42	D	43	L	44	H	45	X	46		H	47	P	48	N	49	N	50	G	51	D	52	M	53
W	54	Z	55		K	56	I	57	F	58	X	59	U	60	D	61		T	62	Y	63		D	64	G	65	J	66		
I	67	A	68		Z	69	K	70	N	71	H	72	U	73	G	74	D	75		P	76	C	77	O	78	O	79			
H	80	M	81	B	82	V	83	P	84		T	85	W	86	R	87		U	88		H	89	X	90	P	91	G	92		
N	93		K	94	I	95	M	96	Z	97		X	98	H	99	P	100	C	101		D	102	G	103	N	104	O	105		
V	106		L	107	M	108	U	109	G	110	X	111	H	112	E	113	W	114		D	115	N	116	B	117	P	118			
K	119	G	120	I	121	T	122	N	123	U	124		X	125	H	126	J	127	Z	128		L	129	O	130	V	131			
Z	132	M	133	P	134	L	135	D	136	G	137	I	138	H	139		T	140	V	141	N	142	W	143	S	144		X	145	
G	146		T	147	N	148	X	149	D	150	H	151		I	152	Z	153	Z	154	K	155	G	156		O	157	F	158		
		P	159	L	160	W	161	N	162	D	163		E	164	K	165	C	166	H	167	J	168	X	169	G	170		O	171	
C	172	D	173		T	174	N	175	H	176	F	177	U	178	M	179	G	180		P	181	W	182	Z	183	Y	184	K	185	
T	186	O	187		I	188	Z	189	X	190		G	191	A	192	U	193	V	194	H	195	R	196	F	197	L	198	M	199	
D	200	K	201																											

INPUT

- A. Pianist Noël; conductor Everett
- B. Composer Donald: "Harold's Trip to the Sky"
- C. Bass Kunikazu sings Schubert's Mass on Lyrichord
- D. Bernstein's "hell of a town" (4 wds.)
- E. Qualified; quick to learn
- F. German-Swiss composer (1822-82): Symphony No. 5 on Nonesuch
- G. Partch theatrical work (4 wds.)
- H. Popular group: "Right Time" (2 wds.)
- I. Big-band leader and clarinetist (full professional name)
- J. "It is the little _____ within the lute/That by and by will make the music mute"—Tennyson
- K. With Word N., Mendelssohn orchestral overture (3 wds.)
- L. Tense (slang; comp.)
- M. Learning; student aid
- N. See Word K. (2 wds.)
- O. Popular group: "Survival"
- P. Openly, simply (lt.)
- Q. Moppet
- R. Haydn Symphony No. 83
- S. Direction to use piano's left pedal (lt. abbr.)
- T. After "La," Audran operetta (Fr.)
- U. Columbia movie, recorded on London
- V. Reinecke flute sonata; E. T. A. in Hoffman opera
- W. Composer Florent (1870-1958): "Quatre poèmes de Ronsard"
- X. Blues form with a sharply rhythmic bass ostinato (comp.)
- Y. Toward the stern
- Z. After "La," Haydn Symphony No. 73 (Fr.)
- ZZ. Federal department (acron.)

OUTPUT

- 18 192 68
- 82 117 21
- 172 77 3 166 101 31
- 75 22 102 43 136 52 64 163 6 115 173 200 150 61
- 16 164 113
- 58 197 158 177
- 14 51 120 110 137 7 74 170 92 146 180 103 156 42 25 191 65
- 176 126 195 112 9 151 139 72 99 89 80 45 47 167
- 95 40 19 67 138 152 57 188 121
- 66 168 15 127
- 10 165 70 94 56 38 185 119 201 155
- 160 135 107 44 129 5 198
- 8 23 108 133 13 53 179 96 34 199 81
- 50 39 104 49 30 116 93 175 12 142 148 2 123 162 26 71
- 130 171 78 187 105
- 84 100 159 17 118 4 33 24 134 181 91 76 48
- 79 157 37
- 27 87 196
- 29 144
- 140 122 186 174 62 36 85 147 109 88 124 60 193 73 41 178 1
- 109 88 124 60 193 73 41 178
- 141 83 131 194 32 106
- 114 182 86 161 143 28 54
- 98 11 145 111 59 190 125 20 169 46 90 149
- 35 63 184
- 132 128 154 183 97 55
- 153 69 189

by William Petersen

CrossTalk

Q. Recently I sent for three TDK D C-120 cassette tapes. The mail-order company said they were out of stock and sent me Capitol Music Tapes as comparable substitutes. I tested them and found the output about 15 dB low. After cleaning and demagnetizing the heads of my Panasonic 612, there was no improvement, though other brands worked fine as usual. What's causing the problem?—J. Pagano, Totowa, N.J.

A. We hope the mail-order company made the substitution with the understanding that, if you were unhappy, you could send the Capitols back for D replacements or a refund; if not, we would consider their business practices questionable, no matter what brand they had substituted. And our tests, both on the bench and in normal use, do tend to favor D over Music Tape. Mechanical construction, for one thing, strikes us as considerably better in the TDK product.

But our tests have been made with C-90s and shorter tapes, and we know of nothing that would cause such a difference in output level unless you are using a very high test frequency and the deck is severely overbiased for the Capitol formulation. Our guess is that Capitol, in trying to make a tape thin enough for a C-120 but with a thick enough backing to stand up well in use, has shaved too much off the coating. That would reduce both the bias requirement and the output of the tape. Even ignoring print-through (which you can't, in long-term storage), the tradeoff between mechanical properties and electromagnetic ones in the longer tapes is a very difficult design problem; that's why few if any deck manufacturers recommend using tapes longer than C-90.

Q. I read Edward J. Foster's article "The Pickup/Preamp Confrontation" in your June 1979 issue and have been able to achieve better capacitance/impedance compatibility between my cartridge and preamp. But there's another kind of matching that he does not cover. My pickup's output is 5 millivolts at 5.5 centimeters per second, but the input sensitivity of my preamp is only 2.5 millivolts. What effect does this

discrepancy have on frequency response? Can it be compensated for?—Stephen A. Butera, Camp LeJeune, N.C.

A. There is no discrepancy. The specifics you quote mean 1) that sustained high-level tones on the record will produce about 5 millivolts of input to the preamp (though peaks and transients can run considerably higher), and 2) that any input above 2.5 millivolts will drive the system to some reference level that may also be taken as representing sustained high levels above which some additional headroom should be expected. There are a number of different "reference levels" that may apply, depending on the measurement standard. In integrated amps or receivers, it may be the 1-watt output level with the volume control set so that a reference input (say, .5 volt) at the aux produces the same 1-watt output, or it may be rated power output with the volume control fully advanced. In a separate preamp (or a preamp section measured separately) the reference can be anywhere from .5 to 2 volts, again with variations in possible volume setting. But in any of these cases, the numbers you quote suggest a good level match between the cartridge and the preamp. If the output of the pickup were too low, there would be no cure unless it were so low that you could use a head amp intended for moving-coil pickups; if it were too high (which is exceedingly unlikely), you would just have to run your volume control at unusually low levels when listening to records.

Q. I notice that electrostatic drivers no longer are being used in speaker systems. I own a pair of large Janszen combination electrostatic/dynamic speakers and admire the sound, but a recent edition of an audio buyer's guide does not even list Janszen models. Is the company out of business? If so, is it because of problems inherent in electrostatics?—David Fonseca, East Ridge, Tenn.

A. Janszen, a name with an almost thirty-year history in high fidelity, did almost pass from the scene recently, but a company in Minneapolis

called Sound Mates purchased it with all its unsold inventory and is attempting to revive it. We understand that nearly all of its current sales are in Europe and that, as soon as the inventory is depleted, Janszen will introduce a line of seven new electrostatic/dynamic systems.

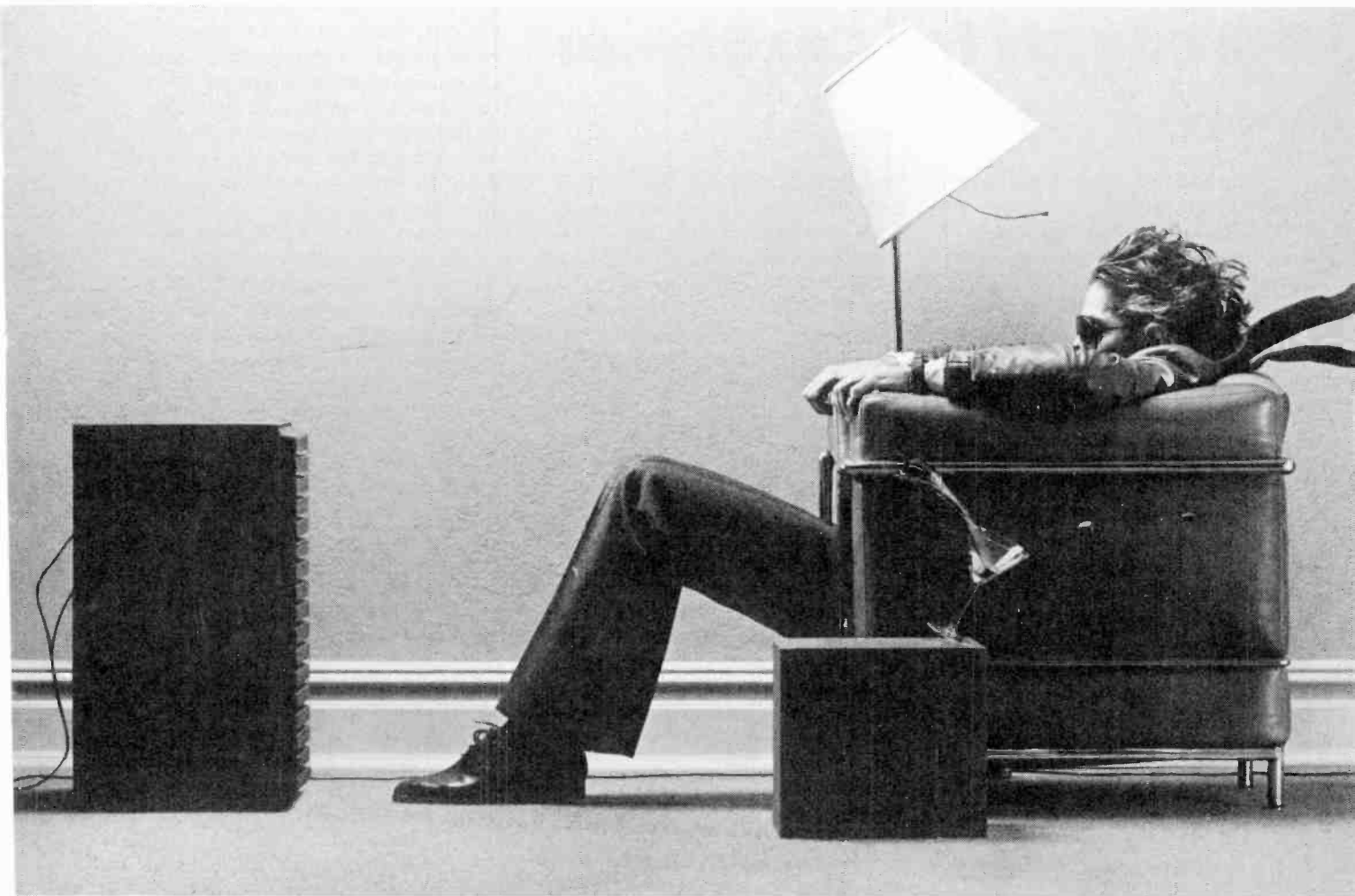
In the meantime, a number of manufacturers continue to offer this sort of hybrid in the American market, though several factors conspire to keep it less popular than all-dynamic speakers. Electrostatics' inherently low impedance is more likely to cause instability in transistor amps, their bipolar radiation pattern is more difficult to integrate with dynamic woofers, and their virtues recently have been largely duplicated in some innovative dynamic tweeter designs.

Q. I am thinking of purchasing a used, five-year-old Allied Radio receiver, Model 395. It seems to work well, but the owner does not have the original service manual or schematics. Obviously, I'm unsure about making the purchase. How reliable are used receivers?—Chris Weinersbach, Kettering, Ohio.

A. The question is: How reliable is the person who wants to sell you his old Allied receiver? According to Radio Shack (which absorbed Allied Radio in the late '60s and sold it around 1973), the 395 dates from around 1970-71, making it closer to ten years old than five. Purchasing used equipment is somewhat chancy, especially if the schematics are not available. Electronics, however, tend to "age" better than equipment with lots of moving parts, such as tape decks and turntables. Write to Radio Shack (500 One Tandy Center, Fort Worth, Tex. 76102) and ask whether it has a service manual on file and whether parts are still available for the receiver. Assuming you get a positive response and the price is very low, we see no reason not to buy it.

|| We regret that, due to the volume of reader mail we get, we cannot give individual answers to all questions.

AFTER 500 PLAYS OUR HIGH FIDELITY TAPE STILL DELIVERS HIGH FIDELITY.



If your old favorites don't sound as good as they used to, the problem could be your recording tape.

Some tapes show their age more than others. And when a tape ages prematurely, the music on it does too.

What can happen is, the oxide particles that are bound onto tape loosen and fall off, taking some of your music with them.

At Maxell, we've developed a binding process that helps to prevent this. When oxide particles are bound onto our tape, they stay put. And so does your music.

So even after a Maxell recording is 500 plays old, you'll swear it's not a play over five.

maxell
IT'S WORTH IT.

THE AUTOPHILE

At Last: Standards for Car Stereo

by Robert Angus

If you've been reading the claims made by some car stereo manufacturers for their equipment, you've probably seen advertisements for amplifiers with wattage outputs simply unachievable from 12-volt DC batteries, tape decks with better frequency response and less wow and flutter than all but the finest home models, and tuners claiming sensitivity right up there with the very best stereo receivers.

Experienced audiophiles always knew that much of this was impossible—at least by using the yardsticks commonly applied to electronics and equipment for the home. And those who read carefully and had long memories realized that they were being treated to the same power-rating shell game that took place before the Federal Trade Commission stepped in to clean up the acts of home electronics makers. Some companies have, in fact, been using the FTC formula to measure their equipment; but others were measuring music power or peak power, while some of those with the highest numbers of all didn't even bother to cook up a rationale for their specs. Result: consumer confusion, charges of misleading advertising, and an uneasy feeling that consumers were being had.

Manufacturers with integrity realized that they had two options: join the frantic numbers game, or do something about the situation. A third option, calling on the FTC for aid, was rejected virtually out of hand because 1) the rule-making process has become more complex since the FTC published its power-output regulation, and 2) the manufacturers were afraid that government intervention, once invited, might prove more far-reaching than any of them wanted. So they created an ad hoc committee, representing twenty-two of the largest aftermarket manufacturers (those whose products are installed as other than original equipment), accounting for 80% of sales. The committee thoroughly researched standards already established by the FTC and the Institute of High Fi-

delity to see which were applicable to car stereo equipment and what modifications might be necessary. The result is a six-page report that, though it lacks the force of law, enjoys the wholehearted support of the overwhelming majority of car stereo makers.

By June 1, the participating manufacturers expect all of their literature and advertising to conform to the new measurement standards, so that shoppers will be able to make intelligent decisions based on comparable specifications. Here's a rundown of these car stereo standards:

Power Amps. Like the FTC standard on which it is based, the ad hoc committee recommends that manufacturers specify continuous average (so-called rms) power output in minimum watts per channel, both channels driven, along with the bandwidth and percentage of total harmonic distortion. The FTC uses an 8-ohm load as its standard; the car stereo standards committee leaves this to the discretion of the individual manufacturer, since most—but not all—car speakers are rated at 4 ohms. The FTC's insistence on 8 ohms for home gear has been a sore point with some companies.

The matter of automotive supply voltages isn't decisively dealt with in either the FTC rule or the current high fidelity amplifier standard, IHF-A-202, which was used as a model by the ad hoc committee. A "12-volt" auto electrical system can vary from 11 to 16 volts under actual driving conditions, with resultant changes in performance. So the members arbitrarily settled on 14.4 volts as a reasonable mean that many manufacturers were using already.

The committee lifted bodily that portion of IHF-A-202 that deals with amplifier frequency response, including provisions that measurements for a separate amp be made through the line-input jacks with the output at 1 watt, terminated in the rated load impedance, and specified in Hz within a stated tolerance in dB. In the case of amplifiers inte-

grated with tuners or tape decks, the input is considered to be that of the volume control.

Signal-to-Noise Ratio. Again, the ad hoc committee turned to IHF-A-202, on the grounds that A-weighted S/N-ratio figures, specified in decibels, most accurately reflect the effect upon the ear. For separate component amplifiers, the IHF's provisions for sensitivity and minimum input impedance also were adopted. The former shall now be shown in volts for 1 watt of output, as an index of compatibility with other models and brands. "Note that it calls for the input voltage for a standard reference output of 1 watt rather than at rated output," the committee points out. "It still falls upon the dealer (or manufacturer) to determine compatibility in regard to headroom and reserve gain to assure a properly operating system, but knowing the sensitivity will prevent a grossly mismatched system." Manufacturers have the option of specifying sensitivity for rated output. Minimum impedance in ohms is likewise intended to indicate the compatibility of different models and brands.

For tone controls and equalizers, IHF-A-202 has been called into service to provide a specification of tone or equalizer action within a range stated in dB at certain frequencies. In the case of bass and treble controls, the recommended frequencies are 100 and 10,000 Hz. For multiband equalizers, the appropriate center frequencies are recommended.

Tape Decks. Since the IHF has no standard for tape systems, the committee was largely on its own. Accordingly, it calls for the use of a standard, commercially available alignment tape calibrated for the prescribed equalization time constants to measure frequency response in Hz, within a stated tolerance in dB. "It has been common practice to state tape frequency response without giving a dB tolerance, the unstated value being as great as ± 10 dB," it observed. "A ± 3 -dB tolerance is recommended and should result in a much more meaningful comparative performance measurement without placing any undue hardship. Low-frequency head contour effect may be averaged." The committee urges manufacturers offering selectable equalization to list the frequency response for both ferric and chrome-type tapes, referred to by their respective time constants: 120 and 70 microseconds.

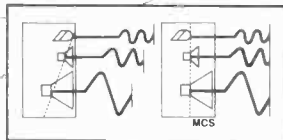
The committee has an interim

tech talk:

Phase linearity.

explained.

To understand what an MCS Series[®] Linear Phase speaker can do, you have to understand what a conventional speaker can't do. A conventional speaker can't deliver all the sound it produces to your ear at exactly the same instant. The major cause of this lies



in the way a conventional speaker is constructed. As you can see by the diagram, a conventional speaker is arranged with the woofer (bass), mid-range and tweeter (small high-range speaker) mounted so that their outer edges are on the front surface. As you can also see, these speaker elements differ in depth. That means the acoustical centers in the middle of each speaker which actually produce sound are also staggered. And so is the sound reaching your ear. MCS Linear Phase speakers start out with specially designed speaker elements

and crossover networks. Then the elements themselves are staggered (see diagram again) in such a way that their acoustical centers are precisely aligned. The result is sound to make you think you've never heard stereo before. But don't take our word for it, listen to your ears. After all, where MCS Series Linear Phase speakers are concerned, one sound is worth a thousand words. MCS Series Linear Phase speakers. Only at JCPenney.

Model 8310 2-way Bass Reflex \$119.95 (each)

Model 8320 3-way Bass Reflex \$199.95 (each)

Model 8330 3-way Bass Reflex \$299.95 (each)

Full 5-Year Warranty on MCS Series[®] speakers. Full 3-Year Warranty on MCS Series receivers, turntables, tapedecks, tuners and amplifiers. If any MCS Series component is defective in materials and workmanship during its warranty period, we will repair or replace it—just return it to JCPenney.

Prices higher in Alaska, Hawaii and Puerto Rico.



MCS[®]
Series

IT MAKES EVERYTHING CLEAR.

Sold exclusively at JCPenney.

DON'T BELIEVE EVERY DIGITAL READOUT YOU READ.

When you tune to 102.7, you want to stay tuned to 102.7.

Toshiba has solved the problem of mistuning by eliminating the need for a center channel tuning meter. Instead, digital frequency synthesis uses a carefully selected quartz crystal to produce a stable reference frequency. In plain English, this system constantly corrects tuning errors. The result is the lowest possible distortion and absolutely no drift. Toshiba was the first to utilize this system in a receiver, and now we're using it again in our SA-850 receiver.

Digital frequency synthesis not only makes us accurate, it also makes us more convenient.

No unnecessary parts.

We've eliminated the center channel tuning meter, FM/AM dial scale and tuning knob. So you can tune automatically or manually with the ease of pushbutton selection. You get LED digital readout and 5 LED signal strength indicators.

You'll thank us for the memory and scan.

Actually, you'll thank digital frequency synthesis. Because only with



1. Behind this digital readout is a conventional tuning system. It requires a center channel tuning meter and manual tuning.



2. Behind this digital readout is a quartz-locked tuning system. More accurate, but it still requires a center channel tuning meter. And it still requires manual tuning.



3. Behind this digital readout is the Toshiba quartz PLL digital frequency-synthesized tuning system. A totally electronic system that's never subject to manual mistuning. Accurate to 0.0025%.

this process can you store 6 FM and 6 AM stations for instant recall tuning at the touch of a memory button.

And in the automatic FM mode, digital frequency synthesis allows the tuner to scan until it stops at the next listenable station. FM stereo S/N ratio is 68 dB. FM selectivity is a high 80 dB. Frequency response is 20 to 15,000 Hz + 0.2 - 0.8 dB.

But there's more to this receiver than just a superb tuning system.

Power you'll respect.

We're talking about 50 watts rms per channel into 8 ohms from 20-20,000 Hz.

This is provided by full complementary direct-coupled power amplifiers. And couple that with an ultra-low THD of 0.03%.

A preamp you'll appreciate.

Along with provisions for attaching two tape decks, we give you full monitoring controls. Plus duplication switching between the decks.

Our special subsonic filter switch helps eliminate low-frequency warp distortion.

And our receiver looks as good as it sounds. With a sleek slide-away cover that conceals a full

range of controls, including tone/defeat switch and a dual speaker selector.

The Toshiba SA-850 digital frequency-synthesized receiver.

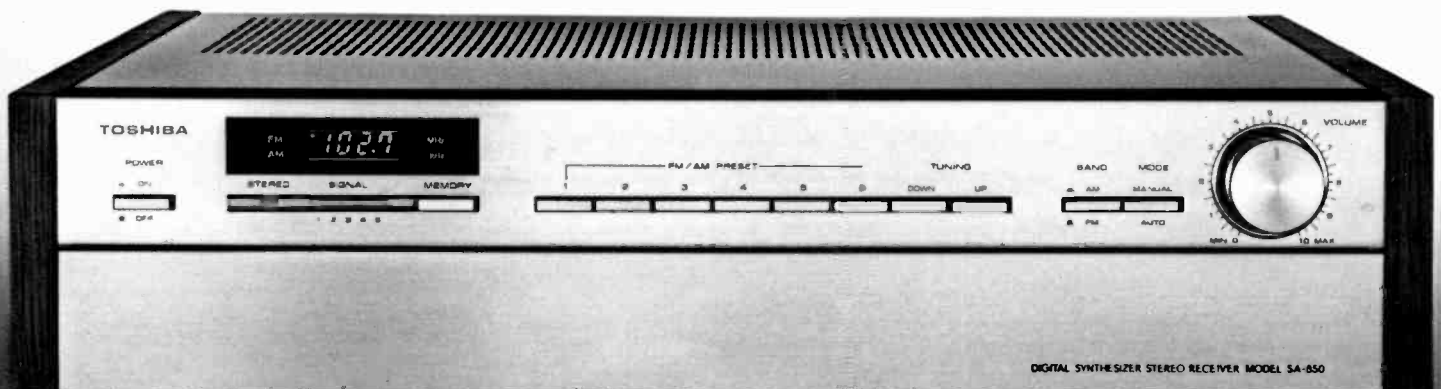
The next time you're looking at receivers, don't believe every digital readout you read.

Except ours.

TOSHIBA
Again, the first.

Toshiba America Inc. 280 Park Ave., New York, NY 11710

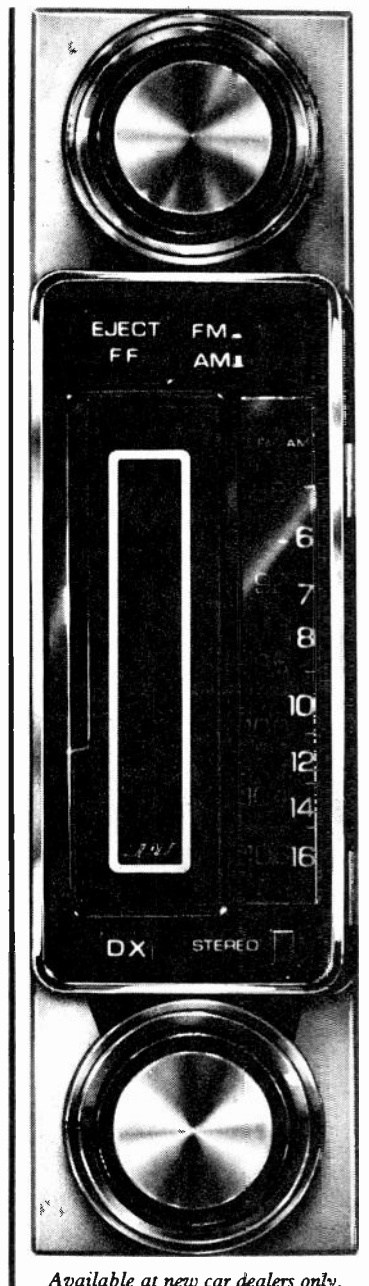
Circle 53 on Page 95



DIGITAL SYNTHESIZER STEREO RECEIVER MODEL SA-850

Vertical thinking from Audiovox: the first complete, one-piece sound system for your 1980 Chevy Citation.

And some horizontal thoughts
for the other GM X-body automobiles.



Available at new car dealers only.

GM only makes a vertical radio for the Citation. Audiovox makes the only vertical radio/cassette or radio/8-track unit for the Citation (and they make it in one piece).

Audiovox engineering overcame the problems of space and gravity that GM couldn't. Not surprising – Audiovox produces auto sound systems, not automobiles. Instead of a separate under-dash tape player, the Audiovox units are designed in one piece. And it wasn't simply a matter of turning a conventional unit on its ear – gravity won't stand for that.

Audiovox does – Detroit doesn't.

When you buy a new car, Detroit offers countless options. When you buy a sound system for that new car, Audiovox offers more options than Detroit has ever heard of. So why settle for a car manufacturer's radio if you can choose an S.P.S. by Audiovox. Like the 5 different vertical one-piece sound systems for your 1980 Chevy Citation or one of 64 other S.P.S. systems for all

new cars. And Audiovox guarantees your S.P.S. stereo for the life of your car, Detroit *doesn't!*

All this and a lifetime warranty.

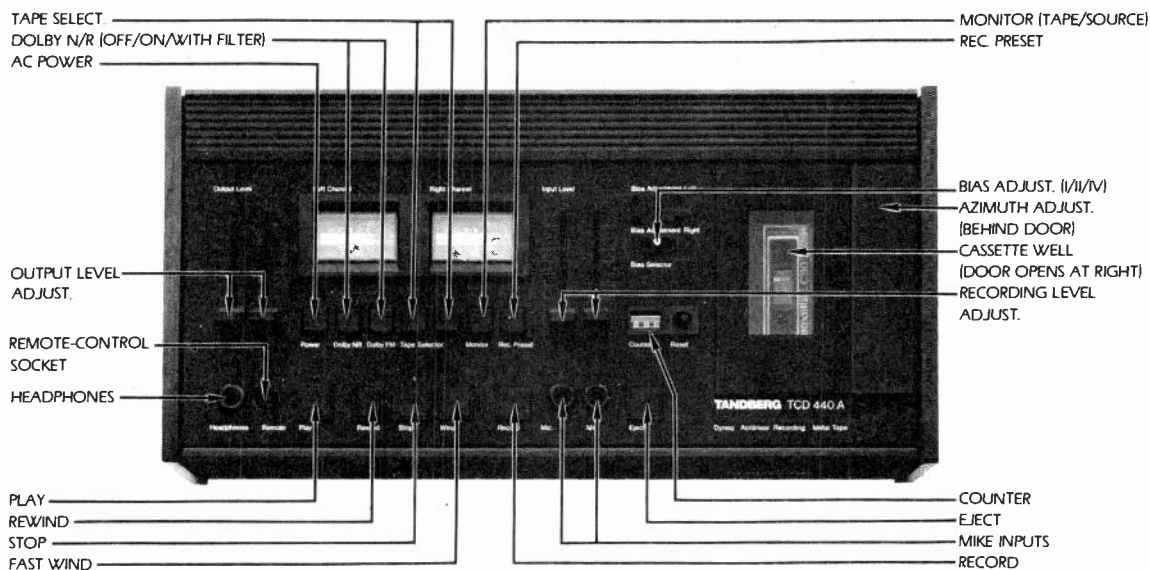
Audiovox is the *only* manufacturer to offer a *lifetime* warranty on all of its S.P.S. auto sound components. Should a component from one of these systems malfunction during the warranty period due to a manufacturing defect, it will be replaced without cost, except for removal and installation costs. The lifetime warranty remains in effect for as long as you own the car.

The Audiovox S.P.S. sound systems were developed in the audio research laboratories of Shintom Co., Ltd., Yokohama, Japan.

*For further information, write to:
R. Harris, Technical Director
Dept. 12 K, S.P.S. Division
Audiovox Corporation, 150 Marcus Blvd.
Hauppauge, NY 11787.*

New Equipment Reports

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



Tandberg's Way with Metal

Tandberg Model TCD-440A cassette deck, in metal case with wood ends. Dimensions: 18½ by 9 inches (front panel), 4 inches deep plus clearance for controls; may be used vertically (with brackets that add ½ inch to height) or horizontally. Price: \$1,600; optional RC-20 wireless remote control, \$150. Warranty: "Ilimited," one year parts and labor. Manufacturer: Tandberg A/S Electronic Division, Norway; U.S. distributor: Tandberg of America, Inc., Labriola Ct., Armonk, N.Y. 10504.

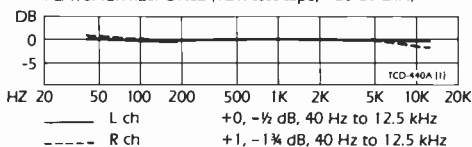
A glance at the TCD-440A will tell you that it is an evolutionary product in a series that has remained unbroken since Tandberg's first cassette model some six years ago. The "news" here is twofold: The 440A will record on metal tape, and it incorporates Tandberg's Dyneq system that varies recording equalization with the high-frequency content of the signal to keep it always below the point of self-erasure, for the greatest possible output with the given recording level and signal spectrum. The drive logic, monitoring head configuration with recording-head azimuth adjustment, dual-capstan/dual-motor transport, and so on—as well as the basic physical orientation and control approach—remain from the past.

That means, among other things, that the deck can be laid flat on a table or stood (as a front-loader) on brackets that are supplied with it. It also means a very distinctive control panel—one that, whether or not you agree with the intent of the designers, is thought out without obeisance toward the design ideas enthroned elsewhere. For example there is no PAUSE at all. The START and STOP are so quick that they give you virtually the same results. A transient will result if you start recording during a sustained sound, but otherwise you can make almost undetectable "edits" even in the presence of some random background noise. Tandberg's alternative to a PAUSE, what open-reel recordists call a flying start, is less successful. This allows you to start in playback and then punch in RECORD at any moment you choose without stopping the transport. As realized here, it leaves a silent gap (something less than 1 second) and thus is not much more adroit for tight edits than the typical solenoid PAUSE and less so than the STOP/START of the 440A

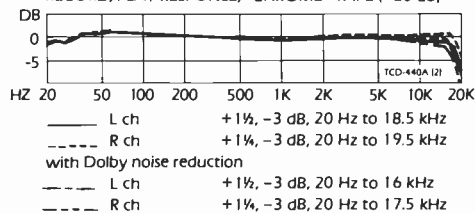
Report Policy: Equipment reports are based on laboratory measurements and controlled listening tests. Unless otherwise noted, test data and measurements are obtained by CBS Technology Center, a division of Columbia Broadcasting System, Inc., and Diversified Science Laboratories. The choice of equipment to be tested rests with the editors of HIGH FIDELITY. Samples normally are supplied on loan from the manufacturer. Manufacturers are not permitted to read reports in advance of publication, and no report, or portion thereof, may be reproduced for any purpose or in any form without written permission of the publisher. All reports should be construed as applying to the specific samples tested; HIGH FIDELITY, CBS Technology Center, and Diversified Science Laboratories assume no responsibility for product performance or quality.

Tandberg TCD-440A cassette deck

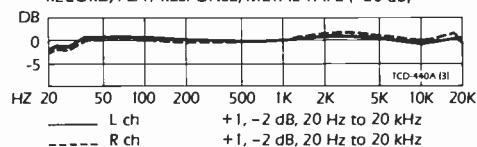
PLAYBACK RESPONSE (TDK test tape; -20 dB DIN)



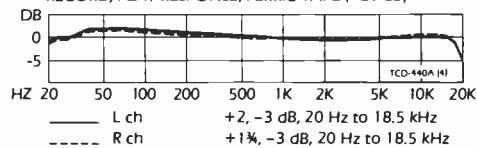
RECORD/PLAY RESPONSE, "CHROME" TAPE (-20 dB)



RECORD/PLAY RESPONSE, METAL TAPE (-20 dB)



RECORD/PLAY RESPONSE, FERRIC TAPE (-20 dB)



S/N RATIO (re DIN 0 dB; A-weighted)

	"chrome" metal	ferric
playback without noise reduction	59 dB	57½ dB
Dolby playback	67 dB	66 dB
record/play without noise reduction	56¼ dB	55 dB
Dolby record/play	63¾ dB	62¾ dB

METER READING FOR DIN 0 dB ca. -½ dB

METER READING FOR 3% DISTORTION (at 333 Hz)

"chrome" tape	+2
metal tape	-3*
ferric tape	+2¾ dB

*Measured on separate metal-tape scale

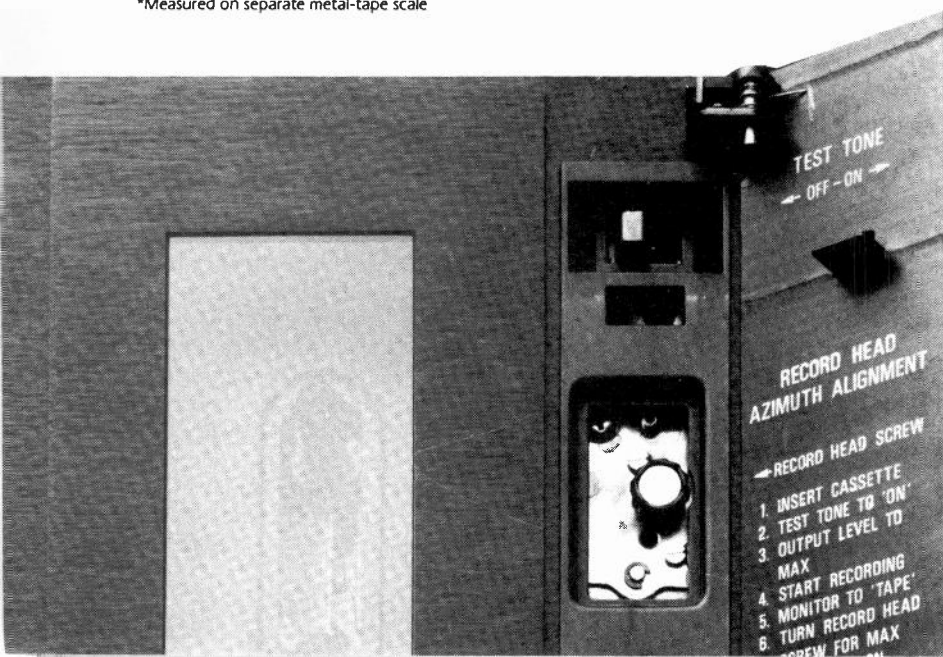
itself. In either of these operations, an automatic fade-in of the monitor signal from the deck's output prevents aural evaluation of the joint while you are making it.

The ranks of similar square buttons may occasionally lead users to push the wrong one. If it is in the lower rank (the transport controls), the deck's logic may well refuse to accept the mistaken command; the upper rank, which is less differentiated, requires a little more alertness. The tape switching is particularly complex. There are buttons marked TYPE I and TYPE II, referring to the premium-ferric and chrome/chrome-compatible groups, respectively, consistent with IEC Types as used in the Maxell UDXL, Scotch Master, BASF Professional, and other tape lines. The combination of both buttons is marked IV METAL. A three-position toggle BIAS SELECTOR switch near the cassette well is marked I/II/IV-METAL. (Nearby, there are screwdriver bias adjustments for each channel of each position, but no calibration means is provided and the manual suggests that these controls are for use only by a qualified service station.) And for Type III (ferrichrome), the manual tells you to use the TYPE I tape-selector button and TYPE I bias-selector position for recording and the TYPE II tape-selector button for playback.

In order to record, you must first press REC. PRESET; if you don't—or if the erasure-prevention tab has been removed from your cassette—the deck's logic simply refuses to respond to a touch on the RECORD button. If you have the preset on but don't want to record, you press PLAY instead of RECORD. (There is no conventional interlock, and we didn't miss it.) But the first job is to set recording azimuth via a high-frequency test-tone switch and knob adjustment (reading on the right-channel meter for maximum output of the recorded tone) behind a flip-up panel to the right of the cassette well. Because the tone fluctuates due to minor tape irregularities, the process takes some getting used to, but it is not time-consuming.

After the "bar graphs" featured in many of the new decks, Tandberg's meters also take a little getting used to. They are calibrated merely at -24, -12, -6, -3, 0, +3, and +6, which may seem inadequate until you realize that these are meters, after all, and that in-between values can be eyeballed from them. (With the graph indicators, that's not generally true.) Furthermore, these represent Tandberg's excellent approach to metering, reading peak values after recording equalization so that the "zero" better approximates the maximum recording level no matter what frequency mix is in the signal. There is a separate scale for use with metal tapes; while the zero on the regular scale is close to the DIN reference, that for metal tape is about 5 dB higher. Actually, Diversified Science Laboratories found similar midrange overload levels with all the tapes (including metal) used in its tests; the extra capability of metal is not here, but in the highs, and the calibration evidently reflects the fact that the meter's equalization will take the highs into account.

The Dynec circuit is said to open up the high-frequency headroom. Since it is not defeatable, we couldn't test it directly. A check of distortion in high-frequency signals at various playback-output levels does show, however, that the 440A compares favorably with less radical designs by introducing far less distortion



Azimuth alignment controls appear when you open door to right of cassette well. So do instructions, so you don't have to refer to owner's manual. Switch at top is for high-frequency oscillator, whose output is recorded on right channel. Knob is used to rotate recording head until playback output is at maximum, thus setting its azimuth to optimum for the particular cassette you are using.

RECORD HEAD AZIMUTH ALIGNMENT

RECORD HEAD SCREW

1. INSERT CASSETTE
2. TEST TONE TO 'ON'
3. OUTPUT LEVEL TO MAX
4. START RECORDING
5. MONITOR TO 'TAPE'
6. TURN RECORD HEAD SCREW FOR MAX

INCREDIBLE CASSETTE OFFER!



a \$5 credit card calculator?

Try 10 DAK high energy 90 minute cassettes risk free for only \$2.19 each and get a remarkable \$59 value LCD Credit Card Calculator for only \$5.

It's your choice. Think about the kind of music you like. You don't want to think about cassettes jamming, loss of high frequency response or tape hiss.

DAK manufactures a cassette that you can really forget about. Great sound, and no problems. And, for only \$5 we hope you will think a lot about your new unique LCD credit card calculator.

YOUR TIME IS PRECIOUS

Imagine yourself just finishing recording the second side of a 90 minute cassette and horrors, the cassette jams. Tape is wound around the capstan, your recorder may be damaged and you've just wasted 90 minutes of your time and perhaps lost a great recording off FM.

Enter DAK. We manufacture over one million units of cassette tape per month in our factory in N. Hollywood. Our tapes are used for high speed duplication where they are recorded at speeds up to 8 times normal. This is the ultimate stress for cassettes and causes more failures than any other use.

MOLYSULFIDE

We developed polyester slip sheets with raised spring loaded ridges to guide each layer of tape as it winds. We coat them with a unique formulation of graphite and a new chemical, molysulfide.

Molysulfide reduces friction several times better than graphite and allows the tape to move more freely within the cassette. The molysulfide is tougher and makes the liner more resistant to wear. Evidently 3M and TDK were hot on our heels, because they have now also come out with new liners.

Hi frequency protection! Tape is basically plastic, and as it moves within the cassette friction causes the build up of static electricity, much as scuffing your shoes on a carpet in dry weather.

Static electricity within the cassette is reduced by the low friction of the molysulfide so that its tendency to erase very high frequencies is drastically reduced. Very important for often played tapes.

MAXELL IS BETTER

Yes, honestly, if you own a \$1000 cassette deck like a Nakamichi, the frequency responses of Maxell UDXL or TDK SA are superior and you just might be able to hear the difference.

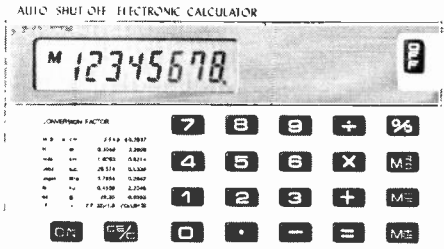
DAK ML has a frequency response that is flat from 40hz to 14,500hz ± 3 db

Virtually all cassette decks priced under \$600 are flat ± 3 db from 40hz to about 12,500hz, so we have over 2000hz to spare, and you'll probably

never hear the difference.

No apology. We feel that we have equaled or exceeded the mechanical reliability of virtually all cassettes and offer one of the best frequency responses in the industry. Maxell UDXL is truly the Rolls Royce of the industry, and DAK is comparable to the 100% US made Cadillac or Corvette!

Price. DAK manufactures the tape we sell. You avoid paying the wholesaler and retailer profits. While Maxell UDXL 90s may sell for \$3.50 to \$4.50 each at retail, DAK ML90s sell factory direct to you for only \$2.19 each complete with deluxe boxes and index insert cards.



A \$5 CREDIT CARD CALCULATOR?

Of course not! This is an incredible offer. Countless stores throughout the country sell LCD credit card calculators with fewer features for up to \$59.

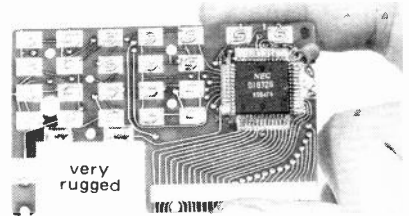
This beautifully styled gold and silver-tone calculator (only 3/16" thick) comes in a leatherette cardcase. An extra large LCD display makes it easy to use, and it's loaded with features.

The calculator performs all normal functions plus has complete memory and percentage built in. Eight of the most needed conversions are printed on the case, such as: in. to cm and oz. to cc. It will even shut itself off after 9 minutes if not used, giving you up to 2000 hours of battery life.



Permanent memory...The calculator above shows DAK's phone number. If you ever need to remember any number whether it's an amount, or a phone number, just enter it in the calculator's memory. Even when you turn it off the number will be retained. You may even use the calculator normally and the number will still be retained in memory until you need it or change it.

It's Guaranteed...This rugged calculator is extremely well built. To withstand rugged use, 9 separate screws secure and protect the printed circuit board brain. Each button has protected triple sized contacts for long life. The calculator is covered by the manufacturer's limited warranty for one full year.



DAK TAKES A RISK

Obviously giving away quality credit card calculators is not going to make DAK rich. We are betting that you will buy our cassettes again, and we are putting our money where our mouth is!

Customers like you are very valuable in the form of future business. We anticipate receiving over 6000 orders and 4500 repeat customers from this ad to add to our list of over 62,000 actives.

TRY DAK ML90 CASSETTES FREE

Try these high energy cassettes on your own recorder without obligation for 30 days. If you aren't 100% satisfied for any reason, simply return the tapes and calculator to DAK for a full refund.

To order your 10 DAK ML 90 minute high energy cassettes at \$2.19 each and the \$59 value calculator with your credit card, simply call the toll free number below, or send your check for \$21.90 plus \$5 for the calculator and \$3 for postage and handling for each group of 10 cassettes and calculator to DAK. (Calif. residents add 6% sales tax).

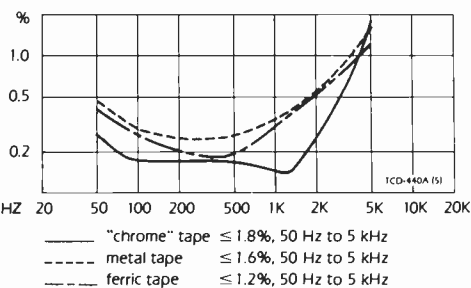
DAK unconditionally guarantees all DAK cassettes for one year against any defects in material or workmanship.

Why not order an extra group of 10 DAK ML90 cassettes for yourself or a friend? We will add one free ML90 cassette to each extra 10 you buy and of course you can buy one \$59 value calculator for \$5 with each group you buy.



Call TOLL-FREE (800) 423-2636
In California Call (213) 984-1559
10845 Vanowen St., North Hollywood, CA 91605

DISTORTION (third harmonic; at -10 dB DIN)



ERASURE (333 Hz; re DIN 0 dB)

"chrome" tape	73% dB
metal tape	69% dB

CHANNEL SEPARATION (at 333 Hz) 40% dB

SPEED ACCURACY no measurable error at 105, 120, or 127 VAC

WOW & FLUTTER (ANSI/IEEC weighted peak)

	average	maximum
playback	$\pm 0.09\%$	$\pm 0.13\%$
record/play	$\pm 0.10\%$	$\pm 0.15\%$

SENSITIVITY (re DIN 0 dB; at 333 Hz)

line input	82 mV
mike input	0.14 mV

MIKE INPUT OVERLOAD (clipping) 18 mV

OUTPUT (from DIN 0 dB) 1.5 V

in the area where compression inhibits, but does not prevent, response. Tapes can be pushed only so far in high-level, high-frequency response, but we're satisfied that the pushing process implies less audible complaint with Dyneq than without it. And both on the bench and in listening, we judged the deck to be exceptionally free of high-frequency intermodulation "birdies."

The tapes suggested by Tandberg for the 440A include Maxell UDXL-II ferricobalt (chrome-equivalent) and UDXL-I ferric plus Fuji's new metal-alloy formulation (for which the manual gives TDK MA-R as an alternative), and these three were used by the lab in measuring it. The response is quite flat (despite some rise in the deep bass of most of the curves) and very extended, particularly at the low end. Distortion measurements, too, are very good. Whether for this reason or because of the extra care the company says it has taken with phase response, we judged the tapes we made to be exceptionally clean. The metal tape won the race for the clearest highs but, because its noise spectrum seems a little more intrusive, might be nosed out by UDXL-II (even at its lower maximum recording level) as the quietest. The flutter measurements, which represent very good performance, were made in worst-case position, with the deck standing vertically. (Tandberg's data suggests that the deck will perform as well or better if it takes this test lying down, where forces on typical drive-part bearings should be better balanced.)

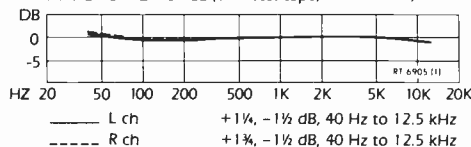
Aside from raw performance (which has always been excellent in Tandberg products), we observed a very special quality in working with the TCD-440A. Everything from the big buttons (a relief after the arrays of microswitches that are breeding on decks like fleas on a dog) to the sound has a positive quality to it. "We have thought about it and decided that this is the right way to do it," the deck seems to be saying. And, to a large extent, Tandberg is doing things right, though its take-charge attitude may seem cavalier on brief acquaintance if you're used to more conventional designs. So if you try out the 440A, give it a chance; otherwise you stand to pass by one of the most capable models on the market.

Circle 134 on Page 95

An Incredible Time Machine cum Cassette Deck

Optonica RT-6905 cassette deck

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



Optonica Model RT-6905 (actually RT-6905/1, comprising RT-6905 deck plus RT-6901 timer) cassette deck in metal case, with infrared remote control. Dimensions: 17 by 8¼ inches (front panel), 14 inches deep plus clearance for controls and connections. Accessory AC outlets: four switched, in two pairs (500 watts max. per pair). Price: \$1,600; PN-907 optional rack-mount adapters, \$35 per pair. Warranty: "limited," two years parts and labor. Manufacturer: Sharp Corp., Japan; U.S. distributor: Sharp Electronics Corp., 10 Keystone Place, Paramus, N.J. 07652.

Initial reactions to the RT-6905's seemingly endless complexities vary from wonderment to confusion to disgruntlement. One member of our staff couldn't even turn on the transport without consulting the owner's manual. Only later does the real potential of the design and the thoughtfulness with which it has been realized become apparent.

First, some orientation. The deck proper occupies the upper two-thirds of the ensemble and contains its own microprocessor for the automatic and memory modes. The lower section is a physically attached but electrically separate timer/clock/programmer microprocessor unit. You must even plug the two together on the back panel for both timer control of the deck's AC supply and synchronization of the time counter to the transport's operation.

The timer can be programmed for up to forty-two operations (the readout registers "full" if you try to exceed this number) in any or every day of the week and reads out in either 12-hour (a.m. and p.m.) or 24-hour formats. It will control either or both of two pairs of AC outlets on the back panel: One socket in the A pair is designated for the RT-6905 deck, and the other can be used for your tuner or receiver; the second pair can be used for anything from an open-reel deck to an automatic coffee maker. The endlessly useful TIME COUNTER mode (which continues to operate, once it is programmed, even when the readout is switched for other purposes) reads elapsed playback and/or recording time (counting upward) or remaining time (counting downward) in minutes and seconds, beginning either on the hour reading (0:00) or at any other point you choose, and it ignores any time spent in PAUSE, STOP, or the fast-wind modes. If you switch off the deck-syncing function at the back panel, this feature converts into a stopwatch for any

Circle 28 on Page 95 ▶

KEF Model 304
on optional stand ULS II

KEF Model 303
on optional stand ULS I

Elegant, Efficient,
Effective.



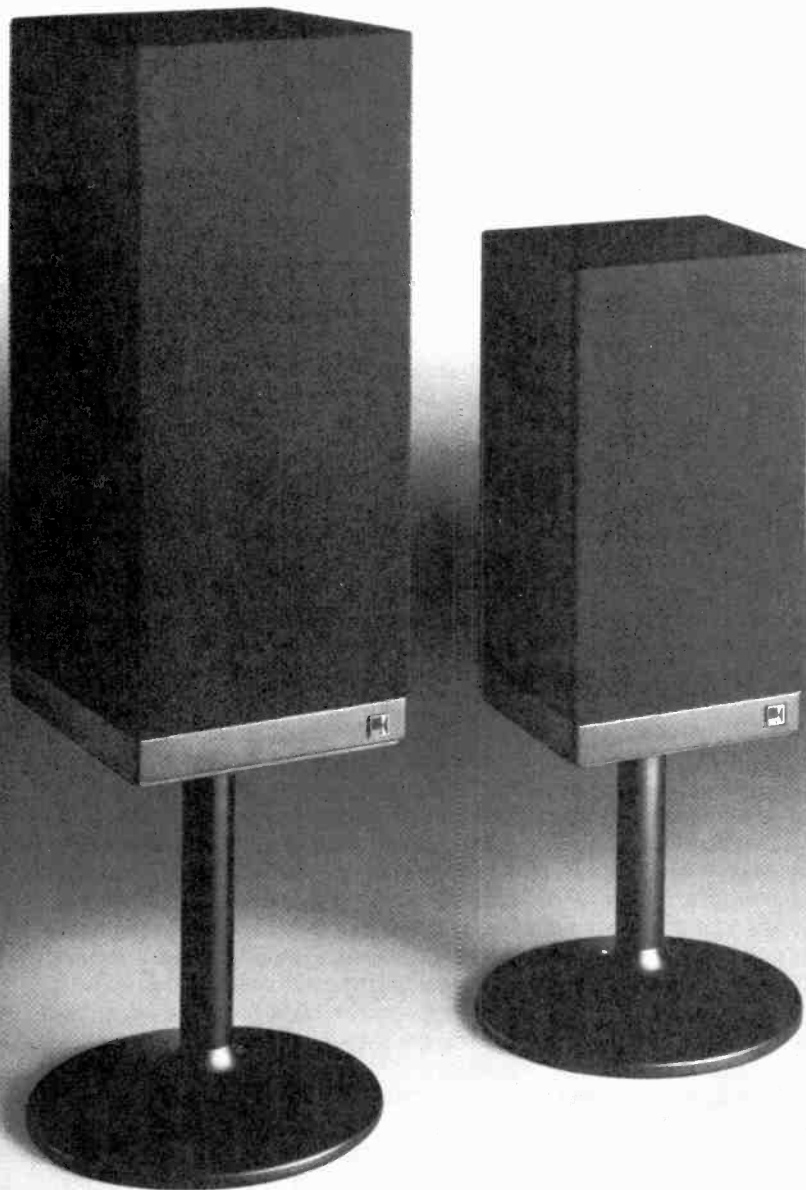
The traditional KEF accuracy in music reproduction now combined with a higher level of efficiency. . . . Whether for use with amplifiers up to 100 watts or music centers as small as 10 watts, the two new KEF speakers—Model 303 and Model 304—can achieve surprisingly loud volume levels without any sacrifice of the tonal quality for which KEF is world-famous.

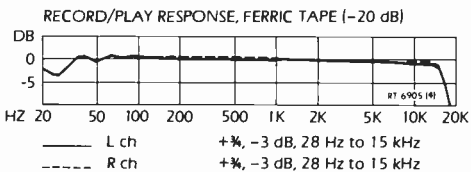
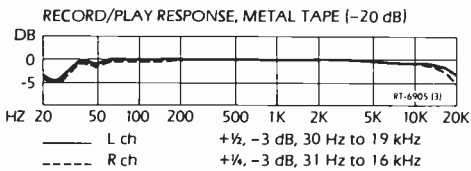
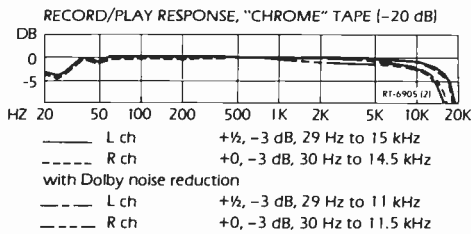
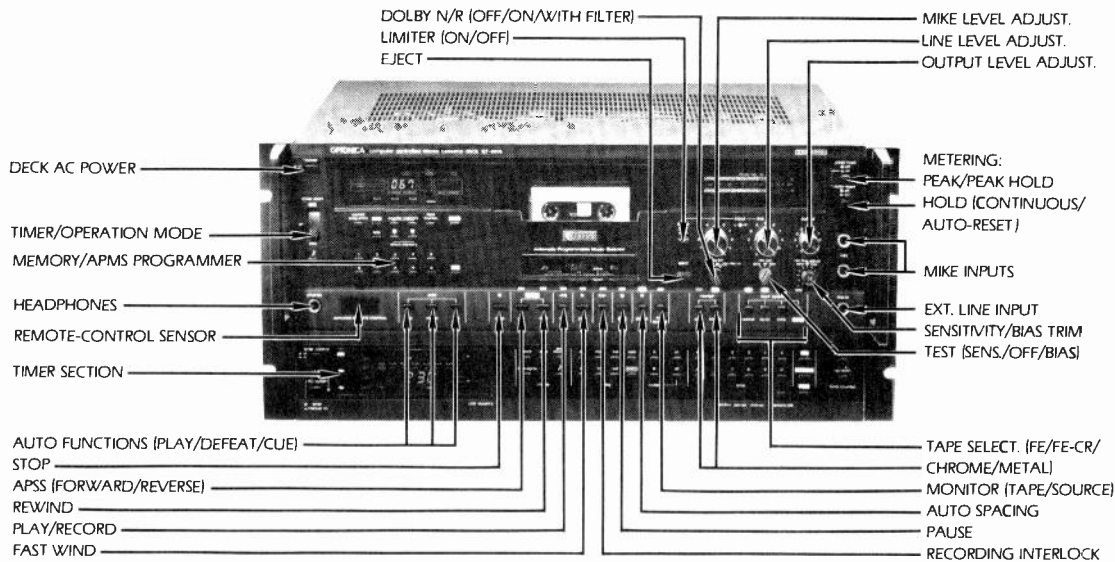
Visit your authorized KEF dealer for a thorough demonstration.

For his name and product information write to: KEF Electronics, Ltd., c/o Intratec, P.O. Box 17414, Dulles International Airport, Washington, DC 20041.

In Canada: Smyth Sound Equipment, Ltd., Quebec J4H 3V7.

KEF The
Speaker
Engineers





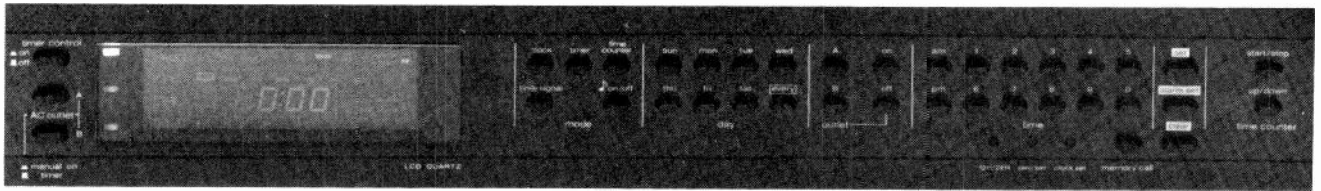
S/N RATIO (re DIN 0 dB; A-weighted)		
	"chrome" metal	ferric
playback without noise reduction	58 dB	54½ dB
Dolby playback	66¾ dB	64 dB
record/play without noise reduction	55¾ dB	52¾ dB
Dolby record/play	64 dB	62 dB
METER READING FOR DIN 0 dB	+3 dB	
METER READING FOR 3% DISTORTION (at 333 Hz)		
"chrome" tape	+8 dB	
metal tape	+5 dB	
ferric tape	+8 dB	

application you choose. We don't know of a more comprehensive and functional timer/programmer design; our description here barely sketches in its salient properties.

The deck's own microprocessor has two memory functions, for start and stop, respectively. Thus it not only offers the equivalent of MEMORY STOP (Optonica calls it CUE) and MEMORY PLAY, but an automatic REPEAT as well. In the latter mode, it rewinds from the programmed stop point to the programmed start and plays through the selected portion of the tape for a total of five cycles (we don't know how Optonica arrived at that number) before shutting off. The Automatic Program Music Selector and Automatic Program Search System of the RT-6905 are similar to the Automatic Program Find System in Optonica's RT-2050U (HF test report, August 1977). A separate head senses output from the tape even during fast-wind modes and thus locates the gaps between selections. Since output of the head is a function of transport speed as well as recorded amplitude, the logic may read tape noise as signal during high-speed winding and pianissimos as gaps when the winding speed is slow. The manual warns that the system is unreliable in recordings with wide dynamic range, like speech and classical music. We believe that Optonica is missing the boat by not building a governor into the fast-wind modes to limit their speed and, consequently, the capriciousness of selection sensing. That would extend the time it takes to reach a given spot on the tape, but the user need not wait upon the fast-wind cycle to give his next command, since APMS can be programmed to perform various functions automatically—or even play back a series of selections in any sequence—which APFS couldn't. Sluggish wind therefore would not be as irksome as with conventional decks. The APSS uses the same sensing to seek out the nearest interselection gap, either forward or back, and begins playback at that point.

The closed-loop dual-capstan drive system employs a quartz-locked servo capstan motor, plus a separate hub-wind motor, and provides automatic tape tensioning when you insert a cassette. The solenoid controls have a few nice features. The RECORDING button is not the usual interlock; it puts the transport directly into RECORDING/PAUSE, and recording begins when you then press PLAY. (Source metering—and hence level presetting—requires only that you press SOURCE on the monitor control.) The PAUSE itself is very quick and noiseless, but it leaves a slight gap; on playback, the resulting "dropout" is elegantly transient-free and lasts only a fraction of a second, though enough to prevent seamless editing. If you want a space between selections when you're recording, the AUTO-SPACING button will give you four seconds of silence (a common spacing on LPs and enough, in theory, to trigger the APSS or APMS) before putting the transport into PAUSE.

The level-control and metering ensemble also pleased us. The controls for both mike and line have separate, friction-clutched elements for the two channels. (If you want single-mike mono recordings, use the left input; it will feed both channels if no mike is connected to the right input—a useful feature for amateurs. The OUTPUT adjusts both the source feed-through and the playback level



The clock/timer can be set to trigger either or both sets of AC outlets, controlled by switches at left, and can be programmed with up to forty-two different commands. Stopwatch mode (shown here as it might appear at end of tape countdown or at beginning of a C-120) can be synced to deck, so that it operates only in play mode, or used independently. Note musical symbol, which signifies that switch activates beeper to confirm whenever your command has been accepted by timer logic; if there is no beep, you have done something wrong.



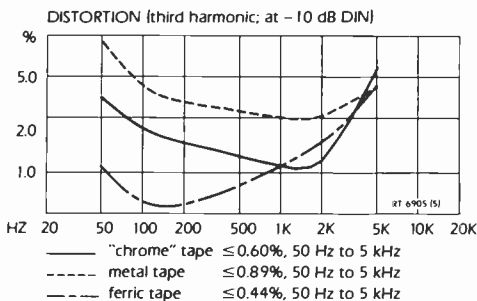
Tape-motion counter logic has separate microprocessor and programming keyboard on transport. Again, note correct-instruction switch.

without altering the metering—again, our idea of the best configuration for amateur purposes. The metering has three modes: instantaneous peak, short-duration peak hold, and indefinite peak hold. The short-duration (AUTO RESET) mode hangs onto the maxima long enough for you to get a positive reading, though the actual time varies (between 3/4 and 2 1/2 seconds) in our test sample according to no discernible pattern. Without AUTO RESET, the PEAK HOLD had not faltered after a half-hour of observation. The display itself is so fast-acting that we're surprised at its conservative referencing, to a zero 3 dB below DIN's, and therefore its lavish headroom. There are indicator segments for +1, +2, +3, +5, and +8 dB. Below its zero calibration, the display also gives adequate differentiation, though it is coarser than implied by its multiple fine lines, which light in groups. And we would have preferred a scale extending beyond -20, where Optonica's bar graphs, like many others, give up.

The tape-matching system, above all aspects of the design, illustrates that the staggering complexity is the result of careful thought, rather than microprocessor-happy prodigality. On the front panel are a recording calibration switch (SENSITIVITY/OFF/BIAS) and a dual control: a screwdriver knob for sensitivity and a knurled outer sleeve for bias. The sensitivity adjustment supplies a midrange tone at meter 0 dB whose playback level must be trimmed to match; a high-frequency tone is used similarly to trim bias. The adjustment range of both is relatively restricted, and their settings affect all tape-selector settings ("normal," ferrichrome, chrome, and metal). The right side panel, however, bears another series of controls: bias for each tape-selector position and sensitivity for each channel of each tape. The manual tells you to set the side-panel controls for your favorite formulation in each category. From then on, the front controls are used simply to trim for minor differences between tape samples—vastly simplifying both the visible controls and the routine adjustment and also preventing gross misadjustment if you forget to retrim when changing tape type. The more we use this arrangement, the more respect we have for it. (Perhaps the most astonishing thing about it is that Optonica didn't employ yet another microprocessor function to do the job, though we may be anticipating an unannounced model in saying so.)

The comprehensive manual, admirably, spells out what tapes the company had in mind in making its factory adjustments: Maxell UD (or Sharp's own and apparently identical branded product) for the ferric, Sony ferrichrome, Maxell UDXL-II "chrome," and TDK MA-R metal. Diversified Science Laboratories used the two Maxells and the TDK for its test data, with satisfactory but not spectacular results. In our sample, we found the front-panel tape-adjustment detents already dead on for the test tapes, so the results represent performance both straight out of the box and after the "tweaking" that the manual calls for. The distortion curves—showing, as is our practice, the third harmonic only—are overgenerous in this case. In tape equipment, the third harmonic normally dominates, often to the exclusion of any other; the second harmonic actually was higher than the third in some of the Optonica measurements. Since we have no documentation of second harmonic distortion in past reports, we felt it unfair to include it here; but had we measured THD instead, the values might have averaged roughly twice the very low percentages shown in the curves and therefore have been closer to those of a typical cassette deck. In sum, and considering the data overall, audio performance is adequate or better, but not what makes this deck special.

In practice, we were able to get very satisfactory tapes from it. With a wide variety of formulations, the monitoring feature supplies aural confirmation of



ERASURE (333 Hz; re DIN 0 dB)
 "chrome" tape 78 dB
 metal tape 72 1/4 dB

CHANNEL SEPARATION (at 333 Hz) 51 1/4 dB

SPEED ACCURACY 0.85% fast at 105, 120, and 127 VAC

WOW & FLUTTER (ANSI/IEEC weighted peak)

	average	maximum
playback	±0.06%	±0.09%
record/play	±0.08%	±0.10%

SENSITIVITY (re DIN 0 dB; at 333 Hz)
 line input 67 mV
 mike input 0.27 mV

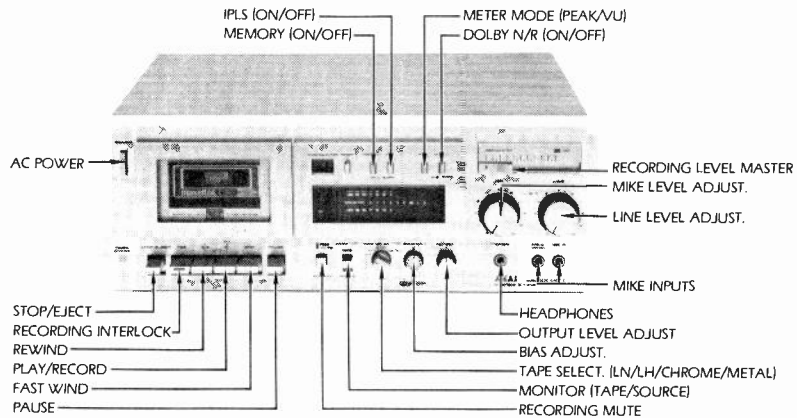
MIKE INPUT OVERLOAD (clipping) 1 1/2 mV

OUTPUT (from DIN 0 dB) 1.2 V

good tape matching when the adjustment instructions are followed. Particularly with the ferrics, audible performance generally rivals what we can get from any deck we've worked with. No other model has had all the ancillaries of the RT-6905, of course, but considering both its high purchase price and the extra performance edge that can be had elsewhere, the ancillaries do not come cheap. How cost-effective they are depends entirely on the needs of the user, and we can imagine legitimate reactions to them ranging from delight to disparagement. Frankly, we tended more toward the former the longer we used these features, discovering one capability after another that simply cannot be managed by any other deck that has passed through our testing procedure.

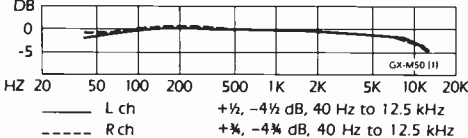
Circle 133 on Page 95

Akai's Low-Priced Metal Deck

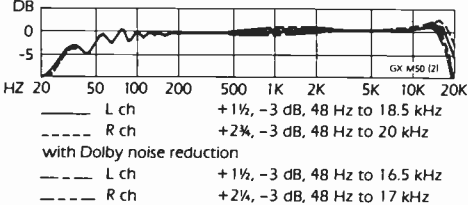


Akai GX-M50 cassette deck

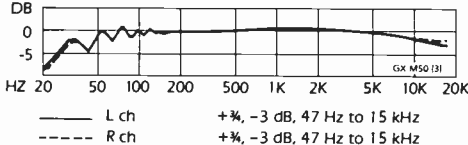
PLAYBACK RESPONSE (TDK test tape; -20 dB, DIN)



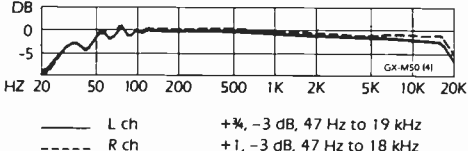
RECORD/PLAY RESPONSE, "CHROME" TAPE (-20 dB,)



RECORD/PLAY RESPONSE, METAL TAPE (-20 dB)



RECORD/PLAY RESPONSE, FERRIC TAPE (-20 dB)

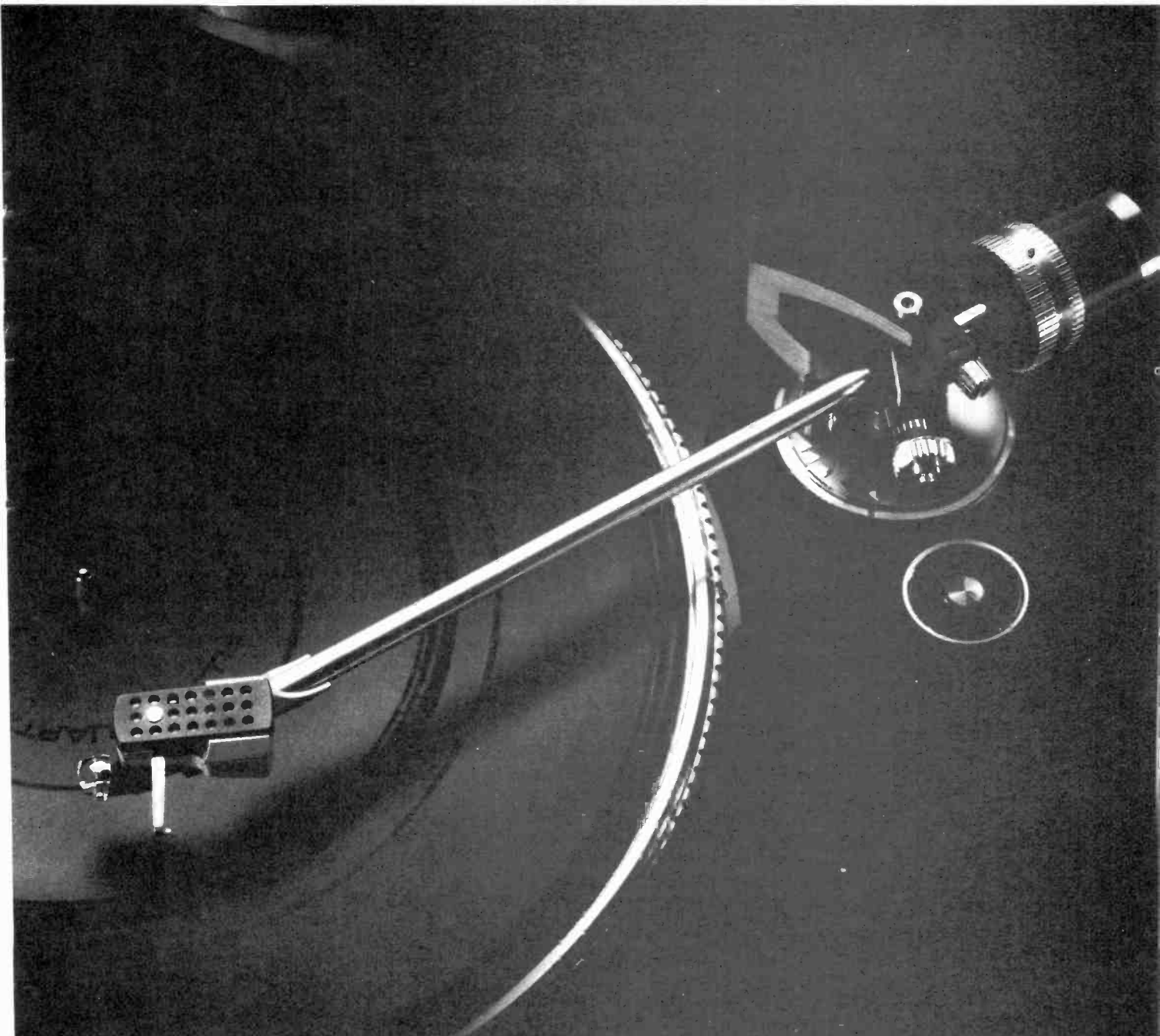


Akai Model GX-M50 cassette deck, in metal case with wood-grain vinyl finish. Dimensions: 17¼ by 6 inches (front panel), 10¼ inches deep plus clearance for controls and connections. Price: \$375. Warranty: "limited," one year parts and labor; seventeen years on tape heads, parts only. Manufacturer: Akai Electric Co., Ltd., Japan; U.S. distributor: Akai America, Ltd., 2139 E. Del Amo Blvd., Compton, Calif. 90220.

Akai's GX-M50 cassette deck has a special significance as the lowest-priced metal-ready deck we've yet tested. It's obvious that if metal tape were limited to use by recordists willing to spend at least \$700 for a metal-capable deck, it would quickly disappear from the consumer market. Large-scale acceptance of metal tape will depend on how successful manufacturers are in engineering popularly priced decks capable of extracting its inherent performance potential. Considered in this light, the GX-M50 bodes well for the future. Even if you dismiss its metal capability as a matter of faddism, the deck has a lot to offer.

A three-head front loader, the GX-M50 is designed to allow the recordist user a degree of creative flexibility. A separate playback element in the head housing and the double-process Dolby circuitry permit source/tape comparison during recording. You can mix via separate mike and line level controls; use of a slide control (labeled REC MASTER) for fade-outs and fade-ins does not disturb the mike or line settings. The fluorescent bar graph display is calibrated from -20 to +8 dB—in single dB steps in the important region from -7 to +5—and is switchable to show either averaged ("VU") or peak recording levels. Data from Diversified Science Laboratories show the metering system to be highly accurate and quick-acting. The 0 dB of the peak mode corresponds exactly to DIN 0, and that of the averaging mode to -5 dB DIN to supply the extra headroom required for sharp transients by the VU mode's averaging action. Indeed, this is precisely why we prefer peak-reading devices; habit seems the only reason for retaining the sluggishness of the once-standard meters.

A bias fine-adjust knob accompanies the four tape-type presets, but to shave a little off the final cost of the unit Akai omits a test tone oscillator. Instead, the owner's manual suggests that adjustments be made with FM interstation noise, tuning by ear for best possible replication—a reasonably practical and cost-effective method. It should also be noted that the range of bias currents afforded by the fine-tuning control is quite limited, and rightly so for the amateur recordist. Even when you adjust clumsily or you forget to readjust the control for a recording on a



The 731Q is the finest turntable Dual has ever made.

There is always a special attitude at Dual about the turntable that is to represent the most advanced thinking and accomplishments of Dual's designers and engineers.

The materials, the care in manufacturing, assembly and quality control must exemplify all that has made Dual precision and reliability so highly regarded throughout the world.

And in every measure of performance, this model must set the standard by which other fine turntables are judged. Even more, it must make a significant contribution to the art of record playback.

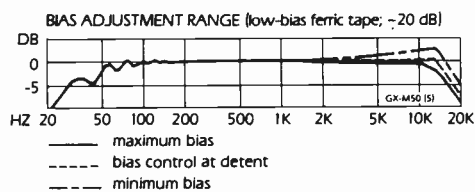
This year, the quartz PLL direct drive 731Q, with its ultra-low-mass (ULM) tonearm and cartridge system, expresses our attitude perfectly.

If your other components and your record collection warrant consideration of such a turntable, we invite you to visit your franchised Dual dealer. And if you have a record that is warped to marginal playability, but too valuable to discard, bring it with you.

That's all you will need to share our attitude and sense of pride about the Dual 731Q.

For the complete ULM story, please write directly to United Audio, 120 So. Columbus Ave., Dept. Q, Mt. Vernon, New York 10553.

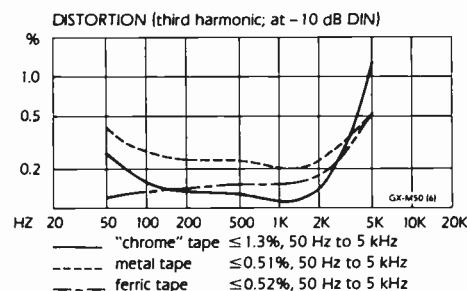
Dual



S/N RATIO (re DIN 0 dB; A-weighted)			
	"chrome"	metal	ferric
playback without noise reduction	60 dB	60 dB	58½ dB
Dolby playback	68½ dB	68 dB	66% dB
record/play without noise reduction	56 dB	57 dB	54½ dB
Dolby record/play	63% dB	65 dB	61½ dB

METER READING FOR DIN 0 dB	
peak mode	0 dB
VU mode	+5 dB

METER READING FOR 3% DISTORTION (at 333 Hz)		
	peak mode	VU mode
with all tested tapes	+3 db	> +8 dB



ERASURE (333 Hz; re DIN 0 dB)	
"chrome" or metal tape	> 72 dB

CHANNEL SEPARATION (at 333 Hz)	
	34% dB

SPEED ACCURACY	
	0.8% fast at 105, 120, and 127 VAC

WOW & FLUTTER (ANSI/IEEE weighted peak)		
	average	maximum
playback	± 0.06%	± 0.08%
record/play	± 0.05%	± 0.07%

SENSITIVITY (re DIN 0 dB; 333 Hz)	
line input	155 mV
mike input	0.52 mV

MIKE INPUT OVERLOAD (clipping)	
	24 mV

OUTPUT (from DIN 0 dB)	
	0.72 V

different tape type, the final product should still be reasonably acceptable. Another cost-cutting omission was any separate switch for the multiplex filter. Frankly, we prefer to leave the filter on in many moderate-priced decks to help control intermodulation "birdies," so defeatability is no special virtue here.

In bench tests we used three of Akai's recommended "reference" tapes—Maxell UD ferric, TDK SA ferricobalt ("chrome"), and TDK MA-R metal. Akai's own low-noise ferric is its reference tape for the LN position. We substituted Maxell LN with very fine results, as you can see in the graph for the bias adjustment range. The test results with other tapes, notably the metal ones, suggest that a touchup of the bias (and/or of a sensitivity adjustment, if there were one) might have improved the numbers. However, without an objective bias adjustment technique (adjusting by ear is hardly "objective"), the lab measured frequency response at the detent of the bias control. In fact, the MA-R does deliver flatter response with the bias set at minimum. (Remember that overbiasing causes a drooping high end due to self-erasure, while underbiasing introduces a high-end peak.)

As with other metal-ready decks we've tested, the metal tape affords a considerable increase in high-frequency, high-level recording capability. Compared with SA, it delivers improvements at both 0 and -10 dB. And, since the noise levels of the two tapes are almost equal, MA-R's extra high-frequency headroom translates into an improvement in high-frequency dynamic range. Also important in the consideration of a deck's ability to cope with metal tape is the degree to which it will erase recorded sections; at 72 dB, the GX-M50 does the job excellently. Overall, the data are good, and we were particularly impressed by the deck's ability to get the most out of a modest-cost quality formulation (LN) while still offering good performance with the premium ferrics, thanks to the separate ferric switch positions.

Lab measurements show that the transport runs a trifle fast, though we consider anything within 1% acceptable for home use. More important, the speed remains unaffected by changes in the voltage. Short-term speed stability, as measured in the flutter tests, is excellent.

In hands-on testing, we thoroughly enjoyed the GX-M50. The MASTER fader seems a good idea for at-home recordings, where a little professional finesse goes a long way to enhance playback enjoyment. We also judged Akai's Instant Program Location System, which allows the transport to go from either of the fast-wind modes directly to playback when a 5-second unrecorded interval is detected, to be a surprisingly sophisticated feature for a deck at this price. It is not foolproof—no device of its sort is, in our experience—especially in classical music or speech (where it is less likely to be used), but we did find it useful. We experienced some difficulty in matching source and tape levels during monitoring, which could indicate a degree of recording compression or could (like the evidence of Dolby mistracking in the response curves) be the result of inexact sensitivity adjustment for the tapes we used. Be that as it may, our copies of discs were reasonable likenesses of the originals.

The GX-M50 is an eminently likable deck. It's fun to use and compares favorably in performance to decks costing considerably more. If you're seeking metal capability in a midpriced deck but also want excellent performance with a moderate-priced tape like Maxell LN, the Akai GX-M50 is a must-see model.

A No-Frills Turntable from Technics

Technics SL-B1 single-play manual turntable, with base and dust cover. Dimensions: 17 by 14 inches (top plate), 5 inches high with dust cover closed; with cover open, 15 inches clearance required at top and 3 inches at back. Price: \$100. Warranty: "limited," two years parts and labor. Manufacturer: Matsushita Electric, Ltd., Japan; U.S. distributor: Matsushita Electric Corp. of America, 1 Panasonic Way, Secaucus, N.J. 07094.

The SL-B1, a single-play, belt-drive turntable from a company that built its reputation in this country on its line of excellent direct-drive models, is a sort of technological hybrid. Circuitry developed by Technics to monitor speed and drive a correcting servo, for the purpose of ensuring the rotational accuracy of its direct-drive turntables, is used here to regulate the speed of the DC motor. But this is no computer-controlled miracle machine; rather, it is a completely manual unit, spartan

The Universal Expander

Dynamic range limiting during the production of records (and of FM broadcasts) has long been a source of irritation for music lovers. As playback equipment improves, the limitations of most program material become more and more obvious. The vast majority of records are produced with the lowest common denominator in mind—a system that is restricted in its ability to recreate natural dynamic range.

With the introduction of the Dynamic Expander, MXR's Consumer Products Group has achieved its goal of providing a signal expansion technique for all types of music compatible with the finest audiophile equipment available.

Enter the typical dynamic range expander: While dynamics are restored, a series of disturbing side effects becomes apparent. Because typical expanders cannot distinguish scratches, ticks, pops, and rumble from music, these noises trigger the expansion circuitry. More importantly, because most existing expanders have a fixed value release time, they seem to 'pump' with some music, and hiss or 'breathe' with other kinds of music.

In most cases these drawbacks have outweighed the advantages of expansion for the critical listener.

Enter MXR's Dynamic Expander: a linear signal processor with up to 8 dB upward expansion (restoring musical peaks) and as much as 21 dB downward expansion (reducing noise). MXR has solved the problem of 'breathing and pumping' by providing a variable release-time control that tailors the response characteristics of the expander to the program material.

A sophisticated level detection circuit discriminates between music and unwanted information such as

rumble and scratches. To monitor gain changes, a unique LED display accurately indicates the expander's effect on the signal whether in or out of the circuit. A level control adjusts the detector's sensitivity to optimize the expansion for varying signal levels, and additional controls provide in/out bypass switching and versatile taping facilities.

The MXR Dynamic Expander preserves the bandwidth, stereo image, and spectral balance of the original signal even after processing. Dynamic range expansion that is musically natural will restore the excitement and nuance that makes live music so emotionally satisfying, and will let you rediscover your cherished recordings.

Harnessing innovative technology and sophisticated production techniques, MXR continues its commitment to the music lover.

The expanding universe of signal-enhancing equipment from MXR's Consumer Products Group gives demanding music listeners maximum performance from their playback systems regardless of room acoustics or program deficiencies. The MXR Comander allows you to maintain the dynamic range of source material through open reel or cassette tape decks. Environmental equalization is easily achieved with your choice of stereo 10 band (full octave), stereo 15 band (two-third octave) or professional one-third octave equalizers all built to the exacting performance specs for which MXR is famous. See your MXR dealer.

MXR Innovations, Inc., 247 N. Goodman Street,
Rochester, New York 14607, (716) 442-5320



**Consumer
Products Group**



Technics SL-B1 turntable

SPEED ACCURACY (at 33 or 45 rpm)
no measurable error at 105, 120, or 127 VAC

SPEED ADJUSTMENT RANGE
at 33 +7.6 to -3.3%
at 45 +10.4 to -4.4%

WOW & FLUTTER (ANSI/IEEC weighted peak)
±0.05% average; ±0.10% max. instantaneous

TOTAL AUDIBLE RUMBLE (ARLL) -63 dB

TO NEARM RESONANCE & DAMPING
vertical 8.0 Hz; 2¼-dB rise
lateral 5.4 Hz; 3¼-dB rise

ARM FRICTION
lateral 75 mg
vertical negligible

VTF-GAUGE ACCURACY
no measurable error below 2 grams;
reads 0.1 gram high at 2 grams & above

ANTISKATING BIAS FACTOR 0.1



in both design and function. Yet tests at CBS Technology Center demonstrate that Technics' least expensive turntable can deliver performance rivaling many costly direct-drive models.

Thanks to its servo, Technics was able to include electronic speed switching and variable pitch control. Mechanical belt shifters and the like, with their own potential for failure, are therefore avoided, and a simple movement of the two-position speed selector accomplishes the task quite handily. Pitch is varied via a knurled wheel whose rotation results in a maximum variation from a quarter-tone flat to a half-tone sharp at 33 rpm and somewhat more at 45. There is a strobe system, but Technics says the servo may be more accurate than the AC line frequency that drives the strobe lamp, making any minor straying of the strobe pattern more a question of the power company's accuracy than the turntable's. The only other controls are an on/off bar molded into the front panel, a viscous-damped cueing lever, and vertical tracking force and antiskating adjustments. In initial setup you also must mount the belt onto the platter and capstan. In the SL-B1, this is quite simple and requires no bent paper clips or such.

Bench tests disclose that both speeds are exact and unvarying at each line voltage. The rumble measurement puts the unit into the good-to-excellent category in this important parameter. And flutter figures are comparable to those of other top-notch turntables. There is a measurable, if tiny, amount of lateral tonearm friction, but no friction was detected in the vertical plane. The tonearm resonance with our "standard" Shure V-15 Type III pickup falls at frequencies that are somewhat lower than ideal (a less compliant pickup would raise the resonance point and, probably, be more in keeping with the budget price) but is quite well damped.

Tracking force adjustments are accurate enough for the most fastidious user. The antiskating mechanism exerts its bias force with reasonable linearity vis-à-vis the calibrations. The bias factor of 0.1 means that the "one gram" calibration delivers 0.1 gram of bias and is a representative value among today's turntables. (Bias factor will be a standard feature of future reports for comparison purposes.)

We could find no fault with the SL-B1 in hands-on operation. The cueing control is silky smooth, with no drift on the descent. Our informal table-thumping tests showed an above-average immunity from surface-borne feedback. As a matter of fact, we are hard pressed to think of another single-play turntable in this price range capable of better performance. For the audio beginner who must stay within a tight budget or for the serious music listener who mistrusts more complex gear, this design would be a very fine choice indeed.

Circle 132 on Page 95

A "Classic" from ESS

ESS Tempest Classic loudspeaker

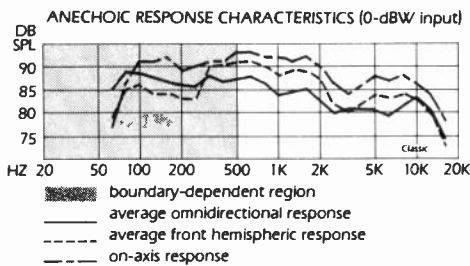
APPROX. BRILLIANCE CONTROL RANGE (re "flat")
+1, -3 dB, 7 to 15 kHz

APPROX. MIDRANGE PRESENCE CONTROL RANGE
(re "flat") +3 dB above 2.5 kHz; see text

ESS Model Tempest Classic loudspeaker system, in walnut-veneer enclosure. Dimensions: 15½ by 33¼ inches (front), 15½ inches deep. Price: \$435. Warranty: "limited," three years parts and labor. Manufacturer: ESS, Inc., 9613 Oates Dr., Sacramento, Calif. 95827.

Speaker systems incorporating the Heil air-motion transformer (an accordion-pleated diaphragm that "squeezes" air and thus sound from its folds) have generally met with favorable reviews here (June 1973 and January 1975). This latest effort, the Tempest Classic, is no exception.

The Heil driver sits atop a truncated-pyramid enclosure that houses a front-firing 10-inch woofer and a rear-mounted passive radiator. The continuously



AVERAGE OMNIDIRECTIONAL OUTPUT

(250 Hz to 6 kHz)

84½ dB SPL for 0 dBW (1 watt) input

CONTINUOUS ON-AXIS OUTPUT (at 300 Hz)

111 dB SPL for 20 dBW (100 watts) input

PULSED OUTPUT (at 300 Hz)

126 dB SPL for 35 dBW (3,000 watts) peak

"NOMINAL" IMPEDANCE

4.3 ohms

adjustable BRILLIANCE and MIDRANGE PRESENCE controls, which require a coin to rotate them through their maximum-optimum-minimum range, are mounted flush with the top of the cabinet. The nubby knit cap on the enclosure makes an attractive-looking system, though it cannot support anything heavier than a magazine.

In tests at CBS Technology Center, the speaker easily negotiated the 20-dBW (100-watt) continuous-tone input test without exceeding distortion limits, for a sound pressure level of 111 dB. In pulse tests, it accepted peaks 15 dB higher before the onset of unacceptable distortion, for a truly deafening sound pressure level of 126 dB. Efficiency is on the high side and the impedance does not fluctuate widely with frequency, making the Tempest an easy load for the amplifier to drive in these respects. But the overall low lie of the impedance might cause some amps to balk when asked to power two pairs.

As in our previous tests of systems incorporating the Heil tweeter, we were impressed with the clarity of the mid- to high-frequency range. Some of the credit for this can be attributed to the driver, which generates very low distortion. The harsh-sounding third harmonic, at both loud (100 dB SPL) and moderate listening levels, averages well under ½%. And the less intrusive second harmonic, though a bit more elevated at loud listening levels, remains quite low at moderate levels. ESS claims to have redesigned the Heil driver with thinner, lighter diaphragm membranes, and some substantiation of an improved transient response can be seen in the speakers' ability to reproduce 3-kHz tone pulses in the lab.

The CBS curves are shown, as always, with the controls at their recommended settings. The controls prove somewhat problematic if you choose to alter their effect. Only the midrange control exerts any appreciable effect (and only from around 2 to 18 kHz—hardly the area we commonly term midrange). With it set at its maximum, there is boost of some 6 dB at around 12 kHz; at its minimum setting, response vanishes altogether above about 3 kHz. We preferred the controls at OPTIMUM and would use conventional tone controls or equalizers if we wanted any additional contouring.

In our listening tests, we were quite pleased with the Classics. Placing them about two feet away from a wall makes good use of the bipolar (front and back) radiating pattern of the Heil driver, giving a spacious stereo image with an excellent sense of depth and dimension. We did note some thumpiness in the low end, and crispness and articulation in deep bass notes suffer somewhat as a result. But, considered as a total system, the Tempest Classic can put out lots of sound and is suitable for a wide variety of musical genres, from the symphonic to Donna Summer. Its sonic qualities, like its appearance, resemble those of ESS's first Heil speakers—which is to say that its open stereo imaging and projection of detail make it a welcome addition to the line.

Rugged Pickup from Shure



Shure SC-39ED fixed-coil professional phono pickup, with nude-mounted elliptical diamond stylus. Price: \$100; SS-39ED replacement stylus, \$56. Warranty: "limited," one year parts and labor. Manufacturer: Shure Brothers, Inc., 222 Hartrey Ave., Evanston, Ill. 60204.

When a phono pickup designed for home use is pressed into professional applications (in radio stations, discos, and such), the probability for failure increases dramatically. Most home pickups are not designed to withstand use (and abuse) by a DJ or broadcast engineer; slip cueing and backcueing tend to bend the delicate stylus shank, and plunking a tonearm manually onto a heavily modulated groove is no picnic for a stylus designed for viscous-damped descent. Shure addresses these problems with the SC-39 series of professional phono cartridges. Though we don't normally evaluate pro audio products, the SC-39ED incorporates several engineering innovations that make it altogether appropriate for the home—especially where record-playing equipment is handled with kids' fingers rather than kid gloves.

Of the three pickups in the series, the ED is designed for the lowest vertical tracking forces—¾ to 1½ grams—and is equipped with a nude-mounted elliptical diamond tip. Each of the SC-39 models incorporates four types of stylus protection. An internal support wire and elastomer bearing allow for backcueing without groove jumping, and a telescoping stylus shank gives strength to the assembly without adding weight. According to Shure, the most common form of damage in the studio occurs when the stylus is pushed sideways and bent; to prevent this, a lateral deflection assembly withdraws the entire stylus shank and tip

Yamaha decks the competition.



TC-720. The 3-head deck for the creative recordingist.

If you like to get involved with your tape recording, this is the deck for you. The bias rotary control and built-in pink noise generator allow you to fine-adjust the deck's high frequency response to best suit the particular tape you are using. The REC LEVEL ADJ controls and REC CAL switch allow you to further adjust the recording sensitivity for proper Dolby* NR tracking, resulting in very high signal-to-noise ratio and exceptionally clean sound. The TC-720 also has a unique built-in "real time" echo facility. You can use this to add new dimensions of studio realism to tapes

recorded for playback in both your car and your home. All these front panel features (and more) are backed by reliable, advanced electronics. The Closed-Loop Dual Capstan Drive keeps the tape at an ideal tension for smooth head contact. An advanced Frequency Generator servomotor transports the tape at a constant, accurate speed with very high torque. High-performance, low-noise amplifying circuits are used for the mic and line inputs. All this superior performance is wrapped in a beautiful simulated ebony cabinet.

*Dolby is a trade mark of Dolby Laboratories.



TC-920B. Matching the industry's finest separates in appearance as well as performance.

For unparalleled performance, the TC-920B starts with the heads. Yamaha's unique Pure Plasma Process results in Sendust heads of unparalleled purity, resulting in high permeability of the core for better sensitivity and playback efficiency, excellent S/N ratio, and greatly reduced tape/head wear.

The 920B has a vast array of audiophile features. Like the unique FOCUS switch. In the "SOFT" position, you will attain a more relaxing, mellow quality to the overall listening effect. In the "SHARP" position, you get a more crisply punctuated high frequency sound quality. There's also a fine bias adjust control to match the deck's characteristics to those of the actual tape in use.

A switchable subsonic filter cuts out subsonic interference due to warped records, line hum, etc., and also safeguards your speakers during playback without altering

sound quality. The bar-graph peak level meters have a fast/slow switch to adjust the recovery time of the meters for maximum control over the material you are recording.

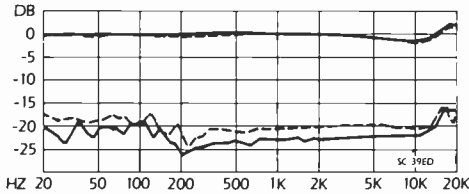
The 920B's sleek black cabinetry enhances the high-performance look of this studio quality deck. For maximum convenience an ingenious hinged panel conceals the less often used controls. Everything was done with striking esthetics and total performance in mind.

The TC-720 and the TC-920B will bring the competition to its knees, and will bring you to your feet, cheering. For the full story, visit your local Yamaha Audio Specialty Dealer listed in the Yellow Pages. Or write us: Yamaha, Audio Division, P.O. Box 6600, Buena Park, CA 90622.

From Yamaha, naturally.

Shure SC-39ED phono cartridge

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



Frequency response
 — L ch +2¼, -1½ dB, 20 Hz to 20 kHz
 - - - R ch +1½, -1¾ dB, 20 Hz to 20 kHz
 Channel separation
 ≥ 20 dB, 190 Hz to 3 kHz;
 > 14 dB, 20 Hz to 20 kHz

SENSITIVITY (at 1 kHz) 1.13 mV/cm/sec

CHANNEL BALANCE (at 1 kHz) ± ¼ dB

VERTICAL TRACKING ANGLE 34°

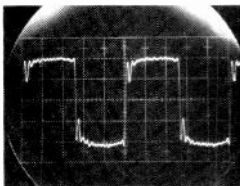
LOW-FREQUENCY RESONANCE (in SME 3009)
 vertical 8.2 Hz; 3¼-dB rise
 lateral 7.0 Hz; 4¾-dB rise

MAXIMUM TRACKING LEVEL (re RIAA 0 VU; 1.0 gram)
 at 300 Hz > +15 dB
 at 1 kHz +12 dB

WEIGHT 6.25 grams

TIP DIMENSIONS
 tip radii 5.2 by 14.7 micrometers
 scanning radii 7.3 and 8.4 micrometers

SQUARE-WAVE RESPONSE
 (1 kHz)



into the stylus housing before it can be bent. A flip-down, lever-operated stylus guard protects the tip when the cartridge is not in use; a V-shaped cutout on the control lever, visible when the guard is up, provides a precise aid for cueing. The stylus tip itself, claims Shure, is polished for minimum asperity and therefore less noise buildup in the grooves of often-played 45s and delicate custom-cut acetates.

How effective this rugged construction will prove in actual day-to-day use, we cannot say with much certainty. In the pickup-destroying maneuvers we tried, the SC-39's defensive footwork seemed pretty fancy, but we have no objective data to help us compare its behavior in this respect with that of other pickups we've tested. The stylus guard assembly is nice indeed, and the V-cut lever does aid in cueing.

Also worth a line of praise is Shure's mounting system. Instead of the usual tiny mounting nuts, the hardware includes a thin mounting bar with two threaded holes. The bar slips through a channel in the top of the cartridge and is held firmly in place during the mounting procedure. This so simplifies what is often a tedious, time-consuming process that we hope other manufacturers adopt similar means.

In tests at CBS Technology Center, the SC-39ED acquitted itself nicely. It negotiated the sweep-tone "torture" test with a mere 0.6 gram of vertical tracking force. With a 1-gram VTF, the cartridge maintains good separation and reasonably flat frequency response. The square-wave photo shows excellent results. Low-frequency resonance falls a hair below the 10-Hz ideal, suggesting that a less massive arm than our "standard" SME would be a good choice. In any event, the low mass of the pickup itself helps minimize system mass.

Vertical tracking angle, obtained by using the STR-112 test record and the vertical tracking meter, is within the usual range of measurements made by CBS with this technique, which is to say that it is notably higher than the 20 degrees employed in modern cutting heads. Channels are less balanced than we are accustomed to seeing in Shure pickups. Microscopic examination of the tip shows polish to be about par among the fixed-coil models we have tested, though not as fine as CBS has encountered in some more expensive moving-coil models.

In the listening room, the pickup's ability to track badly warped records is excellent—comparable to that of the V-15 series. A/B comparisons between it and an excellent home pickup disclose it as a fine performer. Instrumental timbres emerge in full detail. Voices appear open and full, and bass notes are delivered with solidity and impact. On the basis of the response curves, we wondered how the high end, in particular, would sound, and the Shure did reproduce slightly more surface noise than the models against which we tested it.

Considered as professional products, the SC-39 series is sure to win many admirers. Our concern, of course, is with home users. For those whose living situations and habits threaten frequent pickup damage, we heartily recommend this rugged, yet sensitive addition to the Shure line.

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Manufacturers' Comment

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

Crown Straight Line One preamp, November 1979. Your review expresses some doubt about the 33-Hz cutoff frequency on the [switchable] low filter. We argued with each other on this point at some length. An 18-Hz filter at 18 dB per octave would have left most of another octave avail-

able without attenuation, but it would have provided only about 13 dB of attenuation at 10–12 Hz. Warp and resonance difficulties may, in fact, require as much as 20 dB of attenuation to avoid overload. By placing the filter at 33 Hz, an additional 15 dB of attenuation is provided in this region, and serious problems can be effectively filtered out. A carefully designed system ordinarily will not evidence significant subaudio problems; the filter is reserved for exceptional occasions when such problems do threaten the quality of the music. Thus 33 Hz was chosen.

A further note is in order to relate the separate phono module to the low phono capacitance described in the re-

view. An important element of the load imposed on any cartridge is the capacitance of the cabling between the tonearm and the phono input. By making this cabling as short as possible, the user can take another step in controlling the load presented to the cartridge. As stated, the shorter cabling as well as the unique input configuration of the phono circuit reduces RF and other interference problems to a very low level.

Dave McLaughlin
 Crown International

HF replies: Mr. McLaughlin is, perhaps, subtly chiding us for a typographic error in our report. Its reference to "IF" should, of course, have read "RF."

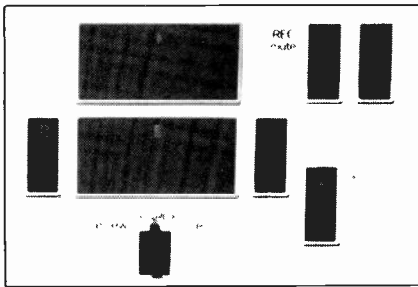
THE DIGITAL READOUTS ON THE NEW SANSUI RECEIVERS ARE NOT WHAT COUNT.



Zen and the Art of Front-Panel Design

Why can't the subtlety and care devoted to circuitry be extended to the knobs and switches that make it work?

by Robert Long



Ingenuity (and, says the author, possible Zen influence) of Lux controls is characterized in cassette deck by the way the red RECORD interlock breaks rank with the rest; note how STOP is centrally located between PLAY (which, as the other most-used control, shares extra size with STOP), the two fast-wind controls, and the SEARCH (CUE/REVIEW) lever—which, as a “special” control, has a special shape. Two end-of-selection buttons, REC MUTE and PAUSE, share a place apart at upper right.

A European designer once told me a story to illustrate what, in his opinion, is wrong with Japanese cosmetics. On a tour of a Japanese television-set plant he had been shown the r&d labs in which the circuitry was developed. Then he was taken to the “design studios.” In one, the designer was at work on cosmetics for the American market; on shelves facing him were sample sets from Zenith, RCA, and other successful U.S. brands. In the European studio, Grundig, Telefunken, and similar brands were standing by as models. “How can you be better than second-best,” the European wondered out loud, “when you’re copying?” Indeed!

Few high fidelity products, from any part of the world, have really fine cosmetics, and the basic problem is inherent right in that word “cosmetics”—our habit of isolating the visible elements of design as though they have meaning when considered in vacuo. They don’t. Audio-product design consists of three intimately related elements. First, there is the electronic and mechanical design: the guts on which satisfactory audio performance stands or falls. Second is styling: the “prettiness” that may influence sales but contributes nothing to performance and, in so “technical” a product, relatively little to owner satisfaction. Finally there is human engineering: the way the product relates both to the user and to the stereo system in which it is used, so that the intended applications can be achieved efficiently. This is the crux of the matter since good electrical and mechanical design is much easier to come by, while inept human engineering can make its virtues inaccessible. Yet the last two considerations generally get lumped together, ignoring the obligatory functional interrelation between both and internal design.

The failure to distinguish between styling and human engineering (abetted, no doubt, by the low cost of pushbuttons) has led to the ordering of long rows of on/off switches in a way that often reminds me of W. S. Gilbert’s line about “. . . our warriors, in serried ranks assembled. . . .” Their uniformity conveys nothing of their individuality of function. Worse, you often must peer elsewhere to discover whether the “out” position means loudness or volume, memory stop or play, 47- or 100-kilohm phono loading, or whatever. Getting your system to perform under these circumstances is like rousing your troops through an interpreter: Neither man nor circuit gets turned on by that sort of fumbling.

Some years ago, in the midst of an engineer’s discourse on transcendental meditation, I got to thinking that Zen archery might be the answer. Simply put, the Zen approach conceives the archer, the arrow, and the target to be one and the target therefore to be unmissable as long as the conception is whole. Are not the designer, the user, and the switch similarly one? And if the designer conceives fully the act of using the switch he is designing, will his design not make its correct use as inevitable as the aim of the Zen archer?

Japan is, of course, the land of Zen Buddhism. Where better to ask my question? But I didn’t get answers. Then on my last trip to Japan, I was the guest of Lux, whose way with knobs and buttons had always struck me as subtle and sensitive; its cassette decks, for example, employ an extraordinary differentiation of shape, size, color, and placement in the transport controls. Surely behind those faceplates stood a designer who would understand my question—one whose perceptions, if not conditioned by the Zen concept, at least parallel it. Susumu Uehara, an executive director of the company and its design manager, was responsible for the Lux look, I was told, so I arranged an interview.

The elegant room in which we met commands an impressive view of the mountains behind Osaka. Uehara, a quiet, self-possessed man who looks much younger than his sixty-one years, smiled rather shyly across a big square table. I launched into the question. The smile continued while it was interpreted. Uehara’s voice seemed almost a melody as he answered at some length; it was impossible not to assume serene wisdom in his words (though, fleetingly, I did wonder whether he might be saying, “You ask about front panels, Grasshopper . . .”). What I received from the interpreter was considerably more mundane: sound, sensitive thoughts on how the interests of the user must be served within the dictates of the product’s own requirements. No mention of Zen or archery, no arcane insights, no poetry.

Maybe that is as it must be. Maybe it is in realistic compromise and reconciliation between conflicting demands that good design lies. But I’m still convinced that most designers aim too low and pay more attention to the interests of the salesroom than to those of the user. The trick is to conceive the problem whole; if all the elements are one, the product will sell because it conveys the meaning of its design—because it is right on target. **HF**

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- FM Sensitivity: 10.8dBf (1.9uV IHF T-100)
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- FM Spurious Response Ratio: 70dB

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- FM Signal-to-Noise Ratio: 75dB
- FM Spurious Response Ratio: 70dB

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Sansui





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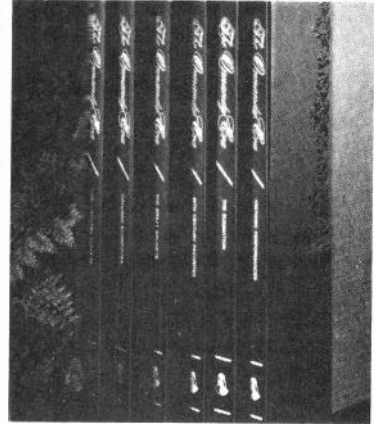


G-5700



G-6700

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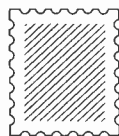
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Letters



Hail Columbia's McCarthy
I can't let David Rosenthal's excellent article "Cracking the Vaults at Columbia and RCA" [December 1979] go by without adding a few words of praise for Tina McCarthy from a different quarter. She and her staff at Columbia's Department of Archives and Consumer Relations have won the gratitude of many discographers in recent years because of their generous and prompt assistance in providing details on recording sessions. This is definitely not the case with most record companies. McCarthy and the management that supports her are to be congratulated for this attitude of respect for the value of American historical recordings.

Peter Grendysa
Words on Music, Ltd.
Caledonia, Wis.

Movie Music Reviews

Paul A. Snook's review of the recording of the film score for *Alien* [October 1979] attracted my attention for several reasons. I have seen the film and heard the record many times, and as a musician and teacher of criticism, I was interested in his critical approach.

I agree with Mr. Snook on almost every point. But apparently he did not see the film. If he had, he would have known that the music for its concluding sequences is not Jerry Goldsmith's, but the second movement of Howard Hanson's Symphony No. 2 (*Romantic*). I wonder if Goldsmith or someone else in the production chain made the decision to use a previous recording of the Hanson work. In any case, this album is not accurately titled the "film score."

Donald J. Shetler
Professor of Music Education
Eastman School of Music
Rochester, N.Y.

There are some serious errors in Paul Snook's review of John Williams' score for *Dracula* [November 1979]. Though it is true that the orchestra is not named elsewhere, it is identified in the jacket notes as the London Symphony Orchestra, not the London Philharmonic as printed. Furthermore, to the best of my knowledge at least, Williams' earlier scores were not performed at all with the National Philharmonic as the reviewer says, but were also done with the LSO.

Mr. Snook's statement that these orchestras do not "match in size" (I'll let the

"splendor" part of it go) is absurd, as all are full symphony orchestras and vary little as far as numbers of players go. One would have to be at an actual recording session to make such a statement. Then he calls the recording "top-heavy, lacking in the kind of warm and resonant acoustics Williams' music requires." Thus it makes the same LSO that recorded *Star Wars* seem smaller.

Whatever one thinks of the *Dracula* music, it is beautifully played and the London Symphony deserves that credit.

William Radford-Bennett
Glen Echo Heights, Md.

Mr. Snook replies: Professor Shetler is correct in deducing that I have not seen *Alien*. I was aware at the time I wrote the review that a decision had been made by the producers of the film (probably without Goldsmith's approval) to use the Hanson as "source music." But since the disc itself offers only Goldsmith's original music (much of which, I have it on good authority, was not even used in the film), I felt that any mention of the symphony would be confusing and irrelevant.

Regarding Mr. Radford-Bennett's complaint, perhaps "scope" would have been a better word than "size" in describing the aural effect of the orchestra's performance of *Dracula*. The term was not intended in a head-counting sense. Thus my characterization of the recording as "top-heavy" applied only to MCA's inadequate engineering (which is certainly inferior to the *Star Wars* and *Superman* recordings), not to the musical interpretation itself.

Mr. Radford-Bennett did catch me in one error: The LSO is indeed the orchestra that is referred to in the liner notes. My apologies.

I will not yield, however, on my judgment that the National Philharmonic under Charles Gerhardt and Goldsmith (or the Royal Philharmonic under Miklós Rózsa, for that matter) have given far more idiomatic and exciting readings of film music than the always polished but slightly bland LSO.

"Uncivilized" Prokofiev

Abram Chipman's review of the new DG recording of the Prokofiev *Scythian* and *Lt. Kije* Suites by Claudio Abbado and the Chicago Symphony [September] hit the nail on the head. The orchestral playing and technical sound are really beautiful, but the *Scythian* Suite is just too "civilized."

The reference to the exciting record-

ing by Hermann Scherchen certainly points out the essence of both works, but Mr. Chipman might have looked back even further to what was probably the first (domestic, anyway) recording of the *Scythian*: an old RCA 78 featuring the Chicago Symphony conducted by Désiré Defauw. My recollection is that it was the most savage performance I ever heard on records. I'm sure he didn't mention it because of its unavailability today, but I would be interested in having his reaction to this performance.

William S. Hayes
Tustin, Calif.

Mr. Chipman replies: I didn't mention Defauw, not on account of its unavailability (else why bother with Scherchen?), but because space just doesn't permit mention of every worthy recording of a piece. I too was introduced to the *Scythian* Suite by the Victor shellacs but don't recall that the performance was up to the subsequent versions I did cite, although it was a good one.

Did Brahms Arrange Brahms?

In his review of Eugene Moye's cello recital ["Recitals and Miscellany," September] Harris Goldsmith makes the flat assertion that it was not the composer, but Julius Klengel who adapted Brahms's First Violin Sonata, Op. 78, for cello and piano. The situation is not quite that simple. Cellists—if not critics—are grateful to Janos Starker for reviving interest in this work, and Starker is not alone in believing that the adaptation was made by the composer.

Some years ago I was asked by the International Music Company to translate a short article, by one Gottfried Marcus, about this sonata. IMC used it as a preface for its publication of the work, which was edited by Starker. According to Marcus, the title page of Simrock's 1897 edition, which served at least in part as the basis of the IMC edition, simply calls it an "edition for cello and piano" without the name of any transcriber. The listing of the sonata in Hoffmeister's authoritative *Handbook of Musical Literature* (Leipzig, 1900) mentions no arranger either, although dozens of other transcriptions of Brahms pieces do. There are at least three other references published in Germany and Austria before World War I that list this cello arrangement as an original work by the composer.

The omission from the Simrock edition becomes more intriguing in light of the fact that, on three occasions that we know of, Brahms wrote to Simrock specifically asking that he not be identified as arranger of certain works he had prepared for publication. While this is only circumstantial

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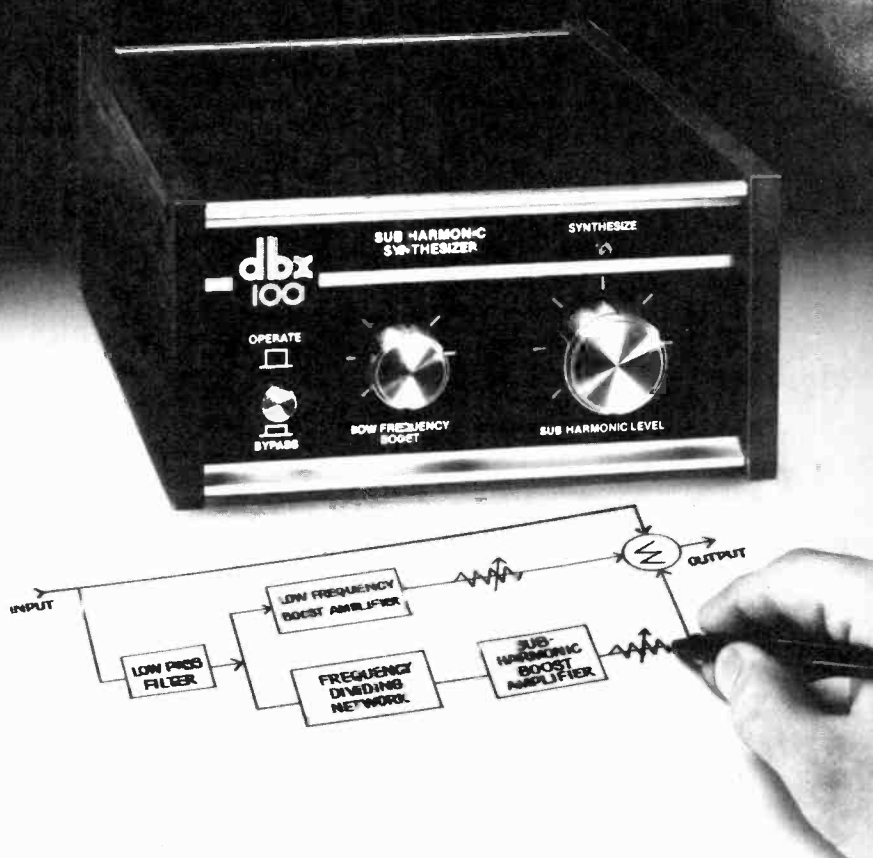
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evidence, I find it harder to reconcile Marcus' statement that there are about 200 alterations in the D major cello text when compared with the violin version of the sonata. Somehow it does not seem consonant with the character of a thoroughly trained German musician such as Klengel to play fast and loose with the music of a revered master, even though some of those alterations may have been dictated by the change in tonality and the change to a lower pitched instrument. (Incidentally, I have seen a reference crediting the editing of this work to Julius' brother, Paul. If a Klengel is responsible, I would opt for Paul, because he is definitely known to be responsible for an arrangement for violin and piano of Brahms's clarinet quintet.)

There is no reason for Mr. Goldsmith to dislike the cello version less if it was arranged by the master himself, but his "alarm" at the sonata's "increasingly frequent appearance" should be confined to aesthetic and not ethical grounds—at least until more evidence is in.

E. Lee Fairley
McLean, Va.

D'Indy Neglected?

With the completion of HF's annual listing of record releases planned for 1980 [October], it is apparent that the recording industry is still neglecting a deplorably undervalued work. I refer to Vincent d'Indy's Symphony No. 2, in B flat, Op. 57, which has not been available on records, to the best of my knowledge, since the version by Pierre Monteux and the San Francisco Symphony Orchestra back in the days of 78-rpm shellac discs. I have hoped for many years that some enterprising conductor would record it.

Morton Franklin
La Jolla, Calif.

"Baltimore Prayer"

In the closing paragraph of his fine article on Walter Legge [November 1979], John Culshaw helps to perpetuate a myth. The poem read at Legge's memorial service was not "found in Old St. Paul's Church, Baltimore, and dated 1692," but came from a book of poems by the American Max Ehrman (1872-1945) that was published in 1948. It is entitled *Desiderata*.

Wilbur McGill
Baltimore, Md.

Mr. McGill is correct. The so-called "Baltimore prayer" is almost universally misattributed. What dates from 1692 is St. Paul's Parish in Baltimore. In about 1956 this information was included on a mimeographed copy of the poem, and that

seems to have been the root of the confusion. Ehrman wrote *Desiderata* in 1927.—Ed.

Wakeman: Pro and Con

I couldn't believe the low-lying remarks Don Heckman made regarding Rick Wakeman ["Rhapsodies," *BACKBEAT*, October]. What is music criticism coming to? Maybe Heckman is too blind to see, but Wakeman is an original and enjoyable modern classical keyboardist and always has been. I have heard all of this master performer's solo and most of his group albums. Perhaps his latest was a little lacking in spots, but Heckman was too eager to give a negative review and sounded like he didn't know what he was talking about. My review of his review: He has poor taste and is a red-neck.

Shayne McCarter
McMinnville, Tenn.

Thank you for Don Heckman's review of Rick Wakeman's "Rhapsodies"—it's always pleasant to read opinions that I hold myself. I still play "Six Wives" and the Yes albums, but "Journey to the Center of the Earth" and "King Arthur" just gather dust. Wakeman's dexterity far exceeds his imagination.

Robert van Keuren
St. Paul, Minn.

Sail On, Commodore!

I enjoyed John S. Wilson's article on Milt Gabler's plans to revive the Commodore label ["The Commodore Catalog Comes Back to Life," *BACKBEAT*, October 1979]. That is indeed great news. The only problem we have out here in the heartland of America is that not even large, well-organized dealerships can tell you who is distributing Commodore.

Richard S. Rice
Indianapolis, Ind.

Commodore recordings are available through CBS Special Products, CBS Records, 51 W. 52nd St., New York, N.Y. 10019.—Ed.

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.

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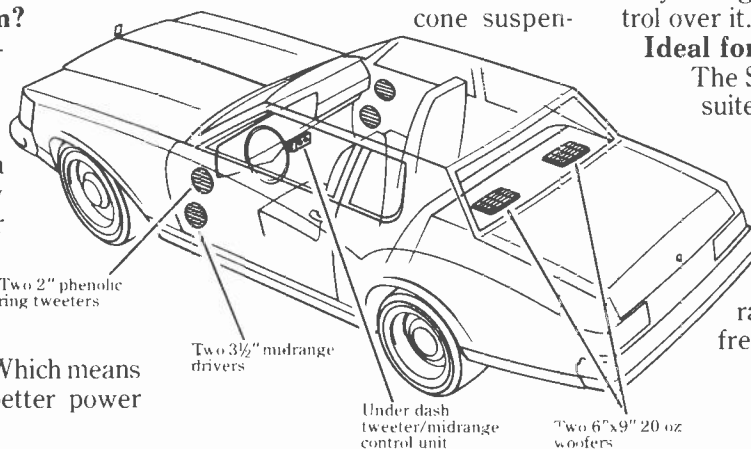
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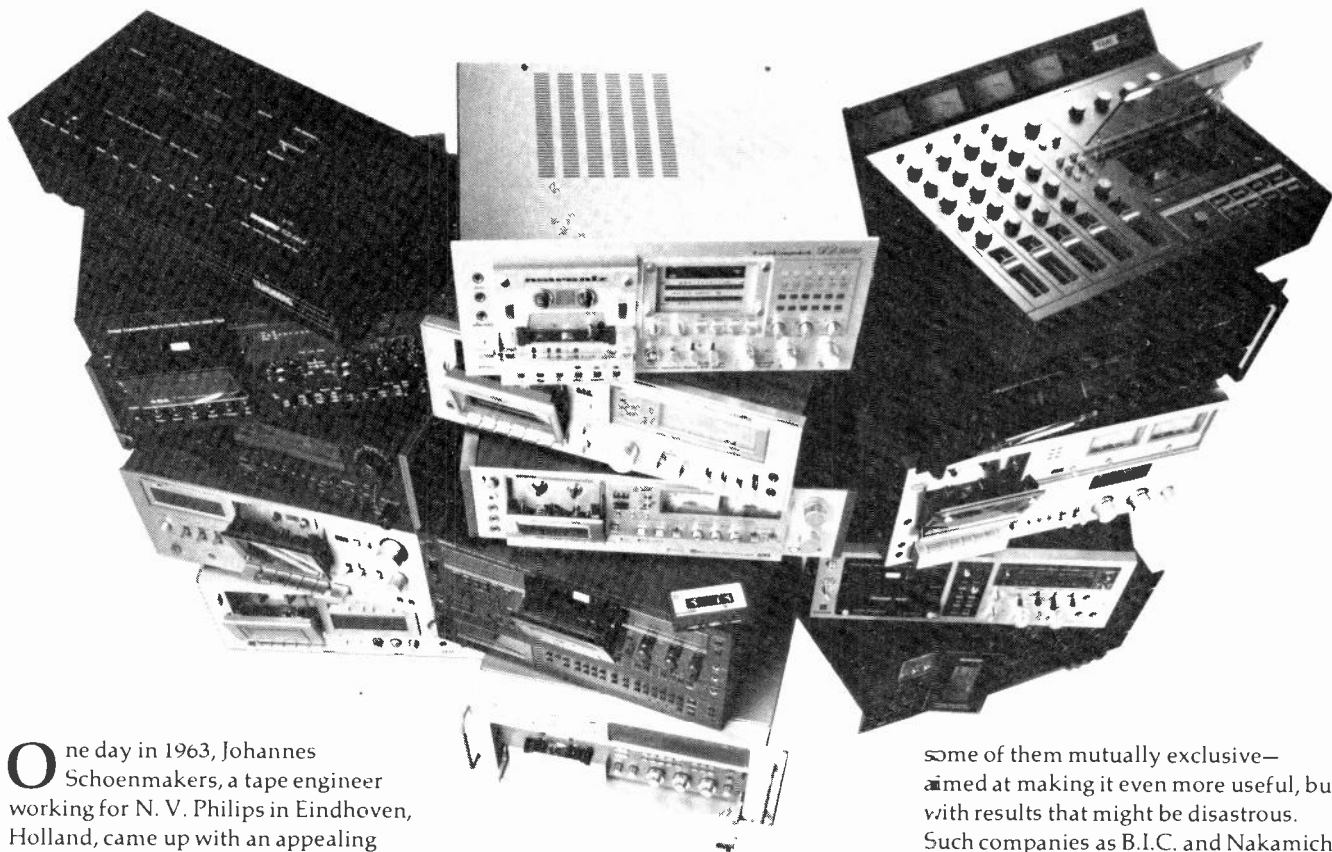
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Cassette in Crisis

Multiple speeds, noise-reduction systems, new types of recording tape, new head configurations, and other changes—Are we about to “improve” the cassette into extinction?

by Robert Angus



One day in 1963, Johannes Schoenmakers, a tape engineer working for N. V. Philips in Eindhoven, Holland, came up with an appealing idea: to seal some 280 feet of tape approximately 3/16 inch wide and anchored at each end to a free-moving miniature hub inside a plastic shell. The plastic wafers, measuring approximately 4 by 2½ by ½ inches, could then be played on portable recorders no larger than a typical abridged dictionary.

At that time tape recording was a somewhat esoteric hobby engrossing only a tiny fraction of American audiophiles, the majority of the world's tape recorders were made in Europe or the U.S., and an album of Mantovani or Sinatra or Renata Tebaldi cost \$7.95 on a “standard” open reel. Schoenmakers' superiors quickly realized several things: that his idea was patentable; that it drew on previous technology (most notably a two-hub tape cartridge developed by an engineer for Telectro Industries); that it would make an ideal dictation

system; and that the quickest way to gain worldwide acceptance of the new format was to make it easily available, virtually royalty-free to all comers, as Columbia had done with the LP.

In the seventeen years since, the compact cassette (its official name) has become the most popular medium ever created for the exchange of recorded sound. It has grown from a lowly dictating system into a stereo high fidelity medium rivaling the performance of discs, stereo FM, and open-reel tape. Even according to the most conservative estimates, twice as many cassette mechanisms as turntables are now in use in this country.

But as the Philips patents begin to expire around the world, the cassette faces a number of technical changes—

some of them mutually exclusive—aimed at making it even more useful, but with results that might be disastrous. Such companies as B.I.C. and Nakamichi have introduced transport speeds that depart from the 1½-ips standard. Teac, among others, has varied the track arrangement. Telefunken, Sanyo, and DBX are only three of the new generation of electronic noise reducers looking to displace Dolby B. Lux, TDK, and others have made some fundamental improvements in cassette shell design. And metal-particle tape has come along, requiring still another bias adjustment and electronics that are yet more sophisticated. All of which leads observers to wonder whether or not success is about to spoil the cassette—to bewilder those whom it seeks to bedazzle.

“It is the firm opinion at Philips that the compact cassette can remain viable as a worldwide recording and playback system only if standards are maintained by the industry, as deviation from these standards will cause incompatibil-

ity and therefore confusion in the marketplace." These words from an attorney representing Philips in Japan reaffirm its stand from the beginning. He suggested that unless manufacturers were willing to forgo maverick design, the company might be forced to take legal action.

In 1963 the factory at Eindhoven was one of the world's largest producers of tape recorders. Philips has exercised tight control over the development and growth of Schoenmakers' invention—to its detriment, some say, while others argue that only such firm adherence to standards could have permitted the cassette medium to develop as it has. The company has used an adroit combination of carrot and stick. It has offered use of its patents to other equipment makers either free or at nominal cost and charged blank-tape producers only about one cent per cassette—provided all were completely compatible with the recorders turned out by Philips. Those who did not play by the company's rules could find themselves in court facing some bloody-minded lawyers and trying to explain why they were not guilty of infringing on the Schoenmakers patent.

Compatibility and interchangeability have been the key items in the Philips credo. As a positive result, the cassette you recorded yesterday will reproduce adequately on the portable player you bought in 1969, and the first cassette recorded in 1964 will deliver satisfactory sound on the stereo decks of 1979.

But almost from the time patents were first obtained in Germany, the U.K., the U.S., and Japan—and licensing agreements were signed with manufacturers in those countries—the licensees found the restrictions difficult to live with. The first hurdle was stereo. Philips finally condoned a track width of only 0.021 inch (the same as that of the then-new eight-track tape cartridge) to fit a stereo pair into the space originally occupied by a mono track. Thus a mono head would reproduce both stereo tracks together, while the two elements in a stereo playback head would respond equally to a mono recording. Meanwhile, in Japan, Teac experimented with a recorder that obtained superior signal-to-noise ratio and frequency response by operating at a speed of 3¾ inches per second—twice that specified in the licensing agreement. Joseph Tushinsky, chief executive of Superscope (which, at

the time, was the import agency for all Sony tape-recorder products), likewise remembers encouraging results with the higher speed and the disappointment when Sony turned thumbs down on the idea—possibly at Philips' request, Tushinsky believes.

Philips did not succeed in staving off one nonstandard tape that came along during this period, however: E. I. du Pont's Crolyn. The chromium dioxide formulation claimed roughly twice the high-frequency resolution of the available ferric tapes, and audio engineers quickly realized that it could be used to create much the same sonic advantages as the discarded higher transport speed. The catch was that the new tape required a bias signal 50% higher than that specified by Philips. And for optimum results, a new playback equalization might be needed. After extensive soul-searching and much lobbying by Du Pont and others, Philips amended the standards to accommodate chromium dioxide and its 70-microsecond EQ.

Much the same sort of thing happened when Advent, Harman Kardon, and other manufacturers wanted to add Dolby B noise reduction. Dolby-encoded cassettes, Philips' standards experts insisted, were not compatible: They sounded pinched and shrill on non-Dolby decks. And conventional tapes sounded even more unpleasant played back through a Dolby decoder. So Philips set out to develop its own noise-reduction system that would operate on playback only, thus benefiting every cassette ever recorded. The result was DNL, which unfortunately opened to mixed critical reviews and a poor box office. The company realized that the Dolby circuit really did improve cassette performance and ultimately allowed it, provided that the circuit could be switched in and out.

Not so successful were some track-configuration ideas of JVC and Astrocom-Marlux in the early 1970s. JVC proposed a quadriphonic cassette in which the four channels ran in parallel tracks laid out in one direction on the tape so that the back channels occupied the space normally reserved for the reverse direction of tape travel. Philips turned the idea down cold, proposing instead a format with eight tracks, each about half the width of conventional stereo tracks, and with four recorded in each direction. Many engineers at JVC

and elsewhere regarded this proposal as an engineering and manufacturing nightmare, and the idea of discrete quadriphonic cassettes died. Astrocom's idea went in the opposite direction: a stereo pair of tracks filling the entire tape width and running in a single direction. The idea was to improve signal-to-noise ratio and other characteristics, but again compatibility won out.

Through it all, Philips made exceptions for certain professional, educational, and industrial applications. For example, Nakamichi has been supplying two-speed versions of the Model 1000 for use in recording studios for several years, and Philips has authorized a number of suppliers to produce 15/16-ips cassette decks for use with talking books for the blind. The understanding in every case has been that these units are not to be offered for sale to the general public.

Multiple Speeds

"When we first came up with the idea of a cassette deck that operates at 3¾ ips," recalls B.I.C.'s Jay Bergen, "we had no trouble selling the concept to our dealers. After all, the benefits of higher speed were evident to anybody familiar with multiple-speed open-reel recorders. What we didn't realize was that there's a whole generation of cassette users out there who didn't know that. Once our cassette decks were in the stores, we found we had to explain this basic truth. That's when we came up with the slogan, 'Twice the speed, twice the performance.'"

Of course there had been no manufacturing standards for 3¾ ips, so B.I.C. created its own—in general, by halving or doubling the figures for other tape speeds: The 120-microsecond equalization became 60 microseconds; 70 microseconds became 35. In general, the manufacturers that followed—Marantz and Fisher—adopted the same numbers because they were both convenient and effective. There is no guarantee, however, that other manufacturers will do likewise, which means that the 3¾-ips tapes you record on a new B.I.C. deck may not be perfectly compatible with those recorded on models from other companies. They definitely will not be compatible with the Teac 144, a multi-track 3¾-only recorder developed for its Tascam professional series (see Back-



Original mono cassette layout (left) was adapted to four-track stereo (center) for interchangeability; equal guard bands to minimize crosstalk in multichannel use (right, for Teac 144) compromise compatibility and sound. See text.

BEAT, January), although the fundamental point of incompatibility here is in the track layout.

More recently, Nakamichi and Superscope added the 15/16 ips speed to some of their consumer models. To do so, Nakamichi altered the 70-microsecond equalization constant to 120 microseconds. Superscope has incorporated the slow speed in certain battery-operated portable models to double playing time (though equalization numbers are not available). And at least one company (Norwood Industries) offers decks with 1 $\frac{1}{8}$ and 15/32 ips. The superslow speed is intended for talking books, and the four tracks of the stereo format can be recorded independently in mono (another incompatible layout), permitting up to twenty-four hours of playback from a single C-180.

When Yamaha tried to introduce variable-pitch recording in its TC-80GL several years back, Philips refused its permission on the ground that any variation in recording speed would violate standards. Yamaha, which also makes pianos and other musical instruments, argued that there was a need for a cassette deck whose speed could be altered and its pitch tamed for musicians who must practice with a recorded accompaniment. Philips yielded by permitting speed variation on playback only, a feature later adopted by a handful of other manufacturers. Now the Tascam 144 offers variable recording speed as well, and there are indications that more manufacturers may do so soon—all without visible reaction from Philips. Why?

Two factors are at work. On the one hand, the once-mighty Philips patents are in the process of expiring, opening the technology even to those who choose not to take out a license. On the other, lawyers are beginning to question the legal validity of the patents.

To understand all the ins and outs, however, you have to be a patent lawyer with a firm grounding in international

law as well. In 1963, Schoenmakers filed a German patent application on a tape recorder/reproducer magazine. That patent will expire in 1981. Schoenmakers' Japanese patent will run out early this year. And in 1985, the last of the basic cassette patents—U.S. No. 3,394,899—will expire. So will the licensing agreements Philips signed under that patent. It is illegal, under American law, to extend the life of a licensing agreement beyond that of the patent on which it is based; but this is not the case in some foreign countries, where licenses can extend the effective lives of patents by many years. On the other hand, some foreign licensing agreements already have expired.

Under normal conditions, U.S. patents and laws would take precedence over foreign practice, at least for American manufacturers and consumers. But conditions here are not normal. Most cassette equipment is manufactured in Japan, where Japanese patent law applies; and the principal patent-holder is Dutch and is governed by Dutch and German law. As a practical matter, no maker of consumer cassette equipment licensed in the U.S. has complained that he has been hurt by imports of nonstandard cassette units. But the U.S. arm of N. V. Philips, rather than manufacturing its own cassette recorders, now buys them from Japanese producers who also make nonstandard equipment for other customers. A very tangled state of affairs, indeed, and ample reason why Philips is no longer pursuing its goal of universal compatibility with the zeal it did only two or three years ago. Lawsuits, in fact or in threat, appear to have been replaced by sternly worded letters pointing out the benefits of adhering to the standards adopted so painstakingly over the years by such organizations as the Deutsche Industrie Normen, the Electronic Industries Association of Japan, and the International Tape Association.

And, too, in recent years, the patents have taken quite a beating from lawyers. One case involved the introduction of the microcassette, which Philips maintained was an infringement. The microcassette, as you may have noticed, prevailed.

When B.I.C., not a Philips licensee, decided to introduce a two-speed cassette in the mid-Seventies, its lawyers examined Patent No. 3,394,899 with great care and recommended that the company not seek a license. Since the Schoenmakers patent didn't specify details like tape speed, track width, or even cassette dimensions, and since it's based on a 1959 patent issued to Karl Rudzitis for a similar twin-hub system, the B.I.C. attorneys thought they had a pretty good case for attacking its validity. And one distinctive feature of the device described in the Schoenmakers patent is a ledge or platform to hold the cassette—a feature that does not appear in front-loading decks like B.I.C.'s.

"It's no coincidence that the first company to market a two-speed cassette deck in the U.S. is one that didn't already have a Philips license," a patent attorney familiar with the situation said recently. "It's a lot easier to defend a patent infringement suit than it would be to defend breach of contract, which would occur if the company had a license and broke one or more of its provisions." Philips hasn't moved against B.I.C., Marantz, or Fisher, so it seems likely that we'll face a barrage of two-speed, three-speed, and variable-speed machines from other suppliers.

But suppose you buy one of these machines now and begin to build a library of cassettes recorded at 3 $\frac{3}{4}$ or 15/16 ips. Will you be able to play them on the decks available in five or ten years? Or will the existence of one or both of these speeds undermine 1 $\frac{1}{8}$ ips as the cassette standard?

Trade estimates put the number of two-speed recorders and decks sold last

year at somewhere around 100,000—an incredibly small fraction of the 16 million-plus cassette transports and the 2.4 million over-\$150 home units sold last year. My informal check has turned up no deck owners who are building a library of 3¼-ips musicassettes. The answer would seem to be that even among people who own the equipment, 3¼ ips hasn't really been accepted as a "standard" speed. Whether it will be depends on prerecorded cassettes and compatibility standards—neither of which exists for 3¼—as well as on public acceptance of the equipment.

Track Layout

If Philips had permitted JVC's four-channel cassette track configuration, would discrete quadriphonics be alive and well today? We'll never know. Some audiophiles hold that Philips' refusal to authorize the one-way recordings was a deliberate technological blockade that hurt both quadriphonics and the cassette medium. Now Teac has come up with a similar configuration designed to improve signal-to-noise ratio and channel separation in the Tascam Model 144. The Philips standards specify, on a stereo cassette, two tracks recorded in each direction, each 0.6 millimeters wide. There's a guard band 0.3 millimeters wide between the channels of stereo pairs, and another 0.8 millimeters wide between the stereo pairs themselves. Teac conforms to the track width, but all three guard bands are 0.45 millimeters wide. That means that a 3¼-ips tape recorded on the B.I.C. T-4 won't play properly on the Model 144 because the right-channel head gap is reproducing part of a guard band and missing part of its track, lowering output level in that channel and compromising Dolby tracking. (The Dolby circuit in the 144 cannot be switched out.) Conversely, the right channel of tapes recorded on the Teac will reproduce at too low a level on the B.I.C. And anything on the third and fourth tracks will reproduce only backward on the T-4. Teac underlines the fact that its deck is intended neither for consumer use nor for compatibility with other decks.

Could a manufacturer now announce a half-track stereo head similar to Astrocom's in the name of technological improvement? At least one manufacturer appears to have been ex-

The patents are expiring, opening technology even to those who are not licensed.

perimenting with such an arrangement.

"I would think he could make a pretty good case in court that the licensing agreement is restricting technology and that the patent isn't applicable," says the patent attorney. "He'd have to be prepared to go to court, since Philips might try very hard to contest this one, but I'd be inclined to advise him to take the risk if he could show a real technological benefit." The attorney says that American courts generally tend to find against licensing agreements they believe unnecessarily restrict creativity or the freedom of trade.

The number of nonconforming head configurations actually sold in the U.S. last year is put at well under 10,000 units—and all of those were special-application devices of one type or another that are difficult or impossible to buy at retail. "I wouldn't expect any home-equipment manufacturer in his right mind to deviate very far from the standard track widths," says one industry observer, "but it is possible that a four-channel deck of the JVC type could appear." He noted that, while only the front channels of quadriphonic tapes recorded on it would play on standard equipment, such a deck would be able to reproduce standard mono and stereo cassettes.

Noise Reduction

As we've seen, the introduction of the Dolby B circuit in 1970 caused real anguish among Philips' standard-makers (though millions of Americans today listen to Dolby-encoded prerecorded cassettes on non-Dolby equipment and accept what they hear). Now, ten years later, Dolby's 10 dB of improvement in signal-to-noise ratios (or that of JVC's similar ANRS) doesn't look like much compared to the 20 dB prom-

ised by High Com (a system developed by Telefunken and licensed by Nakamichi for its High-Com II), the 30 dB or so of DBX (used on certain Teac models), or the 40 dB claimed for Sanyo's Super D (one of several systems announced in Japan and under consideration for commercial introduction here this year).

High Com is a two-mode system. In one mode, its noise reduction and attack time (the length of time it takes the circuit to go into action on a given signal) are said to be close enough to Dolby's to permit interchange. In the other, noise reduction is 20 dB, attack time is twice as fast, and the recordings are not Dolby-compatible. So far, only Nakamichi has offered the system and only in its incompatible High-Com II version as an add-on component priced at \$750. But Telefunken is trying hard to license High Com to other manufacturers for inclusion in their recorders. The stumbling block is said to be cost. Telefunken's proposed royalties and the cost of manufacture are both significantly higher than that for Dolby B, which most Americans accept as standard.

For its system, DBX claims a dynamic range of up to 100 dB, with up to 30 dB of noise reduction at the higher frequencies. Unlike High Com and Dolby, the DBX is a linear compander, which means that it treats all frequencies the same and thus needs no level matching to keep response flat. The result is a recording that isn't pleasant to listen to unless it's properly decoded, and the 2:1 expansion in playback doubles any output-level irregularities (such as dropouts) in the tape. Cost of manufacture and royalties are also given as reasons why more manufacturers don't build it into their equipment. DBX's aggressive new management has made it clear, however, that it's serious about cutting into Dolby's licensing business.

Sanyo, which manufactures cassette decks for itself and others, recently announced a system it claims combines the best features of DBX and Dolby. Its Super D is available only as a separate component, and the company's Bill Byron says he doesn't know whether it ever will be built into Sanyo's decks. Super D, priced at \$470, claims dynamic range of 100 dB, with a 40-dB maximum noise reduction.

And where has Dr. Dolby been while all this has been going on? Not sitting idly by, that's where. His latest is

HX, a circuit that expands high-frequency headroom during recording by as much as 10 dB. It works by sampling the output of the Dolby B circuit continuously and by varying recording bias and recording equalization to match the program content. The result: an improvement in high-frequency response, a new brilliance and liveliness to high-energy program material. It is said to be comparatively inexpensive, adding only about 20% to the manufacturing cost of the Dolby B circuit into which it is incorporated. Expect to see several Dolby decks enhanced with HX this fall.

HX is not a noise-reduction system per se; but it can yield increased dynamic range with program signals that put a premium on its added high-frequency headroom. Tandberg's Dyneq (which varies recording EQ but not bias—see the report in this issue) has a comparable objective, as does the Super option in JVC's Super ANRS. Of these, only Super ANRS requires special playback decoding; as a result, all the rest are compatible with Dolby B. Because it's switchable (out, the Dolby equivalent, "full speed"), High Com is, too. Telefunken began building it into its own equipment last year, and chances are good that one or more other European manufacturers may add it to their best decks. Listeners who have heard undecoded playback of High Com in its flat-out mode say it's no more pleasant to listen to than undecoded DBX.

Metal Ready or Not

When you remember that the original Philips cassette recorder was a battery-operated model designed to take dictation and that the original cassette tape was an iron-oxide product made for open-reel machines but slit narrower, it's staggering to realize what has happened to cassette tape in seventeen years. First came Crolyn, with Philips reluctantly agreeing to its use. Shortly thereafter, some blank-tape makers (notably TDK with SD and Maxell with UD) began tampering with the "standard" bias and equalization in order to obtain better performance. To achieve this performance, equipment manufacturers had to alter their own bias settings from the DIN standards. Later they introduced switchable bias and, still later, decks with variable bias or even with built-in automatic bias adjustment sys-

Nobody seriously doubts the cassette will give way to some better format.

tems. All of these dealt with a bias range representing roughly 100 to 150% of the original DIN specification. The introduction of metal-particle tape stretched the range still higher. What could happen in the future with more exotic recording particles can only be conjectured, but it seems evident that some form of built-in automatic bias and equalization adjustment is increasingly necessary as these tape types proliferate—at least in the better-quality decks in use by most audiophiles.

"It's common for the casual recordist to settle on one tape brand and type and do virtually all of his recording with it," says a spokesman for a major equipment maker. "He really has no need for infinitely variable bias because he may use only one or two bias positions for the entire life of his equipment. The audiophile, however, is different. He tends to try every new tape that appears on the market at least once, although he, too, may do the bulk of his recording on a single high fidelity tape. Of course, he can select bias and equalization manually, but a microprocessor with built-in signal generator is much more precise and avoids the problem of forgetting to change bias when switching from one tape to another."

The catch is that the microprocessor adds significantly to the price of the equipment without a concomitant improvement in performance. But who knows when the tape formulations will change and no longer match the deck's factory "standard" settings?

Of course, say some experts, all of this becomes academic with the specter of digital recording hanging over not only the LP, but the cassette as we know it. Many tape experts agree that the present-day cassette can be adapted for digital recording, and it's also quite possible for the same deck to be able to record both digitally and analogically.

At that point, the striving for better audio tape formulations may become moot.

Perhaps a greater threat is the emergence of the microcassette as a music medium. PearlCorder (Olympus), Sony, and Lanier have been experimenting with the tiny cassettes, which operate at 15/16 ips and can produce sound quality comparable to that from cassettes in the late 1960s, before the introduction of Dolby B and chromium dioxide. Like the cassette, the micro was introduced as a dictation medium. And like many of the developments we've been discussing, it was introduced despite Philips' efforts to keep it off the market. It was, in fact, the successful court defense of the micro that instigated other nonstandard developments, as manufacturers decided to take the risk of defending their nonconformist notions.

Late last year, PearlCorder showed a component microcassette deck that, it claimed, could produce high fidelity results. But the deck was sent back to the laboratory (allegedly, following negative comments about it from dealers), and both stereo and metal-tape recording capability have yet to be introduced in the micro format. To become viable as an alternative for the standard cassette, the micro should offer a library of music featuring name artists (an important element in the growth of the cassette and the overriding one in the eight-track cartridge's rout of its four-track predecessor). It must also be available in a variety of configurations, including car decks, battery portables, and components. All of that is technically and commercially possible in 1980. Whether it will happen—and what effect it would have on the cassette market—is another matter altogether.

Nobody seriously doubts that the cassette will give way eventually to some better format, just as the cylinder gave way to the disc, the acoustic disc to electrical recording, the 78 to the LP and the 45. The LP may well yield to some form of digital disc by the time it's thirty. Compared to those lifespans—typically, about twenty-five years—the compact cassette is in middle age at seventeen. Perhaps it's high time that, as a healthy adult, it escapes from Philips' paternalism. But the danger remains that, confronted by conflicting seductive blandishments for which it is unprepared, it may become dissipated. **HF**

Cassettes: Finally Taken Seriously

by R. D. Darrell

Whatever the future holds for the medium, many of the high-quality cassettes available today demonstrate the care, both musical and technical, that their manufacturers are willing to bestow upon the now ubiquitous compact tape format. Herewith an illustrative selection of tapes—some dating back several years.

At last, that second-class citizen of the recording world, the recorded-tape collector, has come into his own. Now even connoisseur discophiles have begun to open their ears and minds to the "other" medium, musicassettes, that the public has already come to take for granted.

Veteran tape aficionados naturally are overjoyed by the unexpectedly widespread and enthusiastic reception, outside as well as inside audiophile circles, given the latest advances in cassette technology—the expanded dynamic and frequency ranges of the first digitally recorded tape releases and of a whole new deluxe, super-chrome, audio specialty series. Their delight is only lightly curdled by the remembrance of how much previous technical progress has been overlooked, how many early artistic triumphs have yet to be recognized as comparably newsworthy, and above all how much time and effort tape collectors—who don't even have a proper name for themselves—have needed to win nearly equal rights with discophiles.

While technological advances patently are vital elements in the current upgrading of the cassette's status, they means the only ones. Perhaps what's really new is the shifting attitude of recording companies and consumers toward musicassettes, rather than anything about the tapes themselves. Of course any radical change in the climate of public opinion—whether it leads to revaluations of the tape medium or of, say, American-Chinese relations—is only the final product of many factors operating over a considerable period. The mushrooming quantity and diversity of cassette catalogs, and the expansion and variety of the musical repertoires and performance styles so richly represented in them, have contributed to and certainly reflect the acceptance of the format. Just look at the wide range of labels and price categories available and how many have entered the marketplace in only the last year or so. The tabulation here includes only active labels boasting substantial catalogs; aborted (ABC Classics/Westminster) and suspended (Peters International) series are omitted, as well as companies like Aurora, Cambridge/CCC, Desto, Finnadar, and Mid-song that release cassettes only occasionally. Dolby-processed series that have made their U.S. debut since 1978

are indicated with a bullet (•); budget-priced labels with an asterisk (*); and midpriced labels with a dagger (†).

- Advent
- Angel
- Arabesque (Caedmon)[†]
- Archiv (DG)
- Argo
- Book-of-the-Month Club^{*}
- CCC
- CE (Classical Excellence)
- CMS-Summit^{*}
- Columbia
- Connoisseur Society/In Sync
- Deutsche Grammophon
- Euphoria^{*}
- Everest^{*}
- Festivo (Philips)[†]
- Hungaroton
- London
- London Treasury^{*}
- Monitor^{*}
- Musical Heritage Society[†]
- Nonesuch^{*}
- Odyssey^{*}
- Oiseau-Lyre
- Olympia^{*}
- Orion/CCC
- Philips
- Privilege (DG)[†]
- Quintessence^{*}
- RCA Gold Seal^{*}
- RCA Red Seal
- Seraphim^{*}
- Sine Qua Non Superba^{*}
- Supraphon
- Telefunken
- Turnabout^{*}
- Vox^{*}

You will not be able to find all of these labels in SCHWANN. Labels considered by the catalog to have limited dealer distribution or those available only by mail are not included. (SCHWANN does not list any open-reel recordings. For those, you may get a catalog with regular supplements for \$1.00 from Barclay-Crocker, 11 Broadway, New York, N.Y. 10004.)

The most persuasive case for the elevated state of the musicassette art can be made by the music and sonics themselves. Obviously they can do so properly only when heard via a tape player of technical quality comparable to your turntable and with a familiar high fidelity system operating in familiar room ambience. Instead of attempting the impossible task of listing "the best" cas-

How Do You Stack Them?

This assortment of cassette albums demonstrates one major problem that remains for the medium: lack of a standardized package that would allow you to store tapes efficiently on the same size shelves. Clockwise, from the standard Philips plastic boxes for singles in the lower right-hand corner (Musical Heritage Society's Schubert piano music played by Jörg Demus and Hungaroton's recording of Liszt's *Missa Solennis* conducted by János Ferencsik), are Unicorn's album, open-reel size, of Grieg's complete music for *Peer Gynt* (artists unspecified on cover); Caedmon's new paperback-book size, here of Sir John Gielgud's readings from Shakespeare, "Ages of Man" (the spoken-word company's musical label, Arabesque, will use the same packaging); Phonogram's Prestige Box for DG, Philips, Festivo, Privilege, and Archiv, as in the latter's set of Zelenka orchestral works; Angel's full disc-size box, here of Michel Plässon's recording of the Offenbach *Orpheus in the Underworld*, a package also used for its Seraphim albums as well as by Columbia and its Odyssey albums; Vox/Turnabout's book-size set, here of Gershwin music with Leonard Slatkin leading the St. Louis Symphony; and the "spaghetti" box, one-half disc size, favored by RCA and, as shown, by Sine Qua Non for its Beethoven nine symphonies by the Pittsburgh Symphony Orchestra under William Steinberg. In the center is an example of London's squarer preference, also used by Telefunken and Aurora: Vivaldi's *Lu Cetra* on London's Argo label.



ettes for you to listen to, I will recommend a few recordings that distinctively illustrate not only recent technological advances, but a wide variety of other attractions. Although I lead off with the latest digitally recorded and super-chrome spectaculars, I stress the inclusion here of one of the pioneering deluxe chromium-base tapings the Advent Corporation has been producing with consistent excellence since 1974:

NEW YEAR'S CONCERT. Boskovsky/Vienna Philharmonic. LONDON LDR5 10001/2, double play.

CHOPIN: Piano Works. Moravec. CONNOISSEUR SOCIETY/IN SYNC C 4007.

HANDEL: Messiah. Dunn/Handel and Haydn Society. ADVENT EE 1061 (2) (excerpts on E 1070)

To these might be added almost any recent release in the Sine Qua Non Superba series to demonstrate the use of the TDK high-energy, low-noise, ferric-base tape, with a special head-cleaning leader, as well as any Telefunken TriTec series tape processed (like chromiums) with 70-microsecond equalization. But there's no need to single out examples of other specific advances. All reputable musicassettes now enjoy some of the

benefits of Dolby B noise reduction. And practically all extended-play cassettes are free of the tape jamming and sticking nuisance that gave them such a bad reputation in the days before Julius Konins' Cassette Productions, Inc. (CCC series) pioneered in the solution of the mechanical problems.

The following illustrate the remarkable expansion of the artist roster, with gifted youngsters represented as well as long-familiar stars, and of the musical repertory, from standard favorites to a more panoramic overview covering very old music performed on period instruments and in authentic styles, broader representation of chamber music and Lieder, and offbeat music of every kind:

BACH: Mass in B minor. Har-noncourt. Vienna Concentus Musicus. TELEFUNKEN 4.35019 (2).

BAROQUE TRUMPET/ORGAN MASTERPIECES. Tarr, Kent. NONESUCH N5 1356.

MAHLER: Symphony No. 9. Giuliani/Chicago Symphony. DEUTSCHE GRAMMOPHON 3370 018 (2).

HAYDN: Quinten and Emperor Quartets. Concord Quartet. TURNABOUT CT 7003.

SCHUBERT: Die schöne Müllerin. Souzay, Baldwin. PHILIPS FESTIVO 7310 076.

KETĚLBEY: Various Works. Lanchbery/Philharmonia. ANGEL 4XS 37483.

SONDHEIM: Sweeney Todd. Original Broadway cast. RCA RED SEAL CBK 2-3379 (2).

The newcomer who missed the debut releases and the veteran who failed to buy or to keep the originals will relish the greatly increased numbers (and improved remasterings) of reissues of outstanding programs:

SCHUBERT: Symphony No. 9. Furtwängler/Berlin Philharmonic. DG PRIVILEGE 3335 808 (mono).

It should be a mortal sin for musicassette producers to deny consumers essential program notes.

DVOŘÁK: Slavonic Dances; Carnival Overture. Szell/Cleveland. ODYSSEY YT 34626/7 (2).

HORENSTEIN CONDUCTS WAGNER AND KORNGOLD. Royal Philharmonic. QUINTESSENCE P4C 7047.

The most rewarding examples often are those that don't fit neatly into any category—those that contain such irresistibly spellbinding music and such charismatic performances that technology is largely incidental:

MOZART: Quartet for Oboe and Strings, K. 370; Quintet for Strings, in C minor, K. 406. Holliger, Krebbers, et al. PHILIPS 7300 607.

SCHUBERT: Waltzes (complete). Bordoni, piano. SERAPHIM 4X3G 6112 (3).

BRAHMS: Symphony No. 4. Reiner/Royal Philharmonic. RCA GOLD SEAL AGK 1-1961.

So everything's coming up roses in a musicassette paradise? Well, not exactly—at least not yet. There are still some classical music recording companies that do not make all, or in some cases *any*, of their disc programs available in any tape format. Release of many tape issues lags far behind their disc versions, and often a disc bears no indication of whether there will or won't be a tape edition. And of course there are the

inevitable production errors: mislabeling, stereo-channel imbalances, inadequate noise reduction, distortion, and the rest. But most of these are becoming rarer, and at least tape is immune from such disc-production flaws as clicks, crackles, pops, and surface noise.

Lamentably, there are other maladies endemic in tapes in general and cassettes in particular. One is the storage problem that results from the wide disparity of sizes of multiple-tape boxes. Another is caused by the failure of the producers to understand and exploit the tape medium. Extended side lengths can be used without susceptibility to the inner-groove distortion that can occur on long-playing discs, but side lengths, side breaks, selection sequences, presence or absence of filler material, etc., too often slavishly duplicate those of the corresponding disc versions. Fortunately, the most reprehensible of tape-editing barbarisms—exemplified by the company that, in order to save tape, insisted on breaking all cassette programs precisely in half, regardless of musical continuity and movement endings—has long since been abandoned, thanks to waves of protest.

The greatest remaining barrier to equal rights for tape collectors is the failure of many American producers to supply program notes for their single musicassettes. It should be a mortal sin to deny unknowledgeable consumers information essential to their appreciation and enjoyment of what they are listening to—and when the recording is of very old or very new music, historical reissues, and indeed anything off the beaten path, that probably includes most of us. I don't really endorse having to make a special mail request for notes, as some companies require, and I sympathize with farsighted readers who object to the minuscule type sizes used for some annotations. But anything is better than no notes at all. So I'll continue to picket the delinquent labels: Angel/Seraphim, Columbia/Odyssey, Everest/Olympia, Hungaroton, Nonesuch, Quintessence, RCA, and any others that withhold from tape collectors rights equal to those of their disc-collector brethren. **HF**



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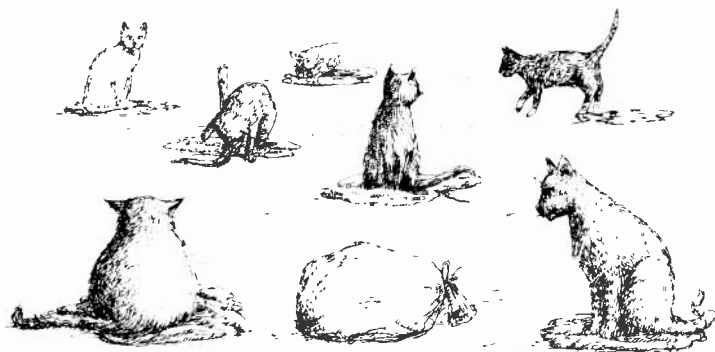
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CULSHAW AT LARGE



Seven Cats and Eight Bags

by John Culshaw

LONDON—It may have something to do with the season or whatever I had for dinner last night, but I am about to release seven out of eight imprisoned cats. In other words, I am in the mood for revelations, although not the *ultimate* revelations that I intend to sell to the highest bidder when I am aged and infirm and disinclined to care whether they are true or not. All I can offer now is an hors-d'oeuvre in question-and-answer form, and anyone who claims to have answered everything correctly is either a liar or an industrial spy. The temptation to include just one phony question to catch out such cheats was restrained only by my innate British sense of fair play and a nagging awareness of the libel laws, although I confess that the latter had much more influence than the former.

First, the questions, all of which should be attempted before consulting the answers. (Anyone who breaks this rule is a sneak and will be sentenced to hearing an uninterrupted playback of Max Reger's unaccompanied viola sonatas for seven weeks.) *There are no trick questions or distortions of the truth.*

1. Which line in the London *Das Rheingold* (Sir Georg Solti) is sung by an artist who, throughout the rest of the work, sings a different character? And why?

2. Which soprano originally took part in the Sir Thomas Beecham *Messiah* (RCA) and was replaced by Jennifer Vyvyan? And why?

3. Who is Aron Gestner in the Solti *Salome* (London), and what is the derivation of his name? In what currency was he paid?

4. In which opera recording was an off-stage voice effect obtained by playing the wrong side of the tape during the dubbing process? Why was it not possible during the recording?

5. Who makes an early entry in the Solti *Götterdämmerung*, and why was it passed as preferable to "correct" versions?

6. Does Libero Arbace—the Herald in Herbert von Karajan's *Otello* (London) and Tom in the Solti *Ballo* (London)—exist as a person? If so, how did he get to sing even minor parts with major conductors? And if he did not sing, who did?

7. Which tenor began to record Riccardo in *Ballo* with Solti? Why and when was he replaced by Carlo Bergonzi?

Frivolous readers will doubtless proceed directly to the answers, but those who enjoy the game of detection and who have the records in question can apply their aural skills, and their patience, to questions 1, 3, 4, 5, and 6. The answers to questions 2 and 7 are known only to insiders and incorrigible gossips.

1. The line is "*Mir stockt das Herz!*" in the passage at the end of Scene 2 when the gods grow old. It was sung on behalf of Waldemar Kmentt as Froh (tenor) by Eberhard Wächter, who otherwise sang Donner (baritone). It happened because Kmentt got the time of the session wrong and turned up just as it was over. It would not have been possible to reassemble all the artists on another day, and of course there was no such thing as multitrack; thus any attempt to "superimpose" his voice at a later stage would have landed us in a double-duplicate tape situation. On hearing the result, Kmentt said: "He's better than I am! Can't you use him for the rest?"

2. Joan Sutherland. She didn't really want to sing it in the first place, and Beecham didn't want her at all because he thought it lay badly for her voice. But RCA wanted Sutherland's name at almost any price, and despite her reluctance, Beecham was just truculent. When I told him that George Marek, then the president of RCA Records, was on his way from New York to plead with him to retain the soprano, Beecham merely poured another gin and tonic and said "Hallelujah!"

3. Murray Dickie, who didn't think it would do his name much good to appear in so small a part as the fourth Jew. Aron Gestner is an anagram of [Maurice] Rosengarten, a Decca/London executive, who was greatly tickled when I confessed what we had done several years later. Dickie was paid in champagne, which he generously shared.

4. Titurel sung by Arnold van Mill in the 1951 Bayreuth recording of *Parsifal* under Hans Knappertsbusch. Microphones were rigidly fixed in positions agreed with the Wagner grandsons prior to rehearsals, during which the off-stage Titurel was placed far too close to one of them. Yet to have "closed" that microphone during his lines would have ruined the overall atmosphere; to have left things as circumstances dictated would have made him sound closer than any character on-stage. It was a measure of despair, but to my knowledge it was never spotted.

5. Gottlob Frick as Hagen in the third scene of Act III on the cue "*Ja dem!*" when he admits to the murder of Siegfried. It is the tiniest of errors anyway, but the intensity is far greater than in any of the pedantically "correct" takes.

6. Libero Arbace ran a highly successful Italian restaurant in Vienna, much frequented by the conductors in question (although not at the same time) and by all the Italian singers in town. He did not sing either part or indeed at all, except perhaps in the shower, but was thrilled to see his name on the label; and his contract, drawn up and duly stamped on a menu, was payable in spaghetti. The voice is that of Tom Krause, whose reason was the same as Dickie's in 3.

7. Jussi Bjoerling. It was one of my ambitions to preserve his performance in this part, but in July 1960, because of his persistent refusal to rehearse with Solti or anyone else in the cast, the project was abandoned in less than a week. His voice was excellent and unaffected by the alcohol that had ravaged his personality. Bergonzi took over the part with the same cast and conductor one year later; Bjoerling died two months after *Ballo* was abandoned.

So seven cats are out of seven bags. The eighth I propose to leave inside for the time being, which means that, infuriatingly, I shall provide the question but not the answer. In which version of *Aida* were the sixteen orchestral measures after letter N in Act I (Allegro sostenuto) not conducted by the artist named on the label? In alphabetical order your choices are: Erede, Karajan, Leinsdorf, Muti, Serafin (first or second version), Solti, Toscanini. And why am I not telling? Well, as I said earlier, I have to keep *something* for my old age. **HF**

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Behind the Scenes

No, London Records' classical division will *not* join DG and Philips under the Classics International umbrella, at least not now. Polygram, the parent corporation of both Philips and DG, with dual headquarters in Baarn, Holland, and Hamburg, Germany, recently acquired London—the American branch of what until now has with impunity been called "British Decca"—along with most of the rest of Decca's recording and publishing assets. Signs are that the distinctive Decca/London recording policy will be preserved and even expanded. "The only difference it will make to the company," according to Terry McEwen, London's executive vice president, "is that the general manager will be a Dutchman instead of an Englishman." The Dutchman is expected to be Reinhard Klasen, ironically an old friend of McEwen's—since 1950, in fact, when both were selling records for Hollandsche Decca, the company's Dutch branch. Now, of course, the whole caboodle is the "Dutch branch," and we will probably have to refer to its London-based activities as the British branch of Dutch Decca. Will the American branch now become Amsterdam Records? We can see Peter Minuit smiling.

Meanwhile, the other venerable British-based recording company, EMI, also faces an unsettling period of adjustment. Since its recent takeover by Thorn Electrical Industries Ltd., a London conglomerate chiefly involved in television rentals, the only certainty has been the prospect of change. Thorn's tough-minded bosses will almost surely impose more stringent budgetary controls on EMI's music division, with as yet unforeseeable effects upon the prestige labels, HMV and Angel. Here, too, a degree of continuity is expected, however, with three EMI directors likely to be retained on the board.

In line with his current predilection for live recordings, Leonard Bernstein recently recorded Mendelssohn's *Scotch* Symphony and Prokofiev's Fifth Symphony at a series of Munich concerts with the Israel Philharmonic. Nothing surprising, you say. But the companion releases will be strange bedfellows indeed, the Mendelssohn appearing on the DG label and the Prokofiev on Columbia. Now what? Has Polygram swallowed up Colum-

bia as well? No. In fact, some fairly strenuous maneuvering took place to ensure separate but equal accommodations. The DG engineers set up their equipment for the first half of the program and then had to give way at intermission to Columbia's engineers and equipment—the first time such a changeover had been attempted, it was claimed.

Bernstein's completion of his live Beethoven symphony series for DG was not entirely routine either. The Ninth was recorded in Vienna, with soloists Gwyneth Jones, Hanna Schwarz, René Kollo, and Kurt Moll, members of the Vienna State Opera Chorus, and the Vienna Philharmonic Orchestra. Observers outside the Musikverein noted that a full session was needed on the day after the second of the two performances from which the main master tape was drawn.

Herbert von Karajan has returned to the DG fold with his recent recording of Puccini's *Tosca* and with future plans for Wagner's *Parsifal*. Surprisingly, he had not recorded a complete opera for DG since the 1970 completion of his Wagner *Ring* cycle; all of his subsequent opera projects went to Angel and London.

The *Tosca* cast includes Katia Ricciarelli, José Carreras, and Ruggero Raimondi. Neither Ricciarelli nor Raimondi has ever sung in this opera on-stage—Raimondi, in fact, would never do so, the tessitura being too high for a bass in actual performance—but Karajan coached his soloists with characteristic intensity. (Some observers thought the conductor was identifying with the character of Scarpia.) The recording sessions, under the supervision of Michel Glotz, Karajan's favorite producer, were compressed into six days, and Carreras had to make a hasty return from Japan for the last three.

Karajan's original choices for the roles of *Tosca* and Cavaradossi, Mirella Freni and Luciano Pavarotti, have since appeared in the London *Tosca* (OSAD 12113), conducted by Nicola Rescigno. With fresh singers in short supply, two other *Tosca* projects await completion. Lorin Maazel, continuing his Puccini series on Columbia, has tenor Plácido Domingo lined up, but no soprano. Renata Scotti, who has also been recording Puccini for Columbia,

would seem a likely candidate, but she's singing the title role for Angel, conducted by James Levine—who has no Cavaradossi. Angel recently signed a contract with Carreras, but he's out of the running, having recorded the role twice in three years, first for Colin Davis and now for Karajan. Talk about musical chairs.

Why is it that the only recordings of Prokofiev's ballet *Romeo and Juliet*, at least outside the Soviet Union, have been directed by foreign-born American Jewish conductors in their early forties? Montevideo-born José Serebrier, forty-one, has just recorded it with the North German Radio Symphony for RCA, joining Paris-born Maazel, who recorded the ballet with the Cleveland Orchestra for London when he was forty-three, and Berlin-born André Previn, who at forty-four recorded it with the London Symphony for Angel.

Serebrier has gone back to the original scores, lighter-textured at times than the more common orchestrations of the Kirov Ballet (for which Prokofiev wrote *Romeo and Juliet* but which balked at the original version because, among other things, the dancers couldn't hear the music from the pit). The new recording also uses the additional band of four French horns, six trumpets, tenor horn, bass horn, two tubas, and percussion that Prokofiev calls for during the Interlude before the preparation for the ball and, later, during the *Dance of the Five Couples*.

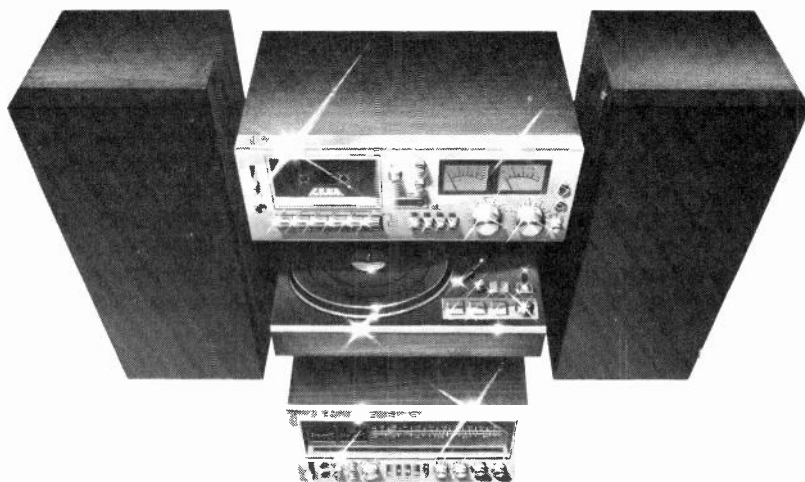
John Sievers, former director of classical a&r at ABC Records—which was recently purchased by MCA—is now head of MCA's classical division. Among his first projects in the post was to negotiate a new contract with Wolf Erickson's Seon Musikfilm. MCA will continue to release materials derived from Seon, including a new digital line, and Melodiya. In addition, Sievers plans to open an extensive budget line, with reissues from the Decca, Command, Kapp, Westminster, Brunswick, and Audio Treasury labels. Early budget releases will include Beethoven's *Fidelio*, conducted by Hans Knappertsbusch, with soloists Jan Peerce and Sena Jurinac, and Walton's *Façade*, read by Hermione Gingold and Russell Oberlin, with Thomas Dunn conducting. **HF**

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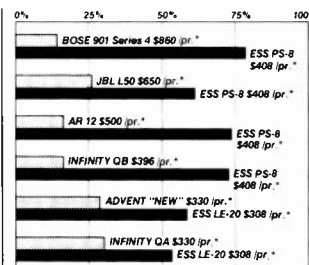
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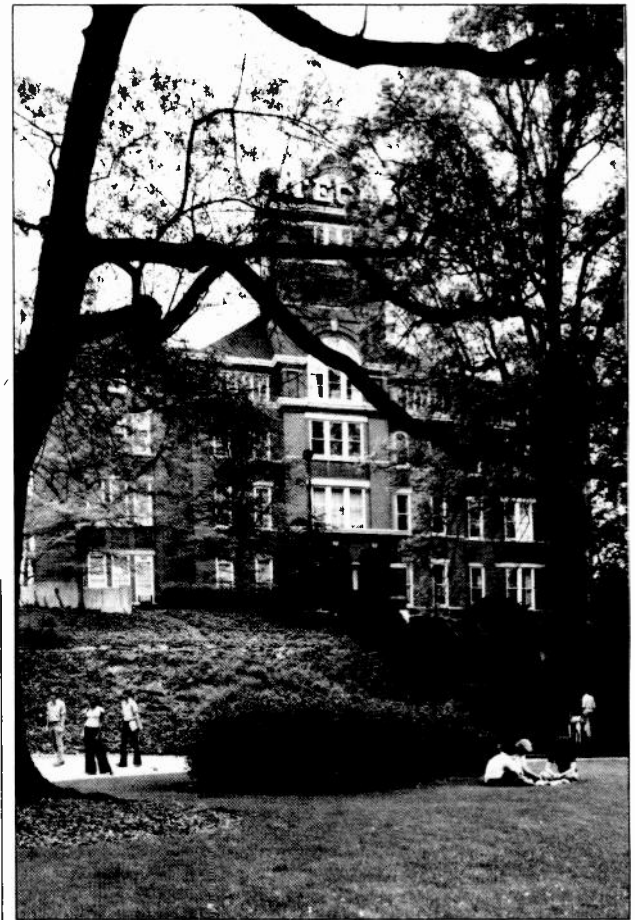


or model. They were then asked to choose the best sounding speaker. At U.C.L.A. and Wisconsin, the students chose ESS in 13 out of 14 comparisons, while at Georgia Tech ESS was chosen amazingly in 24 out of 24 comparison situations.

In all three tests, as the graph shows, ESS speakers were compared to and often chosen over far more expensive name brand models.

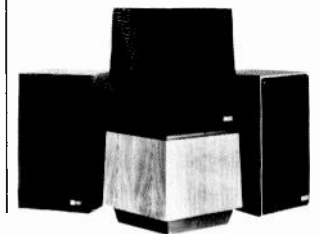
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Feature Reviews

Don Giovanni on Disc and Film

A flurry of activity leading up to the bicentennial of Mozart's opera yields two recordings and a perplexing film.

by Kenneth Furie

As if there weren't reason enough to be glad the Seventies are behind us, the Eighties actually bring us something to look forward to! In this decade begins a five-year stretch that will see the 200th anniversaries of four cultural monuments: Mozart's *Marriage of Figaro* in 1986, *Don Giovanni* in 1987, *Così fan tutte* in 1990, and *Magic Flute* in 1991. (Certain revisionist cliques will begin celebrating next year with the *Idomeneo* bicentennial and will fete *Clemenza di Tito* along with *Magic Flute*, but you'll also find loyalists who insist that the Mets will have a shot at fifth place by decade's end. Beware fanatics of all persuasions, I say.)

With six years to prepare, we ought to be able to do this thing right. But how should we celebrate? One possibility would be to launch a crash program to find and train a batch of singers, conductors, and directors with something to say about these works. Then again, we have only six years—best not be too idealistic. Yet the principle seems sound: The best way to honor a theater work is in performance.

Not just any performance, though. What I have in mind is the kind that takes nothing for granted, that digs into the innards of the piece searching for its message and finds ways of communicating the result theatrically. Of course this seems to me the way all operas should be performed, but it's doubly important with works so rich in complexity and ambiguity.

As a sort of bicentennial dry run, we have a current binge of *Don Giovanni* activity—a film and two recordings—from which we can immediately draw one important warning: Don't get too respectful. The Solti recording illustrates the danger. Yes, *Don Giovanni* is a masterpiece, one of the supreme products of Western civilization, but how can a performance that settles for respectful correctness help us understand what makes the opera a masterpiece?

It's hard to cite anything actively wrong in Solti's reading. The tempos are always safely plausible, the balances neatly

correct. Tempos are often solidly announced, especially when a big, firm, resonant sound is called for (e.g., the slashing string chords around Ottavio's "*Lo giuro, lo giuro*" to Anna in the opening scene; the *maestoso* to which Leporello and the Don greet the maskers in the Act I finale), and yet, time and again, they lose their momentum after an establishing bar or two, as if that initial statement of intent constituted a complete solution of the musical structure.

In the more elaborate numbers, where some sort of emotional statement seems essential, even inevitable, Solti goes blank. The mask trio and the statue's appearance in the final scene are neatly executed but in no real sense performed. Crucial ensembles like the "*Non ti fidur*" quartet and the Act II sextet simply meander; hey, there's important stuff going on here.

Solti's use of a complete edition also seems to reflect more a sense of duty than any conviction about the music. With *Don Giovanni*, such an edition can't be justified as fidelity to "the composer's intention"; it strings together music never intended to be strung together.

The problematic sequence is the chunk of Act II between the sextet and the cemetery scene. In the original Prague version, Leporello pleaded for mercy and made his escape in "*Ah pietà, Signori miei*," and then, after some recitative, Ottavio sang "*Il mio tesoro*." Both arias were dropped in the Vienna revisions. "*Ah pietà*" gave way to a shorter escape recitative and the duet "*Per queste tue manine*," in which Zerlina recaptures Leporello and, unable to get help, ties him to a chair. "*Il mio tesoro*" was omitted to accommodate the Vienna tenor, for whom "*Dalla sua pace*" was inserted in Act I; the vacated slot was filled by Elvira's new aria, "*Mi tradi*."

The standard modern sequence stitches together "*Ah pietà*," "*Il mio tesoro*," and "*Mi tradi*"; the only performance I've encountered that omits any of these numbers is the mercifully deleted Barenboim/Angel recording, which exiles all the

Vienna additions to an appendix. Three recordings—the Leinsdorf/RCA (deleted, but recently available as a German Teldec import), the Bonyngé, and now the Solti—include the Zerlina/Leporello scene between "*Il mio tesoro*" and "*Mi tradi*"; all leave "*Ah pietà*" in place, making the Barenboim appendix the only source for

MOZART: Don Giovanni, K. 527.

CAST:

Donna Anna	Edda Moser (s)
Donna Elvira	Kiri Te Kanawa (s)
Zerlina	Teresa Berganza (ms)
Don Ottavio	Kenneth Riegel (t)
Leporello	José van Dam (bs-b)
Masetto	Malcolm King (bs-b)
Don Giovanni	Ruggero Raimondi (bs)
Commendatore	John Macurdy (bs)
Janine Reiss, harpsichord; Paris Opera Chorus and Orchestra, Lorin Maazel, cond. [Paul Myers, prod.] COLUMBIA M3 35192, \$26.98 (three discs, automatic sequence).	

CAST:

Donna Anna	Margaret Price (s)
Donna Elvira	Sylvia Sass (s)
Zerlina	Lucia Popp (s)
Don Ottavio	Stuart Burrows (t)
Don Giovanni	Bernd Weikl (b)
Leporello	Gabriel Bacquier (b)
Commendatore	Kurt Moll (bs)
Masetto	Alfred Sramek (bs)
Jeffrey Tate, harpsichord; London Opera Chorus, London Philharmonic Orchestra, Georg Solti, cond. [Christopher Raeburn, prod.] LONDON OSA 1444, \$35.92 (four discs, automatic sequence). Tape: OSA 5 1444, \$35.92.	

COMPARISONS:

Siepi/Krips	Lon. OSA 1401
Ghiaurov/Klemperer	Ang. SDL 3700
Bacquier/Bonyngé	Lon. OSA 1434

the brief substitute recitative, which is an exceedingly minor distinction.

Certainly this account of the Zerlina/Leporello scene gives no clue as to why Solti included it. I don't entirely agree with Philips producer Erik Smith's comment, in his annotations for the Davis recording (6707 022), that "the duet, though a lively and well-wrought piece, really has no place in *Don Giovanni* either by merit of its musical quality or its depiction of Zerlina and Leporello." It is "a lively and well-wrought piece," it gives Zerlina a welcome opportunity to show some spunk, and it can provide a needed buffer between Ottavio's and Elvira's arias. Still, I quite agree that it's best omitted unless the Zerlina and Leporello can justify its presence, as did Eugenia Ratti and Fernando Corena (with Leinsdorf) and, to a lesser extent, Marilyn Horne and Donald Gramm (with Bonyngé).

Lucia Popp and Gabriel Bacquier are certainly game, and here—as elsewhere in their roles—they have a general animation their colleagues lack. But that animation rarely takes the form of actual characterization, perhaps because both are so preoccupied with technical matters.

Popp scores some points in recitative. Elvira's vilification of the Don after "*Là ci darem*" seems genuinely to bewilder her; her "*Ma, Signor Cavaliere, è ver quel ch'ella dice?*" ("But sir, is it true what she's saying?") sounds for once like a serious question. But I don't much enjoy her straight

singing, which lacks Italianate flow: "*Giovinette*" is pecked at, and the arias suffer from a quick vibrato that's sometimes there, sometimes not.

Bacquier's voice is in pretty good shape by his current standard, which still leaves him short of the role's requirements. He does a remarkable job of concealing his limitations, making an all-out effort to sing where you might expect him to cover with clowning. He manages a surprisingly firm legato in the lower part of the voice ("*Per queste tue manine*" gets off to a fine start), and "*Madamina*" is very solid for someone who can't sustain a D (note the croon on "*maestosa*"). It's a shrewd performance, with moments of Bacquier's accustomed dramatic liveliness ("*O statua gentilissima*" is direct and funny) but too many more where the vocal effort seems to monopolize his attention or where that effort gives way to buffo cliché (the dogged downbeats of "*Notte e giorno*," the barked "*Ecco il tempo*" in the sextet).

The one big-league vocal performance in the Solti set is Margaret Price's Anna, generally clean, precise, and attractive. The passagework in "*Non mi dir*" gets rather desperate, but the major problem with this performance is its failure to make any emotional contact. Why is this woman singing? The question also applies to Sylvia Sass (she gets through Elvira's entrance aria without disclosing any personality at all), but her singing is no great pleasure. The middle octave is just unsettled enough to

undercut "*Non ti fidar*," and the wobbly top creates problems in almost every number. (The bottom is none too secure either, though this matters less.)

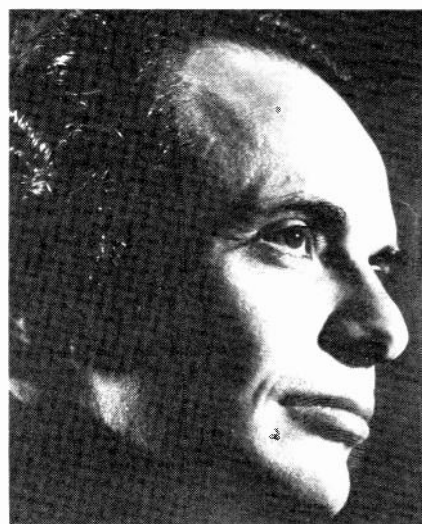
On the male side, Bacquier unfortunately proves the class of the cast. Stuart Burrows' sour, pinched "*Dalla sua pace*" is an out-and-out disaster; the rest of the role doesn't go much better—a feeble performance. Kurt Moll sings the Commendatore's notes very beautifully, in a Germanic way, but to no evident purpose. Alfred Sramek leaves no impression at all as Masetto.

Neither, more seriously, does Bernd Weikl as the Don. By consulting my notes, I could rattle off all sorts of vocal details, yet it is more significant that I can't remember much of anything about the performance. I thought it would at least offer some plush singing, but it doesn't. The singing isn't horrible, and some of it (the serenade, for example) is rather pretty. Though Weikl's Italian is not really good, it is better than I expected, and the grosser exaggerations in recitative reflect a failure of imagination—fake "drama"—more than linguistic discomfort.

This may all sound grimmer than the Solti version actually plays. Except for the Ottavio, it's not actively awful; it runs its course safely and efficiently, and it's recognizably *Don Giovanni*. In other words, we're not talking about a fiasco on the order of the Barenboim recording. At the same time, I'm more likely to return to such sets as the Klemperer and Bonyngé, which may be less



Above, Sir Georg Solti; right, in Joseph Losey's film, Leporello (José van Dam) spreads out the roll of Don Giovanni's conquests before the dismayed gaze of Donna Elvira (Kiri Te Kanawa).



Lorin Maazel

successful as renderings of the opera but are at least of interest for some active engagement of the drama—however wrong-headed or incompletely realized—and for a sprinkling of individual performances.

I don't mean to suggest that the mere presence of some interpretive statement will bring the piece to life. Of course it matters what sort of statement is intended, and it matters even more how that statement is communicated. Which brings us to our other *Don Giovanni* documents.

When I saw Joseph Losey's film, before the PR blitz that accompanied its official release, I was hard put to discern in it more than a few rudimentary indications of who these people are and what they're up to. Some clue is provided by an inscription from Antonio Gramsci: "The old is dying and the new cannot be born; in this interregnum, a great variety of morbid symptoms appears." The Don, clearly, is one of these morbid symptoms, and indeed, as played by Ruggero Raimondi, he comes across as overbearing and fairly unlikely. But what else?

The "what else" is furnished by Losey in his interviews and in the booklet accompanying the Columbia recording. "Don Giovanni has immense charm," we learn. "He is not a likable man. He is cynical and he is hard and he is cruel. But there are moments when you see that he is hurt, there are moments when you see that he is frightened, there are moments when you see that he wants contact—which he can't find."

Son of a gun, this sounds interesting; I'd sure like to see a Don like that. In fact, I find all of Losey's ideas about the opera interesting, and I'd love to see them worked out in performance. The trouble is, I've already seen this production. "Raimondi is simply fantastic in the part," Losey tells Roland Gelatt in *Opera News*. "I think he is a great actor. . . . I think people will be just staggered by his performance." Could I have somehow missed the staggering parts?

My problem with the film is not that it is idiosyncratic, but that all I can perceive directly is its visual idiosyncrasy. Much of it relates to the film's setting (suggested by the Paris Opera's Rolf Liebermann, godfather of the project): buildings designed by the sixteenth-century architect Andrea Palladio, in and around the city of Vicenza, near Venice. The principal site is a country estate, La Rotonda, whose use Losey explains to Peter G. Davis in the *New York Times*: "One of my fundamental concepts was to make full use of the estate's fantastic relating of palatial architecture to the countryside—every window looks to a door which looks to another window and into a vista beyond the building. I wanted to

bring out all these relationships in the film."

Well, you could have knocked me over with a marble column. As a matter of fact, I could never figure out where we were. I couldn't make sense of individual settings, and I certainly couldn't keep track of the scene changes that often occur, as Andrew Porter put it when we talked about the film, between plunk-plunks of the harpsichord. Is this the same place? A different place? Have we been here before? Is this place also part of the Don's estate? (After a while, it appears that everything belongs to the Don. Except, surely, the Commendatore's house. The Don doesn't own that, does he?)

Then there's the damned lagoon (imported from Venice, Losey explains). Ottavio and Anna become the Canal People. Ottavio is so moved by "Or sai chi l'onore" that he takes to a gondola for "Dalla sua pace" (wouldn't "Take a pair of sparkling eyes" be more appropriate?), and the maskers arrive at the Don's house from the misty marsh. The latter actually provides an interesting illustration for the emotions of the mask trio, and there are other appropriately illustrative moments in the film (e.g., the crane shots capturing the fury of the Don's tormentors in the final allegro of Act I—"Trema, trema, o scellerato"). But this is supposed to be a drama, not a slide show.

"Obviously we are creating a new form," Losey says in the Columbia booklet. "Opera has been filmed before, of course, but this is not opera filmed on a stage. It is not opera for television. As far as I know, it's the first time opera has been filmed exclusively on actual locations with portions of it—in this case the *recitativi*—recorded live. . . . We were making a real film, told in filmic terms, set in real locations, with people acting out a real story which is told cinematically and in words as well as in music."

Really, now. What's surprising is how many people have taken this "new form" business seriously. This *Don Giovanni* may blaze fiscal trails for an opera film (\$5-6 million in the *Opera News* account, \$7 million in the *Times*—the mind reels), but what it is is another opera film. Many of us would like to believe that opera can be made to work on film, and Ingmar Bergman gave us encouragement with his *Magic Flute*, yet you can't get around the problems of this hybrid form by declaring them void.

It's hard enough to make the stylized conventions of opera work in a theater. Why are all these people singing? Put a camera and microphones on them, and you have a heightened degree of visual and auditory improbability. Film can of course be used in highly stylized ways, but it

seems to imply an image of literal reality. And it makes no allowance for the different sonic perspectives of theater and film. Where is the orchestra? the harpsichord? How can you edit film without calling attention to the artificiality or downright incredibility of the sonic images? The *Don Giovanni* soundtrack is heavily gimmicked, and the gimmicks only increase the unbelievability.

In the theater, we may accept simply as a matter of convention and habit the periodic stops in the action for the singing of arias, duets, etc. We shouldn't accept this so easily, but we can in a pinch, if the performers provide no more persuasive explanation of their strange behavior. Does Losey really believe that *more realistic* visuals will make this intrinsically unbelievable behavior more believable?

For "Il mio tesoro" Ottavio gets a reprieve from his watery wanderings. Now he wanders around the lawn of La Rotonda. I know it's La Rotonda because the Columbia libretto says so, but in the film, as usual, I had no idea where he was or why. Though I could see that the lawn was very lush and that Ottavio was forlorn, the only immediate connection that occurred to me was that the poor fellow was agonizing over his application for the Lawn King franchise for Greater Venice.

I have yet to talk to anyone who had any idea what was going on during the overture. We're in a glassworks, that much I could tell, but why are we there? From Losey's explanation, I now know that the glassworks belongs to the Don and is in fact the source of his wealth. I also know that the Don is giving a tour of the works, "and among his guests is Donna Anna, and one sees repeated exchanges of glances between her and Don Giovanni. And one knows that something has to follow that."

The thinking here is sound: In trying to construct a plausible version of the opera's opening-scene encounter between Anna and the Don, Losey has decided—quite reasonably, in context—that the Don was in fact invited as a lover. The glassworks tour is designed to establish a basis for this liaison. Except that I didn't notice any of that, not even the presence of Anna and the Don. All I registered was a glassworks. What we have here is a problem all too familiar in operatic (and nonoperatic) staging: lots of ideas but not much communication.

For all the talk of a "new form," the film works for me only when individual performers do what any operatic performers have to do: make me believe in and care about their situations. Two cast members manage this at least occasionally: Kiri Te Kanawa and José van Dam, the Elvira and

Leporello. Losey has Te Kanawa looking kind of loony, but she is ravishing all the same; when Anna and Ottavio sing, "*Cieli, che aspetto nobile, che dolce maestà*" ("Heavens, what a noble appearance, what gentle grandeur"), they are fairly taking the words out of my mouth. Van Dam appears more relaxed and responsive than I have seen him on-stage, and he gives an amusing everyman-ish performance. He sings "*Madamina*" so well that you can ignore the visual: a foldout catalog unraveled to infinity by servants. The preceding recitative actually plays as a scene.

Ironically, one of Losey's problems was having to use a prerecorded soundtrack (except for the recitatives, as noted above) over which he had little control; he was present at the recording sessions but had little input. What's ironic is that the recording happens to be an interesting performance, whose strengths may not be wholly apparent from its use in the film.

It's ironic, too, that Columbia has packaged the recording as a film soundtrack; the libretto is even given in the form of a detailed shooting script. What we have

here is in fact a standard studio recording (with the orchestra in a somewhat more distant and blurrier acoustic than the singers—not bothersome to me, but it may be to you), and it seems to me very much Lorin Maazel's *Don Giovanni*. It's a heavily accented performance with lots of power and thrust and with an unusually rich lower-string presence—all qualities that I suspect don't come naturally to the Paris Opera Orchestra.

Maazel must also have had something to do with the quality of some of the individual performances. Raimondi is not a great Don, or even a particularly interesting one, but his singing is smooth, firm, attractive, and unmannered. Edda Moser is a steely but effective Anna, and Kenneth Riegel marshals his limited vocal resources to produce a surprisingly decent Ottavio; the two mesh in a way that would seem all but impossible for such different voices. Teresa Berganza manages Zerlina's music better than her current vocal estate should allow, though she doesn't do much with character.

Te Kanawa and Van Dam sound a

bit less overwhelming on disc than I'd have imagined from the film, but both give fine performances, and any *Don Giovanni* with a strong Elvira and Leporello has a powerful link to the audience. Malcolm King and John Macurdy make modestly positive contributions. King sounds to me less mealy than he did on the soundtrack (which is much mucked about electronically; Losey and his people were free to mix the sixteen-track master tape as they saw fit). He gives Masetto a bit of spine—not enough, but better than none. Macurdy is an adequate Commendatore, though someone should have noticed that he sings "*aurora*" instead of "*aurora*" in the cemetery scene.

Maazel omits the Zerlina/Leporello duet, and also the two frequently cut bits of recitative: Elvira's expostulation after "*Madamina*" and Ottavio's sappy lines between "*Non mi dir*" and the final scene.

My favorite commercial *Don Giovanni* is still the Krips, but the Maazel seems likely to join that small group of recordings I turn to for a distinctive account of the opera.

Mathis: Noble Failure

Long a subject of political and aesthetic debate, Hindemith's historic opera here receives its first complete recording.

by David Hamilton

Paul Hindemith's *Mathis der Maler* (Mathias the Painter) is, in a significant sense, an opera that missed its time. Long before reaching the stage, it was famous for political reasons. Hindemith was not Jewish and was at first tolerated by the Nazi regime in Germany; for his part, he could not imagine that his compatriots would long submit to such madness. The symphony he put together from *Mathis* was performed on March 12, 1934, by Furtwängler and the Berlin Philharmonic, and a month later the composer conducted the same orchestra in a recording for Telefunken; there was nothing evidently political about the symphony, evoking in tones the paintings of Matthias Grünewald.

Later that year, however, Furtwängler was refused permission to present the opera at the Berlin State Opera. Hinde-

mith's Mathis is a painter who, in a time of social upheaval (the Peasants' War of 1524–25), abjures his art as useless and turns to political action, only to accept in the end that the artist's true task is to create. Whether or not the Nazis grasped this message in all its refinement, they must surely have found unacceptable episodes depicting political repression, especially a scene in which Lutheran books are burned.

On Sunday, November 25, 1934, Furtwängler published, in the *Deutsche Allgemeine Zeitung*, a fervent article on "The Hindemith Case," insisting upon the centrality of Hindemith's role in German musical life and on the maturity of his recent work (this last a point to ward off objections based on more sensational earlier works—to no avail, however, for the bathtub scene in *Neues vom Tage* became one of Goebbels' principal talking points in the subsequent controversy). That morning at the Berlin Philharmonic's public rehearsal, and again in the evening at a performance of *Tristan*, Furtwängler was greeted with tremendous ovations, which the government correctly regarded as threatening. A massive attack was launched in the press against composer and conductor, and the latter responded, on December 4, by resigning all his musical positions in Germany. (Later, unfortunately, he allowed himself to be maneuvered into returning to public musical life, thereby compromising his brave stand and clouding the rest of his life with ill-based

accusations of Nazi sympathies—but that is another story.) *Mathis*, needless to say, was not performed in Germany for many years; it was first heard "in exile," on May 28, 1938, in Zurich, Switzerland. Like another famous "exiled" opera, Alban Berg's *Lulu* (first performed a year earlier in Zurich),

HINDEMITH: *Mathis der Maler*.

CAST:

Ursula	Rose Wagemann (s)
Regina	Ursula Koszut (s)
Countess Helfenstein	Trudeliene Schmidt (ms)
Albrecht	
von Brandenburg	James King (t)
Wolfgang Capito	Manfred Schmidt (t)
Hans Schwalb	William Cochran (t)
Sylvester	
von Schaumberg	Donald Grobe (t)
The Count's Piper	Karl Kreile (t)
Mathis	Dietrich Fischer-Dieskau (b)
Lorenz	
von Pommersfelden	Gerd Feldhoff (b)
Riedinger	Peter Meven (bs)
Prefect of Waldburg	Alexander Malta (bs)

Bavarian Radio Chorus and Symphony Orchestra, Rafael Kubelik, cond. [Friedrich Welz and John Willan, prod.] ANGEL SZCX 3869, \$27.94 (three SQ-encoded discs, automatic sequence).

Mathis then vanished from the world's stages, its message having been vouchsafed to only a few listeners at the time of its most urgent significance.

After the war, *Mathis* conveyed a different message. Even before composing his opera, Hindemith had begun a retreat from the avant-gardism of his earlier music, and *Mathis* became a milestone on this road, a return to what he hoped would be a universally acceptable redefinition and reinvigoration of traditional tonality, set forth in his contemporaneous theoretical work *Unterweisung im Tonsatz* (literally, "Instruction in the Setting of Notes," though the English translation is entitled *The Craft of Musical Composition*). Hindemith, the hero of the Donaueschingen festivals of new music in the 1920s, found himself standing for something else after the war, when young Europeans declined to accept his consolidation; his work was anathema to the devotees of the Darmstadt festivals in the 1950s. He never returned to Germany to live (after his retirement from Yale, he settled in Switzerland) but remained a presence in its musical life and frequently conducted there (in 1955, he again recorded the

Mathis symphony with the Berlin Philharmonic, this time for DG). *Mathis* had become a bone of aesthetic rather than political contention.

Even then, the contention was, primarily local, for the opera remained little known outside Germany: New York and several other major cities have seen it only in the touring Hamburg production. How extraordinary that there have been four recordings of the incomplete torso of Berg's *Lulu*, for example, before even a single one of Hindemith's most famous opera—an opera, what is more, intimately related to his most popular and most recorded orchestral work! Back in the early Sixties, DG made a disc of "highlights" (SLPM 138 769, deleted) based on a 1959 Berlin production with Dietrich Fischer-Dieskau in the title role; confined to the contemplative parts of the work, this could not be accounted even a satisfactory sampling. Now, nearly two decades later, Fischer-Dieskau is again on hand for this first complete recording, a co-production between EMI and the Bavarian Radio. At last, *Mathis* is significantly accessible to a broad international public.

Hindemith wrote his own libretto, in

direct, unfancy, often eloquent German. Except for Regina, daughter of the peasant leader Hans Schwalb, the principal characters are all drawn from history: Albrecht von Brandenburg, Cardinal Archbishop of Mainz and *Mathis*' patron; the Mainz burgher Riedinger and his daughter Ursula, whom *Mathis* loves; and various leaders of Catholics, Lutherans, peasants, and soldiers. Most of the incident in the seven scenes is of Hindemith's own invention, however; it gradually defines *Mathis*' awareness of society's injustice and the apparent irrelevance of art. The climax is a grandiose tableau in which the painter imagines himself to be St. Anthony, tempted by demons (enacted by figures from his own life) and then comforted by St. Paul—the Cardinal Albrecht—who persuades him that his proper contribution to the world is to do what he does best, rather than ineffectually to seek to right the world's many wrongs.

All this is surrounded with vivid incident, well suited to the operatic stage: the arguments of the faction-ridden citizens of Mainz, the burning of the Lutheran books, the battle of Königshofen at which the peasants are defeated. A secondary arm of the plot shows the temptation of Albrecht: Ursula, spurned by *Mathis*, is offered to the Cardinal in marriage (with a large dowry), in hopes of converting him to the Protestant cause; instead, Albrecht is confirmed in his own faith, achieving an insight that will later help him show *Mathis* the truth. It is a good libretto, which doubtless owes some of its vitality and presence to the composer's familiarity with the setting, in the neighborhood of his native Frankfurt. But it's also uncompromising: The love interest is kept at arm's length, the central concern with matters philosophical and spiritual never abates.

In this, and in other respects, *Mathis* seems a profoundly German work, like those two other twentieth-century operatic considerations of the artist's role in society, Busoni's *Doktor Faust* and Pfitzner's *Palestrina*. (Wagner's *Meistersinger* is, of course, the granddaddy of all three, but the nineteenth-century genius succeeded in making his statement of the matter universally accessible.) A musical manifestation of that German-ness, surely, is the degree to which contrapuntal writing—that most learned, most "German" of musical skills—permeates the textures of these operas (and of *Meistersinger* as well), asserting not only their composers' seriousness, but also their desire to attach themselves clearly to that long and central tradition of composition.

No surprise, this, to anyone who knows the *Mathis* symphony. Its first movement, "Concert of Angels," forms the op-

"Virgin and Child," detail from Grünewald's Isenheim Altarpiece



era's prelude and later recurs in modified form as Mathis describes the angelic concert in order to soothe the weary Regina. "Entombment" serves as the interlude between the two parts of the final scene, an epitaph for Regina. The "Temptation" movement is drawn from various parts of Mathis' vision. The opera is as austere scored as the symphony, with only double winds; as often with Hindemith, his expertise in instrumentation is used to make all the instruments sound like "Hindemith instruments," rather than to exploit their potential individuality of color.

The pervasive solemnity of the symphony is, fortunately, not the composer's only manner. He's quite expert at writing all sorts of "stage music"—marches, chorales, fanfares, and the like—that, although firmly fitting into our mental image of the "real thing," is both original and clearly at home in these stylistic surroundings. Particularly effective are the odd-legged marching choruses of the peasants in Scene 4, following upon the military-wind-band effect at the beginning of the scene. No doubt wisely, Hindemith eschews any scene of Mathis actually painting (cf. Pfitzner's idealized and anachronistic depiction of the composition of Palestrina's *Missa Papae Marcelli*); the great and final surge of creativity, during which he puts onto canvas the visions of the sixth scene, takes place while the curtain is down. (Appallingly, none of the Grünewald paintings is illustrated in Angel's libretto booklet, although specific works play an important role in the opera and almost inevitably form part of the decor when it is staged.)

In Hindemith's most important previous opera, *Cardillac* (1926; recorded some years ago on DG 139 435/6, now deleted), the relationship of drama and music was almost uniquely disjunct: The music proceeds on its own independent way, "expressing" nothing except perhaps the pace of the stage action, and the words are fitted to clearly instrumental lines, often somewhat awkwardly. *Cardillac* "works," remarkably, because of the compelling rhythmic energy of the music, which drives the action along, almost against its will. It represents one extreme of anti-Wagnerian reaction, doing away with the immense and pathetic role of the orchestra in forming and reinforcing the audience's emotional response.

Mathis retreats from that extreme; although its music is still anti-Romantic in sound, the orchestra's relationship to the drama returns to an essentially Wagnerian stance, underlining and coloring what the voices do. And yet Hindemith's music remains expressively neutral—and, indeed, often much less compelling dramatically than that of *Cardillac*, for that demonic en-

ergy (and also the higher dissonance level) is gone, with nothing to take its place. Hindemith's ability to invent texture, to spin counterpoint, has not decreased, but what he writes will not bear the burden that he is now putting on it.

This came to me most forcefully during Mathis' description of the angelic concert, in the sixth scene. Here, in the recording, is projected a sense of warmth and concern from Mathis toward Regina, a directness of emotion not heard previously (except briefly, in a similar situation in the first scene)—and least of all in the ostensibly passionate encounter of Mathis and Ursula. Yet it was clear, upon analysis, that this direct expressivity stemmed not from the music, but from the performer—and not from anything he was doing with the music, either; it was simply the associative power of Fischer-Dieskau's ever-so-familiar voice, redolent of the nineteenth-century fathers and lovers that he has so often portrayed for us in opera and song.

As a result, the central characters do not come to life, which puts them at a disadvantage. The quarrelsome burghers of Mainz, the truculent peasants, the court functionaries are all as vividly realized as they need to be, characterized by Hindemith's skillful genre music. But Mathis, Ursula, and Regina need to be more than merely typecast musically, and that rarely happens. When we are moved, it is by their words and actions, not by their music.

One has other reservations about the music, for Hindemith's free-ranging use of tonality in accordance with his newly developed theoretical tenets, though it results in plausible local movement, doesn't generate a convincing sense of long-range motion and destination. Often, when a scene or episode ends, we don't feel as if we've reached home, but rather that we've been pushed off the train with a bump as it passed through the station. The binding force of tonal harmony is implied by the chords Hindemith uses, but not exerted by the way he uses them.

Hindemith aimed high in *Mathis*, dealing with a theme central to his own life and to the life of the society in which he lived, seeking to clothe it in a music that would be more universally understood than any of the diverse styles into which Europe's musical culture had been dissolving. To question his success is not to question the idealism that impelled him, let alone the importance of aiming high; if *Mathis* seems to us ultimately a failure, it is, surely, a noble one.

And important enough to deserve a fine recording. This one is at least creditable, and more than that in the central and enlivening direction of Rafael Kubelik, long an admirer, and admired exponent, of

Hindemith's music. Keeping these busy, note-spinning textures lively and varied is no mean task (Hindemith himself was a master at it, as his recordings attest), but Kubelik rarely lets us down, and the playing is fluent and accurate, if not of ultimate tonal distinction.

The vocal achievement is of a lesser order. Both Fischer-Dieskau and James King (Albrecht) are growing leathery of tone, and there is little bel canto left in them, but the baritone's verbal and musical sensitivity still counts for much, and the tenor's accuracy compensates somewhat for his monotonous, neutral delivery of the words. The current estate of tenor singing is not better advertised by the work of William Cochran (Schwalb) or Donald Grobe (the soldier Schaumberg); the other male singers are fortunately more impressive and as native Germans make more of the text. Neither of the two principal ladies is truly secure of pitch, let alone free and comfortable of tonal emission; Ursula Koszut's vibrant tone and vivacious manner are more convincing dramatically than Rose Wagemann's effortfulness; alas, neither is a pleasure to hear, and even Trudeliene Schmidt, as the beleaguered Countess Helfenstein, sounds pretty unkempt, below her best work. The choral work is generally strong, though a bit limp in the peasant choruses of Scene 4.

Angel's sound does less than ideal service to Hindemith's textures, for the bass line is rarely strongly enough registered (in this respect, DG did much better by *Cardillac*). I also detect some pre-echo here and there, doubtless the result of well-filled sides (they range between 28:30 and 32:15, which is full measure). An opera of seven scenes, between twenty and thirty-seven minutes each, doesn't fit easily on six sides, but no doubt the sonically preferable alternative of eight sides was felt to jeopardize the recording's potential market.

I have already deplored the absence of reproductions of Grünewald paintings in Angel's booklet. Welcome is the inclusion of Hindemith's program note for the first performance, and the essay by Dieter Rexroth is interesting enough, though written from a distinctly German point of view. (These are given in both German and English.) There are some interesting photos, but of three stage designs reproduced in the libretto, two are in the wrong place (and the captions for all the pictures are buried in the back of the book, in the world's smallest type). The libretto includes a good translation by Bernard Jacobson; the omission of brackets to designate ensembles may prove initially confusing (the break at the beginning of Side 4 is incorrectly indicated, four speeches—or, in fact, one ensemble—too early). **HF**



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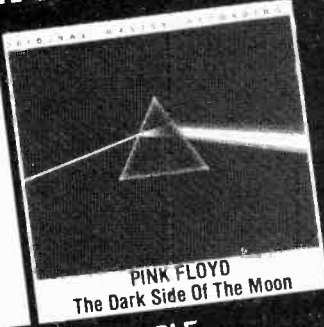
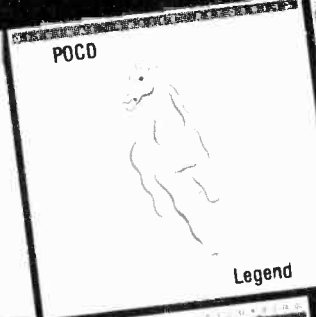
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BARTÓK: Concertos for Piano and Orchestra, Nos. 1 and 2.

Maurizio Pollini, piano; Chicago Symphony Orchestra, Claudio Abbado, cond. [Rainer Brock, prod.] DEUTSCHE GRAMMOPHON 2530 901, \$9.98. Tape: 3300 901, \$9.98 (cassette).

This coupling, new to the catalog, encapsulates a very important phase of Bartók's career. Representing the composer/pianist as the *enfant terrible* of the keyboard in the 1920s, these concertos emanate from the period of his most forbiddingly original creation—extending from the two violin sonatas of 1922–23 to the Fifth String Quartet of 1934. Unfortunately, there is no adequate documentation of his pianism during this period, but, to judge from his later recordings and from the technical difficulties he set for himself in the concertos, he must have been a formidable technician indeed.

The First Concerto (1926) presents Bartók at his knottiest. The thematic material for both soloist and orchestra constantly undergoes transformation—inversions, retrograde motion, and rhythmic alteration—that makes its musical logic hard to grasp. Moreover, there are formidable pianistic difficulties, among them, tone clusters that Bartók first heard Henry Cowell play in London in 1923. (Characteristically, he modestly wrote Cowell asking permission to use this device.) At least one

passage calls for the pianist to play adjoining black and white keys with the same finger.

Sensing that the difficulty of the First Concerto reduced his opportunity for solo appearances with orchestras, Bartók composed the "easier" Second in 1932. Its thematic relationships are more easily grasped; both the orchestration and the piano part are less formidable; and the overall structure is looser.

Both concertos employ sonata form in their first movements, rondo in their finales. The First has a haunting "night music" slow movement; in the Second, the Adagio is interrupted by a presto section, giving the work a symmetrical fast-slow-fast-slow-fast arch structure similar to that employed in the Fourth and Fifth String Quartets.

At least three pianists have recorded all three of Bartók's concertos. György Sandor was a truly idiomatic soloist (Second and Third still available on Turnabout single discs), but the various collaborating orchestras provided inadequate support where equal partnership is a must. Another Hungarian pianist, Géza Anda, joined the Berlin Radio Symphony under Ferenc Fricsay in what stood for years as the classic performances of all three works, but the sound of two decades ago, even as refurbished for the DG Privilege series (2535 262 and 2535 333), is diffuse, and the orchestra, despite Fricsay's leadership, is not fully up to the task. Indeed, Anda himself now sounds somewhat tepid.

More recently, Stephen Bishop-Kovacevich joined Colin Davis in excellent collaborations with the BBC and London Symphony Orchestras (Philips 9500 043, 839 761). These have a richness of texture and Romantic phrasing that some may find too warm for authentic Bartók, but they remain highly persuasive statements.

Other releases pair the First or Second either with the Third Concerto or with other works. Among these, one of the most distinguished is the Daniel Barenboim/Pierre Boulez recording of the First and Third (Angel S 36605), where the conductor inspired brilliantly incisive performances from both the soloist and the New Philharmonia Orchestra. Rudolf Serkin's

First has tremendous solo impact, with strong support from George Szell and the Columbia Symphony Orchestra (Columbia MS 6405); Serkin made this recording after having played the concerto in Chicago and New York with Fritz Reiner conducting. Sviatoslav Richter's Second (Angel S 36801) is sensitive but rather lightweight, especially when compared with Bishop-Kovacevich's. Neither Peter Serkin nor Philippe Entremont conveys the requisite driving power.

Which brings us to Pollini and Abbado. Musically, the new recording leaves nothing to be desired. Soloist and conductor are at one with each other and with the music. Pollini projects the same musically directed virtuosity that he has exhibited in his recordings of Beethoven and the contemporary works of Boulez, Webern, Nono, and Schoenberg. The Chicago Symphony is fully in command of the scores.

My enthusiasm is qualified, however, by two features that may or may not bother other listeners. Pollini's instrument is voiced to produce a very brilliant treble register; although the tone never becomes glassy, there is an overemphasis on the treble. And then there is the manipulation of the balance between piano and orchestra. At times, balance is excellent, giving the equal prominence Bartók explicitly required; in such passages, the detail of the scoring is stunningly projected. But at other times, the piano recedes too far into the background, losing both detail and impact.

Nevertheless, the new recording would be commendable if only for its coupling. Fortunately, there is much more. Both Pollini and Abbado reveal insights into Bartók's music in ways that match any other performances on record. They remind us once again that Bartók, along with Debussy, was one of the two most original composers for the piano in this century. P.H.

BRAHMS: Orchestral Works.

Leipzig Gewandhaus Orchestra, Kurt Masur, cond. PHILIPS 6769 009, \$39.92 (four discs, manual sequence). Tape: 7699 110, \$29.94 (three cassettes).

Symphonies: No. 1, in C minor, Op. 68; No. 2, in D, Op. 73; No. 3, in F, Op. 90;

B Budget

H Historical

R Reissue

A Audiophile

(digital, direct-to-disc, etc.)

No. 4, in E minor, Op. 98. Variations on a Theme by Haydn, Op. 56a. Academic Festival Overture, Op. 80. Tragic Overture, Op. 81.

BRAHMS: Symphonies (4). Academic Festival Overture, Op. 80. Tragic Overture, Op. 81.

Chicago Symphony Orchestra, Georg Solti, cond. [James Mallinson, prod.] LONDON CSA 2406, \$35.92 (four discs, manual sequence). Tape: CSA5 2406, \$35.92 (four cassettes).

BRAHMS: Symphony No. 4, in E minor, Op. 98.

BR Czech Philharmonic Orchestra, Dietrich Fischer-Dieskau, cond. [Eduard Herzog, prod.] QUINTESSENCE PMC 7094, \$3.98 [from SUPRAPHON 4 10 2077, 1977].

Georg Solti's Brahms is Dionysian, with extreme tempos and, especially in transitional passages, elastic rhythm. If there is a contrast to be made, he will probably underline it. Kurt Masur, on the other hand, avoids rhetorical argument and distension. Moderate tempos and a calm, gentle dignity prevail. His beat is rock solid. If neither symphony cycle offers startlingly original insights, both suggest long experience and strong identification with the music.

Though London's annotations tell us the string complement was reduced in the middle symphonies, the Chicago Symphony everywhere sounds big and tonally plush. This is partly the result of London's gargantuan bass response, partly the result of Solti's conducting. The Chicago's recent Brahms series under James Levine (RCA single discs) sounds crisper, brighter, and considerably more transparent. Levine generally reads the scores more incisively, galvanizing the orchestra into playing that is often cleaner and crisper, if louder and less tonally nuanced, than under Solti. Indeed, in many places (e.g., the tossing of antiphonal motifs among string sections in the Second's scherzo and the Third's opening movement), Levine obtains smoother ensemble joints than Solti.

So does Masur. He has a finely disciplined group in Leipzig, though not one strong on magnificent sonority. If those quaintly breathy, slightly nasal East European woodwinds penetrate clearly, it is partly because the strings are a bit wiry and undemourished. Yet the brass rarely shine through as nobly as in the Chicago. One would inevitably opt for the superior choir blending, more alert bowing and articulation, and firmer brass tone of the other major East German ensemble that has recorded these symphonies, the Dresden State Orchestra (Eurodisc 85 782 XHK).

Kurt Sanderling's baton is slightly less rigorous, and the recording features virtually ideal translucency and hall ambience.

In the new sets, Solti observes all three first-movement repeats (there is none in the Fourth), Masur only that in the Third. Other detailed comments follow:

First Symphony. Both conductors open with the massive pace that has become the Central European standard. (Levine offers the faster option.) Comes the allegro, and Masur scarcely speeds up. Masur is cool in the slow movement, Solti darkly and heatedly passionate. In the finale, Solti is more frenzied in the coda, and he takes a ritard in the final utterance of the horn call.

Second Symphony. Solti's mercurial temperament shows up in the development section of the first movement, but the second has a blowsy, fustian quality. Masur's sturdy rectitude and airier sonorities avoid these polarities and make for a more charming third movement. Solti whips up greater excitement in the finale, leaving the Leipzigers slightly in the doldrums.

Third Symphony. This is perhaps Solti's weakest performance—rhythmically flaccid (e.g., the three against two in the Andante) and devoid of vertical clarity (in marked contrast to the Chicagoans' incredibly alert and vividly characterized Levine disc)—and Masur's strongest. In this serenely bucolic reading, the Teutonic village beer hall sound of the Gewandhaus winds reminds me of Eugen Jochum's wartime Telefunken version with the Hamburg Philharmonic (briefly available here as a Capitol LP—in no way duplicated in his later DG and Angel cycles). As a single, Masur's Third would be a winner.

Fourth Symphony. Solti and Masur both pace the opening movement moderately; Solti could have driven it a bit more to throw into sharper relief his impressively somber and weighty treatment of the Andante. The knotty passacaglia finale sees a reversal of roles: Solti breaks the seamless continuity somewhat with his impetuous gear shifts, but Masur does so even more conspicuously and perhaps deliberately, apparently seeking to underline the individual character of the variations. I prefer the unvarying pulse prescribed by Brahms and most closely approximated by Levine, Toscanini (RCA Victrola VIC 6400), and Dorati (deleted).

As for Fischer-Dieskau's Fourth, the original Supraphon issue met with both generous praise and sharp criticism. I take a middle view. There is a little too much capriciousness of tempo (and not just in the finale) for a work of such classically defined architectural proportions. Yet a very

forceful personality is projected here. I detect the baritone's emphatic style of detached enunciation of key syllables (with that slightly delayed beat) vividly projected into the delivery of the scherzo (the "Fischer-Dieskau bark"), and it works. Lyricism is not slighted, of course. What ultimately makes this a bargain is the Czech Philharmonic's bouncy delivery, pungently articulated in the strings, gorgeously mellow but witty in the woodwinds, and brazenly stabbing in the trumpets and timpani. Quite simply, the symphony is given the virtuoso ride of its life. The Quintessence pressing is well balanced, an accurate replica of the Supraphon original.

To return to the shorter works in the sets, Solti has already given us his *Haydn Variations* (London OSA 12114, September 1979); Masur's is prosaic and phlegmatic, no match for such classics as Toscanini (RCA Victrola VIC 6400), Szell (Columbia MS 6685), Boult (Angel SZ 37648), Jochum (DG 2530 586), Ormandy (RCA ARL 1-3001), or Monteux (London Treasury STS 15188). Solti's *Academic Festival Overture* comes on like a windy and hortatory commencement speech, while Masur trims down its grandiloquent gestures appreciably. The Gewandhaus *Tragic Overture* is steady but not stately—in fact, Masur totally neglects to halve the beat at the central *Molto più moderato*, an idiosyncrasy remembered from recordings by Mengelberg, Van Beinum, and Knappertsbusch (London Treasury STS 15027), albeit at a slower basic tempo. Solti is more correct in overall outline but a bit careless about differentiating between legato and staccato. Toscanini's feverish intensity and grandeur in this work (Seraphim IC 60150) are rarely heard nowadays. A.C.

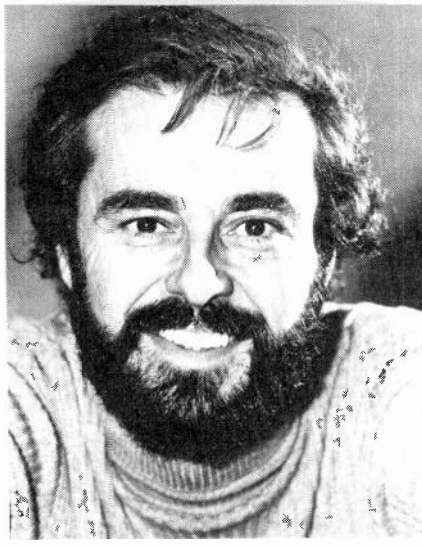
COPLAND: Symphony No. 3.

Philharmonia Orchestra, Aaron Copland, cond. [Roy Emerson, prod.] COLUMBIA M 35113, \$8.98.

COMPARISONS:

Copland/London Sym. Ever. 3018
Bernstein/N.Y. Phil. Col. MS 6954

In the Third Symphony (1944-46), Aaron Copland was consciously reaching for what he calls "the grand manner." As the symphony opens, we hear the language of *Appalachian Spring* spread out onto a broader canvas—that of the opening of Mahler's First Symphony, so to speak. Later in the first movement, the brass lead an emphatic fugue to a somewhat raucous climax; the subject comes from the same shelf as that of the "Wissenschaft" section of Strauss's *Zarathustra*.



Ciani, Jacobs, and Rev—three excellent releases of Debussy piano music

The point of such a description is not that the music is derivative (which it is only in the most creative way), but that its inspirations indicate the scale of its aspirations. The Third Symphony seeks to transform the masterful—but in dimension essentially anecdotal—style of Copland's "Americana" decade (1935-45) into a suitable medium for larger statements, comparable to the symphonies of Dmitri Shostakovich, for example, which were then coming out of Russia with much fanfare. (Subsequently, in the opera *The Tender Land*, Copland made an equally ambitious effort to place himself in the central line of still another major musical tradition—with, alas, equivocal success.)

Opinion has differed as to Copland's success in his maneuver toward symphonic "higher ground"—on top of which comes today the question of whether the "major symphony" was indeed "higher ground": What was right for Brahms and Mahler, and perhaps also for Shostakovich, was not necessarily right for an American composer after World War II. Virgil Thomson, at the time, likened it to "an observance of some kind, the ceremony of writing a symphony, perhaps, more than a direct statement about anything beyond its references to the history of symphonic expression."

That seems extreme. Still, the Third Symphony is marked by a self-consciousness one doesn't hear in the composer's earlier music: The material takes itself more seriously, its working-out is more methodical, self-explicatory, even pedantic. The recurrent pastoral ambience is of course closer than the grandiloquence to Copland's usual line of country, and is developed with more spontaneity, but this vein isn't enough to support a piece like this—which is why (to return to the starting point) he wanted to write the symphony in the first place.

The composer's new recording certainly supersedes his previous effort with

the London Symphony Orchestra on Everest, though it doesn't quite displace Leonard Bernstein's 1966 disc. The newer Columbia is more comfortably recorded than the older, with a more distant, spacious, and resonant pickup than the vivid but boxy sound of the Philharmonic disc. And though Copland's slower traversal of the second movement is neater than Bernstein's, the latter achieves more rhythmic poise in the third movement. Not an easy choice, but both make the best of the work's strong points. D.H.

DEBUSSY: Preludes, Books I-II.

Dino Ciani, piano. [Franz-Christian Wulff, prod.] DEUTSCHE GRAMMOPHON PRIVILEGE 2535 260/1, \$6.98 each. TAPE: 3335 260/1, \$6.98 each cassette.

DEBUSSY: Preludes, Book I.

Livia Rev, piano. [Ted Perry and Martin Compton, prod.] SAGA 5391, \$8.98 (distributed by Centaur Records, Inc., P.O. Box 23764, Baton Rouge, La. 70893).

DEBUSSY: Images (1894); Images, Books I-II; Estampes.

Paul Jacobs, piano. [Joanna Nickrenz and Marc Aubort, prod.] NONESUCH H 71365, \$4.96.

All of these releases are excellent. Indeed, there is little to choose between the Hungarian-born Rev and the Italian-born, Cortot-trained Ciani in the preludes. (Presumably Rev's Book II will be along shortly.) Both offer classical, shapely performances in the Gieseeking tradition; in fact both incorporate specific aspects of Gieseeking's readings, such as the minimal tempo contrast in the central episode of *La Sérénade interrompue*.

Subtle differences come into play, of course, with Rev inclined to shadows and half-tints and Ciani preferring a more tangible linearity, a weighting of chords that brings all components—not merely the top voice—into stark definition. (This contrast is partly attributable to the different acous-

tics, excellent in both cases.) But in the main, each artist manages to project atmosphere and color along with structurally concise outlines. I give the slightest edge to Lev, partly because the processing of the German-pressed Saga disc is even more luxuriant than the Privilege, with its occasional crackle and hint of overbrightness. Nevertheless, I am happy that DG has finally decided to make Ciani's versions posthumously available here (the young pianist was killed in an automobile accident some years ago). They form a worthy memorial to an unusually promising performer.

On Nonesuch, Jacobs plays the assorted Debussy works beautifully—with greater abandon and less tempo adjustment than in his recent account of the preludes. (The more compact sound of the Baldwin SD 10 piano, as opposed to the slightly cumbersome overrichness of the Bösendorfer Imperial used for the preludes, helps.) Included is the first American version of the *Images* of 1894, lovely, expressive works that Debussy for some unknown reason neglected to publish. The second of these pieces, "*Dans le mouvement d'une Sarabande*," is in fact an earlier incarnation of the *Sarabande* from *Pour le piano*, so the conjectural explanation put forth in Jacobs' lucid annotations—that perhaps Debussy intended to revise the first and third pieces as well—seems entirely credible.

The pianist characterizes the more familiar compositions with equal distinction. "*Soirée dans Grenade*" is especially undulant—totally different from Ricardo Viñes' briskly paced early recording, but no less effective. The recorded sound is superb, but my review copy was beset with clicks and swishes. H.G.

GAY AND PEPUSCH: The Beggar's Opera.

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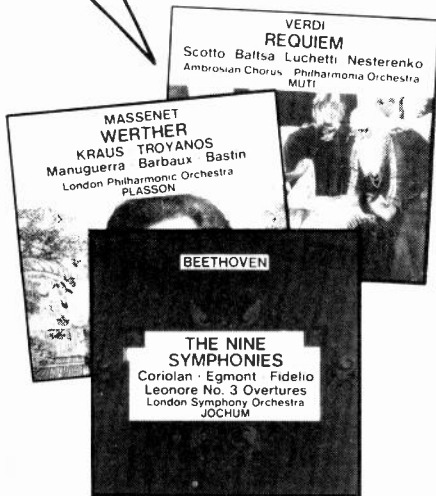
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Circle 2 on Page 95

Mrs. Peachum	MargaretCable(ms)
Lucy Lockit	Shirley Minty (ms)
MacHeath	Nigel Rogers (t)
Lockit	John Noble (b)
Mr. Peachum	Edgar Fleet (bs)

Chorus and Orchestra of the Accademia Monteverdiana, Denis Stevens, dir. ABC CLASSICS AX 67046/2, \$15.96 (two discs, manual sequence) (also available on Musical Heritage Society MHS 4011/2).

Editor's note: This production was in progress as MCA bought ABC Records. When current stock is depleted, the album will sport the same number but the MCA label.

In the first third of the eighteenth century the English theater, especially the drama, was marked by rather cold correctness, turgid declamation, and unnatural pomp, lacking the freedom and the warmth that capture the imagination and feeling. Then suddenly John Gay brought society upon the stage, showing its web and texture as it really existed. He held up a mirror of nature in which men and women could see themselves as others saw them, see their most striking peculiarities and defects pass in merry review before them.

In the *Beggar's Opera* (1728) we see veritable human beings and manners, imbibe our notions of virtue and vice from practical examples, and see the many hues of daily life. The characters are highwaymen and thieves who wear—such was the similitude between high and low—the manners and morality of fine gentlemen. Besides the sharp social criticism, the *Beggar's Opera* contains political satire at its most rudely effective and lampoons opera and the aristocracy's "unnatural taste for Italian music" (Dean Swift). The audience was startled to hear slippery moral, ethical, and political tenets expressed with such stark directness and in verbiage "persons of quality" would never dream of using, but it was delighted, the play became an unheard-of success, and Polly Peachum was declared a national heroine.

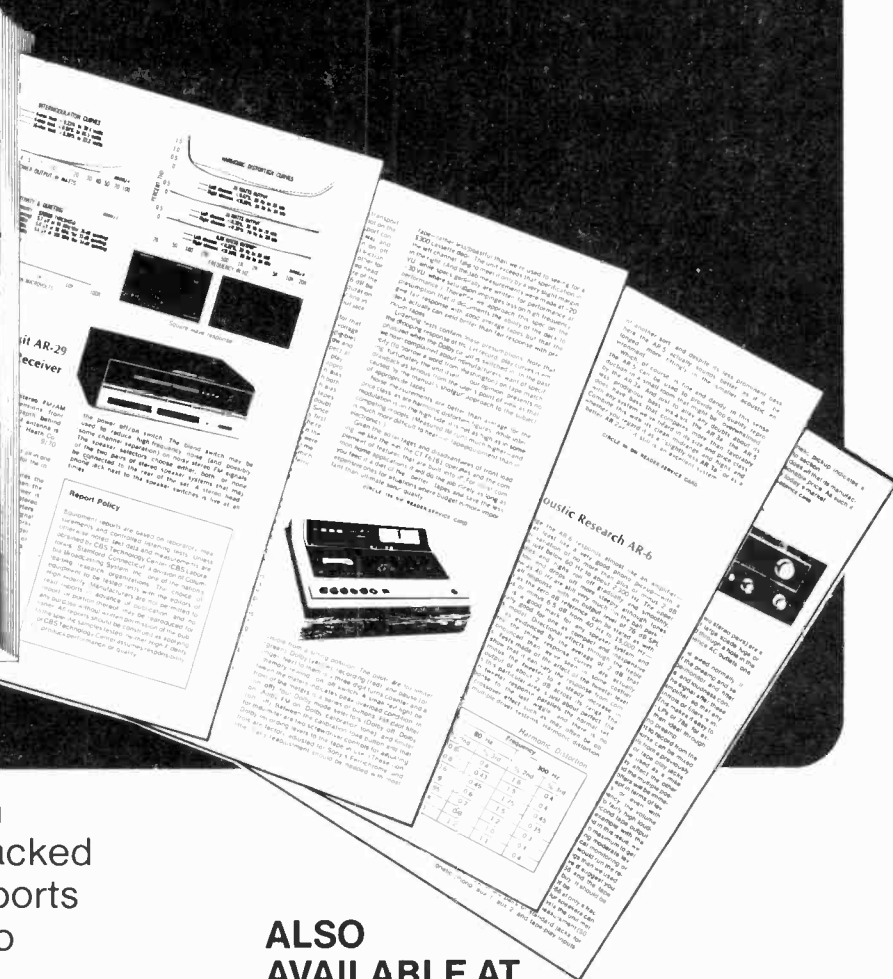
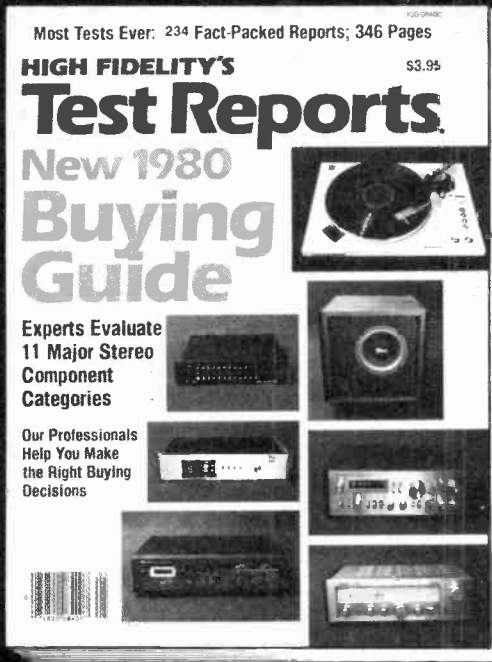
The new theatrical genre was called ballad opera. The term is of course a misnomer, for this is not an opera at all, but, in the old English tradition, a play with musical inserts not unlike our modern "musicals." Nor is it a tale with loftiness of style, fullness of detail, and unity of action. But it is capital fun, and its success was well deserved, starting a flood of imitations. Though the ballad opera petered out in the nineteenth century under pressure from the early romantic opera and operetta, it has been successfully reconstructed in our day by Dent and Britten, among others, and in a more original way in the *Three-Penny Opera* by Brecht and Weill. We should also remember that ephemeral, lightweight, and very English as the ballad opera was, it

exerted considerable formative influence on the German Singpiel.

The music to this "opera" was not composed, but slapped together from borrowed and parodied material, from well-known folk and street songs, from popular ballads, as well as from music filched from Purcell and Handel. The production was so hasty that there was not time to arrange the borrowed tunes; it was only some months later that Christopher Pepusch was prevailed upon to compose an overture and provide the tunes with an accompaniment, which actually consisted only of a figured bass line. We do not know how the music was presented in the original performances. The score—if there ever was one—is lost, and we are not even sure of the proper sequence of the songs. Because of this uncertainty, in the various modern revivals the composer/arrangers set the tunes their own way. But Denis Stevens decided to restore the *Beggar's Opera* more closely to its supposed original shape. Instead of replacing Pepusch's often sloppy basses, as did those modern arrangers, he retained and tactfully corrected them and provided the typical small baroque theater orchestra. He also, without a doctrinaire attitude, inserted such embellishments as were customary in Gay's time, brought order into the helter-skelter tonal relationships of the numbers, and arranged the tessituras to accord with each of the protagonists.

The large cast is very good, the singers enunciate with clarity, and in general the performance is commendable, yet on the whole the recording is a disappointment. The *Beggar's Opera* is a play with music, not music without a play. Indeed, I am forced to quote the old Shakespearean saw: In this work, "the play's the thing." Yet even though the entire text is printed in the booklet, only the music is recorded. Imagine sixty-nine songs, taken out of the context of the play, sung one after the other with a break of a few seconds between them. After a dozen numbers, one has had enough. Most of the pieces are mere little ditties, quite similar, and with slight musical content. As they appear in their proper place during the unfolding play they are amusing, but in such an entirely unmotivated sequence they amount to an extremely boring song recital. Stevens himself must have realized this, because he suggests a sort of family gathering at which the play is read while a disc jockey tends the record player at the right spots. But this merely supplies what the record should have done. If the entire play *cum* music had been recorded, it might have provided pleasant entertainment. P.H.L.

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BACH: Suites for Orchestra, S. 1066-68, et al. English Concert, Pinnock. ARCHIV 2533 410/1 (2), Nov.

BEETHOVEN: Missa Solemnis, Op. 123. Bernstein. DG 2707 110 (2), Jan.

BERLIOZ: Harold in Italy. Suk, Fischer-Dieskau. QUINTESSENCE PMC 7103, Nov.

BRAHMS: Choral Works. Corboz. RCA RED SEAL ARL 1-3350, Nov.

BRAHMS: Piano Concerto No. 2. Tirimo, Levi. MUSICAL HERITAGE SOCIETY MHS 4001, Dec.

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SCHUBERT: Quartets Nos. 12, 15. Gabrieli Qt. LONDON TREASURY STS 15418, Nov.

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sharp minor (*Farewell*); No. 48, in C (*Maria Theresia*).

English Chamber Orchestra, Daniel Barenboim, cond. [Günther Breest, prod.] DEUTSCHE GRAMMOPHON 2531 091, \$9.98. Tape: 3301 091, \$9.98 (cassette).

HAYDN: Symphonies: No. 82, in C (*The Bear*); No. 83, in G minor (*The Hen*).

Academy of St. Martin-in-the-Fields, Neville Marriner, cond. PHILIPS 9500 519, \$9.98. Tape: 7300 675, \$9.98 (cassette).

As we look at Haydn's symphonies, we notice that many of them carry nicknames, such as *The Morning*, *The Queen*, *The Philosopher*, *The Bear*, and the *Military Symphonies*. To be sure, these subtitles were hung on them by posterity, but they do not lack plausibility. Haydn was not a composer of program music in the customary sense, but rather a witty and infinitely resourceful musical raconteur. He used popular tunes, or invented them in the spirit of folk music, as if to begin with "once upon a time," and in the course of the stories there are onomatopoeic spots that gave rise to the nicknames. But then he raised his material to the highest sphere of art; symphonic élan and logic dominate.

Barenboim and his orchestra enact the *Farewell* Symphony very nicely as the last violins remaining on the scene, after some sleepy repetitions, tail off into silence. (It is said that Haydn also composed an "entrance" symphony, in which the musicians appear one after the other. If so, it is lost, though the fact that there are such works by Pleyel and Dittersdorf indicates that there might have been a counterpart to the *Farewell*—everyone tried to imitate Haydn.) Barenboim hits a solid, straightforward tone and good tempos, and he catches the chamber symphony spirit. Only in the melodic inflections, notably in the Adagio, could there have been a little more finesse, but the quiet gentleness is attractive.

In Symphony No. 48, supposedly commemorating Maria Theresa's visit to Esterház, a rich work with enough invention in it for two or three symphonies, the conductor tears vigorously into the opening Allegro. Here the dynamics are more varied, and in the Adagio the articulation is more sophisticated than in the previous symphony; the movement embraces the listener with a warm and friendly hug. The deceptively simple minuet/Ländler preserves the dance character but is nevertheless symphonic—the noisy military fanfares in the middle are one of Haydn's delightful musical jokes. The boisterous finale is perhaps a shade too fast (it is an allegro, not a presto), but this fine orchestra takes it in stride: Everything is clear, nothing is slurred no matter how fast the strings

are racing. The empress had a good musical education; she would have enjoyed this repeat performance.

After his great successes in Paris, Haydn began to compose for more than the restricted circle of a princely household. Now the commissions came from everywhere, particularly from Paris, where he was considered to be the greatest instrumental composer of all time, while publishers got busy printing his symphonies—as well as many counterfeit ones. In these Paris symphonies, for which the composer clearly had in mind the excellent and large French professional orchestra, the development sections are not yet so elaborate as in the later works. Haydn at this stage still gave full rein to his bountiful invention and used a multiplicity of themes; though he could handle them well because his marvelous symphonic thrust never wavers, later he would often dispense even with a second theme in a sonata movement, so intent had he become on concentrated thematic work.

In Symphony No. 82 (*The Bear*) he starts out with a remarkable group of themes that promise an extraordinary movement, but the promise is not quite fulfilled; the movement is tightly knit and swift, yet Haydn does not exploit his material to the full. The Andante's charming tune redeems the master, and the pièce de résistance is the finale, with its drone bass and heavy, tramping theme that gave the work its title. Whether this movement is really a bear dance is not known, but it certainly reflects the popular tone of the country fair, and it takes little imagination to conjure up an ungainly bear dancing to the accompaniment of a bagpipe. But no bear ever danced to such lively counterpoint, for Haydn works a miracle with the suggestive idea, creating a wild yet utterly concentrated sonata structure, one of the best and most fantastic in his symphonic oeuvre. The Parisians were both flabbergasted and delighted, and *The Bear* became one of Haydn's most popular symphonies.

Symphony No. 83 is subtitled *The Hen*. The moniker is well meant, perhaps even justified, because at one point this Olympian jokester really makes the orchestra cackle. Yet this is not program music; it is serious, introspective, troubled, excited, and passionate. The Andante tries to reassure us, but the original mood of disturbance comes through. The Minuet is festive yet still restless with its curious alternation of three- and two-quarter rhythm, and the finale, though in the siciliana pattern of 12/8, is entitled Vivace, which immediately indicates that something is out of kilter. The siciliana is usually

a dreamy, gently flowing piece of pastoral music; here the preceding emotional stresses force it into a fast, excited movement before we are pacified at the end.

The performances on the Philips disc are masterly. Marriner's rhythm is sharper than Barenboim's, the orchestral playing is a little crisper all round, and the winds offer a more positive presence than on the DG disc. And Marriner's dynamic range has many subtle gradations. The Allegretto is played with the utmost delicacy and refinement, while in the finale the many inventive color combinations are well realized. Both of these recordings are highly rewarding. P.H.L.

HINDEMITH: Mathis der Maler.
For a feature review, see page 78.

MOZART: Concertos for Flute and Orchestra. For a featurette, see page 90.

MOZART: Don Giovanni, K. 527.
For a feature review, see page 75.

MOZART: Quintets for Strings: in B flat, K. 174*; in C minor, K. 406; in C, K. 515; in G minor, K. 516; in D, K. 593; in E flat, K. 614.

BR Budapest Quartet; Milton Katims and Walter Trampler*, viola. ODYSSEY Y3 35233, \$14.94 (mono; three discs, manual sequence) [from various Columbia originals, recorded 1942-57].

Juilliard Quartet; John Graham, viola. [Steven Epstein, prod.] COLUMBIA M3 35896, \$26.98 (three discs, manual sequence).

COMPARISONS:

Danish Qt. Tel. 56.35017
Grumiaux et al. Phi. 6500 619/21

The Budapest Quartet and friends performed the cycle of Mozart viola quintets almost annually and recorded these sublime works three times. Their first versions were made over an extended period—ranging from the 1942 G minor, before Alexander Schneider's departure, to the E flat, K. 614, taped after Jac Gorodetzky had replaced Schneider's immediate successor, Edgar Ortenberg, in 1948. The early B flat Quintet, K. 174, was not included in this traversal. The second Budapest edition dates from late 1956 and early 1957, after Schneider's return. By that time, Milton Katims had left New York for Seattle, and his role of collaborating artist had passed to Walter Trampler. This cycle was taped in stereo, but only K. 174 was issued in that

form (on tape, Columbia JMB 5). The final set, again with Trampler, dates from 1965 and represents a sort of last hurrah commemorating the ensemble's twenty-fifth anniversary with Columbia Records. These performances are still available (D3S 747).

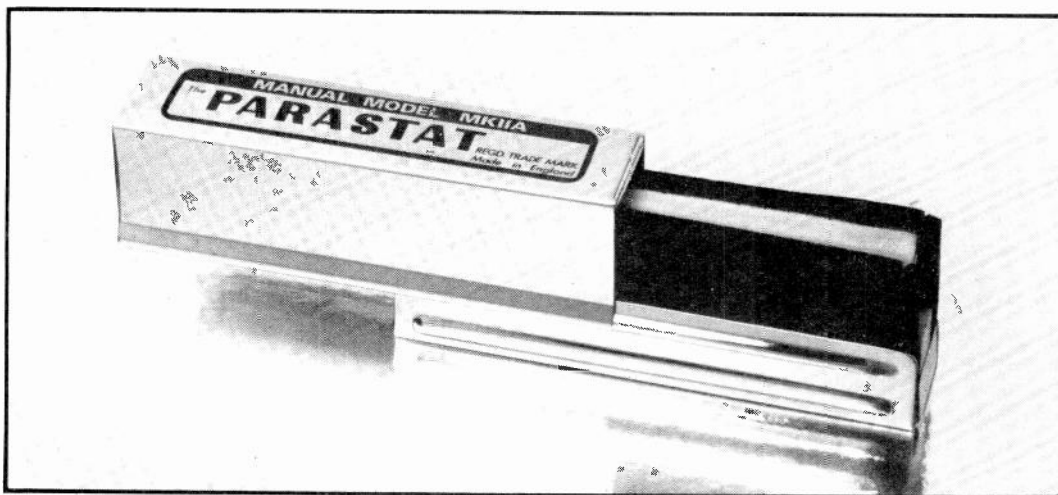
The Odyssey issue revives the 1940s versions with Katims, borrowing the 1957 K. 174 to complete the cycle. There has been some confusion, however: At least one critic seems to be aware of only two Budapest sets, and in fact, Columbia printed the first run with the box (though not the records) erroneously identifying the contents as a straight reissue of the 1956-57 readings, formerly available as Columbia M3L 239. Newer printings rectify the error, but some of the early copies did reach the market.

For years I have been proclaiming the superiority of the second set of performances over the 1965 readings. I do find the 1957 K. 174 a bit scrappy and aggressive, with the players kicking the ends of phrases and imposing a physical extroversion at odds with this basically courtly composition. The later account is more even-tempered but tonally obese.

Comparison of the 1956-57 set with

Continued on page 92

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The Publicity Route to Musical Success. (Of Course, Talent Never Hurts.)

by Patrick J. Smith



Robin McCabe



James Galway

The equation of performer and music played is not and never has been enough to ensure "success" in the real, as opposed to the ideal, world of music. That is why the apparatus of managers and publicity agents exists, and that is why competitions and awards gain a prominence beyond the strictly musical. The increasing reliance of all of the media on what could be termed the *People* magazine approach to music—concentration on the artist and his personality rather than on the performance—only accentuates this tendency.

Nothing new here, of course: Whatever Jenny Lind was or was not as a singer, her fame in Europe was transformed by the impresario shrewdness of P. T. Barnum into a goldmine for both himself and the artist. Today any performer who can fit into the format of the Johnny Carson show and its ilk can increase his fees accordingly, while the shy reclusive types not blessed with charisma may render Beethoven's Op. 111 so as to make the sainted composer weep for joy but will likely find themselves playing to their coteries in Carnegie Recital Hall. But that's show biz.

Here we have two very different approaches to the seduction of the bitch goddess.

The James Galway story is the more typical. He is a diminutive man with an out-sized personality, whose charm is immediately and radiantly apparent. He markets his skills with consummate flair. He is also a first-rate flutist.

This last is an important, but not the controlling, criterion. Galway and Jean-Pierre Rampal are the best-known flutists now before the public. Galway possesses a fat, firm tone that seemingly never loses its strength in breathiness. Yet, even given this virtuosity, neither he nor Rampal is—as an artist—streets superior to several young flutists I have heard in the past few years. Moreover, neither occupies the honored place that, say, Wanda Landowska or Andres Segovia does—that of popularizing a neglected instrument—and neither has been particularly active in commissioning a body of contemporary literature for the instrument, as Mstislav Rostropovich, for instance, has done for the cello.

The Joaquín Rodrigo concerto represents one such commission, but Rodrigo is hardly in the forefront of today's musical thought (although, and this is significant, he is one of the most popular living "classical" composers). His deservedly successful *Concierto de Aranjuez* for guitar remains ever-

green and fresh, but that work effectively explores most of the scope of his talent, besides being written for an instrument that is in his bloodstream. The *Concierto pastoral* is a watery piece successful in showily highlighting the flute, but dispassionate and mechanical compared to Rodrigo's best.

Galway's career (and accumulation of platinum records) follows the formula for artists of this caliber and personality who have exhausted the known repertory but do not wish to venture into the unknown contemporary: the refashioning of works to fit their instruments. Thus the flip side of the Rodrigo record, a transcription for flute (with the composer's approval) of the guitar *Fantasia para un gentilhomme*. The performance is exemplary, but the transcription falls far short of the original.

Galway's many fans couldn't care less, of course. Such transcriptions will doubtless form a larger part of his repertoire in the future, joining "Annie's Song" in its obligatory appearance as first encore. (I note an ad for a new Galway record: "Against the lush orchestral background of the Tokyo String Orchestra, James Galway plays a series of hauntingly beautiful Japanese melodies." That "lush" is the key.)

And there will be the re-recording of the standard repertory, here represented by the Mozart flute concertos. Galway has al-

RODRIGO: *Concierto pastoral; Fantasia para un gentilhomme* (arr. Galway).

James Galway, flute; Philharmonia Orchestra, Eduardo Mata, cond. [Ralph Mace, prod.] RCA ARL 1-3416, \$8.98. Tape: ARK 1-3416, \$8.98 (cassette).

MOZART: *Concertos for Flute and Orchestra: No. 1, in G, K. 313; No. 2, in D, K. 314.*

James Galway, flute; New Irish Chamber Orchestra, Andre Prieur, cond. [James Mallinson, prod.] *QUINTESSENCE SHM 3010A*, \$4.98 (distributed by Pickwick International).

AN AUTOBIOGRAPHY, by James Galway. St. Martin's Press, Inc., 181 pp., \$8.95.

STRAVINSKY: *The Firebird: Suite* (arr. Agosti). **MUSSORGSKY:** *Pictures at an Exhibition.*

Robin McCabe, piano. [Joanna Nickrenz, prod.] *VANGUARD VSD 71264*, \$7.98.

PIANIST'S PROGRESS, by Helen Drees Ruttencutter. Thomas Y. Crowell Company, 158 pp., \$8.95.

ready recorded the two, with a bonus of the Andante in C, K. 315 (RCA ARL 1-2159), but the new traversal is expert and less expensive.

Galway's autobiography seems a little premature, but, as it reveals, he has already had a very full artistic life. The book is understated, amiable, and consistently optimistic. Its best passages are those discussing his career as first flute in the Berlin Philharmonic. Karajan knew a top-notch flutist when he heard one, but ultimately Galway's personality became too big for even a chair in the world's best orchestra.

In the other case under consideration, the book, record, and career are intertwined; unquestionably, the article on which the book is based was helpful in furthering Robin McCabe's career. Helen Drees Ruttencutter, a *New Yorker* editor, became interested in the problems facing young pianists at the beginning of their performing lives when she met McCabe. The article she wrote for the *New Yorker* has been expanded into this short book, *Pianist's Progress*.

It concentrates on McCabe's career at the Juilliard School and thence in the performing world, but along the way includes extras—there is a lengthy section on the Leventritt piano competition, which McCabe did not enter. The picture is an accurate one of the fearsome life demanded of a young performer: the endless hours of practice, the finding of the right teacher, the daily competition within and outside school walls that leads up to the competition for performances after graduation. McCabe was one of the lucky ones: A finalist in the Geneva *Concours international de musique*, she now has both a concert and a teaching career.

Her recording attests to her sharply etched technical prowess—a prerequisite today—but supplies in addition a profile beyond the technique. The *Firebird* transcription, well as it is played, will appeal mostly to pianomanes, for on records, more than in live performance, the adaptation suffers from implied comparison to the orchestral score. Mussorgsky's *Pictures at an Exhibition* does not, because it was conceived for the piano, and its pianistic qualities are strongly brought out by McCabe. She has an excellent feel for line yet she creates a wide range of color, underpinning it with a rock-solid rhythmic sense. In the final *Great Gate of Kiev* she deliberately overpedals—and, in the closing *grave*, she interjects a pronounced left-hand tremolo—to suggest both massiveness and the concatenation of bells. **HP**

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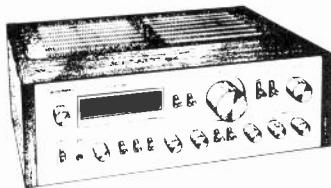
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Circle 54 on Page 95

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WELCOME, MUSIC LOVERS, to the inauguration of our new monthly column. It's not often that we can share directly with our audience the special delights of our work, but we hope to use this space to do just that.

To begin, here's a question... what would be the perfect recording studio for an instrument with a sound so soft that even the slightest noise drowns it out? That was Denis Vaughan's conundrum as he sought to record on his delicate Goff Clavichord for our release, "Bach After Midnight."

The ideal solution was a bathroom! We found it near Rome, and as Vaughan performs these sections from Anna Magdalena Bach's Notebook & her eminent husband's Well-Tempered Clavier's Preludes, we think you will enjoy a completely unique sound.

Vaughan contends that the clavichord's tiny sound was no match for the huge Bach family and, consequently, old J.S.B. did most of his composing on his favorite keyboard instrument in the wee, small hours. Thus, the album's title.

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Circle 9 on Page 95

the 1940s album is much more subtle and even more revealing: Although the group maintained its high *musical* standards well into the '50s—indeed, showing unmistakable evidence of deepening in K. 515 and 516—its *technical* decline started much earlier, remaining marginal for a long time but then accelerating with alarming rapidity. K. 406 and 593 have astonishing grace and proportion on *Odyssey* and are immeasurably more delicate and incandescent than those from 1956–57. K. 516 was a bit more polished in 1942, although the later version is somewhat more regal and Beethovenian than its slightly cool predecessor. I prefer the K. 515 from 1957—the pacing is more supple, and details, such as the sforzandos in the second viola part at bars 168 et seq. of the fourth movement, are integrated into the whole with greater subtlety. The later account of K. 614, with its double first-movement repeat and greater rhythmic and tonal dynamism, is also better. The 1949 version, with only the first repeat in the opening movement (even that was omitted in 1965), is a shade overrefined and staid, though very beautifully executed.

As a totality, the *Odyssey* edition provides wonderful value and is certainly the preferred economy set of this glorious music. Columbia, aside from eliding a silent bar just before the recapitulation in K. 406's first movement, has done very well with the elderly sound. Chamber music seems more impervious to outmoded sonics than orchestral music, and these clear, well-balanced recordings can still be listened to with the greatest pleasure.

In fact, I may just favor the older sound over the tangible realism of the new Juilliard/Graham album. There is nothing wrong with the new engineering, which is basically warm and well-balanced, but effects that sound magical in the early Budapest readings are much less alluring when revealed to the point of glare. The Juilliard Quartet, once a taut, acerbic-sounding ensemble, has modified its style considerably, and in certain respects these broad, warm-toned interpretations are similar in style to the 1965 Budapest versions—albeit with far better concentration and intonation.

The group uses the Bärenreiter text, as did the Heutling Quartet (Seraphim S 6028), the Danish Quartet, and Grumiaux. Thus, the Minuet of K. 515 is played *after* the slow movement, and the chromatic, rather than the zigzag, version of K. 593's finale is used. All this "scholarship" constitutes a dubious improvement—I prefer the alternatives in both instances; certainly K. 515 makes much more emotional sense with the Minuet following hard on the heels of the first movement.

The Juilliard offering is not quite the

equal of the more elegantly polished Danish and Grumiaux editions. The classic Budapest version, however, more than measures up to those superb later recordings. H.G.

MUSSORGSKY: Pictures at an Exhibition. For a featurette, see page 90.

RODRIGO: Concierto pastoral; Fantasia para un gentilhombre. For a featurette, see page 90.

SCHUMANN: Songs, Vol. 2.

Dietrich Fischer-Dieskau, baritone; Christoph Eschenbach, piano. [Cord Garben, prod.] DEUTSCHE GRAMMOPHON 2709 079, \$29.94 (three discs, manual sequence).

Liederkreis, Op. 24 (complete).
Zwölf Gedichte, Op. 35 (complete).
Romanzen und Balladen, Op. 45: No. 3, Abends am Strand. Dichterliebe, Op. 48 (complete). Romanzen und Balladen, Op. 49: No. 1, Die beiden Grenadiere; No. 2, Die feindlichen Brüder. Lieder und Gesänge, Op. 51: No. 4, Auf dem Rhein. Romanzen und Balladen, Op. 53: No. 1, Blondels Lied; No. 2, Loreley; No. 3, Der arme Peter. Bel-satzar, Op. 57. Romanzen und Balladen, Op. 64: No. 3, Tragödie (first two parts only). Spanisches Liederspiel, Op. 74: No. 6, Melancholie; No. 7, Geständnis; Anhang, Der Contrabandiste. Lieder und Gesänge, Op. 77: No. 5, Aufträge. Liederalbum für die Jugend, Op. 79: No. 7, Zigeunerliedchen (2); No. 13, Marienwürmchen; No. 17, Die wandelnde Glocke; No. 22, Des Sennen Abschied; No. 23, Er ist's; No. 26, Schneeglöckchen; No. 27; Lied Lynceus des Türmers.

For Dietrich Fischer-Dieskau's Schumann survey, the second installment of which is now at hand, the domestic catalogs indicate very little competition except in the cyclical groups—and a substantial part of that competition is in the form of the baritone's own earlier recordings. Given the prevalent dearth of Schumann songs on records, then, one's initial reaction certainly ought to be gratitude—not only for the existence of these recordings, but also for the solid level of professionalism and musicianship that Fischer-Dieskau and Eschenbach maintain. After three decades of recordings from this singer, such quality should not—and does not—surprise us; still, we ought to acknowledge it specifically.

To the songs of 1840 in Vol. 1, the present collection adds fifty more, plus twelve from later in the decade. None is recorded here for the first time, though eight have not previously been recorded by this singer. (Those who own Peter Schreier's less comprehensive Schumann survey, reviewed in May 1979, will find but nineteen

duplications—mostly the Kerner songs of Op. 35—with Fischer-Dieskau's Vol. 2; now out of print in America is Schreier's coupling of Opp. 24 and 48.) Nearly all of these songs are central to Schumann's reputation as a composer and to the love for Clara that was the essential fact of his life; they require little further recommendation from me on musical, biographical, or historical grounds.

Comparisons with Fischer-Dieskau's earliest recordings of this music (the *Liederkreis*, Op. 24, and other Heine songs on Electrola E 90014; the Kerner cycle on Decca DL 9935; *Dichterliebe* on Decca DL 9930—all out of print) and his "intermediate" ones (particularly Op. 24 and *Dichterliebe* on DG 139 109, other Heine songs on DG 139 110) show something of a consistent pattern. Strikingly and unexpectedly, the change from a warmer voice and a more intimate, spontaneous delivery to a drier sound, a more studied and pretentious manner of singing took place before the "intermediate" recordings—that is, in the early 1960s—rather than more recently. Although the latest versions are, by and large, of the same general style as the "intermediate" ones, they are less inflated in vocal scale, and sometimes more convincing. To the extent that these are songs of a young lover—and many of them are explicitly that—there can be little question that the earliest recordings serve the expressive content more effectively; they are also pleasanter to listen to. Hang on to them if you are lucky enough to have them. (Recently, Electrola has reissued Fischer-Dieskau's very first recordings of the Schubert cycles, IC 175 01764/6; perhaps DG will eventually undertake parallel restorations from its backlist.)

That the singer has changed both vocally and expressively should not surprise us. I'm sorry to report, however, that in one matter he has not wavered at all over more than two decades: his callousness toward the interrelationships among the songs within the cycles. Some years ago (May 1972) I discussed this matter at length, with particular reference to the Kerner songs, Op. 35; it's equally important for *Dichterliebe* and the Op. 24 *Liederkreis*. Though questions of key relationship may seem arcane to the nonprofessional, they are not in fact so; we can all hear such things, even if we can't all describe them in words.

In *Dichterliebe*, for example, the first sounds of nearly every song are closely related to the last sounds that preceded it (and the absence of such close relationship is equally significant, of course). The first piano chord of No. 7, "*Ich grolle nicht*," is almost identical in content to the last chord of No. 6, "*Im Rhein, im heiligen Strome*"; it's

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played an octave higher, but has the same note on top—at least it does in the Pears/Britten recording on London OSA 1261. Under the transpositions Fischer-Dieskau has made on all three of his recordings, the two chords are completely different in content. The "distance" that we sense between one song and the next is significantly affected by such an arbitrary alteration; if you have access to the recordings in question, just play this sequence and compare.

Though Fischer-Dieskau sings some of *Dichterliebe* in Schumann's original keys, he transposes other songs down a tone or a minor third; four of the fifteen junctures between songs are thereby distorted. In Op. 24, the score is five out of eight falsified; in Op. 35, eight out of eleven. Any violinist who juggled around the movements of a sonata in this way, to suit his digital convenience, would be immediately branded as irresponsible; I submit that singers ought to be held to the same standard.

A lengthy catalog of detailed observations about these performances would not serve much purpose; if you require a survey of Schumann songs, this is the only game in town (unless you have access to imports, and Schreier's much smaller series). Eschenbach's thoughtful and accurate playing is sparser of line than some we have heard in this literature, if not very spontaneous. But then spontaneity would not mesh well with this singing; for all their solid musicianship, what we hear in these performances seems more often the voice of an institution than of a person.

The usual booklet includes texts and translations, for the most part by the reliable Lionel Salter. D.H.

STRAUSS, R.: Songs.

Kiri Te Kanawa, soprano; London Symphony Orchestra, Andrew Davis, cond. [Paul Myers, prod.] COLUMBIA M 35140, \$8.98. Tape: MT 35140, \$8.98 (cassette).

Four Last Songs; Zueignung, Op. 10, No. 1; Ruhe, meine Seele, Op. 27, No. 1; Morgen, Op. 27, No. 4; Befreit, Op. 39, No. 4; Wiegenlied, Op. 41, No. 1; Muttertänzelei, Op. 43, No. 2.

There is some ravishing singing on this record, and my only reservation about the second side is that I can't stop playing it. It is an instant work-stopper, for no sooner has Te Kanawa reached the final "Habe Dank" of "Zueignung" than back I go to the opening "Morgen."

On the first side, however, something essential is missing. Heaven knows, it is hard enough to get the *Four Last Songs* in

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tune, and there is certainly no fault in that direction; but everything is marginally too fast—there isn't much of "night's magic realm" ("*Zauberkreis der Nacht*") in the third song, for example—and the autumnal quality at the heart of the songs is absent.

All the same, these are exceptionally difficult songs to bring off, and I urge you to hear the record: You may share my enthusiasm for Side 2 and disagree with my doubts about Side 1. In any case, Te Kanawa must record more Strauss songs, and soon. J.C.

STRAVINSKY: The Firebird: Suite.
For a featurette, see page 90.

STRAVINSKY: Pulcinella.
Teresa Berganza, mezzo-soprano; Ryland Davies, tenor; John Shirley-Quirk, bass; London Symphony Orchestra, Claudio Abbado, cond. [Rainer Brock, prod.] DEUTSCHE GRAMMOPHON 2531 087, \$9.98. Tape: 3301 087, \$9.98 (cassette).

COMPARISON:
Stravinsky/Col. Sym. Col. D3S 761

After hearing Claudio Abbado's concert performance of Stravinsky's *commedia dell'arte* ballet score with the Chicago Symphony, I expected much of this recording—which it doesn't quite deliver. The gap between Chicago and London is interestingly similar, in kind and degree, to that between Abbado's Rossini performances with La Scala and his recordings with the LSO: a reduced crispness and variety of articulation, a softness at edges and center.

The Chicago performance combined to a remarkable degree the verve of Stravinsky's gutsy but scappily played recording (now available only as part of a three-disc, specially priced set) with a level of orchestral playing that the Columbia Symphony Orchestra, whatever its members' individual expertise, simply could not dream of reaching under the "from-scratch" circumstances of their recording. In many respects, the London Symphony matches the polish of the Chicago performance and thus becomes a desirable, indeed necessary, complement to the composer's recording. Most importantly, the restoration of the score's full range of dynamic contrast is welcome, for much of the Columbia version is too loudly played.

The score calls for a soprano, but since most of her music lies quite low (and never above a high A flat) the use of a mezzo is possible; Berganza isn't comfortable at either extreme of the range, but her musicality and precise diction are welcome. (I do miss the sexy, chesty legato of Maria Ewing, who made something very fetching of "*Se tu m'ami*" in Chicago.) Davies is serv-

iceable, Shirley-Quirk unsteady of tone and weak on the lowest notes. (Stravinsky's soloists come out, on average, at about the same level.) Berganza and the orchestra manage a nice fadeout effect at the end of "*Contento forse vivere*" that does seem to be implicit in the score, though it is not observed by the composer.

DG carries truth-in-packaging to a new high with this recording. Not content with stating that Stravinsky's score is "after Pergolesi," or identifying the works from which it is taken, the producers have summoned Dr. Helmut Huckle to furnish the latest findings of scholarship in identifying the real composers of the source material—much of it not by Pergolesi, whose fame was so great that other composers' works were published under his name. This won't, of course, affect your pleasure in the music, but it will comfort those who like to have music history's house in order. A brief and cogent note includes a plot summary of the ballet, and texts and translations of the vocal pieces are provided. A fine, if somewhat subdued performance, lucidly recorded, this should give much enjoyment. D.H.

TCHAIKOVSKY: Symphonies: No. 1, in G minor, Op. 13 (*Winter Dreams*); No. 2, in C minor, Op. 17 (*Little Russian*); No. 3, in D (*Polish*).

Berlin Philharmonic Orchestra, Herbert von Karajan, cond. [Hans Hirsch, prod.] DEUTSCHE GRAMMOPHON 2709 101, \$29.94 (three discs, manual sequence). Tape: 3371 053, \$29.94 (three cassettes).

With this set, Herbert von Karajan becomes the eighth conductor currently represented in SCHWANN in all six Tchaikovsky symphonies. Given his and DG's propensity for *Gesamtaufnahmen*, it should not have taken so long; after all, he has been halfway around this course three times already.

Predictable as Berlin Philharmonic/Karajan performances are, they seldom fail to impress with their consummate orchestral quality. I cannot agree with those who find Karajan's mastery cold or insensitive: Technical artistry of this sort is impossible without profound musicianship and interpretive commitment. The almost seamless sonic fabric he weaves is not an idiosyncratic end in itself, but rather the realization of a master concept of how music should sound—a concept as distinctive as Toscanini's driving clarity or Ormandy's sumptuous sonority. One may dispute the substance of such concepts, but not their sincerity or the skill of their realization.

Throughout these performances,

there is a beautifully controlled orchestral balance, a glow to the strings, and a cohesive wind ensemble that few, if any, orchestras can match. Moreover, the recording captures these orchestral beauties thrillingly. To cite but one instance: The timpani solo at the beginning of the slow movement of the Second Symphony, subtly phrased as it is, is a true pianissimo—not a louder sound reduced by lowering the gain, not a soft sound amplified to suit arbitrary audio parameters. And this simple passage leads to an equally delicate exposition of the march theme in the strings and winds. By comparison, the same passage in recordings by Bernstein, Rostropovich, and Muti is too loud, tonally coarse, or both.

Karajan's approach well suits the predominant style of early Tchaikovsky, especially in his evocation of Mendelssohnian lineage. He handles the folk tunes in the Second and Third Symphonies idiomatically and without undue emphasis and avoids seeking out forebodings of the later Tchaikovsky, as Bernstein and Rostropovich sometimes do. Nor does Karajan attempt to combine polish of execution with emotional power as he did so successfully in his most recent recording of the Tchaikovsky Fifth (DG 2530 699).

Stylistically, he is the polar opposite of Bernstein, in these symphonies (Columbia D3M 32996) as elsewhere. Bernstein, with his overt energy, imagination, and ability to impose his extrovert personality on his performances, elicits a more aggressive, less polished sound from the New York Philharmonic, seconded by Columbia's rather forward and sometimes brash reproduction. Between these extremes lies Muti, whose readings with the Philharmonia Orchestra (Angel S 37114, 37472, and 37496) are less refined than Karajan's but more so than Bernstein's; a young middle-of-the-roader, Muti still lacks the strong personal profile of either older conductor.

As a set, this release will appeal primarily to committed Karajan fans, who may be assured that their idol is in top form here. Others will prefer to choose singly. In anticipation of individual releases of these records, a few comparative comments: In the First, choice still lies between Bernstein's strong reading and Michael Tilson Thomas' very individual balletic interpretation with the Boston Symphony (DG 2530 078). In the Second, Karajan is hard to pass up, although Muti's record, generously including a fine *Romeo and Juliet*, is an appealing alternative. Muti, Bernstein, and Karajan all meet the challenges of the Third Symphony admirably, though in different

ways; choice will depend upon one's general attitude toward the conductors. P.H.

WAGNER: Arias.

Joan Sutherland, soprano; National Philharmonic Orchestra, Richard Bonyngue, cond. [Richard Beswick, prod.] LONDON OS 26612, \$8.98.

Rienzi: Gerechter Gott, so ist's entschieden schon. Der fliegende Holländer: Senta's Ballad. Tannhäuser: Dich, teure Halle; Elisabeth's Prayer. Lohengrin: Elsa's Dream. Die Walküre: Du bist der Lenz. Die Meistersinger von Nürnberg: O Sachs, mein Freund. Tristan und Isolde: Liebestod.

The liner notes try to establish Joan Sutherland's credentials as a Wagner singer, although the writer might look to his own: He does not seem to realize that Woglinde in *Das Rheingold* and the First Rhinemaiden in *Götterdämmerung* are the same character. In fact, the only substantial Wagnerian role that Sutherland ever sang on-stage was Eva in *Die Meistersinger*, and that was before she burst upon the international scene with the repertoire that has been hers ever since.

I do not know who advised her to go back to Wagner for this recording, but it was not a good idea: Bits and pieces are hard enough to bring off at the best of times, and here they hardly work at all, except in a purely technical sense that may be of help to other singers. Thus, she sings Senta's dreaded "Jo-ho-hoe" with a certainty that will be the envy of most current exponents of the role; but having done that, she sets off on "Traft ihr das Schiff" with a kind of hop-skip-and-jump that verges on the comical. Everything goes at a tremendous lick: Elisabeth greets the hall with such command and efficiency that one feels she can't wait to get down to the dusting. As for the *Liebesod*, it could be about anything.

There are beautiful sounds aplenty, but of meaningful music there is almost nothing at all. How much of this is attributable to Bonyngue, reputedly not a Wagner enthusiast, I do not know; but in the end it does not matter. This record is strictly for those interested in Sutherland's voice and not in her artistry. J.C.

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GERARD SCHWARZ: Works for Trumpet and Chamber Orchestra.

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HAYDN: Concerto for Trumpet and Orchestra, in E flat. HUMMEL: Concerto for Trumpet and Orchestra, in E (Tarr ed.).

TIMOFEY DOKSCHITSER: Works for Trumpet and Chamber Orchestra.

BR Timofey Dokshtiser, trumpet; Moscow Chamber Orchestra, Rudolf Barshai, cond. [Steven Vining, prod.] QUINTESSENCE PMC 7135, \$3.98 [from MELODIYA/ANGEL SR 40123, 1970].

HAYDN: Concerto for Trumpet and Orchestra, in E flat. HUMMEL: Concerto for Trumpet and Orchestra, in E flat. BIBER: Sonata à 6, for Trumpet and Strings, in B flat.

Both Gerard Schwarz and Timofey Dokshtiser are incredibly skilled trumpeters, and both are supported here by chamber orchestras of high quality. Schwarz is heard in digital recordings of recent vintage, Dokshtiser in an analog recording that probably dates from a decade ago but still sounds very good indeed.

Schwarz represents what is locally known as the Chicago School of brass playing (but probably deserves a more comprehensive name): His tone is very clean and clear with no vibrato, precise intonation, superlative articulation, and a very wide dynamic range, fully exploited by the digital technique. Thus, in the Hummel concerto—and to a lesser degree in the Haydn—he provides far more sophisticated playing than Dokshtiser, who has a brassier sound. Dokshtiser inserts rather florid cadenzas in the concerto finales and plays with true flamboyance. His is the traditional European style of brass playing at its best.

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cludes the welcome bonus of a Biber sonata to fill out the Haydn side, is a real buy. But if you want the latest word, both in engineering and in the treatment of the instrument, the Schwarz record of the concertos has no peer. The sound is unbelievably fine, and the performances are right on the mark.

If one trumpet can be that sensational, then simply imagine two in the Vivaldi, or even seven in the Altenburg or eight in the Biber! The high estate of American brass playing is obvious when trumpet ensembles of this quality can be assembled—each player an outstanding musician. The combined effect may not have been equaled since the heyday of the baroque brass tradition, from which this music emanates. (American composers please take note.)

Schwarz's solos on an A piccolo trumpet in the Torelli and Telemann exploit the coloratura style with playing that is featherlight, crisp, rhythmically precise, and full of verve. His articulation and purity of tone must surely be the envy of every soprano. R.C.M.

Theater and Film

EVITA. Original Broadway cast recording.

Music by Andrew Lloyd Webber; lyrics by Tim Rice. Rene Wiegert, cond. [Andrew Lloyd Webber and Tim Rice, prod.] MCA 2-11007, \$12.98 (two discs, manual sequence). Tape: MCAC 2-11007, \$12.98 (two cassettes).

With their 1969 *Jesus Christ Superstar*, composer Andrew Lloyd Webber and lyricist Tim Rice extended the pop-rock musical format beyond the temporal confines of *Hair* into the realm of history and religious myth. Their New Testament follies, despite its pretensions, was a tremendous popular success that spawned a whole new genre of musical theater. With *Evita*, Webber and Rice have finally hit their artistic stride, and their unique brand of hook-laden pop sophistication meshes exquisitely with the strange life/legend of Eva Peron.

This operatic musical—the only spoken lines occur in some cleverly placed radio broadcasts and film footage—derives its central thrust from *Evita's* near-allegorical persona. Hers is the archetypal twentieth-century success story, replete with the seedy trappings of a rise to power based on

media stardom and sexual politics. The wily and ambitious fifteen-year-old peasant girl becomes involved with a second-rate crooner, who takes her to Buenos Aires; there her affairs lead up a ladder of army officers and politicians to Colonel Juan Peron, whom she eventually marries. As Evita, Patti LuPone combines icy nerve with a believable passion, and her complex characterization shines through in this recording.

The character of Che Guevara (actually a medical student in Argentina under Peron's rule) becomes a major dramatic device, functioning as stage manager/commentator, criticizing Eva's motives while mingling with the crowds. Mandy Patinkin, as Che, is the moral voice that constantly places the story in a larger social-historical context. His lovely tenor adds energy and humanity to each scene, whether he's commenting on the hypocrisy in Argentine politics ("Oh What a Circus") or the tragic irony of Eva's success ("High Flying Adored").

As portrayed by Bob Gunton, with a regal, resonant baritone voice, Peron has a detached imperiousness that suggests he was never totally in thrall to Eva. Mark Syers, as the jilted crooner Magaldi, nicely contrasts a sensual voice and manner with the gullibility of his character.

Evita captures the intense paradoxes of the heroine's life in a series of songs that intertwine and play off each other almost like themes in a symphony. One particularly strong sequence begins with the colonels cynically singing "The Art of the Possible" as they play a very Brechtian game of musical chairs on-stage. Peron begins to emerge as the possible victor, and a crowd chants his name in a darkly dissonant clamor. Eva appears, already zeroed in on Peron. Their supremely crass duet, "I'd Be Surprisingly Good for You," is a grim tango that epitomizes coldhearted love. The movement from one number to the next and the counterpoint between them are subtle, as passion and power first contrast and then mirror each other.

Eva's "Don't Cry for Me, Argentina," is a genuinely moving song that beautifully combines Webber's delicate melodic shading with Rice's psychological sophistication. Significantly, it has been banned in Argentina, where the memory of Eva still carries an incendiary clout.

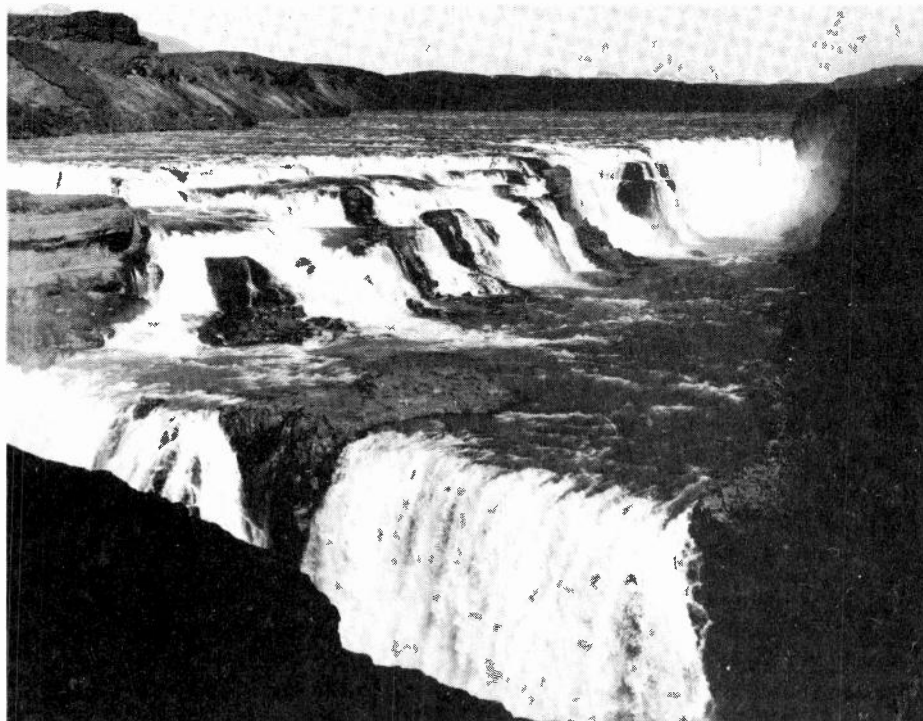
At times, Webber's pastiche of musical styles becomes jarring. Some of the transitional music is either too obviously atonal or too utilitarian to give the lines proper focus. Elsewhere, the score slips into blaring rock melodies that sound like out-

takes from *Jesus Christ Superstar*. But these lapses are few, and the overall orchestration is superb, modulating effortlessly between broad, Latin-tinged swaths of impressionistic color and the sound of a cheesy cabaret combo playing ersatz mariachi music. When it works, the juxtaposition of the pop sounds of the '40s and the '70s is illuminating.

In London, where it has been playing since 1976, and in the U.S., where it arrived only recently, *Evita* has been criticized for canonizing a trollop. Yet its genuine force

and vigor are not political, but emotional. The music conjures up a valid surrealistic image of how it must have been to live through the Peron era. Most important, the production depicts Eva Peron's life with emotional honesty, especially at the end, when she is finally "defeated by her own weak body," dying of cancer at thirty-three.

The complexities of the play translate very well to vinyl, and the recording captures most of the weird excitement generated by the music. C.C.



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The Tape Deck

by R. D. Darrell

Waltzing dodecaphonists

Serialism are at opposite ends of the musical spectrum. The gulf between Johann Strauss II and the serialist pioneers, Schoenberg, Berg, and Webern, might seem unbridgeable, but they all have one thing in common: They are quintessentially Viennese. And even avant-garde theoreticians aren't necessarily anhedonists.

As proof, Deutsche Grammophon offers a delightful set of Strauss waltz transcriptions prepared by the serialists: Webern's *Schatz Waltz* from *Zigeunerbaron*, Berg's *Wine, Women, and Song*, and Schoenberg's *Roses from the South* and *Emperor Waltz* (DG 3300 977, \$9.98; see feature review, December 1979). A special prize should go to the Boston Symphony Chamber Players, led by violinist Joseph Silverstein, for unearthing these extraordinary novelties. The readings are perhaps more Proper Bostonian than *gemütlich* Viennese, but that's a minor flaw in a release that neither Straussians nor serialists dare miss.

New period-instrument series

Telefunken's *Das alte Werk* catalog, a pioneer in authentic recorded performances of old music and still a prolific contributor, introduces a series of recitals illustrating a wide variety of "original" (i.e., period or replica) instruments. The appeal has been expanded to attract audiophiles as well as historical specialists, since each of the musicassette tapes is processed in Teldac's "TriTec" technology, which, while it no longer uses chromium tape, still uses 70-microsecond equalization.

In the debut releases (\$9.98 each), two obscure composers are recorded for the first time, to the best of my knowledge: Giovanni Picchi (c. 1575-c. 1630) and François du Fault, or Du Faut (seventeenth century). Ton Koopman plays a toccata and eight engaging dance pieces by Picchi on a Kroesbergen replica of a Stephanini harpsichord (Telefunken 4.42212—with rather short measure at twenty-seven minutes total), and Hopkinson Smith plays an eloquent pavane and four suites of varied dances by Du Fault on a Pietro Railich lute (4.42328). Du Fault writes in the style of his teacher, Denis Gaultier (c. 1600-72), some of whose *Rhétorique des dieux* suites Smith gave us in an earlier, equally delectable cassette (4.42122).

In 4.42366, Jordi Savall plays, on a 1697 Barak Norman viola da gamba, two suites of depictive miniatures by Antoine Forqueray (1671-1745), most of which were recorded before in harpsichord transcriptions by Gustav Leonhardt. In 4.42425, Paul Badura-Skoda plays, on a c. 1790 pianoforte by Johann Schantz, several little-known Mozart pieces along with the more familiar K. 511 Rondo in A minor and K. 265 Variations. And in 4.42321, various natural horns and *Inventionshörner* are represented in an anthology (Mozart concerto and quintet, Bach cantatas, and Beethoven quintet) drawn from earlier releases featuring Hermann Baumann.

Varieties of pianistic excellence

How far modern pianos have come from the Schantz instrument used by Badura-Skoda and how extraordinarily different they can be made to sound by soloists of disparate technique and temperament are vividly demonstrated by a batch of current cassettes. Most exciting is "The Horowitz Concerts 1978-79" (RCA Red Seal ARK 1-3433, \$8.98; see feature review, January). The program includes the Schumann *Humoreske*, Rachmaninoff *barcarolle* and *Humoresque*, and Liszt *Consolation* No. 3 and *Mephisto Waltz* No. 1—all superlatively recorded.

Outstanding too are three older recordings not previously available on tape. Ivan Moravec's program of Debussy (three preludes and *Pour le Piano*) and Ravel (*Sonatine*), tonally entrancing in its 1969 Connoisseur Society original, is more beautiful than ever in its In Sync super-chromium revitalization (C 4013, \$10.98). One of Tamás Vásáry's earliest triumphs was his 1961 Liszt program (the great B minor Sonata, heroic Polonaise No. 2, and Mozartean *Don Juan* Fantasia), which now returns as DG Privilege 3335 270, \$6.98. And among the recordings the inimitable Clara Haskil made shortly before her tragic death in 1960 were her Mozart Concerto No. 13 (with only so-so string accompaniment) and her more vivid K. 280 Sonata in F and K. 265 Variations (DG Privilege 3335 115, \$6.98).

Vanguard realities, old and new

In addition to the recently recorded Vanguard programs Barclay-Crocker has been issuing in open-reel format, the mail-

order company (11 Broadway, New York, N.Y. 10004) is digging up more and more of that label's older recordings worthy of restored or first-time taping, most of them at the moderate list price of \$7.95 per reel. Welcome restorations include Vladimir Golschmann's 1960 high-voltage Kabalevsky *Comedians* and Khachaturian *Gayane* Suites (D 0207) and Johannes Somary's 1973 augmented wind versions of Handel's *Royal Fireworks Music* and *Water Music* excerpts (E 71176, \$8.95).

The open-reel firsts go back to 1967 for David Blum's still astonishingly vital Haydn Symphonies Nos. 59 and 70 (D 71161) and for pianist Earl Wild's bravura Brahms ballades and *Paganini* Variations (D 10006); to 1969 for Maurice Abravanel's overrestrained program of Rimsky-Korsakov (*Antar* Symphony), Ippolitov-Ivanov, and Glière (D 10060); and to 1970 for pianist Lili Kraus's lovely Schubert Sonatas in A, D. 664, and A minor, D. 845 (D 10074). Scholar/pianist Charles Rosen's eloquent Haydn Sonatas Nos. 31, 32, and 38 actually were recorded in 1969 for CBS, but they sound freshly minted on Vanguard/B-C-D 10131.

Masked Opera-Ball.

The most ambitious Vienna Light Music Society release to date is Richard Heuberger's *Opernball* in a performance claimed to be complete, and including extensive spoken dialogue, with unnamed soloists and the Biedermeyer Concert Orchestra under Otto Schulz (BDRS 220 and 221, \$18 postpaid from VLMS agents, K. C. Co., Box 793, Augusta, Maine 04330). It demands duple reviews.

One, for German-speaking listeners, is a lively commendation. This popular 1898 operetta is a Lucullan feast of Viennese *Torlen mit Schlagsahne*, sung and acted with authentic grace, sentiment, and vivacity and gleamingly recorded in appropriately lightweight sonics. The other review must include a warning to most Americans that they will be exasperated by the absence not only of printed texts and cast identifications, but even of any song titles, and by the presence of long stretches of (to them) mysterious dialogue. Nevertheless, the bewitching music just may overcome these handicaps. I hope that VLMS will give it a better chance sometime, in a single cassette of music minus talk. **HF**

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BACKBEAT®

Anne Murray: Behind the Sweet Facade

by Christopher Petkanas



Snowbird was an incredible smash in 1970, and I said yes to everything, working 365 days that first year." But while the public was delighting in its discovery of Anne Murray's wholesome, country-inflected mezzo-soprano, she was watching the threads of her life come undone. "It was disastrous because I had no direction, no informed management that could help me," says the Canadian-born two-time Grammy winner. "No one in Halifax [Nova Scotia] had ever tried a show-business career, so I was a pioneer, the guinea pig who made all the mistakes."

America's, if not the world's, perception of the thirty-four year old singer probably does not include this hard-luck underside ("I guess it was character building," she says now in retrospect.) Save for an occasional review that challenges her to stray from the safe, middle-of-the-road material that characterizes most of her sixteen-album catalog, neither her music nor her image has inspired much media probing. She is the kind of regularly chart-topping artist, who, one assumes, holds interest only as long as her recordings do. This doesn't seem to bother her, though: "When it comes down to it, I am the way I am—restrained." And, though she does make visible efforts to overcome her inhibitions, she certainly expresses no desire to heighten her show-business profile. "I'm a small-town girl anyway you look at it" she says emphatically, "and I always will be."

Though she was awarded the Grammy for Best Female Country Singer in 1974 (for *Love Song*), she says she heard no country music while growing up in the small coal-mining town of Springhill, Nova Scotia. Instead, she cites Sarah Vaughan, Perry Como, Rosemary Clooney, the Mills Brothers, Bobby Darin, and, in particular, Mahalia Jackson as early influences. As a teen-ager she studied piano and took singing lessons for three years, and eventually gravitated to the shamelessly bold rock & roll of Buddy Holly. More contemporary models include Barbra Streisand and Harry Nilsson, and she terms Dusty Springfield

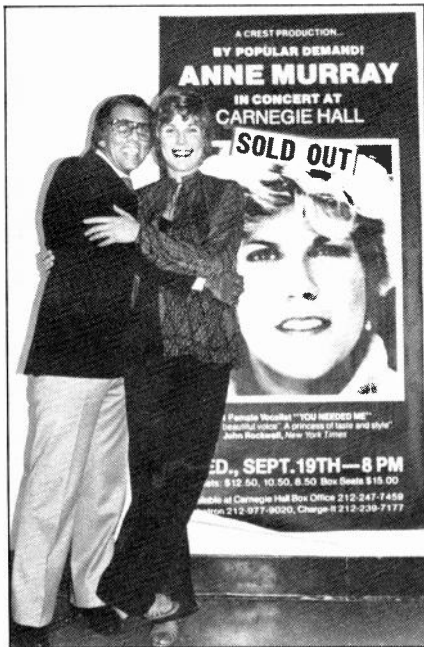
"perfection—the best all-around singer."

A University of New Brunswick graduate, Anne still looks very much like the high-school physical education instructor she once was. She still held that position when she first appeared on Canadian television's *Sing-Along Jubilee* and performed in various nightclubs and coffee houses. She kept it until 1968, when she cut her first album, "What About Me," for the Canadian label Arc. That LP paved the way to Capitol, the company with which she has since remained.

With the success of *Snowbird*, Murray signed with Glen Campbell's manager Nick Savano and began commuting from Halifax to Hollywood to be a semi-regular on Campbell's television show. Her first Vegas gig came in 1971, and she just wasn't ready. "I didn't know where I was. . . . I sang a medley of my one hit—you know the old cliché—in bare feet and hot pants while the audience pulled their hair out. Don't ask me what I was doing because I can't tell you. I was so crazed by the whole thing that I must have been on the moon. . . . Looking back, it's no wonder they didn't understand me."

But while the image-makers (particularly Savano) tried to transform her into something more colorful than she was—or wanted to be—record producer Brian Ahern proved to be a sympathetic and intelligent craftsman. Their four-year, ten-LP collaboration not only yielded several gold albums, but also created a context and a niche for Murray's now easily identified sound. Two of those albums in particular, "Love Song" and "Highly Praised Possession" (both released in 1974, her last year with Ahern), sport folklike textures supremely compatible with her husky yet clear, straight-ahead voice. Ahern's choice of material ranged from rock standards to new ballads, often written by unknown Canadians. The totality of his work with Murray charts the ascent of a quietly expressive singer in her mid-twenties who took lyrics pretty much at face value to a sophisticated interpreter and song stylist.

"Brian and I had a very good relationship, though he loved to work into the



Murray with her U.S. booking agent Fred Lawrence following a successful Carnegie Hall concert

“Playing to 500 people in a 3,000-seat hall is the most demoralizing thing in the world.”

wee hours of the night, and I wanted to work during the day. Anyway,” says Murray, who isn’t lacking in directness. “I thought the time had come to see how someone else did it. In 1976 I teamed with Tom Catalano, who had produced some beautiful albums for Neil Diamond and Helen Reddy. But Tom didn’t consider me to be a country singer. He also went in for big productions, and the departure was too great for me. I like the albums we did a lot, but they alienated a lot of people,” she says of the commercially unsuccessful “Together” and “Keeping in Touch.” “And I wasn’t 100% into it, though I won’t ever make an inferior product. Tom’s way of making albums was so different from what I was used to. We would choose keys, then he would farm out three songs to three different arrangers. When I came into the studio everything was written down. I was accustomed to musicians working from chord charts, to a wonderfully creative atmosphere in which everybody contributed. But that wasn’t the case. We were using fabulous, double-scale musicians who gave me the feeling that they were looking at their watches and waiting for the next coffee break. Brian was at one end of the spectrum, and Tom was at the other.”

Things weren’t going too smoothly on the management end either. Murray had left Savano in 1973 for manager and longtime friend Shep Gordon, whose client roster included Alice Cooper. He was an improvement, but not enough of one. Their eventual parting of the ways can best be explained by the incident in which she was “dragged” out of her dressing room at the Troubadour in Los Angeles to pose for the hungry paparazzi with Cooper and John Lennon. Not exactly her style.

“My manager was a terrific guy who didn’t understand me or what I represent. No one knew what to do with me. Finally, in 1975, I sat down with him in a motel room in Los Angeles and said, ‘Why am I doing this? I’ve got to stop.’ I’d been banging my head against the wall those many years. I was working eight months out of twelve, but to no avail. I had some hit records [*Snowbird*, *Danny’s Song* in 1972, *Love Song* and *You Won’t See Me* in ’74] but I had no momentum. The spaces between the songs were too big. And it

wasn’t as if by working live I was accumulating fans. Because if they didn’t know me in the first place, they weren’t going to buy tickets to find out who I was. Playing to 500 people in a 3,000-seat hall is the most demoralizing thing in the world. I need constant support—I’ve always been shy. I had to be pushed into this business, and having those kinds of things happen made me shudder. It was plain awful.”

Perhaps that need for support precipitated her next move. Murray was committed to more than six months of engagements when she announced to Gordon that she intended to stop working when they were fulfilled and marry William Langstroth, a television producer-director turned photographer. “For four or five years,” Murray remembers, “there was speculation that I was a lesbian because there was never talk of any men in my life.” That ended, of course, with her marriage in ’75 and the birth of her first child a year later.

Her contentment with family life, a year off from the rat race, and a new sense of security coincided with her introduction to Jim Ed Norman, an arranger for the Eagles and the producer of Jennifer Warnes’s *Right Time of the Night*. Of their first meeting in the spring of 1976 she recalls, “He said, ‘Well, I don’t know much about your albums, but I know your singles. I’m a singles person, and I want to make hit records.’ He was talking my language, and we made the Everly Brothers’ *Walk Right Back* in the fall of ’77.” That became a big seller and served to relaunch her career. *Walk Right Back* and *You Needed Me*, which won her the 1978 Grammy for Best Female Pop Singer, were both from their first LP together, “Let’s Keep It That Way.” Their second album, “I’ll Always Love You,” was released last fall and yielded another hit single in Randy Goodrum’s *Broken Hearted Me*. Quite a track record. How do they do it? “We play *Stayin’ Alive* or the Doobie Brothers to fill ourselves up with energy before beginning the sessions. Then I sing my ass off.”

In spite of the obstacles, Murray has undeniably made some of the Seventies’ most tasteful and stylish singles. And they do hold up with time. *Broken Hearted Me* is a realistic ballad with a hook that, in another era, might have



found its way into the hands of, say, Peggy Lee. Murray, who seeks out songs with subtle lyrics and has little interest in composing herself, reaches out to her listeners, though her essential modesty remains intact: "Every day is just the same/ Playin' games, different lovers, different names/ They keep saying I'll survive/ It just takes time." She takes a few light chances, sounding a mite coarse and desperate at times, and the returns are enormous. Norman's mildly haunting production, featuring a lovely and clear storytelling piano line and heavy-handed drums, is not without its mawkish, grenade Manilowisms. If there is an irony here, it is that the lyrics are printed on the album sleeve: Murray's impeccably clean diction allows every syllable to be perfectly understood.

"My singing seems effortless, which is why a lot of people find it boring. It comes off so easy, as though I were singing within a five-note range, which of course isn't true. I'm singing as hard and going after it just like Streisand is, but I'm neither volatile nor dramatic. I do restrain myself. When I do what sounds to me like hard rock & roll—if I'm really raunching it out—it still comes out relaxed. That's simply the nature of my instrument. And if people find it boring, they don't have to listen."

But listen they do—not only the public, but, since the success of *You Needed Me*, also the marketing department at Capitol. "*You Needed Me* wasn't slotted for single release," Murray remembers, "so I went to the president of Capitol, Don Zimmerman, and asked him to trust my instinct. He said okay and we hit. When the song won me a nomination for the pop female Grammy [along with Donna Summer, Carly Simon, Olivia Newton-John, and Barbra Streisand] I thought, 'What the hell am I doing in this category?' Those singers are in show business. I'm not. I'm so removed—I've never met any of them. But I listened to my performance and realized that I can sing as well as the next girl."

That was in 1978. It had taken eight years for her to gain the confidence she needed to really take control of her own career. "I sat down with my manager, Leonard Rambeau, and made a game plan for the year." (Rambeau took over in

1976 when she left Gordon). "He had been my right arm and traveling with me since '71 but didn't have the moxie or know-how then to take charge. Anyway, we mapped out all the places I'd play, worked in some television, and decided to get all the press we could. Everything was strategically set up. I saw the first eight months on paper before me. Consequently, every time I ended up some place on the road I knew that I was there because I wanted to be. Strangely enough, my career never really took off until I got my life together. Now," she says matter-of-factly "the biggest problem I face is leaving my family. I'm torn."

One would have thought, given her "restrained" and "small-town girl" self-images, that she would have chosen the family route by now. (She just gave birth to a second child.) On the other hand, she has worked long and hard to come this far and doesn't seem inclined to let her career end up as so many gold records on the wall of the family room. "Getting to as many people as Streisand—whom I admire immensely—and Linda Ronstadt do is more important to me than anything else. And there are means of doing that. Streisand did it by being the consummate performer. Because she's both a great actress and a great singer, I could never be the same kind of celebrity she is. And neither do I have the sex thing that Ronstadt does. But there's somewhere in there for me, and I'm really close to attaining it. I've been out there going after it, doing everything possible to sock this whole thing home.

"What I do know now is that I can say no—I really do feel like I can pick and choose. It's probably true that I've been a reluctant celebrity, but I'm heard on the radio, and now I've got to put a face on what I do. I want it to happen. Yet I have a certain amount of anonymity that I cherish. If only I could have both. . . ." ❀

"It's simply the nature of my instrument. If people find it boring, they don't have to listen."

"The biggest problem I face is leaving my family. I'm torn."

"We were using fabulous, double-scale musicians who gave me the feeling they were looking at their watches and waiting for the next coffee break."

Studio Circuit

A Home Studio for \$2,000? It Can Be Done!

by Bennett Evans

This is the first of three articles on home studio installations. Future discussions will cover the \$3,000 to \$4,000 setup and—inflation willing—the \$4,000 to \$10,000. In the meantime, save your money, start collecting egg cartons for insulation, and get ready to move out of your bedroom.

You say you want to build a studio, but you're not independently wealthy? Well, a studio doesn't have to be a million bucks' worth of equipment and acoustics. No, a studio is anything that produces tapes that sound like a million. And that could be your garage. Or your bedroom. Or even your closet. Furthermore, if you already own a decent playback system with an amp, some speakers, and maybe a cassette deck, you can put one together for \$2,000. Difficult, but not impossible.

Because, basically, all you need are a tape deck, some mikes, a mixer, a good pair of headphones, and some odds and ends like cables, stands, and rugs for acoustical treatment. And if you plan on recording live—particularly classical or dramatic performances—you can frequently get by with just a recorder and two mikes. I recorded live performances that way before I got my first mixer.

Without a mixer, of course, you can only do one-pass recording. But there are advantages: You can capture an accurate representation of the performance with less chance of screwing up your stereo perspective and no chance at all of mixer noise or distortion. Also, you'll have a bit more to spend on the other stuff.

With a mixer, though, you have a lot more options: You can individually mike and balance instruments, mix new material with previously recorded tracks, and, with a multitrack tape deck, build your recording layer by layer to achieve just the sound you want. "True" stereo perspective may get lost in the process (some en-

gineers refer to multitrack overdubs as "multichannel mono"), but with a mixer you can re-create it artificially anyway.

THE DECK

Good tape decks cost money. So the bulk of your \$2,000 budget, say \$1,000 to \$1,250, will go into that. It's hard to put a price tag on performance. Different manufacturers emphasize different specifications, and they rarely make a better-performing model without giving it some additional features. So before we start looking at specific models, let's list the features of the "ideal" deck. Later we'll discuss which of those features can be traded off.

Transport. The deck should operate at three speeds: 15 ips for maximum quality, 7½ ips for maximum playback compatibility with other machines, and 3¾ ips for maximum economy and recording time in noncritical applications. There should be three separate heads—erase, record, and playback—for the purposes of monitoring and for maximum quality. (The ideal record head has a wide gap, the ideal playback head a narrow one; on two-head machines—record/playback and erase—something's got to give.) What we're looking for is either a stereo deck with half-track recording heads and switch-selected half- and quarter-track playback ones, or a four-channel machine.

The transport should take 10½-inch reels for maximum recording time (especially important at 15 ips). It should have three motors, for better tape handling and durability, and solenoid or solid-state logic controls for greater reliability, and for faster, easier, quieter operation. There should also be an optional remote control.

For easy editing or punching-in you want to be able to listen to the tape in fast forward or rewind, and to "rock" it back and forth while it's still in contact with the heads. (On many decks, with no tape-lifter

defeat, you'll have to put the deck in PLAY with the tape threaded *behind* the capstan in order to edit.) The counter should read in direct proportion to tape length, preferably in minutes and seconds. The heads should be easily accessible for marking edit points and for cleaning, and you should be able to use the deck just as easily upright as laid flat.

Electronics. The electronics section of the ideal deck should have separate line and microphone mixing inputs, with balanced-line microphone inputs using XLR-type 3-conductor plugs and heavy-duty jacks (XLR or ¼-inch phone) on the outputs as well. The level indicators should be easy-to-read, the adjust pots big and sturdy, and there ought to be provision for setting and measuring bias and tweaking equalization. The deck should be equipped for synchronized second-track recording (using the first track's record head for playback in this mode), sound-on-sound (switching, or "bouncing," a recorded track to the track being recorded), echo, and punching-in (shifting directly from the playback to record mode without going through stop and without leaving clicks on the tape). Automatic reverse is not essential. Some decks that otherwise qualify for semipro studio use do have it, but it's only available in quarter-track machines (since stereo half-track tapes play only in one direction). If you do get auto-reverse, consider it part of your home playback system budget.

Multitrack or stereo. A four-channel, ¼-inch deck (also known as a four- or quarter-track) has, theoretically, 3 dB less dynamic range than a two-channel two- or half-track) ½-inch deck. But four channels give you a lot more leeway—separate tracks for different performers, overdubbing, and the like (plus being able to save tape by recording in regular, quarter-track stereo). Given a choice between a little more quality and a lot more flexibility, I'd opt for the flexibility. But that isn't the whole choice. Going multitrack adds about \$500 to the bill—or rather,

Bennett Evans has been writing about sound equipment for fifteen years.

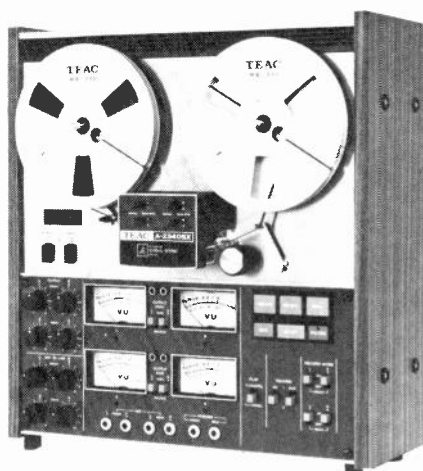


TAPE DECKS

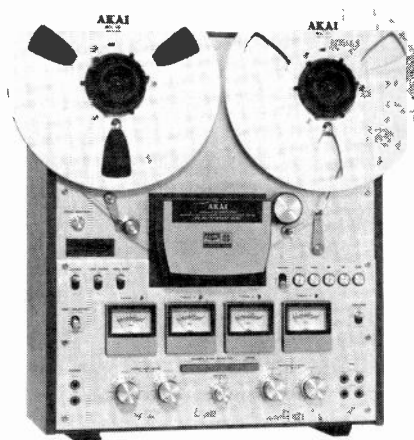
Make & Model	Price	Reel Size	Tracks	Channels	Speeds	Heads	Meters	Sync	Pitch Control	S/N*	THD*	Frequency Response*
Akai GX-620	\$725	10½"	4	2	7½, 3¾	3	2, VU		yes	62	0.5%	30-26k ± 3
<i>Remarks: Meters read to +5 VU; wired and wireless remote controls optional; timer-start switch.</i>												
Akai GX-270DSS	\$1,075	7"	4	4	7½, 3¾	4	4, VU	yes	± 5%	54	1%	30-21k ± 3
<i>Remarks: Auto-reverse; otherwise as above, except no timer-start switch; punch-in record; pitch control operates in record and playback.</i>												
Akai GX-630DSS	\$1,250	10½"	4	4	7½, 3¾	4	4, VU	yes	± 5%	54	0.5%	30-21k ± 3
<i>Remarks: As above, but meters read only to ± 3 VU, no auto-reverse.</i>												
Akai GX-650D	\$1,295	10½"	4	2	15, 7½, 3¾	3	2, VU		no	58	0.4%	30-26k ± 3 (30-30k ± 3)
<i>Remarks: Similar to above, but 2-channel, 3-speed; sound-on-sound switch; dual-capstan transport.</i>												
Pioneer RT-901	\$795	10½"	4	2	7½, 3¾	3	2, bg		± 6%	60	1%	20-28k ± 3
<i>Remarks: Fluoriscan bar-graph "meters" and digital tape counter; dual-capstan drive; separate bias & EQ switches; timer start; average or peak metering; accessible azimuth adjustment screws.</i>												
Teac X-7	\$750	7"	4	2	7½, 3¾	3	2, VU		yes	63		40-20k ± 3
<i>Remarks: Timer start; record mute switch; bias and EQ switches; dual-capstan drive.</i>												
Teac X-10	\$1,000	10½"	4	2	7½, 3¾	3	2, VU		yes	63		40-20k ± 3
<i>Remarks: Similar, but for larger reels; with memory rewind, manual cue lever.</i>												
Teac A-3300SX2T	\$1,050	10½"	2	2	15, 7½	3	2, VU			67w		30-24k ± 3 (30-26k ± 3)
<i>Remarks: Cue control; bias & EQ switching.</i>												
Teac A-2340SX	\$1,175	7"	4	4	7½, 3¾	3	4, VU	yes		62w		40-18k ± 3
<i>Remarks: Bias & EQ switching.</i>												
Teac A-6100 MKII	\$1,400	10½"	2	2	15, 7½	4	2, VU + peak		yes	67w		40-18k ± 3 (40-22k ± 3)
<i>Remarks: Memory rewind; manual cue; bias & EQ switches; switchable NAB/IEC EQ; ¼- & ½-track play; peak LEDs; mike attenuator.</i>												
Teac A-3340	\$1,600	10½"	4	4	15, 7½	3	4, VU	yes	± 5%	65	0.8%	40-20k ± 3 (40-22k ± 3)
<i>Remarks: Interface for optional DBX, for up to 85 dB S/N; no mike/line mix; mike att. on each input; individual-channel output level controls plus monitor out control; manual cue control; headphone monitor mix.</i>												

Notes:

* Performance at 7½ ips (15-ips performance in parentheses); bg=bar-graph display



Teac A-2340SX, 4-track



Akai GX-630DSS, 4-track



Teac A-3300SX2T, 2-track

since we're working on a fixed budget, subtracts about \$500 from other things.

There are three four-channel decks under \$1,250 and four if we raise our limit to \$1,600: The Akai GX-270DSS and GX-630DSS (\$1,075 and \$1,250), and the Teac A-2340SX and A-3340 (\$1,175 and \$1,600). (Sony's open-reel decks are temporarily off the market.) Of these, only the A-3340 runs at 15 and 7½ ips; the others run at 7½ and 3¾. And the less expensive Akai and Teac both have only 7-inch reel

capacity, not 10½-inch. (Admittedly, that's only half the limitation at 7½ ips that it would be at 15.) All four of these decks have sync, the virtue of which is being able to synchronize each track with the first one recorded.

Now the good news is that virtually all of these features are available in the \$2,000 studio's price range. But the bad news is that you can't get all of them at once. Take a look at the chart on page 109, analyze your needs, and then decide.

One last point: In spite of my emphasis on flexibility, don't be afraid to buy a two-track. The Teac A-3300SX2T and A-6100 MKII, for instance, go for \$1,050 and \$1,400. If you go multitrack in the future, you'll need the two-track for mixing down and making copies anyway.

The specs vs. hands-on. The chart gives you some insight into which decks you might want to consider. But many a useful feature (punch-in recording, for example, or tape dumping) isn't



Mixer Checklist

Most good mixer spec sheets include a diagram that shows the signal path from one input channel through to the output, rather like the one on page 112, which is an amalgam of the TEAC 2A and Tapco 6201B diagrams. The more you can see on the diagram, the more you'll be able to do with the mixer. Here's what to look for.

Inputs. For recording, you need both microphone and line inputs on all modules (mixers made for live performance may have fewer line inputs than you need), so you can use all your input positions for live sources, for line-level instruments like synthesizers, or for mixdown. Mike attenuators prevent overload with strong input signals. A cue or monitor output before the fader control lets you hear any input signal even if it is switched out of the mix; some mixers let you meter the signal level on each channel separately, too.

The input fader control may be either a compact, inexpensive rotary pot, or a linear slider type. Sliders are easier to move as a group, and make it easier to see what your settings are. If there are tone controls (or, on bigger boards, equalizers), there will usually be one set for each fader, so you can adjust the sound of each input separately.

Into the mix. At a minimum, you'll need to be able to switch any mike into any output channel, and to bridge at least some mikes across both outputs for a "center-channel" image. Some mixers have pan pots that let you control how much of each mike's signal goes into either output, expanding your choices beyond far-right, far-left,

and dead-center. The Tapco has only pan pots, no assignment switches. Teac has a slight elaboration on this: If you assign a signal to two or more channels, the pan pot is automatically engaged.

Effects, echo, and other funny business. The more inputs and outputs you have, the more external gadgets you can plug in to modify or sweeten your sound. Our imaginary mixer has two sets of send/receive jacks for this: EFX, which affect signals from individual input channels, and ACC (CHANNEL PATCHING), which apply to each output channel's signal. In other words, you could add echo only to one mike by plugging an echo device into the EFX send and return jacks, or add it to every mike on the left channel by plugging into the ACC jacks. Jacks like these may have their own input and output level controls (as in the EFX circuits shown on the diagram) or may not (as in the ACC circuits). Some mixers will feed all EFX signals to a single EFX mixing buss—others may have standard EFX jacks.

The BUSS IN or STACKING jack is used to gang several mixers when you need more inputs. Connect a second mixer's ACC SEND jack to the first one's BUSS IN, and you double the number of inputs available—with the first mixer's master fader controlling output level for them all. The more elaborate the mixing board, the more such jacks and alternate signal paths you'll find. On large studio consoles, there are input and output jacks for every function block in the system, so you can patch

into, out of, or around any part of the console at any time.

Getting out. Most mixers have master faders: either one per output channel, or a single, master fader for all output channels. Having multiple output jacks for each main channel, as on the diagram, serves several purposes: You could connect LINE out to your tape deck and AUX out to your monitor amplifiers, for example. Or, if you're using a stereo mixer for multitrack work, you could connect two channels of your deck to the LINE outputs, and the other two to the AUX, to save yourself the trouble of patching and repatching cords when you switch from recording on one pair of tracks to recording on the other.

Other features. There are quite a few mixer features that aren't shown on the diagram. **Headphone jacks** (preferably with their own output level controls) let you monitor your recording when you're working in the same room as your mikes. (Don't forget to turn the speakers off to avoid feedback). **Meters** enable you to monitor levels visually without having to look up from the mixer to the meters on your tape deck. The meters may be built in or may be an accessory. A **tone generator** is for matching your tape deck's inputs to the mixer's output levels, and for synchronizing both sets of level meters. **Filters** get rid of low-frequency noise, such as "room rumble" or 60-Hz hum. And **phantom powering** lets the mixer serve as power sources for certain professional condenser mikes.

listed in the specs, and the specs that are there may be of different standards—weighted or unweighted, DIN or NAB, and so on—making them difficult to compare. All of which is to say: Before you buy, try. Go to your dealer (if there's none nearby, travel—this kind of investment is worth a small trip) and put any deck you're considering through *all* its paces. Record some FM interstation noise at 0 and -5 and -10 on the meter, and see how a 7½ ips (and 15, if the deck has it) recording

matches the original. Record some music. Does it sound natural in playback? Is any hiss or distortion audible? Did the meters lead you to record it at the right level? Can you edit with relative ease? Do the controls work for, not against, you? It shouldn't take too much time to make your decision since your choices are mostly between Teac and Akai. Higher up on the cost scale the selection is wider. We'll cope with that in future installments.

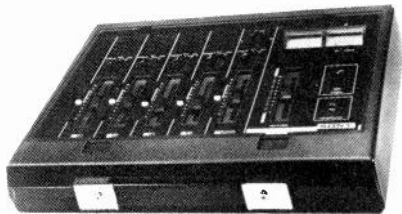
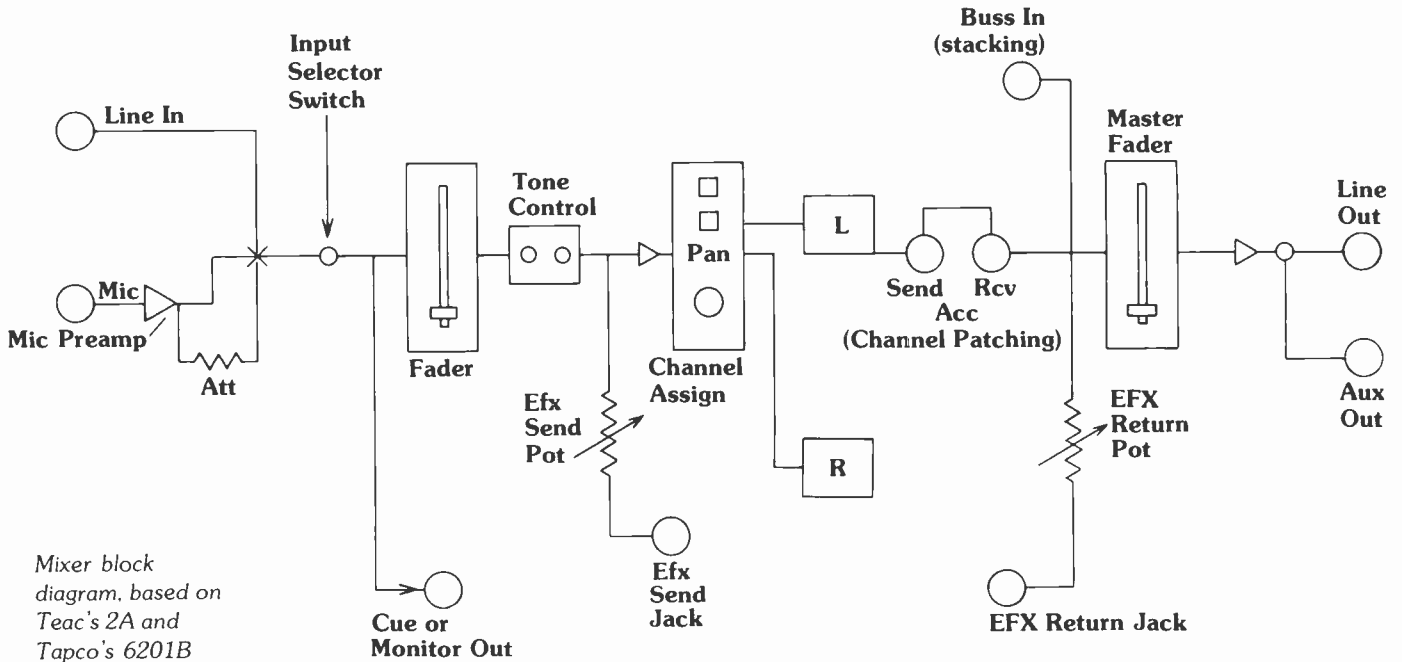
THE MIXER

With what's left of our budget, the mixer has to be inexpensive, but good. And by good, I mean *clean*, with negligible distortion, frequency response at least as good as your recorder's, and with *at least* as high a signal-to-noise ratio (S/N) as your tape deck has—and preferably 3 to 5 dB higher. Your recordings will only be as clean as the noisiest component their signals pass through. You don't want to pay

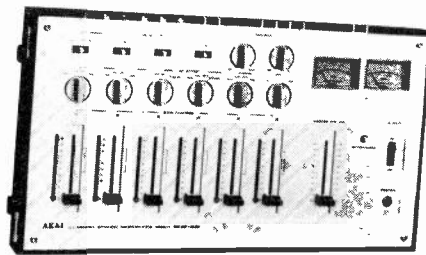


Make & Model	Price	Mike Inputs	Line Inputs	Output Channels	Meters	Stack-able?	Pan Pots	S/N (dB)	Power
Akai MM-62	\$250	6	4 + 2P	2	2, VU		on 2	55	battery, AC optional
<i>Remarks: 2-channel master gain pot; mag phono in on 2 channels.</i>									
Audiokit 62	\$265K							65M	
	\$395w	6	6	2	2, VU		on 6	70L	battery
<i>Remarks: Kit or wired; optional input transformers (\$18); bass and treble EQ; gain variable for mike through line levels; cue & echo send on all inputs; aux/echo return pot.</i>									
Heathkit TM-1626	\$160k	6	2	2	2		on 1	85	AC
<i>Remarks: Kit only; can be built with balanced inputs; adjustable peak indicators.</i>									
JVC MI-5000	\$430	6	6 + 6P	2	2, VU		on 6	56M 67L 65P	AC
<i>Remarks: Built-in tape monitor and echo; overload lights for all inputs; illuminated meters; separate monitor output, switchable to console or tape output.</i>									
Pioneer MA-62A	\$295	4	4 + 4P	2	no		on 2	52M 67L 60P	AC
<i>Remarks: Single, master gain; switchable low-cut filters on all mike inputs; switchable subsonic and 0/-8 dB gain on 2 phono inputs.</i>									
Sony MX-510	\$225	5	3 + 2P	2	2		on 1	60	battery, AC optional
<i>Remarks: 2-channel master gain pot.</i>									
Sony MX-650	\$310	6	6 + 6P	2	2	yes	on 2	60	battery, AC optional
<i>Remarks: Built-in meter-calibration oscillator; outputs switchable to feed both channels; 2-channel master gain; 2-position mike attenuator.</i>									
Sony MX-670	\$425	6	6 + 6P	2	2, VU	yes	on 6	60	battery, AC optional
<i>Remarks: As above.</i>									
Tapco 6201B	\$599	6	6	2	2, VU	yes	on 6	82M	AC
<i>Remarks: Phantom powering for condenser mikes; transformer-isolated mike inputs; pre-everything monitor send on each channel; VU meters read effects, monitor, or mains; AutoPad input limiter; rotary pots.</i>									
Teac 2A	\$400	6	6	4	optional	yes	on 6	55M	AC
<i>Remarks: Optional meter bridge with 4 VU meters, monitor select; bass and treble EQ on each input; no memory markers; post-fade echo/acc. send/receive; 2-channel master gain pot; cue out on all inputs.</i>									

M=mike input **L**=line input **P**=phono input



Sony MX-510, 5 mike inputs



Akai MM-62, 6 mike inputs



Tapco 6201B, 6 mike inputs

through the nose for low noise in your tape deck, only to pay through the ears for a noisy mixer.

You want low noise for two reasons: because the noise in each channel is additive (Teac's 2A mixer, for example, has a 62 dB S/N for one channel—but 55 dB when all six channels are in use), and because the signal may pass through the mixer both going into the tape deck in record and coming out for mixdown. This is not to say that you don't want versatility and special features in a mixer. The more limited it is, the greater the chances that you'll eventually have to replace it. But a noisy mixer needs replacing from the day you buy it.

I emphasize noise because that's the likeliest weak spot in an inexpensive mixer. Frequency response is rarely a problem; distortion isn't either, unless you use high-output mikes to record a loud, close instrument—and most mixers have input pads or rotary trim pots that you can switch in to cut down the input signal when

overload is likely.

Your mixer should have a minimum of six inputs and two outputs (four if you have a multitrack deck), with low-impedance inputs for the microphones. At least four (and preferably all) input channels should be switchable for both microphone and line signals. At least two input channels should be bridgeable into both outputs, to serve as "center-channel" instruments in a stereo mix; at least two others should be assignable to either output channel. For a broader look at features and facilities see the mixer sidebar and spec chart on pages 110 and 111.

THE MICROPHONES

What you need in mikes will depend on what you record and where you record it. What you get will depend on what you can afford. Which, at this point, isn't much. Unless you're only concerned with taping direct from a synthesizer or some other electronic instrument, you'll need mikes.

A good minimum is two: enough to make live stereo recordings or stereo reference tracks, to lay down tracks two at a time, and to leave you at least one working mike if one breaks down.

For stereo, it's best that they be identical. If you have a big, good-sounding room to work in, and isolating performers is not a factor, then mikes with an omnidirectional pickup or polar pattern will give you the best sound for the least money. But if, like most beginning studios, you're using the living room or basement or if you're recording a performance where you can't get the mikes onstage, you'll need directional mikes, usually unidirectional (cardioid) ones. With cardioids, you can increase isolation by turning the microphone's comparatively dead side to the other track's performer, also taking advantage of the reduced rear pickup to cut down on room reverberation, noise leaking in from outside, and so on.

Cardioids do have their limitations. You can never assume that the dead side



is really dead. Rear, dead-center pickup is only about 15 to 25 dB lower than front pickup under the best of conditions (and then not at all frequencies), such as an absolutely anechoic room.

Off-axis frequency response is never quite the same as that on-axis with any mike, but with cardioids the variation tends to be a little greater. So what is picked up off axis may sound a bit funny, especially compared to the direct sound on the other track. And on axis, you get "the proximity effect"—bass frequencies are emphasized at distances of a few inches from the mike. If you need to add some bass to a voice, that's an asset; otherwise, it's a liability. Many cardioids have filter switches built in to roll off lower frequencies.

The bidirectional, or "figure-8" mike, which is comparatively rare nowadays, is also a possibility. Among other things, you can place it between two performers and change the balance between them by simply adjusting the microphone position. (In higher price brackets, you'll find mikes whose patterns can be changed between cardioid and omni, and sometimes to a figure-8 pattern as well.) But you'll probably wind up with a pair of either cardioids or omnis. Whichever type you buy first, start thinking immediately after about investing in a pair of the other (as soon as your wallet recovers). If you can hold off long enough to spring for two multi patterns, so much the better.

Your microphones will probably be either dynamic or electret condenser types. Both have advantages: In my experience electrets tend to have better bass response, while dynamics usually have better treble. Electrets tend to have flatter frequency response too, but also escalate more sharply into distortion from strong signal overload (the problem's not in the electret itself, but in the built-in FET impedance-matching amplifier). The amplifier circuit also needs power, so electret mikes normally require built-in batteries. Battery life is long, but batteries do fail, eventually, and usually pick the day of an important session to do so—or, worse, the night of one, when stores are closed. Keeping batteries fresh and having a spare or two around is always a good idea.

The most important factor will be how well the various microphones in your price range sound. I won't presume to choose for your ears; talk to fellow mike users with similar applications, get demos, where possible, and consult Dick Ros-

mini's piece in the April 1978 *BACKBEAT*, the most exhaustive multi-microphone comparison I've seen. But mostly, listen.

Your microphones should be low-impedance (50-250 ohms). Balanced-line mikes will give you more immunity from noise, but involve some extra expense at the mixer end for matching transformers, since mixers in this price range tend to have low-impedance but unbalanced inputs. They're worth the money, if you have it. And if you plan really long mike cables (past 25 feet), then hock your grandpa if need be and scrape it up.

The direct approach. Not all instruments require mikes. Though you can mike the amps of electric guitars and similar instruments, you can also record them "direct" from the instrument pickup or from the amplifier. I used quotes there because you'll have to record through yet another piece of gear—either a direct box or an impedance-matching transformer with a y-connector—to change the instrument's impedance to match the mixer's. The least expensive box I know of is the Sescor SM 1A, for \$54, which has both a switch for pickup or amplifier signal input, and a high-frequency filter switch.

Why direct? The sound is often better, with less distortion from amplifier and speaker, and no need to cope with limitations in the mike's response. The room's acoustics are no problem, and you can simultaneously lay down a direct guitar track and a miked vocal with virtually perfect isolation (not true, of course, for pickups mounted on acoustic guitars). You're also better isolated from your neighbors: With a direct box, you can play up a storm at 3 a.m. and they'll never hear a thing.

On the other hand, with a mike you can make a true acoustical pickup. You can include the sound of the speaker, if you want. And other players can hear the instrument, which is crucial if it's part of the rhythm track.

STANDS, CABLES, AND PHONES

There are still two vital necessities we haven't covered: Mike stands and cables. A \$2,000 studio rarely includes a separate control room, or a room big enough to require longer cables than the ones that come with your mikes, so you can probably make do with those for now. Stands, however, you'll have to buy. My recommendation is for one floor stand per mike. A good one can run \$100 or more and be worth it. But you can get an

adequate one from Radio Shack for under \$20, and since we've been bumping our heads hard on the \$2,000 limit, you'd best go for that. It also pays to have at least one baby boom—one per stand if possible (Radio Shack's is under \$15). That will give you more flexibility in positioning, so you can hang the mike above the piano or position the singer's vocal mike so that it will pick up his instrument as well.

You're also going to need headphones so you can listen to the tracks you're recording/performing with. They needn't have too wide a frequency range, but they *must* have good isolation, so what you're listening to won't leak through into your mike (especially if you're doing a vocal). They should also have a volume capability that's loud enough to be heard over your own instrument or others, but clean enough so as not to distort. Distortion wears your ears down. One final recommendation: The phones should fit comfortably on every musician who'll be wearing them regularly, and their impedance should match the output of the amp that is driving them.

THE ROOM

Your \$2,000 worth of equipment isn't a studio until you set it up somewhere—probably in your garage, basement, or living room. (Well, at least *they* are free.) The best room will be the biggest (probably the garage) and the one most isolated from outside sounds (probably the basement), and it will have a nice wood floor and carpets (probably the living room).

Once you've decided on your space, check for unforeseen hazards. Turn on all the fluorescent lights in the house, turn the refrigerator to its coldest setting and leave the door open so it will recycle more often. Now plug in an amp and speaker in the room you're considering. If you hear a buzz, it's probably the fluorescents. If you hear clicks, they're probably the refrigerator cycles. If trying another outlet or using an isolation transformer (about \$20 from your hardware store) doesn't work, either consider a different room or be prepared to unplug the problem appliances whenever you're recording. Also listen for noise from outside. If you can, borrow, rent, or buy a sound level meter. (If you insist on buying one they cost about \$40 or so at Radio Shack or from some BSR/ADC dealers.)



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Always insist on a Genuine Shure replacement stylus. Substitutes will not restore the Shure cartridge to its original performance standards.

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Circle 44 on Page 95

Pick the times when street sounds are likely to be the most intrusive: morning or evening drive time, school recess time, garbage pickup time, etc.

If you choose your garage, make sure it can be locked securely. If you decide on the basement, make sure it doesn't flood. (If there's a drain, have Roto-Rooter run it through in case there should be some obstruction that hasn't caused you trouble yet.)

Sound conditioning. You'll rarely find a room in the average home that has suitable acoustics for recording. The ideal space is large, with irregularly-angled walls to break up resonances and a touch of natural reverb. The one you're probably stuck with is small, with neatly parallel walls, a low, flat ceiling, and a short, nasty-sounding reverberation. It would be nice if you could stick in a non-parallel wall or two, but few can do that. You can always deaden a room though, and get rid of the reverberation, and at the same time you'll be helping the isolation.

Isolation itself is harder and more expensive than deadening—ideally, you'd build walls inside the extant walls, with a small air space between. That's probably not possible, so let's look at what is. Carpets on the floors, with plentiful padding under them (newspaper's a workable substitute), will help both isolate and deaden the room. Second-hand carpet's fine, if it's not worn threadbare—something with deep pile and a horrendous stain ('makes it cheaper) would be ideal. Additional carpets hung on the walls or, better yet, a few inches away from them, will give you more isolation and still less reverb. Cardboard egg cartons are another old but effective favorite. If you can't get the thirty-egg tray separators that come with bulk-packed eggs, the bottoms of regular, twelve-egg packages work pretty well. If the plaster's yours to ruin, tack the cartons down at diagonally opposite corners. If not, staple, stitch, or glue them into a continuous sheet, and hang that. Or put them on a wooden panel that's reversible—carton side out for deadening, wood side out when you want things a little more lively. If your room has closets, stuff them full of clothes: Open the doors for deader acoustics, close them for livelier sound.

SAVING MONEY


For home listening audio components, the standard money-saving sugges-

tions are discounts, kits, or used gear. I'm leery of all three when it comes to studios. Discounts won't be easy to find, except on some tape recorders, because pro gear's market is too narrow for much price competition. Pro dealers are more likely to compete on servicing fees, which is as it should be. Hang around one if you can and ask questions. Find out which gear works well with which, what kind of quirks to expect, etc. You'll find, too, that when something breaks down (and it will—Murphy must have spent time in a studio before he wrote his law), a pro dealer can probably get it up and running—or perhaps lend you a substitute—without having to farm it out or ship it a few hundred miles to a service center. That's doubly important when you only have one of everything: If that one goes down, you're out one studio.

I only know of two kits, both mixers: the Heathkit and the Audiokit. (The Gately Prokit is still badly missed.) Used electronic gear is generally safe, and a used mixer, if it's working right, should keep on working right for quite a while. But ask the seller why he's selling. Get a demo, and play with all the controls to make sure they're not gritty, uneven, or noisy.

Used tape decks and mikes are risky. Again, ask why they're being sold and get a demo. With a mike, record some of the loudest and softest sounds you're ever likely to in practice. Loud sounds will make it rattle if it's been damaged, soft ones will show you whether it has sufficient sensitivity. (With electrets, of course, make sure batteries are fresh.) With a tape deck, see if the reel spindles and capstan are loose. If they are, the bearings are worn. Clean the capstan and heads carefully, then check for visible head wear or capstan grooving, and for pitting of the capstan surface—both signs of hard use. As with mixers, check the electronics for gritty or noisy controls. The deck's tape motion controls should operate freely but not mushily.

\$2,000?

Yes, the basics—mikes, stands, mixer, headphones, and tape deck—can be purchased for \$2,000. But so far we've only scratched the surface. Next month we'll dig a little deeper, which will require digging a little deeper into your pocket, too. Start saving! 

A&R Men to Singer/Songwriters: “Get Commercial or Get Lost”

by Stephen Holden

Among the varieties of pop talent seeking record contracts today, the least likely to succeed, after cabaret acts, are singer/songwriters. Even ten years ago, when their popularity was at an all-time peak, radio and promotion people and the rock press viewed these troubadours as a threat to rock. Critics called them self-indulgent and emasculated, applying the derisive term “wimp” to the likes of James Taylor, Cat Stevens, Jackson Browne, and Don McLean. Still, for a while almost anyone with a medium-size writing talent and some performing skills could secure a record contract.

The turning point came around 1974, and it was dictated as much by economics as by a shift in mass taste. As pop became bigger box-office, labels sought superbands that could fill both the stage and the huge seating capacity of large arenas. The natural environment for a singer/songwriter is a club, usually the smaller, the better. At the same time, as records became more and more “produced,” the singer/songwriter was encouraged to use state-of-the-art technology and complex arrangements for his LP to sound up-to-date. That in turn necessitated a backup band to duplicate the LP’s sound on the tour that had become essential to promote the costly album.

The break-even level for an album skyrocketed to the point where signing new talent usually meant a label investment of at least a quarter of a million dollars. Since then, costs have probably more than doubled. The singer/songwriter’s craft of setting personal poetry to music was also vulnerable to Seventies star-making machinery: The pressure to put out a yearly album and then tour on top of it severely cramps creativity. It’s no accident that the creative peaks of most singer/songwriters who’ve made it big came early in their careers.

Nowadays, many major talents are being frozen out of the music business. It is not in the personal interest of most label executives to sign a singer/songwriter,

since it generally takes two to three albums to break a solo act, and at a cost that’s simply astronomical. In terms of job security, the new rock & roll is a cheaper, safer gamble—team music for corporate team players. The singer/writer has to prove himself as a commercial hack writer before he gets the chance to make an album, and even then he usually gets only one shot. He won’t even get a hearing unless he can come up with at least two “hit” songs. As a result, many highly creative people are crafting material with Barry Manilow or Barbra Streisand in mind, instead of developing their own voices.

Granted the obvious benefit of an enforced “professionalism of craft” on aspiring singer/songwriters, I wonder how much art is being sacrificed to such “professionalism,” that is to say, commercialism. And what about the scores of writers who either can’t or won’t work within this system? If they were starting out in the late Seventies, would Bob Dylan, Neil Young, and Joni Mitchell have been given the opportunity to develop into the artists they eventually became? Or would they have had to choose between being frozen out or becoming hacks?

I’m not encouraged when first I hear that radio has “massively rejected” 1978’s Janis Ian album and then I see Ian turn up with a pleasant, though much less adventurous, record in 1979. I could hardly believe my eyes when a trade magazine criticized her for being “depressing.” Can even seasoned ears no longer tell the difference between provocative and depressing? I’m not encouraged when I hear Steve Forbert—a very promising talent who had modest commercial success with his debut album—drown his own fresh rural/street voice in a sludge of horns and backup vocals on his followup record. I can only assume that it’s a pathetic attempt to be more commercial. I’m not encouraged by the fact that Leonard Cohen’s CBS LP “Recent Songs” is of no apparent interest to his record label because it isn’t rock & roll,

and that anything intellectually challenging these days can be dismissed as “pretentious.” Cohen really is a North American natural resource who might sell if his marketers treated him with a modicum of respect. I’m not encouraged by the fact that the second LP of David Forman—a tremendously talented white r&b-pop singer/writer from Brooklyn whose first album received much critical praise—was rejected by Arista on the grounds that it lacked a “hit single.” I’ve heard the record. It’s a flawed masterpiece. I’m not encouraged when Wendy Waldman, the West Coast singer/songwriter who made five albums for Warner Bros., has had trouble finding a record deal even though she has hit a creative peak that puts her in the highest rank, alongside Paul Simon, Randy Newman, and Joni Mitchell. Waldman not only has developed into a first-rate performer, but has a staggering unrecorded catalog that’s ultracommercial as well as highly artistic. Yet because of her poor commercial track record on Warner, the careerist, trend-mongering a&r people at other labels are afraid to gamble on her now.

Pop music needs its singer/songwriters the way literature needs its great novelists, and surely as much as it needs rock & roll. There should be a way for them to be heard that isn’t prohibitively expensive. Instead of viewing each fledgling talent as a potential big investment, record companies might consider treating them as a prestige specialty like jazz artists. It shouldn’t cost too much for a major label to establish a budget custom line of new voices, and the investment could pay off mightily if contractual arrangements allowed the brightest talents to “graduate” to full roster status. If the records were cut quickly, Sixties style, on eight-channel equipment, with few frills, both the material and the voice would be more than adequately showcased. The way the system stands now, tomorrow’s Dylans, Youngs, Mitchells, and Taylors may never be heard. ♪

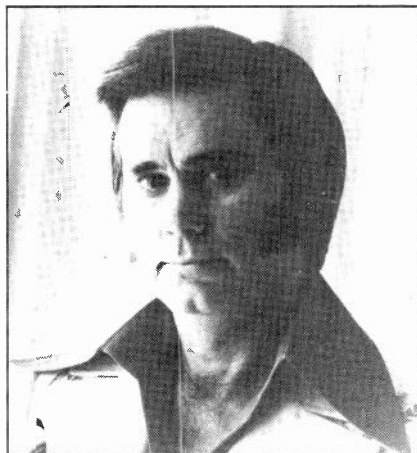
Records



Poodle power: DeMeur, Burrows, Robertson, Valentino



Jerry Jeff Walker



George Jones

Fabulous Poodles: Think Pink

Muff Winwood, producer
Epic/Park Lane JE 36256
by Sam Sutherland

Though their fabulously tacky name and tongue-through-cheek delivery many have gained them acceptance in the new wave/power pop circles of current rock fashion, the Fabulous Poodles are actually up to something not so new at all: pop farce. It's a venerable English preoccupation, one stretching back to broadsides and encompassing music hall revues, theater, and pop stylists from Noel Coward to Ray Davies. Although the Poodles' approach is understandably

closer to that of the more recent exponents, it embraces elements of the entire tradition, such as tight story lines, sprightly tempos, and punch lines that invert clichés for new meaning. All of these characterize "Think Pink," the band's second album.

Like last year's debut, "Mirror Star," the new record is built around comic vignettes variously set to workmanlike rock or a more fractured style derived from the unholy alliance of guitarist Tony DeMeur and violinist Bobby Valentino, who wrings gypsy filigree or country corn at the drop of a cue. At its best, the mix is a charming one, and the quintet's frankly limited technique is offset by De-

Meur's well articulated vocal attitudes. Whether droll or passionate, he manages to temper the more satirical elements of the songs with good-humored empathy for the plights of his hapless characters, which range from the prosthetic quandary of *Bionic Man*, through libidinal restlessness (*Any Port in a Storm*), to disastrously wronged love (*Suicide Bridge*, with its wickedly funny hook). Surprisingly, though, the best cut is *Man with Money*, a vintage Everly Brothers song once intended for dramatic effect, not guffaws.

If the quality of the material begins to thin appreciably on Side 2, climaxing in the utterly pointless chant *Pink City Twist*, the Poodles' lightheartedness mitigates that dip more effectively than could the sententiousness of many of their angry young punk contemporaries. And producer Muff Winwood fleshes out the performances without resorting to extensive studio cosmetology or squads of session players.

Waylon Jennings: What Goes Around Comes Around

Richie Albright, producer
RCA AH1 1-3493

Jerry Jeff Walker: Too Old to Change

Jerry Jeff Walker, producer
Elektra 6E 239

by Steven X. Rea

Although Jerry Jeff Walker hails from upstate New York, he has long been associated with the Texas "outlaw" clan of country pickers to which Waylon Jennings legitimately belongs. It's their renegade spirit that makes them country brethren and, as the titles of their latest efforts suggest, both have been around many a Texas moon. Though they might be too old to change, they're not too old to give it their laidback all, which is exactly what both of these gruff, honky-tonk heroes do.

Jennings has recorded more energetic LPs than "What Goes Around" but he has rarely come up with a more consistently bountiful batch of tunes. Nudged along by Jerry Bridges' subtly insistent bass lines, he sounds almost gentle on most of the selections. *Out Among the Stars*, the tragic narrative of a kid who robs a liquor store ("He can't find a job, so he finds a gun"), emotes a sense of resigned beauty. Jennings applies proud but melancholy tones to Mickey Newberry's *If*

You See Her. Hitting an upbeat stride, the singer rocks through Rodney Crowell's *I Ain't Living Long like This*. (Crowell has emerged at the vanguard of the new country tunesmiths—his songs are being covered by Nashville, Austin, and Los Angeles artists alike.) On the bar-room blues *It's the World's Gone Crazy*, by Jennings and Shel Silverstein, Waylon waxes some quietly profound comments on various states of affairs, including the music business: "Yes the sidemen all want to be frontmen/ And the frontmen all want to go home."

Like a bottle of mellowed whisky, Walker's mumbly, frayed-at-the-edges voice has improved with age. He croons, talks, and occasionally hollers with the loose assuredness of a wizened cowpoke. "Too Old to Change," self-produced, is his most low-key work to date. Practically every number—Susan Clark's *I'll Be Your San Antone Rose* (on which Carole King renders a wonderfully understated vocal), *Hands on the Wheel*, Paul Seibel's *Then Came the Children*, the title track—is a near-dead tempo ballad. That's not a complaint; listening to "Too Old to Change" is like sitting and staring at the warm last embers of a fire.

Walker does let loose a little on Crowell's *I Ain't Living Long like This* (yep, take your pick), which sports an endearingly shaky sax solo from Tomas Ramirez. And on Daniel Moore's *Cross the Borderline* he lopes quickly along, urging his usually low-range register into some mountainous regions and summoning a couple of yodels. A drunken Tex-Mex style brass section embellishes several songs, and country swing fiddler Johnny Gimble makes a guest appearance. Throughout, the musicianship is eloquent and ebullient in a casual, off-handed kind of way. Walker's choice of material suits him like a lived-in pair of boots; although closing with Kris Kristofferson's *Me and Bobby McGee* might arguably be a little unadventurous.

"What Goes Around Comes Around" and "Too Old to Change" are encouraging signs that Lone Star serenaders like Waylon and Jerry Jeff can grow old with style. That's a lesson some of pop music's senior citizens should take to heart.

George Jones: My Very Special Guests

Billy Sherrill, producer
Epic JE 35544

by Steven X. Rea

George Jones's very special guests—Waylon Jennings, James Taylor, Emmylou Harris, Linda Ronstadt, Tammy Wynette, Willie Nelson, Johnny Paycheck, Elvis Costello, Dennis and Ray (of Dr. Hook) and Pop and Mavis Staples—were never really his "guests." None of them was in the same studio at the same time with the country great. No, he and his troupe of Nashville sessioners cut the tracks and sent them off to the aforementioned group to record their respective "duets." Lo, the wonders of modern recording.

Logistics and Jones's reputation as a moody, alcohol-troubled eccentric are what probably account for that, but no matter. "My Very Special Guests" sounds like he and the sundry stellar singers were in the same room, eyeball to (bloodshot) eyeball, crooning into the same microphone. With the exception of the closing two cuts—Dr. Hook's *I Still Hold Her Body (But I Think I've Lost Her Mind)* and the all-too-often recorded *Will the Circle Be Unbroken*, performed with the Staples—the album: is a country, and pop, masterpiece.

Jones has one of country music's purest, most effortlessly expressive voices. Deep, resonant notes rise from his larynx with all the ease of a beer drinker's belch. On this project, he is paired with some equally distinctive singers, several of whose names are bound to pique the interest of pop and rock fans. Ronstadt, whose roots are in country, delivers one of her most heartfelt performances in years on *I've Turned You to Stone*. Costello, a long-time Jones admirer, comes up with a quirky, uncharacteristically warm vocal on his own *Stranger in the House*. Jones's easy acclimatation to the English new waver's lyrics proves that Costello can indeed write a country song.

The two side openers, *Night Life* and *I Gotta Get Drunk*, offer perhaps the most rousing moments. With Texas outlaw Waylon Jennings, Jones jumps into the old c&w ballad *Night Life* (by Willie Nelson), stretching single syllables across entire verses, aligning with Jennings' gruff, bluesy timbre. On *I Gotta Get Drunk*

Messrs. Nelson and Jones tackle one of country's most time-tested themes: that ol' demon alcohol. When Jones yelps "Well I gotta get drunk and I sure do dread it," you know he means what he says. Equally appropriate is a duet with his ex-Mrs., Tammy Wynette, called *It Sure Was Good* by Billy Sherrill. (Sherrill was long the producer for Jones and Wynette and for their countless duo discs.)

"My Very Special Guests" is one of those gimmicky notions that usually turns out sounding cold and calculated. It's a testament to Jones's musical wealth (and those of his pop and country cohorts) that this project manages to come across with charm.

Willie Nelson Sings Kristofferson

Willie Nelson, producer
Columbia JC 36188

Willie Nelson: Pretty Paper

Booker T. Jones, producer
Columbia JC 36189

by Sam Graham

In the six albums Willie Nelson has made for Columbia over the last two and a half years, there has been one—count it, one—new Willie song. Since his songwriting well has temporarily run dry, it seems, he has filled the gap with live albums, collections of standards (the lovely "Stardust"), duets with Leon Russell, and the like. He gets away with it—in fact we're the richer for it—because he is such a winning interpreter.

"Willie Nelson Sings Kristofferson" has few surprises. The songs are Kristofferson's most familiar: *Me and Bobby McGee*, *For the Good Times*, *Why Me*, etc. All are handled with Nelson's customary warmth and restraint, presented in simple arrangements geared to the singer's gut-string picking and Mickey Raphael's mournful harp. Nothing really special, but a mighty nice way to have all these songs in one place.

It is "Pretty Paper," Nelson's Christmas record, that is the prize here. Producer/organist/arranger Booker T. Jones and Nelson (the "Stardust" team) finesse their way from *Frosty the Snowman* and *Here Comes Santa Claus* through both blue and white Christmases, all the while displaying a kind of schmaltzy charm. But *O Little Town of Bethlehem*, Jones's instrumental *Christmas Blues*, and Willie's *Pretty Paper* (his one new

song), are better than just charming, they're special. That in itself is unusual for a Christmas album.

War: *The Music Band 2*

Jerry Goldstein & Lonnie Jordan, producers. MCA 3193

by Crispin Cioe

For ten years War has maintained a high profile, mainly because at any given downbeat, its sound is unmistakable and, seemingly, impossible to replicate. The eclectic instrumental blend looks deceptively simple on paper: timbales, one sax, and a keening harmonica on top, a Hammond organ and rhythm guitar to fill out the midrange, and an uncluttered but spot-on rhythm section. But what has always distinguished War's truly legitimate rock/soul/jazz/Latin fusion isn't sheer technique or dramatically unusual songs. Rather, it is the band's uncanny ability to play simple grooves uncommonly well. The best of these chug-along tracks have become pop classics.

A label change two years ago and even some recent personnel shifts haven't altered that facility one whit, and "The Music Band 2"—more or less a companion piece to last spring's "Part 1"—contains two or three memorably elastic grooves. Conceptually, however, War is now casting about for an image to propel it into the '80s, and the musical results of this search remain to be seen.

The band's early-'70s street-funk sound, introduced on songs like *Cisco Kid* and *Low Rider*, has been catchily updated here with *Night People*. Luther Rabb's bass, replacing longtime member B. B. Dickerson, pops along with a sinister, unadorned clarity, as the band chants the phrases and passwords of L.A. nightlife. New member Pat Rizzo, on woodwinds, contributes a perfectly snide and insinuating alto solo, proving that he will ably fill outgoing saxist Charles Miller's shoes (no real surprise, since Rizzo was with Sly Stone in the glory years). War's celebrated minimalist arranging approach gets a full workout on a long instrumental version of *The World Is a Ghetto*.

Elsewhere, though, the band sounds like it's trying to apply its own aesthetics to current trends in pop rhythm and blues. *Don't Take It Away* matches characteristically bright melodic verse lyrics with an ominous, Funkadelic-like intro

chant and bass line. *I'll Take Care of You* is a pretty ballad, although the first verse or two have the kind of syrupy m.o.r. ambiguity that has become a virtual trademark of the Commodores. Despite these derivative excursions, War is still an essentially funky and admirably self-contained unit. "The Music Band 2" has just enough of those infectious grooves to prove that the band is still moving ahead, and *Night People* even shows that its eye and ear for translating real street life into artful groove music are still its greatest assets.

Stevie Wonder's *Journey Through the Secret Life of Plants*

Stevie Wonder, producer
Tamla T13 371C2 (two discs)

by Crispin Cioe

Stevie Wonder's long-awaited "next" album is a two-disc film soundtrack. Though that may mean that there are fewer hummable ditties here than on his previous efforts, the film's atmospheric, impressionistic subject matter has allowed the composer to enter areas of harmony and orchestration that might have been inappropriate on an album of pop tunes. Indeed, on "Journey Through the Secret Life of Plants" Wonder's eclectic mix of influences—nineteenth-century Romanticism, classical Indian music, American jazz—combined with his virtuosic control of synthesizers make for some very alluring music.

First, about those synthesizers. At times, the variety of sounds and the accuracy with which Wonder imitates acoustic instruments is hard to believe. The beautiful symphonic string sound on *The First Garden* and the hip, hornlike utterings on *Venus' Flytrap* and *the Bug* (reminiscent of Miles Davis' "Birth of the Cool" charts) are simply gorgeous, rich musical passages. On *Same Old Story*, as on most of the pieces, Wonder is listed as the sole instrumentalist. But the bass sounds so acoustically present, each pluck resonating so roundly, that either he has been studying with someone like Ron Carter and has already developed into a fairly accomplished string bass player or he has taken the synthesizer to incredibly sophisticated new heights. Either way, the song is delicately effective, even taking into account a recurring chord change that's the hook from *Happy Trails to You*.

The songs with lyrics are often written from the viewpoint of flowers, which is of course what the film calls for, based as it is on the premise that plants talk and feel. These songs, like *Power Flower* and *Send One Your Love*, feature the Wonder expertise in writing, arranging, and playing r&b-flavored pop music. *Race Babbling* bubbles through some frenetic chord movement that suggests a flower's reaction to the fast pace of modern human life.

As a feat of composition and orchestration, "Plants" is impressive by any standards. Side 3 slides easily from a stately church organ piece, *Ecclesiastes*, into an African drum chant (*Kesse Ye Lolo De Ye*), culminating in a lovely, Chopinesque melody that Stevie sings with Syreeta Wright called *Come Back as a Flower*. This last features a stunning, round harmonic movement and modulation pattern. Throughout this type of scoring, elements of the composer's personality pervade, especially his unerring ability to blend pop conventions (many of which he helped invent) with a growing and diverse palette of influences from around the world. Certainly at this point, he looks to be the most effective and powerful composer to wed classical Western music with the Afro-American basis for most American pop music today. This album is his most ambitious move in that direction.

Neil Young & Crazy Horse: *Live Rust (Record 2)*

David Briggs, Tim Mulligan, & Bernard Shakey, producers
Reprise 2RX 2296 (two discs)

by Sam Sutherland

Although nominally a companion to "Rust Never Sleeps," the album issued last summer in conjunction with the film of the same name, "Live Rust" is also Neil Young's first live summary to date of his long stage and studio collaboration with Crazy Horse. It spans from his final Buffalo Springfield songs to the above-mentioned new work, and, what with 1978's release of the three-disc "Decade" retrospective, some listeners will understandably be wary of the need for yet another lengthy history lesson.

But the looser flow of a concert setting makes "Live Rust" anything but redundant. Much as "Decade" lent new



shape and coherence to Young's prolific output through its conceptual sequencing, so does the live set abound with similar cross references. *Powderfinger* slips into the chilling, stately *Cortez the Killer*, emphasizing the shared theme of primitive innocence exploited by cultural "superiors." The defiant, crack-of-doom message of *Hey Hey, My My (Into the Black)* is reinforced and extended by the next song, *Tonight's the Night*, the centerpiece from Young's grimly realized album of that title. These songs, taken individually, are unflinching looks at the dark side of rock; taken together, they encapsulate the songwriter's own sense of the paradox between rock energy and its enervating toll on its artists and audiences.

Side 1 begins with new acoustic renderings of earlier ballads. But the real fireworks start on Side 2 and climax with Side 4's *Tonight's the Night*. Dominated by the full-volume electric onslaught of Young and Crazy Horse, these performances remind us just how elemental and moving this band can be, with Young and second guitarist Ralph Sampedro exchanging whipcrack guitar figures and riveting power chords. The former plays with a fire that explains his long-standing notoriety as a guitarist, despite his apparent technical limitations; instead of speed or nuance, he relies on the sheer force of his howling, single-note leads.

Unlike the pristine sonics of some recent live recordings, the production on "Live Rust" captures the blitzkrieg intensity of a typical live show. Only audiophiles should complain, for the sound is a faithful index not only to Young in concert, but to past rock studio outings as well, where he has always emphasized a raw, live feel over electronic effects.

ZZ Top: Degüello
Bill Ham, producer
Warner Bros. HS 3361
by Crispin Cioe

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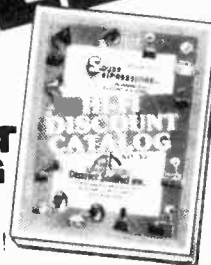
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ZZ Top: Beard, Gibbons, Hill

to satisfy even the most jaded tastes.

But this Texas trio came on strong in the early '70s with the most indigenous-sounding brand of heavy metal blues-based rock this listener has ever heard and proceeded to build a following too large to be called cult. The three years that have passed since its last LP have seen disco's rise and leveling off, as well as extreme changes in the public's rock & roll tastes. These days, a band like ZZ Top is susceptible to such labels as "dinosaur" and to being dismissed with a (new) wave of the hand.

To its credit, though, the group has honed its original sound to an even sharper edge. On "Degüello" (Spanish for "no quarter" and Santa Ana's command to his troops on attacking the Alamo) it delves deep into blues and r&b roots, while retaining the excellent playing and production values of a world-class rock band. With Elmore James's oft-covered Chicago blues *Dust My Broom*, producer Bill Ham gets a tight room sound on the trio's instruments (especially Frank Beard's drums) that is like an updated version of the old Chess singles by Howling Wolf, Muddy Waters, et al. Another cover, Sam and Dave's *I Thank You*, is a textbook example of the right way for a rock & roll band to rework a soul classic: Billy Gibbons' vocal doesn't try to compete with the original but goes for a nasty bite all its own that blends nicely with his slide guitar solo.

On its originals, ZZ Top reaches even higher ground. *I'm Bad, I'm Nationwide*, steams along at a midtempo clip, with Gibbons' guitar sound grabbing the classic blues low-level distortion tone setting. At the end of each chorus, the trio lopes into a behind-the-beat triplet figure that's about as down-home as you could ask for. Gibbons' vocal is recorded with a

slight phase effect. When he sings, "With my New York brim, and my gold tooth displayed/Nobody gives me trouble, 'cause they know I got it made," a strong sense of gutsy musical past and sophisticated studio present emerges. It is a completely vital and believable style that comes through on all the best songs here, especially the ominous *Esther Be the One*. The group has also added its own sax tracks, and on *Hi Fi Mama*, Gibbons, Beard, and bassist Dusty Hill accurately evoke the Fats Domino/New Orleans horn charts that complement this kind of music so wonderfully. Any blues fan, hard rock aficionado, or combination thereof should check out "Degüello," because ZZ is still at the Top of the heap.

||| JAZZ |||

Bob Cooper:

Tenor Sax Jazz Impressions

Albert Marx & Dennis Smith,
producers. Trend TR 518

Tenor saxophonist Bob Cooper was an important element in Stan Kenton's seminal band of the '40s, and, from 1945-51, was among the more vital, light-toned players influenced by Lester Young. In 1946 he married June Christy, giving him another measure of notoriety since she was then at her short-lived peak as the all-American girl singer. But for the past three decades Cooper has called little attention to himself as a jazz artist, instead making a (presumably good) living in Los Angeles as a studio musician and composer.

"Tenor Sax Impressions" is one of the few recordings he has made as a leader since leaving Kenton, and it shows that he has maintained and even honed his jazz talents. It is a somewhat peculiar collection in that it starts with an off-putting piece of trivia called *Yo-Yo* dedicated to the late Frank Rosolino. But it picks up with a relaxed and breathy ballad treatment of *We'll Be Together Again*. There follows a light and tripping Latin-accented piece called *Juarez Saturday Night*, the richly shaded blues *True Grit*, and, most revealing, an open swinger called *Fat Tuesday*, on which Cooper shows his close relationship to Zoot Sims.



He is not quite as free and exuberant as Zoot, but for a musician who has not been practicing his trade (particularly as openly as Zoot), he has retained his swinging characteristics remarkably well.

Each side ends with a spoken interlude by Cooper in which he lists the selections that have just been played, as he might do in a club. This information is also on the label and the sleeve, so the "personal touch" makes little sense. J.S.W.

Chick Corea/Herbie Hancock: An Evening with Chick Corea and Herbie Hancock

Chick Corea & David Rubinson,
producers
Polydor PD 2-6238 (two discs)
by Don Heckman

The second installment from the classic Chick Corea-Herbie Hancock two-piano concerts of 1978 is very nearly as good as the first, which was released on Columbia a year ago. The magical interaction that takes place between these two gifted keyboard artists persists. So does the irony that both play complex electronic fusion music with their own groups, often with mediocre results, yet in this pristine acoustic setting, they play with the grand skills of concert virtuosi.

This collection seems oriented more strongly toward Corea, perhaps because Polydor is his label and Columbia is Hancock's. One entire side, devoted to a piece entitled *Bouquet*, is really a Corea solo. Here, more than anywhere else, one hears the fineness of touch, the sheer ability to wring remarkable colorations of tone from the piano, that are Corea's greatest gifts. Hancock balances well, tossing phrases back and forth on the strangely contentious *The Hook*, but he only really seems to burst forth on his own piece, *Maiden Voyage*.

My one real problem with the album is its unexpectedly chilly tone—a feeling of distance that wasn't in the earlier collection. In part, this may be a built-in problem for two-part piano improvisations, especially with players as technically competent as these. Lacking any real pre-set chord structures, focused on the purity of the interaction between them, Hancock and Corea often seem more concerned about what the other is doing than they do with establishing a connection with their audience (best typified on the Bartók-de-

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rived piece, *Ostinato*). Ironically, this is something that they do exceptionally well with their own groups.

Miles Davis: Circle in the Round

Jim Fishel & Joe McEwen, producers
Columbia KC2 36278 (two discs)

The mystery persists. Why has there been no new Miles Davis studio album since 1975? What is his musical state of mind these days? What is his physical condition? And how long will we have to put up with collections like "Circle in the Round?"

The ten tracks here cover a span from 1955 to 1970, encompassing styles that range from Miles's mid-'50s transformation of bop, through the modal music of the late decade, and into the contemporary sounds of the Hancock-Carter-Williams band and the electric, post-*Bitches Brew* music. Quite a lot for one album—perhaps even too much, since the jam-packed discs (more than 26 minutes on some sides) have a number of modulation and tracking problems.

Some of the music is surely worth having: *Love for Sale* (formerly available on a 1975 anthology entitled "Black Giants") is a masterful performance by the 1958 band that featured Cannonball Adderley and John Coltrane in the front line with Miles. Coltrane is also featured on *Two Bass Hit*, and *Blues No. 2* spotlights the wisely mature drumming of Philly Joe Jones. But the highlight is *Circle in the Round*, which takes up an entire side and bridges the Davis music of the early '60s with his rock-tinged excursions of the late '60s. Joe Beck's guitar provides a persistent, dronelike undercurrent that is dramatically dissimilar to what Miles was doing just a few months earlier. The floating, dark-hued solos by Davis, the eery space sounds of Hancock's keyboard effects, and the sudden shots of rhythm from Tony Williams all suggest a new direction for Miles.

But there are foolish inclusions, too, particularly in the later entries. *Teo's Bag* (from 1968) has a few peaks, especially in the improvising of Miles and Wayne Shorter, but *Side Car* is an undistinguished throwaway. Astonishingly, the producers have chosen to include two versions of the latter, perhaps because the second adds the now-bankable playing of George Benson (who contributes nothing

of value to the piece). *Splash* is an unsuccessful try at a 5/4 blues that finds even the unflappable Miles huffing and puffing and David Crosby's *Guinnevere* is represented by a silly, extended improvisation.

It would seem that Columbia wishes to maintain its involvement in Davis' recording career. But, with "Circle in the Square," it does so with a collection of leftover takes compiled, apparently, without the advice of Davis or his longtime producer Teo Macero. A peculiar way to treat one of the most important figures in the history of American music. **D.H.**

Eddie Heywood: Portrait of an Island

Lyn EH 5000 (Lyn Records, P.O.
Box 399, Vineyard Haven, Mass. 02568)

For the past twenty years, Eddie Heywood has been one of the most elusive of contemporary jazzmen. After his success in the '40s—first with his highly stylized piano version of *Begin the Beguine*, then with his equally stylized sextet—a paralyzed hand forced him to stop playing. During his recovery he wrote, among other things, *Canadian Sunset*, which he was well enough to perform publicly in the '50s. That opened a new career and, in the late '50s, he retired to Martha's Vineyard, to concentrate on his writing, and since then he has performed only on rare occasions.

"Portrait of an Island" was produced and recorded on Martha's Vineyard, and the title piece (based on the island's changing seasons) takes up a full side. Heywood is essentially a miniaturist and even in *Portrait's* fourteen-minute length, his ideas run thin. But he is a charming melodist: *Spring to Summer* is a lovely bit of light and air, and his vision of fall turning into winter has an attractively ominous and rhythmic feeling.

There is more solid and rewarding music on Side 2, which, intentionally or not, seems to sum up the high points of his career. With one foot tapping a rhythmic counterpoint, he plays *Who Can I Turn To* with a slightly Latin accent that derives from his *Begin the Beguine*. *Winds in Autumn*, an original, captures the crisp, clipped style of his sextet, and *Canadian Sunset* represents his emergence as a composer. Through these pieces, and through his *Soft Summer Breeze* and Fats Waller's *Jitterbug Waltz*, Heywood's distinctive style—the rolling

rhythms, the crisp phrasing, the gently singing melodies—is always present, seasoning but never suffocating the material. **J.S.W.**

Jimmy Knepper Quintet in L.A.

Lew Tabackin, producer
Inner City IC 6047

There may be some significance in the fact that two of today's least recognized yet finest jazz musicians—Britt Woodman and Jimmy Knepper—are trombonists. This may be a holdover from the bebop days, when the trombone, along with the clarinet, was demoted to a lesser position because of its inappropriateness to the genre's staccato intricacies. The clarinet has still not recovered, and the trombone has stayed alive primarily because of J. J. Johnson's technical virtuosity.

Both Knepper and Woodman are, to some extent, influenced by Ellington's trombonist Lawrence Brown—Woodman at least by association, Knepper by his own admission. On "Jimmy Knepper Quintet in L.A.," the latter plays with Brown's polish, virtuosity, and exploratory instincts. He is backed by a brilliant group, the kind that urges even the best leader to be better. Producer Lew Tabackin plays tenor saxophone (and flute) with a big, sturdy attack that generates a Ben Webster kind of excitement. Roger Kellaway, one of the most provocative jazz pianists playing today, gives Knepper and Tabackin most of the spotlight, but, when he takes it, sends up delightful sparks of whimsy. Monty Budwig on bass and Shelly Manne on drums provide a driving impetus to *The Master* and *Bertha the Dragones* (based on *Strike Up the Band* and *Sweet Georgia Brown*, respectively) and an appropriate cradle for Knepper's beautifully developed solo on *My Old Flame*.

Knepper's lack of recognition relates, to some extent, to the fact that he is not frequently recorded, even as a sideman. As a leader his only other record listed in the SCHWANN CATALOG is a 1957 reissue on Bethlehem. But an album as richly and vitally realized as this can stand as a worthy representation for him for a long while. **J.S.W.**

by Elise Bretton

ABBA: Voulez Vous
Big 3, 10 songs, \$5.95

In "Voulez Vous," the Scandinavian Mamas and Papas shake their collective booty. Not to worry, this is soft-core disco interspersed with a few contemporary ballads and rendered in the laidback style that has so endeared this group to the public. Profundity is not a feature, but the melodies are full of hooks and the lyrics agreeable. An entertaining read-through quite worthy of your folio shelf.

Joan C. Baez: And Then I Wrote . . .
Big 3, 54 songs, \$14.95

Joan Baez did not start out as a creative artist, but then neither did Grandma Moses, another celebrated folkie. From the former's early creative attempts (*Sir Galahad*) to her most recent (*Michael*), one detects an alarming infatuation with words, words, *words* to the point of overkill. Torrents of exposition, fountains of narrative, and cataracts of confession pour forth unchecked, with no regard for possible flood damage. The first third of this waterlogged recital acquaints us with Baez' "poetry" and quite charming line drawings. The catch is that the fifty-four "poems" are nothing but the lyrics to the fifty-four songs that follow.

Anyone who knows anything about words will tell you that a lyric is not designed to be read as poetry. Anyone who knows anything about the folio market will tell you that the more pages you print, the more you can charge. I consider this an odd maneuver on the part of a lady whose distinguished career has been built on unalloyed honesty.

George Benson: Livin' Inside Your Love
Warner Bros., 12 songs, \$7.95

George Benson renders soul and elegance with a jazz feeling, and his latest folio is a dual treat: Six of the pieces, including the title song, are guitar solos with piano accompaniment, and the other half

dozen are vocal selections as performed on record. But though the material is tasty—*Unchained Melody*, *Hey, Girl*, and Sam Cooke's *A Change Is Gonna Come*—the notation (women beware) is in keys that climb high above the treble clef. Female members of the George Benson fan club are hereby encouraged to burn their guitar straps in protest.

David Bowie: Lodger
Warner Bros., 10 songs, \$7.95

Material for David Bowie, charismatic performer, is supplied by David Bowie, lyricist, and David Bowie, composer, both alone and in collaboration with Brian Eno and Carlos Alomar. Bowie's technique is solid, but his meanings are unclear and his self-containment does not help clarify matters. Recommended for fans only.

The Cars: Candy-O
Warner Bros., 20 songs, \$8.95

These fledgling cutups should be doing five to ten years in nursery school instead of fooling around in heavy traffic where they might get hurt. This much can be said: Their lyrics rhyme, even when the meaning is unfathomable. Let's just call it bubble-gum punk and be done with it. (And how I wish we were!)

The Family Songbook
Warner Bros., 137 Songs, \$9.95

Herewith, Warner Bros.' low-priced, in-house version of the enormously popular New York Times/Quadrangle Books Great Songs of . . . series. The 302-page folio is divided into eight sections and includes folk songs, music of the screen, the stage, and the big-band era, plus sing-along songs, hymns, operetta classics, and Tin Pan Alley favorites. Don't let the gooeey cover deter you; inside you'll find an illustrated, annotated collection of such rare reprints as *Les Bicyclettes de Belsize*, *What's New?*, *Jeepers Creepers*, and *I'll Walk with God*. As the publisher's foreword states, "Great care was taken with this book to make each song exciting, inventive, and above all easy to play. The older standards were given new harmonic changes and modern rhythms, while the newer compositions were arranged to reflect the sound of the



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Fleetwood Mac: Tusk
Warner Bros., 20 songs, \$9.95

I perceive "Tusk" to be a giant case of writer's block. Instead of facing the fact, Lindsey Buckingham, Stevie Nicks and Christine McVie (three authors in search of a mutual character) have opted to practice massive self-delusion. Unfortunately, Fleetwood Mac's high-energy performances cannot be committed to paper, and the mediocrity of these twenty inconsequential songs is all the more appalling in view of the band's superstar position.

Gershwin Songs from Manhattan
Warner Bros., 13 songs, \$6.95

Here, thanks to Woody Allen and Warner Bros., is art-deco Manhattan exactly as delineated by the Gershwins fifty years ago. The music is timeless, the lyrics still fresh, and, although there are other Gershwin collections available, some of the material in *Manhattan* has long been under wraps and is ripe for revival. Singers should check out *He Loves and She Loves*, *Sweet and Low Down*, and *Do-Do-Do*, for live performance potential.

Elton John: Complete (1974-1979)
Warner Bros., 62 songs, \$9.95

If you and your piano get marooned on a desert island, be sure that Elton John is with you, and you'll never be bored. This gentleman has more musical facets than a palm tree has fronds. In his new retrospective, he and longtime partner Bernie Taupin are represented by the complete scores of five megaselling LPs: "Caribou," "Captain Fantastic," "Rock of the Westies," "Blue Moves," and the second volume of "Elton John's Greatest Hits." Also included is music from "A Single Man," a more recent collaboration with lyricist Gary Osborne. You will need to sharpen your rock-piano technique, as the transcribers have given no quarter to John's dotted eighths. But after all, on a desert island you'll have plenty of time to practice.

Van Morrison: Anthology
Warner Bros., 35 songs, \$8.95

For those who have grappled unsuccessfully with Van Morrison's mumbo-jumbo, Top-40 brogue, his newly issued anthology, designed for English-speaking audiences, proves that the Celtic-American chanteur does not sing in tongues. Indeed, little of it is blarney. Oh, there's a goodly sprinkling of utter nonsense, to be sure, but a touch of the poet is afforded us in lyrics like "the girls walk by, dressed up for each other" (*Wild Night*) and "whisky ran like water in his veins" (*Linden Arden Stole the Highlights*). O'Neill, O'Casey, Yeats? The linkage, though slight, is there. Be advised that the easy-play piano parts are counterbalanced by literal transcriptions of Morrison's vocal whimsy, which can be most painful to sight-read.

The Genius of Django Reinhardt
Big 3, 19 songs, \$5.95

Django Reinhardt, born in 1910 to a gypsy family in Belgium, was a self-taught guitar stylist whose influence upon some of America's greatest jazz musicians—including Coleman Hawkins, Eddie South, and Benny Carter—cannot be underestimated. Perhaps best known as founder of the Quintette of the Hot Club of France, a landmark group active in recording and broadcast work in Paris in the late '30s and '40s, Reinhardt was a free spirit. He never learned to read or write and showed up for concerts or recording sessions only when the mood struck him.

He died in 1954, leaving us a huge legacy of compositions, mostly in the A-A-B-A form popular among instrumentalists. The transcriber of these note-for-note, off-the-record solos is not credited, but five of the songs have been augmented by special choruses arranged in the Reinhardt style by one Ike Isaacs. This folio is a "must" for any serious guitarist, and if Jon Hendricks could be prevailed upon to dress up the sweet, wordless melodies with some chatty, bebop lyrics, we'd be one step closer to that long-overdue jazz renaissance.

Continued on page 128

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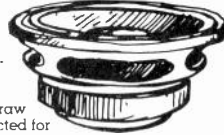


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John Stewart: Bombs Away Dream Babies

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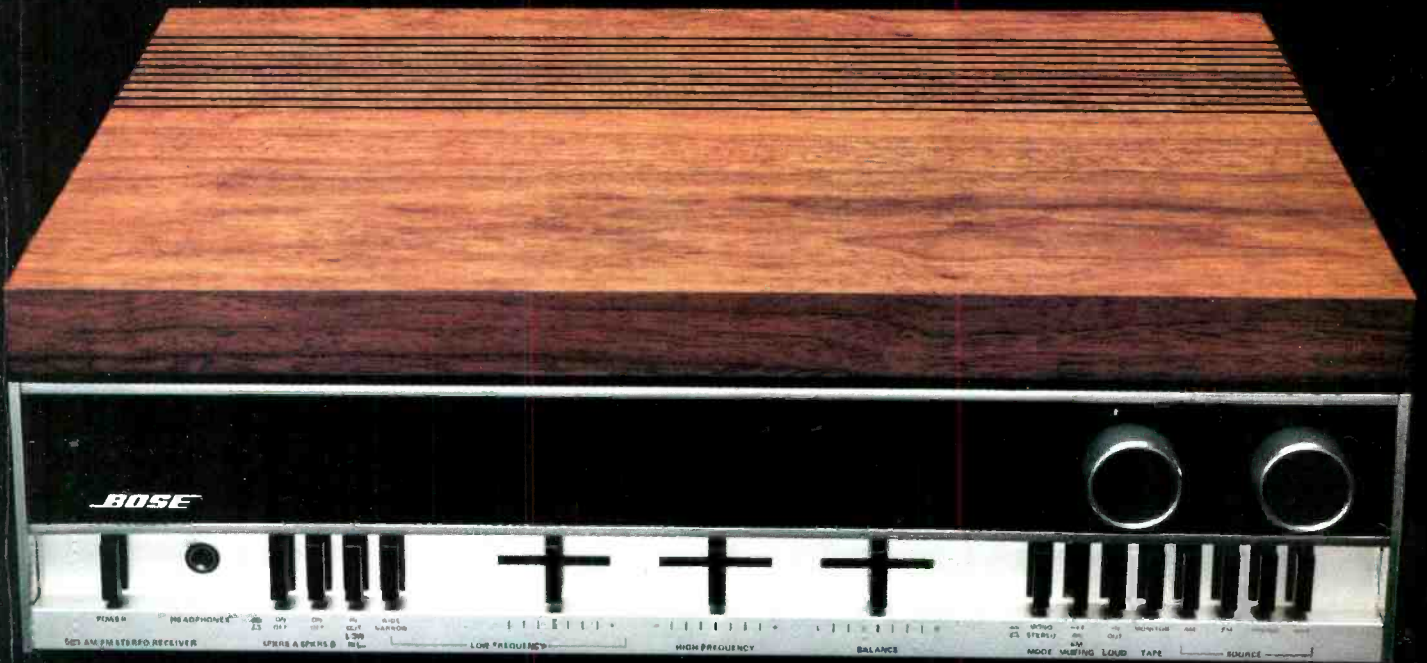
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There are other cassette decks at this price that can handle metal tape.

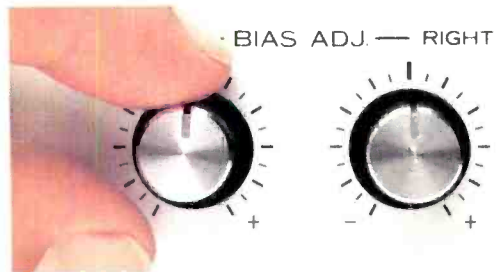
But only the new Kenwood KX-1060 can get the most out of every metal tape. And every other kind of tape as well. The reason is our simplified adjustable bias control with built-in oscillator that allows you to calibrate the deck to a specific tape for optimum results. It's one more "hands on" feature that really lets you get the most out of your deck.

And when it comes to performance, you'll appreciate the KX-1060 even more. The three ferrite heads have been designed for better playback sensitivity and remarkable frequency response (30-18,000 Hz \pm 3dB with chrome or metal tape).

To eliminate a common problem on other manufacturers' three head decks, we've increased our tape-to-head contact. This maintains constant output and high frequency response. At .045% (WRMS), wow and flutter has practically been engineered out. Signal-to-noise is an outstanding 65dB. Not to mention Kenwood's Double Dolby** for true monitoring right off the tape for extreme accuracy in recording.

At Kenwood, we think that metal tape is the future of ultimate-quality recordings. With the KX-1060, you can take full advantage of any metal tape and get the very best performance possible.

See your Kenwood dealer and get your hands on one soon.



Simplified adjustable bias control with built-in oscillator lets you get optimum results with any kind or brand of tape.

KENWOOD®

For the Kenwood dealer nearest you, see your Yellow Pages, or write Kenwood, P.O. Box 6213, Carson, CA 90749.

In Canada: Magnasonic Canada, Ltd.

*Nationally advertised value.
Actual prices are established by Kenwood dealers
**Dolby is a trademark of Dolby Laboratories, Inc.

