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EQUIPMENT TEST REPORTS: Allison Electronic Subwoofer

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OCTOBER 1979 • VOLUME 43 • NUMBER 4

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COVER: Design by Borys Patchowsky; photo by Bruce Pendleton. Shown: Acoustique 3A's Triphonic 1200 subwoofer (see page 70 for more).

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Stereo Review BULLETIN

Edited by William Livingstone

● INCREASED PLAYING TIME IS PROMISED for metal-particle microcassettes by a new tape-manufacturing process perfected by Matsushita Electric. A cobalt-modified metal alloy is vacuum-vapor deposited directly on the surface of the tape's plastic backing instead of mixing the magnetic particles with an adhesive resin binder. Longer playing time is achieved because the entire surface of the new tape is composed of magnetic material, thus providing more efficient performance with a thinner coating.

● THE BEST MALE PERFORMER FOR 1979 AWARD went to Teddy Pendergrass at the Disco Music Awards in Hollywood. Wolfman Jack made the presentation, which honored "...those artists who have given a new and exciting beat to the lives of all of us, as selected by the USA's top 200 radio stations." Pendergrass' current album is "Teddy" on the Philadelphia International label.

● THE INTERNATIONAL GRAND PRIX for recordings of the music of Franz Liszt, awarded in Budapest on October 22, the composer's birthday, goes to (among others) Claudio Arrau's two-disc set of the etudes (Philips 6747 412) and to the Alfred Brendel recording of the Weinen, Klagen Variations and other works (Philips 9500 286).

● SONY'S NEW 72-INCH PROJECTION TV is suspended from the ceiling. Since the projector unit is over the heads of the viewers, it does not block their view of the wall screen. The system reproduces color-TV broadcasts and images from video-cassette recorders. Now on sale in Japan for about \$7,500, it may reach the United States by the end of the year.

● THE ST. LOUIS SYMPHONY ORCHESTRA will celebrate its 100th anniversary during the 1979-1980 season. The celebrations include world premieres of new works by Witold Lutoslawski, Robert Wykes, and David Del Tredici, and a number of new recordings by the orchestra under music director Leonard Slatkin will be issued by Vox. These include the complete film scores of Prokofiev, a digital recording (the orchestra's first) of the Carmen and Peer Gynt Suites, and direct-to-disc recordings of works by Shostakovich, Tchaikovsky, and Ravel.

● IMPORTED STATE-OF-THE-ART RECORDINGS are listed in a new free AudioSource catalog that includes nearly 300 pop, jazz, and classical titles. The labels represented include Lyricon (Sweden), Merlin (England), Sarastro (France), and Three Blind Mice (Japan) as well as the Japanese affiliates of Philips, Mercury, and RCA. Write AudioSource, 1185 Chess Drive, Foster City, Calif. 94404.

● PORTABLE AM/FM/CASSETTE/TV SETS are not new, but Sharp has added a feature that was previously unavailable: a full microcomputer. The TV screen serves as the computer display, and the cassette recorder doubles as the external memory unit. The computer's built-in memory contains programs devoted to math and statistics, games, and educational and business subjects. A hard-copy printer that connects easily to the unit is also available from Sharp.

● A TRAINING CENTER FOR DISCO DJs is now operating in New York City under the auspices of Disco-Van 2000 and Hunter College's Lifelong Learning Program. The Center will conduct weekly seminars that give theoretical background and practical experience with sound and light systems. Enrollment is limited to ten students per seminar. Tuition: \$400. Write to the Learning Center for Disco Programmers, 511 West 54th Street, New York, N.Y. 10019.

● RCA'S SELECTAVISION VIDEODISC CATALOG will initially comprise 250 titles, including feature motion pictures and sports, cultural, and educational shows. Among the latest acquisitions are Franco Zeffirelli's seven-hour epic Jesus of Nazareth and twenty-one Charlie Brown programs. Introductory date for RCA's videodisc will be announced later this year.

● GREAT PERFORMANCES ON PBS THIS MONTH include a concert by Joan Sutherland, Marilyn Horne, and orchestra conducted by Richard Bonyngé in Exxon's Live from Lincoln Center series on October 15. Leonard Bernstein conducts the Vienna Philharmonic in Mahler's Ninth Symphony on October 17, and the New York City Opera Co. performs Kurt Weill's Street Scene on October 27. Check local PBS listings for exact times in your area.

Speaking of Music...

By William Anderson



NOT ON THE DISC

SCARCELY a week goes by lately that does not bring news of some fresh development, actual or merely impending, in the videodisc area. RCA, whose corporate style has been aptly characterized as Ambush in the Marketplace, successfully maneuvered MCA/Magnavox into making the first move in the videodisc sweepstakes—the introduction of the Magnavision player last December—and is now awaiting the most propitious moment to attack with its competing SelectaVision system.

The SelectaVision crew has meanwhile been busy fattening the potential software catalog with additions both secular and sacred (see this month's "Bulletin"), but I cannot see that any of these are of either original or, indeed, musical material. That, it seems to me, is a serious tactical error: a brand-new entertainment medium can hardly hope to create much of a splash by appearing at its own com-

ing-out party in secondhand clothes. Old movies and old TV shows doubtless have their place in the video catalog, but it can hardly be an exclusive or even a first place when many of these same shows (or their re-run counterparts) can be seen almost nightly on free TV. Music of all kinds is notoriously ill-served on the tube, but has no one given any thought to what it is that twentieth-century man expects when he puts a disc on a turntable? A disc catalog without music would seem to be almost a contradiction in terms, can it be that the planning for this new medium is being left entirely in the hands of those who know only music-starved TV?

SOME of these thoughts inevitably ran through my mind during several Mostly Mozart concerts this summer at New York's Avery Fisher Hall. The performances were almost all by artists already familiar to me

through recordings—hardly an unusual circumstance these days—and I was reminded repeatedly of how much there is in "live" music-making that simply cannot be represented on audio discs. Most startling in this respect was the Russian violinist Vladimir Spivakov, soloist in Mozart's Second Violin Concerto (K. 211). A handsome, poised, Tartar-eyed young man to begin with, he extended, magnified, and underlined his idiomatic musicianship and impressive virtuosity with a kind of spare body English (body Russian?) that amounted almost to choreography. No gypsy excess, you understand, nothing flamboyant, nothing vulgar. But there was a subtle dance of the eyebrows, an obligato of darting smiles, frowns, and grimaces, an understated suggestion of tiptoe for high notes, a slow raising of the scroll end of the instrument at some (not all) cadences, and once—to great effect—a passing brush of the cheek on the wood for a bar or two of tender melody. This telegenic largesse was, moreover, all a bonus; nothing whatsoever was missing in purely musical terms. And it all looked perfectly natural, though it was surely rehearsed, probably in front of a mirror, perhaps under the tutelage of that same Russian dramatic coach who taught Gidon Kremer his moves (see "Going on Record," June 1979).

Alicia de Larrocha's reputation is now so well established and she herself so well loved that one is no longer surprised by the almost palpable excitement that ripples over the audience when she heads across the stage toward the piano. The businesslike, no-nonsense demeanor of that compact little figure makes even Spivakov's disciplined restraint seem extravagant, but the visual impact is just as great. The reason, I think, is Presence, the unwilling projection of a powerful musical personality whose effect is something of a mystery even to its possessor. But, mystery or no, wouldn't you think that, now that there's a possibility at last of capturing some of that crowd-pleasing magic on videodisc, the recording studios would be busy doing it?

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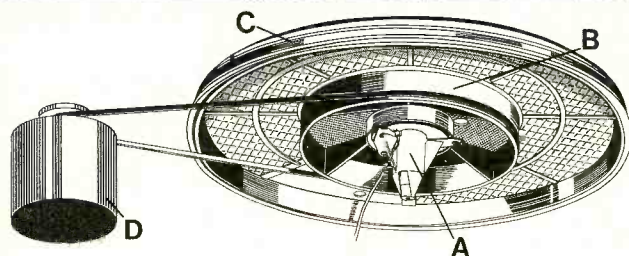
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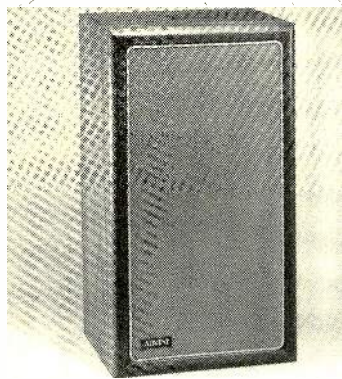
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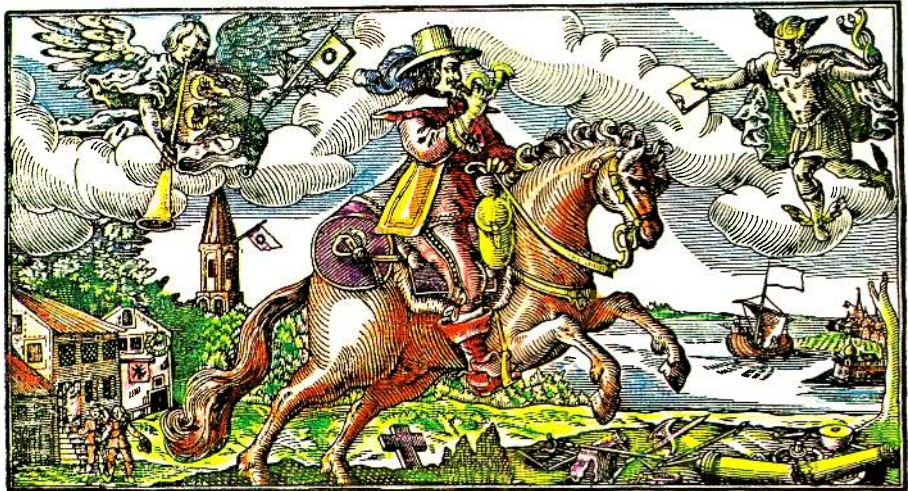
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LETTERS TO THE EDITOR

Minispeakers

● STEREO REVIEW's listening report on nineteen minispeakers in August was right on target; it zeroed in on the most important aspect of these products, namely, how they *sound*. Conventional tests and reports with charts, graphs, etc. may be nice for engineers who are designing speakers, but we listeners need precise details about sound and music reproduction. The *subjective* comments along with the background information on the panel of real people (not merely some anonymous collection of "golden ears") allowed us to judge more fully the suitability of each of these units for our own purposes.

CHARLES M. EDWARDS
Cherry Hill, N.J.

● My compliments to STEREO REVIEW for the timely and informative August cover story on minispeakers. I bought a pair of ADS 200s a year ago and have been thoroughly pleased with their performance, especially in my car. I cannot stand boomy bass, so I forgave the 200s their lack of very low end. Last December, however, I was drooling through my local audio shop when I heard—and bought—my first subwoofer. The bass end is now very much alive and living in my bedroom; I now have clean bass that will make any organ music shake the walls. The total invested in the system is \$600, and the sound I am getting puts most systems costing twice that much to shame. I would encourage everyone to give the satellite/subwoofer systems a listen, because they have the potential to revolutionize the speaker industry.

STEVE SCHMIDT
Escondido, Calif.

Peer Gynt

● I heartily concur with Richard Freed's enthusiasm for the new Unicorn recording of Grieg's complete music for *Peer Gynt* (August "Best of the Month"). The work is indeed a masterpiece of a scope far beyond what the well-known suites would lead one to suspect. The review, moreover, is an excellent illustration of a very positive aspect of the critic's role, namely, the identification and recom-

mendation of recordings of exceptional merit. Like many readers I am frequently irritated when critics do not like the same recordings that I do. I would not, however, care to do without the valuable service they provide in spotlighting truly exceptional works and/or artists that I might otherwise overlook.

DAVID R. SCHRYER
Hampton, Va.

Sweeney Todd

● Having thoroughly enjoyed both the opening-night performance and the original-cast recording of Stephen Sondheim's brilliant *Sweeney Todd*, I take issue with the final paragraph of Paul Kresh's August review. Sondheim is expanding the musical theater, not trying to re-create "the pen of Irving Berlin." And as for "singable, simple, warmhearted songs," has Mr. Kresh forgotten who penned *Send In the Clowns*?

LLOYD KAY
Los Angeles, Calif.

Mr. Kresh replies: No; but it wasn't in Sweeney Todd.

Prix de Rome

● William Anderson's August "Speaking of Music . . ." column includes the statement that "[the U.S. has] no Prix de Rome . . ." What do you think those awards are called that are given out every year to the American Academy in Rome, if not the Prize of Rome? Composer Leo Sowerby won the first, Howard Hanson the second, and since then such major and minor names as Samuel Barber, Roger Sessions, Robert Sanders, Randall Thompson, and friends have enjoyed the prize's privileges. Indeed we have a Prize of Rome, in name and in fact.

PAUL HUME
The Washington Post
Washington, D.C.

Just so, and we thank Mr. Hume for sharing what appears to be a well-kept secret.

(Continued on page 12)

Is it possible to love a fatter tonearm?

Most sleek, graceful tonearms, including Sony's, are lovingly crafted precision instruments.

But even the most expensive beauties have a beast of a problem. Tonearm resonance.

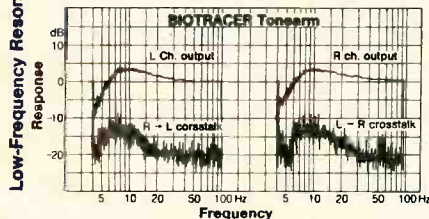
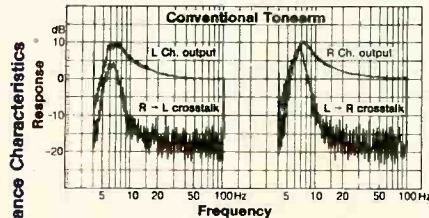
At low frequencies, feedback in the form of noise and wayward harmonics is added to your music. Bach with a tiny tuba in the background.

It's called the last big turntable problem.

Poof. Sony banished tonearm resonance at any frequency by putting a linear motor in the tonearm. And a linear motor under the tonearm.

That's why it's radically fatter and radically better. It's totally electronic.

We call our new tonearm the Biotracer and our new turntable is the PS-B80. It's the highest-fi you can buy for professional applications or critical home listening.



A microcomputer orchestrates every tonearm move. There are no counterweights, tracking force mechanisms or antiskating devices.

When the PS-B80 is first turned on, or when a new cartridge is installed, the microcomputer automatically adjusts the arm for zero balance. A standby lamp on the arm base illuminates during this brief operation.

You select the stylus force by dialing an LED readout on the front panel and the microcomputer automatically makes the adjustment. Tracking force can be changed during record play.

Antiskating force is automatically and continuously applied by the horizontal linear motor. A sensor relays the tonearm's lateral position to the

flutter. The BSL motor in a major design breakthrough has no slots to cause uneven torque distribution.

A highly stable quartz-crystal oscillator and a magnedisc servo-controlled system lock turntable speed for precise platter rotation.

Consider the electronic automation. Record play is automatic. Record size selection is automatic. Repeat and partial repeat are automatic. Even stylus cleaning is automatic.

The new all-electronic Sony PS-B80 redefines the limits of turntable technology.

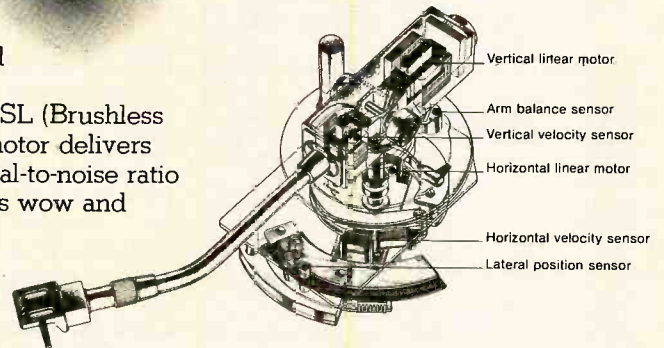
Listen closely. You're going to love it.



PS-B80

microcomputer and the selected tracking force is stored in its memory.

The linear torque BSL (Brushless & Slotless) turntable motor delivers an extremely high signal-to-noise ratio and virtually eliminates wow and



SONY

CIRCLE NO. 58 ON READER SERVICE CARD

Donna Summer

● How is it possible for a reviewer, writing about an album he likes, to overlook completely the best song on it? That's what happened in Edward Buxbaum's review in August of Donna Summer's "Bad Girls." I was in Los Angeles when I first heard cuts from it; along with *Hot Stuff* and *Bad Girls*, the song *Sunset People* was dominating the disco airwaves—and with good reason! Besides being the type of dancing music that will make your blood boil and your feet move whether you want them to or not, *Sunset People's* combination of lyrics and music comes close to capturing the essence of the Strip on a weekend night. I say "close" only because the lyrics

should have been developed a little more, but compared with most other disco songs, this one is a milestone.

JOSEPH A. TOLJANIC
Evergreen Park, Ill.

NAD Modifications

● Julian Hirsch pointed out some minor weaknesses in performance in his extremely favorable July review of the NAD 3020 integrated amplifier. We at NAD agree with his comments and have introduced the following modifications in the component: (1) the soldered internal speaker fuse has been replaced by an automatic-reset thermal relay that will

permit high-level music to be played into 2-ohm loads but will cut out on continuous sine-wave testing into loads of less than 3 ohms, (2) the operating temperature of the unit under heavy load conditions has been reduced by 15 to 20 per cent by using a new cover with increased ventilation area, and (3) the phono-preamp overload point at 20,000 Hz has been increased from 1,500 to 2,700 millivolts.

In addition, we would like to point out an important aspect of the amplifier's "soft-clipping" action that is not shown in Mr. Hirsch's spectrograms printed with the report. Although the change in the higher-order harmonics is seen (and it is worth keeping in mind that 0.1 per cent of a spurious tenth or eleventh harmonic sounds as objectionable as 3 per cent of a second harmonic when the fundamental is in the 20- to 50-Hz range), the resolution of the spectrum analyzer is not good enough to show the elimination of numerous intermodulation sidebands caused by ripple modulation at 120 Hz and its harmonics. These sidebands, which give rise to a particularly objectionable buzzing sound, are completely removed by the soft clipping, contributing greatly to the circuit's effectiveness.

B. ERIK EDVARDSEN
Director of Research, NAD International
London, England

A best seller. Versus the best.



Bose 301
\$242.00 per pair



Micro-Acoustics FRM-3ax
\$279.00 per pair

	Bose 301**	Micro-Acoustics FRM-3ax
Tweeter	One, fixed.	One, rotatable, rim-damped.
Tweeter mounting	Attached directly to baffle.	Isolated from baffle by damped suspension and separate compartment.
High freq. dispersion control	Rotatable rectangular plate with control, mounted in front of fixed tweeter.	Rotatable Vari-Axis™ tweeter with five-position detented control.
Bass enclos. volume	929 cubic inches.	1210 cubic inches.
Bass loading	Single ducted port directly under tweeter.	Twin-ducted port positioned on opposite sides of woofer.
Cabinet panel thickness	½" throughout.	1" front panel; ¾" sides and rear; ½" tweeter compartment.
Dimensions	17"W x 10 9/16"H x 9 5/16"D.	21 1/8"W x 12 5/8"H x 9 9/16"D.
Weight	15 ½ lbs.	24 ¼ lbs.
Warranty	5 years (full).	10 years (full).
Mfr's sugg. list	\$242.00 per pair.	\$279.00 per pair.*

*Slightly higher West of Mississippi.
**Latest Model.

© 1978, Micro-Acoustics Corporation.
Complete FRM-3ax specifications are available in Micro-Acoustics literature No. L-1114.

Comparison photo is unretouched.

Compare these two speakers, and you'd probably expect the one on the left—with the lower price—to be the better seller. You'd be right . . . *but is it the better value?* Before you decide, consider how much more a little more money will buy:

Compare bass. The new FRM-3ax uses a twin-ducted enclosure with thicker cabinet panels and larger cubic volume, for rich, full bass.

Compare highs. The new FRM-3ax's unique Vari-Axis™ control system, damped isolated tweeter suspension and rim-damped cone give lifelike highs.

Compare warranties. The new FRM-3ax is warrantied *twice* as long. The Micro-Acoustics new FRM-3ax. When you compare, there's really no comparison.

Micro-Acoustics Corporation, 8 Westchester Plaza, Elmsford, N.Y. 10523, (914) 592-7627. In Canada, H. Roy Gray Ltd., Markham, Ont.

ma[®]
Micro-Acoustics
Quality worth a 10-year warranty.™

Prudish Reviewer?

● Peter Reilly should get an award as "Prude of the Year," not for his June review of Frank Zappa's "Sheik Yerbouti" but for his complaint about the album cover in the last paragraph of his August "Best of the Month" review of Hubert Laws' "Land of Passion." I have read with interest many of Mr. Reilly's reviews and share his opinion of this exquisite work by Laws, so it is beyond my comprehension how he could be so prudishly narrowminded and Victorian in his attitudes. Because an LP with an erotic theme has a photo of a flower that looks (in a vague way) like human genitalia I should hide it from my children? Why, for pity's sake? I am not ashamed of my body and its sexual parts, and I do not wish my children to be of theirs.

GALE TITUS
Round Lake Heights, Ill.

Mr. Reilly replies: The line between innocent physiology and smirking prurience is a thin one, and the designer of the "Land of Passion" album cover has, in my judgment, stepped over it.

Disco Barbra

● Edward Buxbaum asks (rhetorically?) "can Streisand be far behind?" in his August review of Donna Summer's "Bad Girls" album. He need listen no further than *Love Breakdown* on Barbra's "Songbird" effort from last year. Let's not even discuss the title song from *The Main Event* or the (vicious, I hope) rumor that Streisand will record with the Bee Gees. Taken together, it all goes to prove that not only is Streisand not far behind, she's running well with the pack—much, I might add, to my chagrin.

RICHARD D. SIMMS
Lexington, Ky.

(Continued on page 14)

Psst. Want a hot tip?

Think for a moment about the single most important element between your record and your ears. The cartridge.

Too often it's the forgotten component even in expensive component stereo systems. That's sad.

A low-fi cartridge not only robs you of your stereo investment, it steals part of every record you buy, usually the "presence" and "definition" of the original recording.

Sony would like to recommend a sure thing. The Sony XL-55 Pro moving coil cartridge.

It's a highly original cartridge proved by exacting studio tests and critical home listening trials. And it passes examination without flying colors. Sound is colorless, clean and marvelously transparent. Even the highest-frequency pianissimo soars the way it was originally recorded.

The moving coil cartridge, as compared with the moving magnet type of cartridge, uses a direct voltage generating system that obtains superior sound with extremely low distortion. Output voltage is very low and either a head amplifier or step-up transformer must be used. Sony's HA-55 Head

Amplifier offers extremely low-noise amplification for all kinds of MC (Moving Coil) cartridges.



HA-55

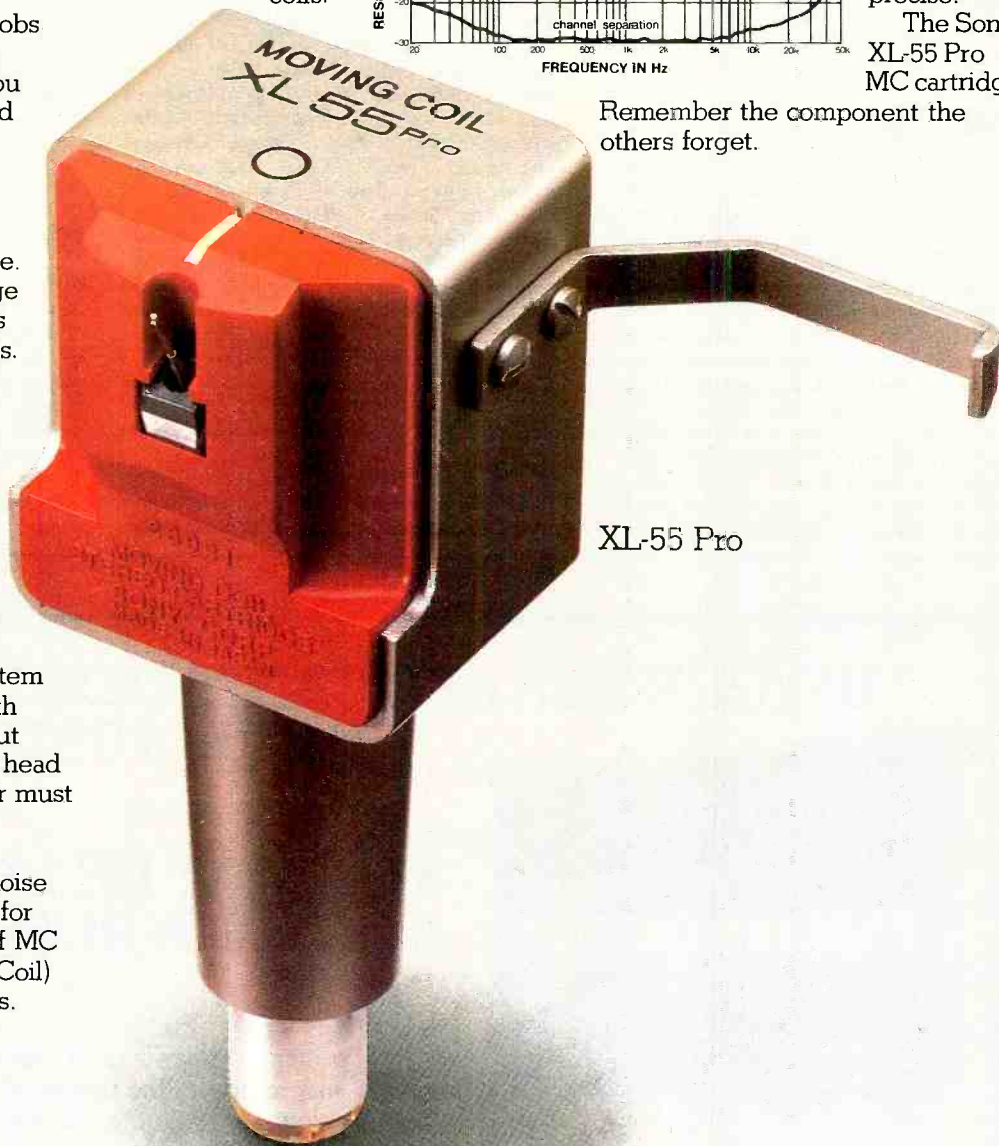
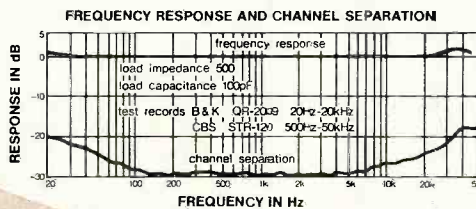
Sony's unique method of generating voltage in our XL-55 Pro is based on a simple figure-8 coil. Output is double that of conventional round coils.

To harness resonance, we adopted an extremely intricate three-layer

cantilever mechanism. Tracking is sure and precise.

The Sony XL-55 Pro MC cartridge.

Remember the component the others forget.



XL-55 Pro

Specifications

Type:	Moving-coil
Output voltage:	0.2mV
	NAB (1kHz, 5cm sec, 45°)
Frequency response:	10-50,000Hz
Channel separation:	More than 30dB (1kHz)
Channel balance:	Less than 1dB (1kHz)
DC resistance:	40Ω
Impedance:	40Ω (1kHz)
Load impedance:	More than 40Ω
Compliance:	15×10 ⁻⁶ cm/dyne
Tracking force:	1.5-2.5g (recommended value 2.0g)
Type of stylus:	Elliptical (0.3×0.8mil), Nude diamond
Weight:	22g (including the shell)
Installation dimensions:	EIA

Design and specifications subject to change without notice.

SONY®

CIRCLE NO. 59 ON READER SERVICE CARD

Seventies Requiem

● Hats off to Noel Coppage for perfectly expressing this nineteen-year-old's thoughts on popular music in his July "Requiem for the Seventies." After being weaned on such music as the Allman Brothers' "Eat a Peach" and Traffic's "Low Spark of the High-heeled Boys," I find most "creations" by current rock "artists" uninspired and bogus. Like Mr. Coppage, I am patient. So, until our music is again played from the head and the heart instead of from the back pocket, I'll just keep wearing down the vinyl on my copy of "Close to the Edge."

RICHARD MARSHALL
Stanhope, N.J.

Gold Records

● Barbara Jurin's "How to Strike Gold" (July) was interesting and obviously well researched. However, in my opinion the "bible" on the subject of gold records is *The Book of Golden Discs* by Joseph Murrells. According to Jurin, not one 45-rpm single was awarded a gold record in 1960, but according to Murrells no fewer than ninety releases in that year went gold, including such chestnuts as *Greenfields* by the Brothers Four, *Chain-gang* by Sam Cooke, *Summer Place Theme* by Percy Faith's Orchestra, and *North to Alaska* by Johnny Horton, seven Elvis hits, stuff by Mantovani, Perry Como, Anita Bryant (!), Fats Domino, Brenda Lee, and dozens more, plus that little ditty that was on everyone's

lips. *Itsy Bitsy*, *Teeny Weeny*, *Yellow Polka Dot Bikini*.

BARRY J. HOOD
Oakville, Ontario

● I thoroughly enjoyed Barbara Jurin's "How to Strike Gold" in July. The material was wittily presented and, at least after 1958, accurate by RIAA standards. However, the historical section of the article, dealing with the first million sellers, repeats many myths and perpetuates inaccuracies that should be cleared up once and for all. For example, Caruso's "*Vesti la giubba*" sold a million copies not in one recording but in at least three different ones. Al Jolson's *Ragging the Baby to Sleep* is one of his rarest records and sold less than 200,000 copies. Bessie Smith's *Down Hearted Blues* sold precisely 277,000 copies (this can be verified by the files at Columbia Records), nowhere near a million. Even the idea of a gold record predates RCA's presentation of one to Glenn Miller in 1942. In 1933 the Gramophone Co. of England gave one to Feodor Chaliapin—admittedly not specifically for sales of one million, but for their thirty years of association. These inaccuracies in Ms. Jurin's article appear to be drawn from Joseph Murrells' *The Book of Golden Discs*, which is unfortunately replete with errors.

ALLEN KOENIGSBERG, Editor
The Antique Phonograph Monthly
Brooklyn, N.Y.

● "How to Strike Gold" was fun and informative, but I would like to amend the report on classical gold records. The most recent

gold-record award for a classical album mentioned was that in 1969 for Walter Carlos' "Switched-on Bach." However, Herbert von Karajan's 1963 recording of the complete Beethoven symphonies with the Berlin Philharmonic officially "went gold" in July 1977. Thus, author Jurin's tongue-in-cheek advice to classical hopefuls, "Don't try to be serious," doesn't always hold true.

JILL KAUFMAN
Press and Artist Relations Manager
Deutsche Grammophon
New York, N.Y.

Ultimatum

● If Tonio K's "Life in the Foodchain" isn't the album of the year, then I'm withdrawing from this funky Western civilization.

ROBERT PANNONE
West Haven, Conn.

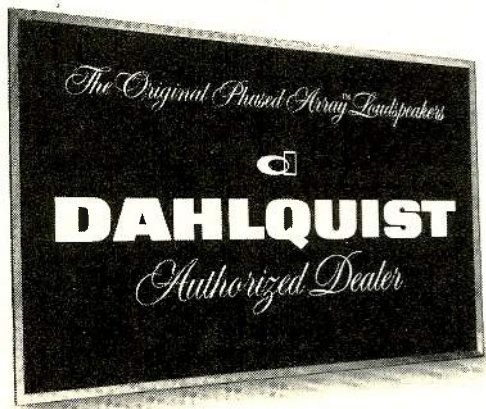
Correction

● We appreciate the very complimentary review of Music for a While's 1750 Arch album "*La Fontaine Amoureuse*" (July "Best of the Month," page 73). However, the catalog number of the record is S-1773 and not S-1772 as given in the review.

Thank you for your continuing support of the activities of independent record labels.

PHILL SAWYER
Executive Director, 1750 Arch Records
Berkeley, Calif.

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DAHLQUIST INC., 601 OLD WILLET'S PATH, HAUPPAUGE, NEW YORK 11789

Now a car stereo that can fix flats and sharps. Panasonic Component Systems II™ with graphic equalizer.

Music from some car stereos can sound like a retread of the original. Because with most car stereos you can't fix the bass without affecting the treble. Or fix the treble without affecting the bass. Add these problems to the problems your car's interior creates and you have an acoustic condition hazardous to your music. Panasonic Component Systems II solves the problem with a 5-band graphic equalizer.

The Panasonic graphic equalizer, CJ-3600, gives you 5 separate tone controls. That's one bass and treble control for every two musical octaves. So you can change the music that sounds too flat or too sharp. And the graphic equalizer is also a power booster, giving you 30 watts of total power. So you'll have both the power and control to steer clear of the

many musical bumps caused by your car's interior.

And there's a lot more to Panasonic Component Systems II. There's a stereo cassette player with auto-reverse, the CX-7200. It has a built-in 2-stage preamp and dual channel power amp for clean stereo separation. And a sensitive AM/FM stereo tuner, the CA-9600, with AFC plus local/DX and auto-stereo/mono switches. They're all designed to fit neatly under your dash.

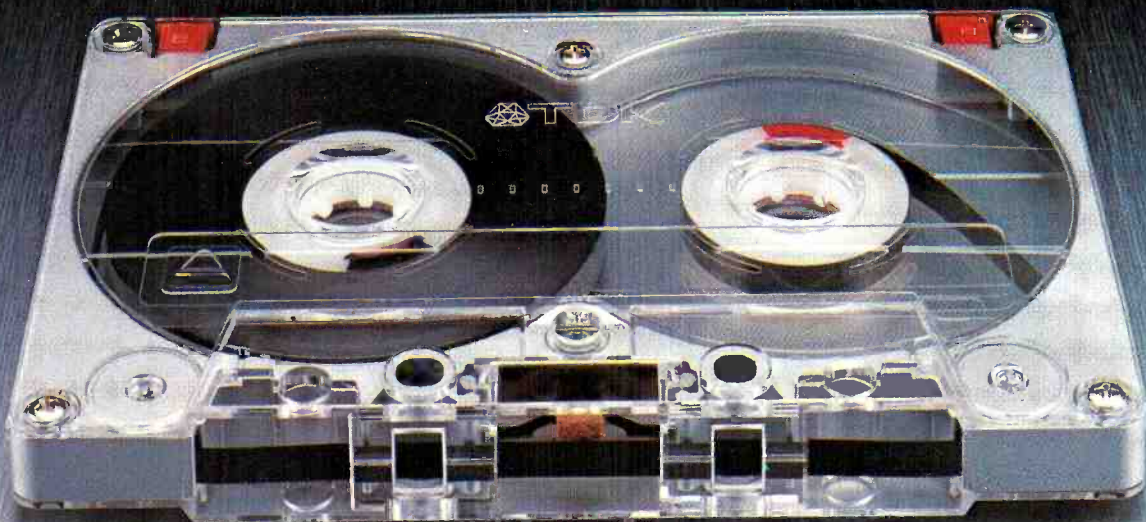
The Panasonic Component Systems II. Also available with repeat track cassette or 8-track. They'll give your ears one of the smoothest rides they ever had.

Panasonic
Just slightly ahead of our time

CIRCLE NO. 67 ON READER SERVICE CARD



Introducing TDK metal. The Music Mirror.



The era of metal particle tape has arrived. Metal-ready cassette decks are already in the stores, and more are on their way. There are also a number of metal cassettes on the market, and all of them have a high coercivity and remanence—their magnetic energy is roughly four times that of the best oxide tapes. But that does not mean that all metal cassettes are alike. Not by a long shot.

TDK's metal cassette, MA-R, looks, feels and performs like no other cassette. That's why we call it "The Music Mirror." We've used advanced manufacturing technology to solve the problems inherent in metal tape. If left untreated, metal particles oxidize upon contact with water vapor and oxygen in the atmosphere—they actually "rust." TDK has developed a unique way to coat each and every particle with a process that protects them from the atmosphere, even at the critical exposed edge of the tape. The result is a tape that is resistant to oxidation. In fact, the overall stability of MA-R is well within the limits that have been set for conventional cassettes. But superior tape is only

part of MA-R's story. TDK's new Reference Standard Mechanism is so revolutionary in design and performance, that its influence will be felt for years to come.

For starters, there's the one-piece, die-cast metal main-frame. Metal is far more resistant to warpage than plastic, and unibody construction eliminates performance differences between the A and B sides. The frame and mechanism are sandwiched between two clear covers held in place by six computer-torqued, double-threaded locking screws that will not slip because of vibration.

MA-R's amazing mechanism is visible for all to see, thanks to a transparent slip sheet. Our unique double hub-clamp is an integral part of a strong and circular tape storage system. (MA-R's two clamps are color-coded red and black, as a visual reference).

Our newly-designed, seamless, water-wheel-type rollers rotate around stainless steel pins, which are micro-polished for circularity. Our new dual-spring pressure pad assembly allows for more flexibility, yet provides more hor-

izontal support for uniform tape to head contact. MA-R even includes removable, replaceable erase-prevention lugs, a new standard in protection and flexibility.

Ask your TDK dealer to show you the new MA-R cassette. Hold it in your hands and feel its weight. Look at the ingenuity and precision of the shell and mechanism. Then listen to it perform in one of the new metal decks. All your senses will tell you that this isn't just another new cassette—it's one of the memorable audio products of our time. TDK Electronics Corp., Garden City, N.Y. 11530.

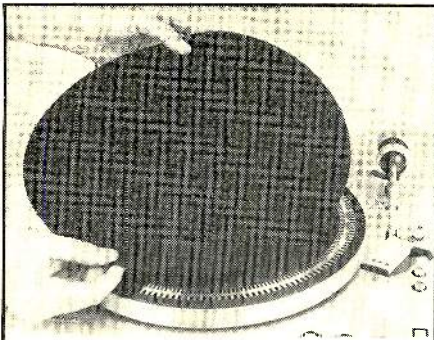
© 1979 TDK Electronics Corp



TDK MA-R

The machine for your machine.

New Products latest audio equipment and accessories



Conductive-foam Turntable Mat Reduces Static

□ The Charleswater Staffree record mat is a lightweight, electrically conductive foam cushion that neutralizes record-borne static electricity. Surface electrical resistance, according to Charleswater, is less than 30,000 ohms per square inch. Thickness is $\frac{1}{8}$ inch and weight is approximately $\frac{1}{2}$ ounces. Price: \$4.95. For more information write to Charleswater Products, Dept. SR, 87 Crescent Street, Needham, Mass. 02194.

mid-treble driver and tweeter levels are continuously adjustable using front-panel controls. Nominal impedance of the system is 8 ohms, sensitivity is 92 dB for a 1-watt input (as measured at 1 meter), and power-handling capacity is 80 watts maximum on musical programs. Rated frequency response of the system is 40 to 20,000 Hz. Dimensions of the enclosure, which is finished in oak veneer with a black fabric grille, are $19\frac{1}{4} \times 14\frac{3}{4} \times 12\frac{1}{2}$ inches. Price: \$530.

Circle 120 on reader service card



Acoustic Research's Anniversary Edition Speaker System

□ The AR25 is a two-way acoustic-suspension loudspeaker introduced in honor of the twenty-fifth anniversary of the founding of Acoustic Research. It uses an 8-inch roll-surround bass driver and a $1\frac{1}{4}$ -inch ferro-fluid cone tweeter with a crossover point at 2,000 Hz. The system's nominal impedance is 8 ohms, and power-handling ability is 100 watts on musical material, assuming clipping no more than 10 per cent of the time. The speaker's sensitivity is 86 dB for a 1-watt input measured at a distance of 1 meter. The enclosure, which is finished in a simulated-walnut vinyl covering with a black foam grille, has dimensions of $21\frac{1}{2} \times 11\frac{3}{4} \times 7\frac{3}{8}$ inches. Weight is 24 pounds. Price: \$110.

Circle 122 on reader service card



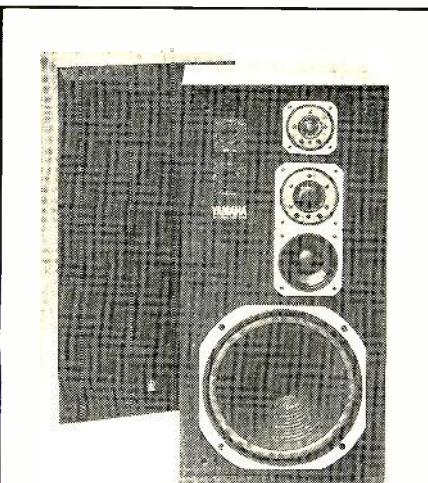
Medium-price AM/FM Receiver From Marantz

□ The Marantz SR-6000 AM/FM receiver has a power output of 70 watts per channel into 8-ohm loads with a total-harmonic-distortion rating of 0.025 per cent or less. It is capable of putting out 88 watts per channel into a 4-ohm load (with total harmonic distortion of 0.05 per cent or less)—an important characteristic, according to Marantz, because most loudspeakers have an impedance well below 8 ohms at some frequencies. Intermodulation distortion is 0.025 per cent or less at 8 ohms and 0.05 per cent or less at 4 ohms.

Controls and features include LED power-output meters, three tone controls, a separate record-mode knob that permits the user to record one source while listening to another, FM muting, tape-copying facilities, and the proprietary Marantz Gyro-touch tuning wheel. The tuner section of the receiver has a phase-locked-loop multiplex-decoder section and a front-end gain section that employs MOS field-effect transistors for low noise. Usable sensitivity is 1.7 microvolts (9.8 dBf), and sensitivity for 50-dB quieting in stereo is 35 microvolts (36.1 dBf). Harmonic distortion in stereo is 0.2 per cent or less at 1,000 Hz, capture ratio is 1 dB, and alternate-channel selectivity is 65 dB. Ultimate signal-to-noise ratio is 72 dB.

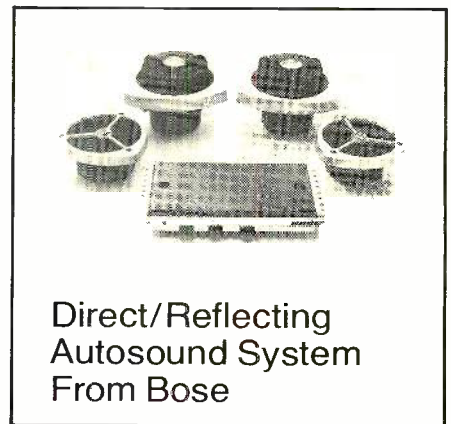
The preamplifier section of the SR-6000 has a phono section with an A-weighted signal-to-noise ratio of 90 dB, RIAA equalization accuracy to within ± 0.2 dB, and an overload point (at 1,000 Hz) of 225 millivolts. The receiver's power amplifier is fully d.c. coupled. Dimensions of the receiver, which is supplied with a walnut-grain vinyl-covered cabinet, are $18\frac{3}{8} \times 5\frac{1}{2} \times 13\frac{3}{8}$ inches; weight is approximately 21 $\frac{1}{2}$ pounds. Price: \$550.

Circle 121 on reader service card



Yamaha Four-way Speaker Has Beryllium Domes

□ The Yamaha NS-890 is a four-way acoustic-suspension speaker that uses beryllium as the diaphragm material of its two dome drivers. The system's driver complement consists of a 12-inch bass driver and $4\frac{3}{4}$ -inch midrange driver, both with conventional paper cones, and 2-inch and $1\frac{1}{4}$ -inch beryllium-dome high-frequency drivers. Crossover points are at 600, 2,000, and 6,000 Hz. Both the 2-inch



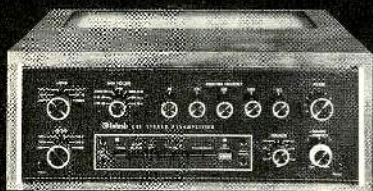
Direct/Reflecting Autosound System From Bose

□ The Bose 1401 is an automotive sound system that includes a booster-amplifier/equalizer combination and either two or four full-range speakers; it is designed to provide a combination of direct and reflected sound, as do the Bose home loudspeakers. The amplifier section, which can be driven by any car program source, contains four separate power

(Continued overleaf)

McIntosh

"A Technological Masterpiece..."



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

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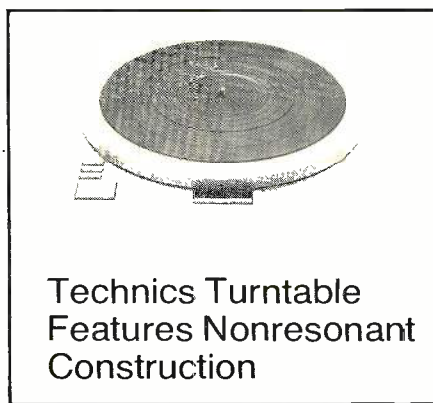
CIRCLE NO. 43 ON READER SERVICE CARD

New Products

latest audio equipment and accessories

amplifiers, each capable of a 25-watt output. Frequency response is specified as 40 to 17,000 Hz and typical total harmonic distortion as 0.09 per cent. Slide controls for power, balance between front and rear speaker pairs, and low-frequency boost are on the front panel. A rear-panel switch can be used to boost treble as a means of compensating for exceptionally absorbent automotive interiors. Dimensions of the amplifier are 10 x 4½ x 1½ inches; a bracket for under-dash mounting is included.

The two rear loudspeakers supplied with the 1401 system are 4½-inch units with steel-mesh grilles; the grilles are designed to angle much of the speaker output upward and to the rear, where it will be reflected from the rear window to the listener. The optional front door-mounting speakers are also 4½-inch full-range units; their entire output is direct. The rear speakers will mount in 6 x 9- or 5 x 7-inch holes. Price of the system with two speakers is \$229.95; accessory front speakers with grilles are \$69.95 per pair. For more information, write to Bose, Dept. SR, 100 The Mountain Road, Framingham, Mass. 01701.



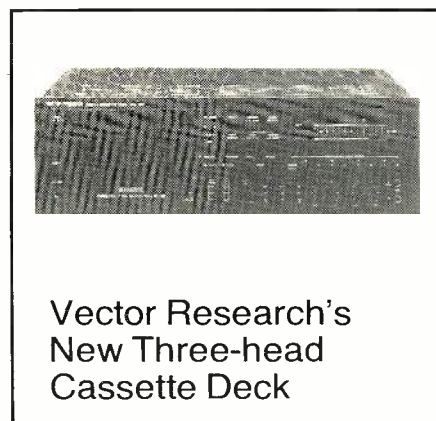
Technics Turntable Features Nonresonant Construction

□ The Technics SP-15 is a three-speed (33⅓, 45, and 78 rpm) "armless" turntable that uses a quartz-controlled direct-drive motor of unusually high torque and speed accuracy. The turntable's speed is variable in 0.1 per cent increments over a range of ±9.9 per cent. It comes up to speed in 0.4 second and brakes to a complete stop, with the assistance of electronic and mechanical braking systems, in a similar length of time. Wow and flutter of the system is 0.08 per cent or less (weighted rms) and rumble is -56 dB, measured using the DIN B standard.

The underside of the turntable platter and the cast-aluminum base have extensive antiresonant matting attached to them—rubber for the platter and a proprietary substance (TNRC—Technics Non Resonant Compound) for the base. These materials are said to reduce acoustic feedback and to eliminate resonances and ringing within the platter and in the disc itself. Controls on the SP-15 include pushbuttons for the three speeds, a

start-stop switch, and two digital displays, one for speed, the other for percentage of change of pitch. Two accessory outer mounting bases are available: the SH-15B2, a heavy rubber base covered with a rosewood veneer, and the SH-15B3, a rubber base in a matte black finish. Dimensions of the SP-15 are approximately 14¾ x 3¾ x 13¾ inches (not including outer mounting base). Prices: SP-15, \$600; SH-15B2 and SH-15B3, \$250.

Circle 123 on reader service card



Vector Research's New Three-head Cassette Deck

□ Vector Research, a newly formed California company, has introduced three receivers and three cassette decks. Their top-of-the-line cassette machine is the VCX-600, a three-head, solenoid-controlled unit capable of recording and playing back pure-metal tapes. The deck has a programmable music-search function which, when engaged, searches out and plays a sequence of musical selections chosen by the user (the selections must be separated by brief silent spaces). Peak-reading bar-graph level indicators, controls for memory, auto-rewind, record-mute, and cue-and-review functions, and three-position separate bias and equalization switches (with a ±10 per cent variable bias control) are also found on the front panel.

The transport of the VCX-600 has two motors: a servo-controlled tape-hub motor and a frequency-governed d.c. motor for the capstan. Both the record and playback heads are of Sendust construction; the erase head is ferrite. Specifications of the deck include a frequency response of 30 to 20,000 Hz with pure-metal tape, 30 to 18,000 Hz with cobalt-treated or chromium-dioxide tapes, and 30 to 16,000 Hz with ferric tapes. Signal-to-noise ratio with the Dolby system in use is 65 dB. Weighted wow and flutter is 0.06 per cent rms, and rewind speed is 90 seconds for a C-60 cassette. Dimensions of the VCX-600 are 17¾ x 5½ x 14¾ inches. Price: \$575. For more information write to Vector Research, Dept. SR, 20600 Nordhoff Street, Chatsworth, Calif. 91311.

(Continued on page 20)

TIME LIFE VIDEO

presents:

**A \$12 videocassette bargain to
bring you a great new idea
in home entertainment:**

Why would TIME LIFE VIDEO sell a new top-of-the-line name brand two-to-four hour videocassette for just \$12 or 40% off the suggested retail price?

Because we want to use a small portion of the cassette (which you can, of course, erase later) to present a message so exciting that we thought a videocassette recording was a great way to bring it to life.

We want to tell you how you can gain access to the finest, *most comprehensive library of videocassette programs ever assembled.*

So fill out and return the coupon with your \$12, stating whether you want your cassette in the BETA or VHS format. Or call the 800 number listed in the coupon.

For just \$12, you'll be getting a fantastic videocassette buy, and information about a great new way to save a lot more.

But hurry. This offer expires December 31, 1979.

FREE DUST-PROOF JACKET Even if you don't want to take advantage of our videocassette bargain, you can get a free, durable dust-proof jacket that fits both BETA and VHS videocassettes. Just fill in the coupon or call the toll-free number.

Call toll-free

800 523-7600 (national) or
800 662-5180 (in Pennsylvania),
and ask for **operator number 102.**

Or fill out and return this coupon to:



TIME LIFE VIDEO

Harrisburg, Pa. 17105

Please send me the two-to-four hour cassette containing your brief message and the free videocassette dust-proof jacket.

My VCR is (check one) BETA VHS .

Check method of payment:

Enclosed is my check or money order for \$12 plus local tax (if applicable). 9-01

Charge my credit card \$12, plus local tax (if applicable). 9-01

American Express Diners Club

VISA Master Charge

Interbank # _____

Credit card _____ exp. date _____

Signature _____ date _____

Name _____

Address _____

City _____ State _____ Zip _____

Free Dust-Proof Videocassette Jacket

I do not wish to accept the special two-to-four hour cassette offer, *but* please send the free dust-proof jacket to the above address. 9-03

Offer expires December 31, 1979, good only in continental U.S. Limit one per customer.

Introducing

ALLISON: FIVE

Room Matched® 11" x 18 1/4" x 10"
8" Woofer, system resonance 52 Hz
Single 1 inch Convex Diaphragm tweeter
Full Warranty for Five Years
\$160 to \$188
(depending on shipping distance from factory)

ALLISON: SIX

Room Matched® 11 1/4" x 11 1/4" x 11 1/4"
8" Woofer, system resonance 59 Hz
Single 1 inch Convex Diaphragm tweeter
Full Warranty for Five Years
\$125 to \$131
(depending on shipping distance from factory)

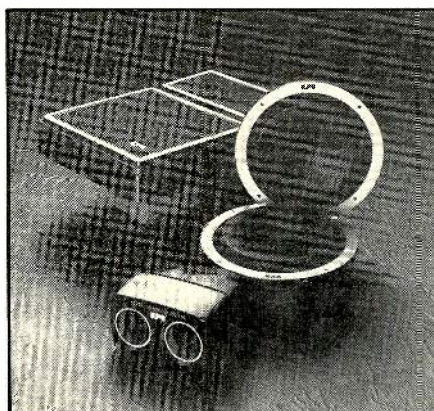
ALLISON ACOUSTICS INC., 7 Tech Circle, Natick, MA 01760

Full specifications
available on request

CIRCLE NO. 2 ON READER SERVICE CARD

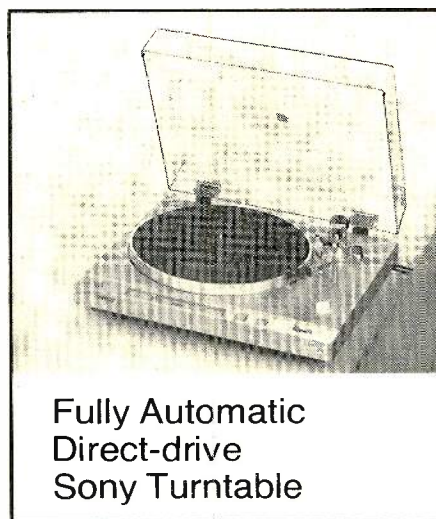
New Products

latest audio equipment and accessories



**Epicure Companion
Auto Speaker System
And Level Control**

□ Epicure has introduced a 4 1/2-inch full-range automotive speaker system, the LS 35, designed to be used in conjunction with a rear-deck speaker unit. Epicure notes that ambient-noise levels in a car are usually quite high and that a sound source close to the listener (such as a full-range door-mounted speaker) overcomes ambient noise without requiring extremely high output from the primary rear-deck speakers. The LS 35, which comes with an integral grille, has a ferro-fluid-cooled voice-coil gap. A level-control system, the LCS, permits individual attenuation of left and right front-speaker outputs. Prices: LS 35, \$75 per pair, level control included; LCS alone, \$40. Epicure Products, Dept. SR, 1 Charles Street, Newburyport, Mass. 01950.



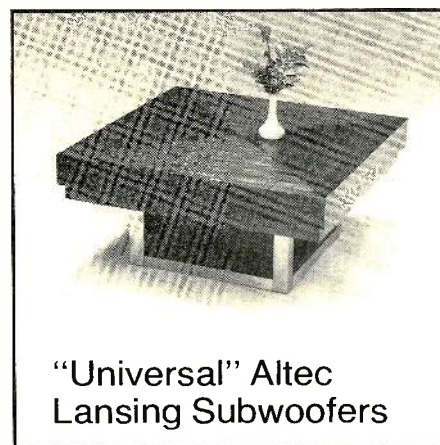
**Fully Automatic
Direct-drive
Sony Turntable**

□ Sony's PS-T25 is a moderately priced fully automatic turntable with a drive motor that does not "cog" (move in discrete increments)

because its design is both slotless and brushless. The turntable has a servo-control system called "Magnedisc" to monitor and maintain speed; it employs a sensor that monitors the motion of the platter's outer rim rather than the motor speed, thus accurately reflecting the turntable's actual speed. The variable speed control has a range of ± 4 per cent.

The tone arm of the PS-T25 is a J-shape, statically balanced unit with an aluminum arm shaft. A spare head shell is included with the turntable. Controls on the PS-T25 are located at the extreme front of the top panel in an area that is not covered by the dust cover. They may therefore be used while the dust cover is in place. Specifications of the unit include a rumble figure of -70 dB, measured using the DIN B standard, and a wow-and-flutter figure of 0.04 per cent. Dimensions are 5 1/2 x 17 1/2 x 15 1/2 inches; the tone arm's pivot-to-stylus length is 8 1/2 inches. Price: \$170.

Circle 124 on reader service card



**"Universal" Altec
Lansing Subwoofers**

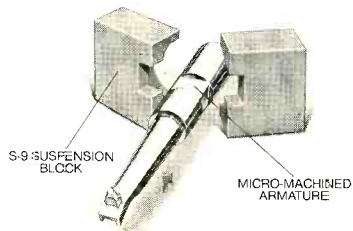
□ Altec Lansing's LF-1 subwoofer has a fixed crossover at 80 Hz and was developed to be compatible with a wide variety of loudspeakers. The sensitivity of the system may be varied over a 9-dB range to match its output to that of the main speakers. The LF-1 uses a single 12-inch driver with a dual voice-coil arrangement that derives a combined left- and right-channel signal from the output of the amplifier. The enclosure, finished in an unusual wood veneer called Endriana, has dimensions of 36 x 36 x 18 inches. The speaker radiates downward and the enclosure incorporates its own lower panel, thus preventing variations in response that might be caused by different floor materials. It is mounted on nickel-steel legs. Approximate price: \$500.

A second similarly styled system, the LE-2, has selectable crossover frequencies of 80, 60, and 40 Hz and includes its own equalized outboard amplifier for greater dynamic range. Approximate price: \$800.

Circle 125 on reader service card

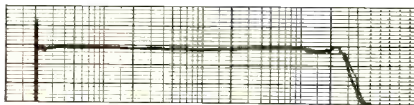
(Continued on page 22)

We can. Thanks to the revolutionary Omni-Pivot System™ in our new ADC Improved Series cartridges. We can also honestly say ADC has never sounded better. Definition and stereo separation are incredible. Even the most complex musical passages are reproduced in full detail with absolute neutrality.

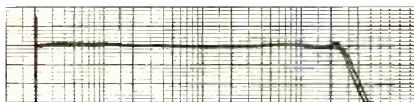


The new Omni-Pivot System™ is a major advance in micro-technology. There are no restrictive armature governors, wires or

adhesives. Instead, each armature is micro-machined to perfectly lock into a newly formulated S-9 high definition suspension block. We think it's a real breakthrough. But we'd like you to be the judge.



Above is the frequency response of a new ADC ZLM Improved cartridge. The wider and flatter the response, the better it is. Do we have to state the obvious? We didn't think so.



Now look at the same cartridge after 1000 playing hours. See

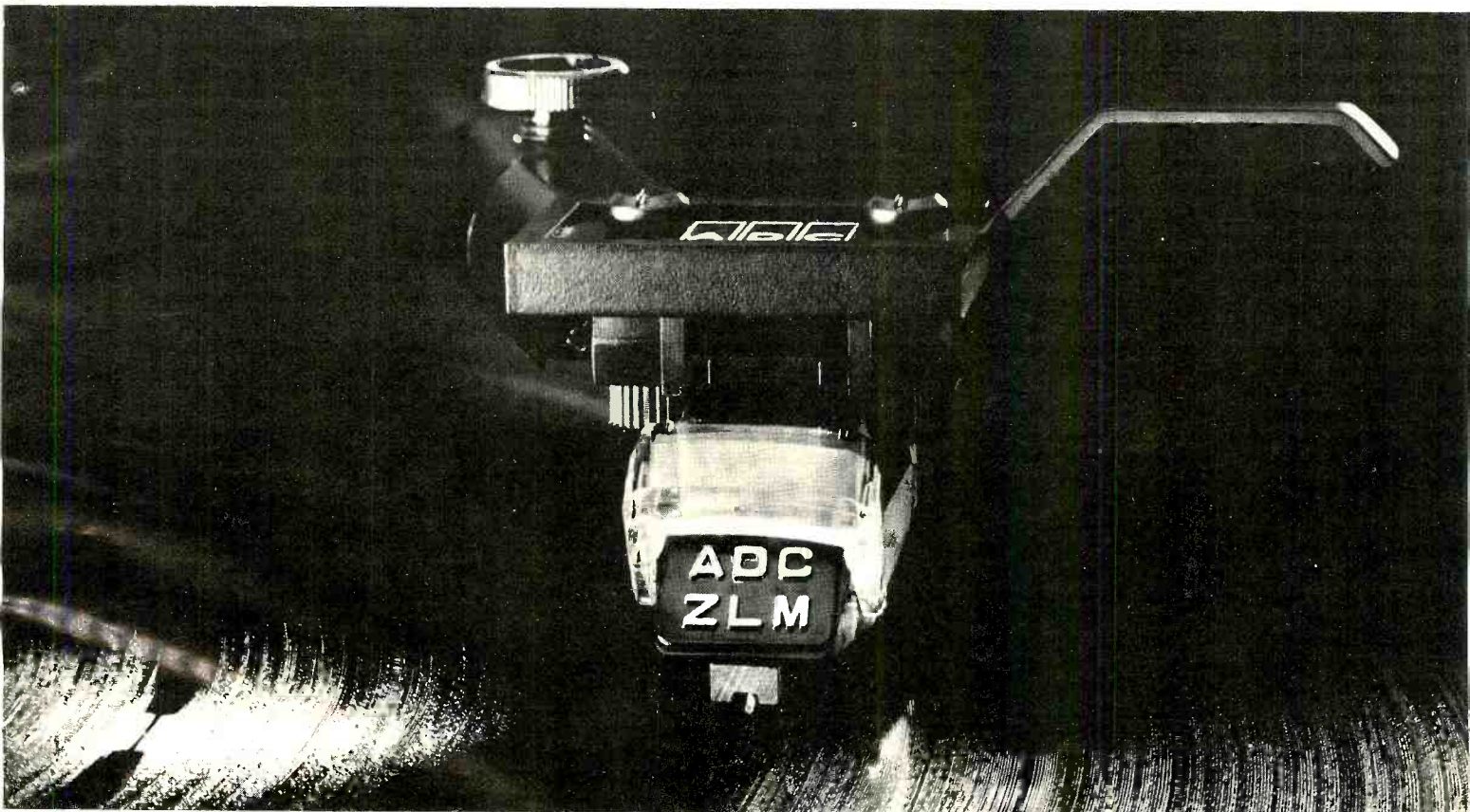
any difference? You won't hear any difference either. The ADC ZLM Improved cartridge showed less than a 1dB change in response after 1000 hours!

Now the good news gets even better. The Omni-Pivot System™ comes in a wide range of new ADC Improved Series cartridges. The ZLM, XLM MKIII and MKII, and QLM-36 MKIII. All featuring new snap-down stylus protectors.

If you already own a fine ADC cartridge, the Omni-Pivot System™ is yours for just the price of a replacement stylus.

Listen to any new ADC Improved cartridge. After you've heard us, we'd like to hear from you. Write Audio Dynamics Corp., Pickett District Rd., New Milford, Ct. 06776, or call our toll-free number (800) 243-9544.

CAN YOU HONESTLY SAY YOUR CARTRIDGE WILL STILL SOUND NEW 1000 PLAYING HOURS AFTER YOU BOUGHT IT?



ADC
A BSR COMPANY

CIRCLE NO. 6 ON READER SERVICE CARD

FREE

details... A DIFFERENT KIND OF RECORD CLUB

You can now own every record or tape that you may ever want... at tremendous savings and with no continuing purchase obligations. You can get valuable free dividend certificates, you can get quick service and all the 100% iron-clad guarantees you want.

Now you can stop price increases that leave you with less music for your record and tape budget. You can guarantee yourself more music for less money through membership in Discount Music Club.

Look at these benefits:

TREMENDOUS SAVINGS

on every record and tape in print—no "agree-to-purchase" obligations of any kind.

DISCOUNTS OF 43% TO 73%

off mfg. suggested list... special catalog features hundreds of titles and artists.

ALL LABELS AVAILABLE

including most imports through special custom ordering service. If we don't stock it we'll get it for you.

SCHWANN CATALOG

lists thousands of titles; classical, pop, jazz, ballet, opera, musical shows, folk, rock, vocal, instrumental, country, etc.

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Dividend Gifts—Every shipment carries a dividend gift or dividend certificate. Certificates redeemable immediately for extra discounts.

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happenings in the world of music; concerts, critiques, new releases... special super-sale listings at discounts of up to 73%.

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Diamond needles, cloths, tape cleaners, etc. Discount Music Club is your complete one stop music and accessory buying service.

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same day shipping on many orders... rarely later than the next several days. Partial shipments always made in the event of unforeseen delay... all at no extra cost to you.

100% IRON-CLAD GUARANTEES

on all products and services. Everything is guaranteed factory fresh and free of defects or damages of any sort.

Your total satisfaction is unconditionally guaranteed.

Discount Music Club is a no-obligation membership club that guarantees tremendous discounts on all stereo records and tapes and lets you buy what you want... when you want... or not at all if you choose.

These are just a few of the money-saving reasons to write for free details. You can't lose so why not fill out and mail the coupon below for immediate information.

dmc DISCOUNT MUSIC CLUB, INC. 9-1079
650 Main Street, New Rochelle, N.Y. 10801

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ADDRESS

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CIRCLE NO. 19 ON READER SERVICE CARD

New Products

latest audio equipment and accessories



Audio Control's Ten-band Equalizer/ Spectrum Analyzer

□ Audio Control has introduced the C-101, one of the few examples of a new component category called the "equanalyzer." The C-101 combines the functions of a real-time frequency-spectrum analyzer and an octave-band graphic equalizer.

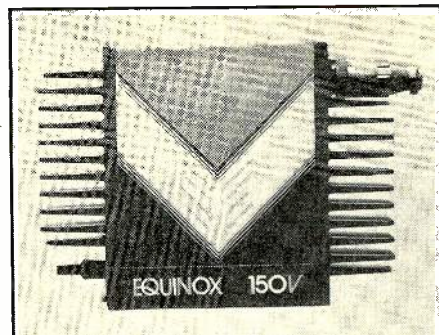
The spectrum-analyzer section continuously monitors the level of each of ten octave-wide frequency bands and displays an illuminated graph of the frequency response of a system or individual component at any given moment on a screen composed of about one hundred LED's. (The term "real-time" indicates that the instrument is simultaneously measuring and displaying changes in level and frequency response as they occur, rather than examining only one range of frequencies at a time and storing the information to derive a complete display.) The analyzer can be used to determine the frequency response and output level of almost any component, including those with line-level outputs (such as tape recorders), speaker-level outputs (such as power amplifiers), or, using an external microphone, components whose output is acoustic rather than electrical (such as loudspeakers).

The analyzer contains a pink-noise generator that can be used as a system-input test-signal source; however, the unit will also display the instantaneous levels and frequency response of a signal composed of other types of test tones or of music. Sound-pressure-level readings can also be made. The speed of response of the display may be set to either slow or fast positions, depending on the degree of smoothing of the visual signal desired. The LED display can also be set to show either a 2- or a 4-dB change in level per LED, yielding either an 18- or a 36-dB dynamic range on the display.

The C-101 also contains a ten-band graphic equalizer that permits ± 5 dB of level adjustment at 32, 60, 120, 240, 480, 960, 1,920, 3,840, 7,680, and 15,500 Hz (these are also the center frequencies of the analyzer bands). Left- and right-channel controls for each frequency band are grouped together for ease of simultaneous adjustment. The equalizer section has a switchable infrasonic filter that attenuates at 18 dB per octave below about 25 Hz and a circuit that blends both channels below 200 Hz, thereby canceling vertical phono-rumble or other disc-noise components. Specifications include a total-harmonic-distortion rating for the equalizer of less than 0.025 per cent, frequency response of 3 Hz to 100 kHz

± 0.75 dB, a signal-to-noise ratio for the equalizer of 96 dB below 1 volt, and a maximum output level of 7 volts. The pink-noise generator of the unit puts out 100 millivolts and can be connected directly to an amplifier's auxiliary input.

Audio Control notes that a wide variety of operations useful to both the audiophile and the technician can be performed with the C-101: optimization of tape-recorder bias and equalization; determination of speaker, preamplifier, and tape-recorder frequency response; spectrum analysis of room acoustics; determination of sound-pressure levels; and measurement of speaker efficiencies. Dimensions of the rack-mounting unit are 19 x 13½ x 6½ inches and weight is 7¾ pounds. Price: \$549. For further information, write to Audio Control, Dept SR, 6520 212th Street SW, Lynnwood, Wash. 98036.



MOSFETs in SBE Equinox Auto Power Amplifiers

□ The Equinox 100V and 150V (shown) are automotive power amplifiers that use MOS field-effect transistors in their power-output stages. The 100V has a power output of 50 watts per channel; the 150V has 75 watts per channel. Both units have harmonic-distortion specifications of 0.2 per cent or less at rated power, a frequency response of 20 to 20,000 Hz (-1 dB), and an input sensitivity of 1 volt. Each has a number of indicator lights that report on the status of the power-supply circuit breakers, the unit's temperature, and other conditions. Prices: 100V, \$349.95; 150V, \$399.95. Write to SBE, Dept. SR, 220 Airport Boulevard, Watsonville, Calif. 95076.

NOTICE: All product descriptions and specifications quoted in these columns are based on materials supplied by the manufacturers.

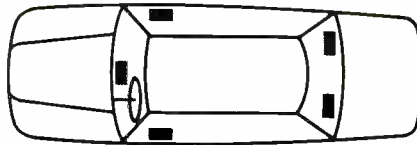
Domestic inflation and fluctuations in the value of the dollar overseas affect the price of merchandise imported into this country. Therefore, please be aware that the prices quoted in this issue are subject to change.

How to select a sound system for your car, boat or plane.

Audiovox candidly reveals what you should look for, listen to and beware of.

By Robert Harris, Technical Director

You are confronted by everything from \$50 AM radios to \$1,000 high fidelity systems. Where should you shop? How much do you really need to spend? Read on as Audiovox throws some light on the subject.



and up, an inappropriate set of speakers will blow out. If you play your Audiovox receiver/amplifier through power-matched Audiovox speakers, the performance of the system will be optimized to the fullest.

Audiovox aims to provide American motorists with a level of sound reproduction previously attained only in the home - through a range of more than 139 systems and components.

Where to buy.

Manufacturers with a limited range of products need to sell *all* of their products to *all* types of stores.

Audiovox, on the other hand, markets 3 totally *different* product groups. The regular group - providing superior sound reproduction at a reasonable price and available through conventional retailers, chain stores, and catalogs; the S.P.S. (Special Performance Series) featuring original equipment styling and features - available only from new car dealers; and the Hi-Comp group - a complete line of "state of the art" components, available through car stereo specialists.

How much good sound should cost these days.

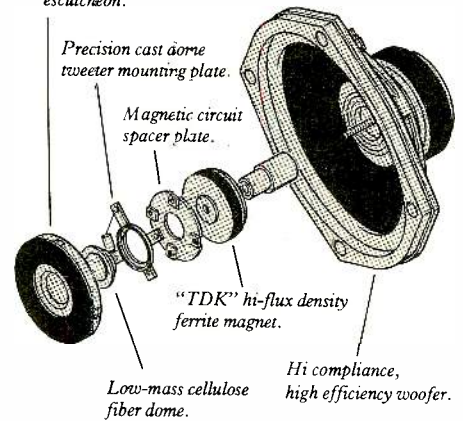
You can pick up a basic AM radio for about \$50. The average cassette or cartridge player with built-in AM/FM radio and two good speakers will cost about \$150. And if you want to shoot the works, Audiovox builds an electronically-tuned receiver/cassette player with auto-reverse, the HC65 speaker system, a 60-watts-per-channel amplifier, plus Dolby®, CrO₂ switch, parametric equalizer, etc. for around \$950. (Installation charges excluded.)

Speakers - Facts you should know.

As with home hi-fi, speakers are the most important component of a mobile sound system.

The key issue is *compatibility*. With power out-puts of 60 watts per channel

Acoustically transparent escutcheon.

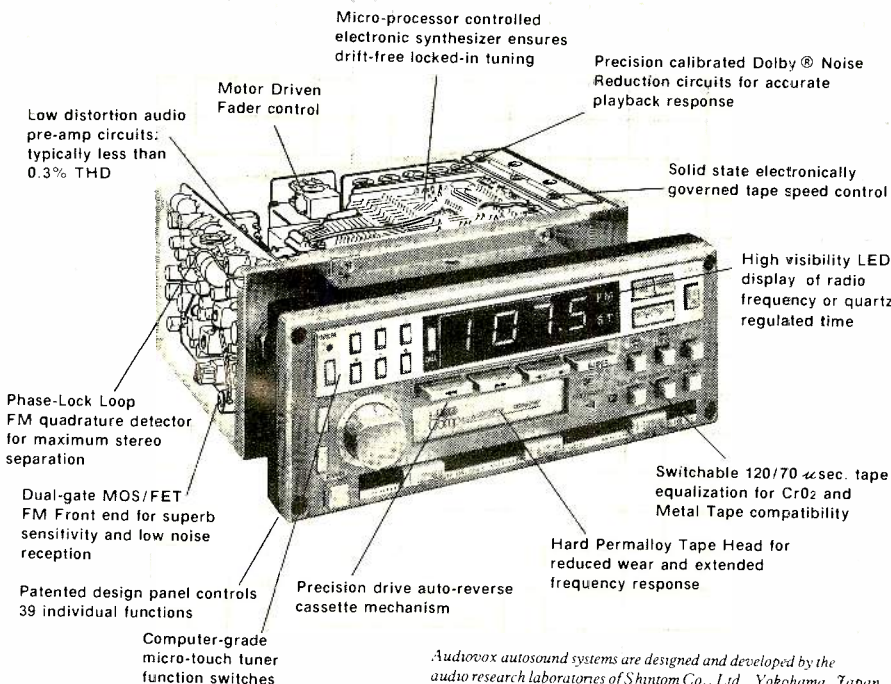


The Audio Dome™ 6" x 9" speaker system.

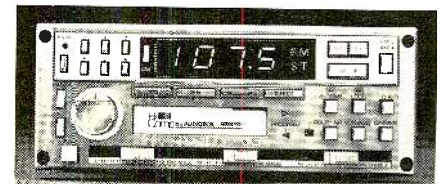
More than 15 years of specialized experience.

Audiovox sound systems have a remarkable pedigree. The single-minded pursuit of superior sound in automobiles has never been diluted by diversification. The state of the Audiovox art is superior mobile sound systems.

For further information, write to R. Harris, Dept. SR, Audiovox, 150 Marcus Blvd., Hauppauge, New York 11787.



Audiovox autosound systems are designed and developed by the audio research laboratories of Shintom Co., Ltd., Yokohama, Japan.



The Hi-Comp HCM0010: Electronically-tuned AM/FM/MPX radio, auto reverse cassette, Dolby®, plus 10 other hi-fidelity features.

Dolby® is a registered trademark of Dolby Laboratories, Inc
© Copyright Audiovox Corporation 1979



Robert Merrill listened to us.

He was formerly a baritone with the New York Metropolitan Opera.

After he heard the System B, a vented 4-way, 5 driver loudspeaker system, this is what he said.

"The sound doesn't come directly at me. It seems to come around me which I enjoy."

That's because we painstakingly designed the System B to achieve maximum dispersion of sound.

Here's how we did it.

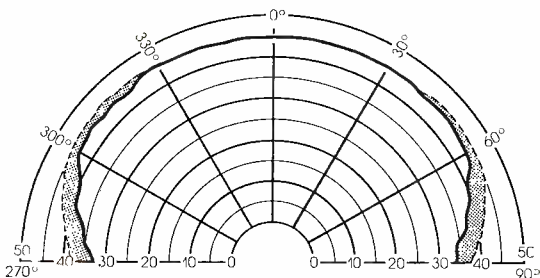
First, we symmetrically positioned all four front-firing drivers to improve dispersion over the complete frequency range.

We didn't stop there, either.

The System B has two specially designed, but different high frequency drivers. One on the front and one on the rear.

With the System B positioned 12" from the wall, the supplementary energy from the rear firing driver is deflected off the wall and dispersed throughout the listening area.

That means the music sounds virtually the same whether you're directly in front of the speaker or off to the side.



The graph pictures the polar response characteristics of System B at 5000 Hz. It shows improved dispersion (shaded area) as a result of the rear firing driver.

We've gone to great lengths to mini-

mize distortion, too.

We've carefully selected each crossover frequency to subjugate driver resonance below critical crossover points. That completely eliminates distortion in the crossover regions.

It all adds up to music that is clearly defined and accurate.

But this is just part of the story behind this amazing sound system.

That's why you should go to your Jensen audio dealer for a personal demonstration.

After all, your ears are still the ultimate test.

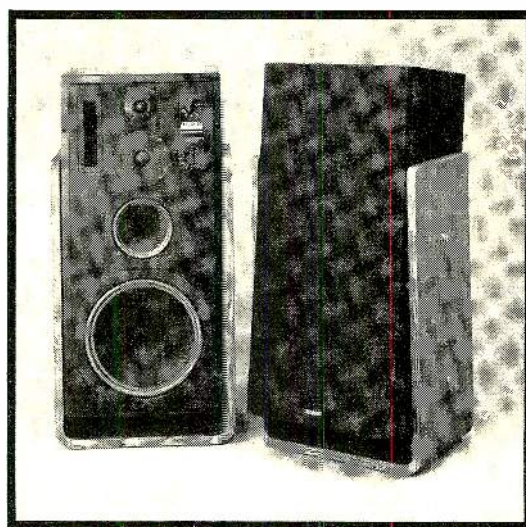
But here's one more thought about the System B from Robert Merrill, a professional baritone.

"I've often thought that I would like to jump off the stage and hear myself sing. I think if it sounded like this, I'd be very happy...yes, very much."

Listen to our speakers.

Robert Merrill did.

Listen with the professionals.



Listen to JENSEN speakers.

JENSEN SOUND LABORATORIES
Division of Pemcor, Inc., Schiller Park, IL 60176.
CIRCLE NO. 33 ON READER SERVICE CARD

By Larry Klein

Technical Director Klein samples Audio-Technica's experimental subwoofer headphones.



Stereo Image and Depth

Q. Some audio enthusiasts make a big deal of the differences they hear in "stereo imaging" and "depth" among the various components. What is it all about?

VINCENT PETERS
Staten Island, N.Y.

A. As far as I know, the only factors that can influence the perceived spatial properties of a stereo signal are: (1) accidental or deliberate phase shift between channels, (2) channel separation, (3) difference-signal (L - R and L + R) feed into the opposite channel, (4) frequency-response irregularities, and (5) the ratio of directly perceived versus reflected sound within a room, which is determined by the design and setup of the speakers in interaction with room acoustics. (Also see "Technical Talk" in this issue.)

I asked Tom Holman of Apt Corporation for his thoughts on the matter, and he replied:

"In working with preamplifier design, we have learned that many factors can influence the perceived depth of the stereo image produced by an electronic component. Some of these are clearly understandable in terms of stereo recording and reproduction; others bear a more subtle relationship to the process.

Usually the most dramatic influence on the depth of the stereo image is the type and amount of reverberation in the recording. The sound field embodied in a good classical recording consists of three components picked up by the microphones: the direct sound, early reflections, and reverberation. The direct sound, which is the first heard, is used by the ear to localize the source of the sound. The early reflections contribute a sense of the size of the acoustic space. When the reflections become numerous enough, they are eventually "homogenized" and blend into reverberation, which adds a pleasing sense of warmth and continuity to the sound. (Early Toscanini recordings provide examples of inadequate reverberation, and the result is recordings that are dull-sounding despite the musicality of the performances.)

What I am referring to are the qualities in the recording, not what takes place during reproduction in a room environment. Since the reverberant element in a recording is usually at a lower level than the direct or earliest sounds, any electronic manipulation of dynamic range may lead to an increase or decrease of the perceived reverberation in the signal. For example, a dynamic-range ex-

pander reduces the level of the softer passages (thus improving the noise characteristics), but expansion also reduces the level of the reverberant "tail" on the music, thereby shortening the reverberation time and reducing apparent depth. (Some expanders compensate for this effect electronically.)

Crosstalk between channels, whether introduced deliberately or otherwise, can also have the effect of either increasing or decreasing the apparent depth or width of the sonic image. In-phase crosstalk will decrease apparent depth by "combining" the channels toward mono, while out-of-phase crosstalk will de-emphasize the center-recorded sounds, thus increasing the depth and width of the stereo stage. Since crosstalk in a phono cartridge usually varies to some degree across the audio-frequency range, so can imaging.

Small changes in frequency response during critical A-B tests may cause differences in the perceived depth before the listener perceives the tonal-balance difference. It is common for the top octave of phono preamplifiers to have a rising response which will add to the sense of "airiness" that some hear as increased depth. Also related is the fact that a small amount of stereo noise (random hiss) added to otherwise clean program material can add to the subjective "airiness" of the stereo image. (There was early resistance to professional noise-reduction systems because the reduction of tape hiss seemed to dull and close down the program material. Many engineers were conditioned to tape hiss; for them, hiss was not only not detrimental, but it added a high-frequency boost to the program.)

When interactions among these effects are considered, it is no wonder that there are perceived-depth differences among various pieces of equipment."

Square shanks for nude-diamond stylus tips are preferred by some manufacturers; others employ rounded shanks for both nude and bonded tips.



BONDED SPHERICAL



BONDED ELLIPTICAL



NUDE ELLIPTICAL



NUDE SHIBATA

It has also been suggested to me by Bob Carver, of the Carver Corporation, that those stereo cartridges that provide a deeper or broader stereo image than is normal probably have internal out-of-phase crosstalk, and also that a small bump in frequency response at about 300 Hz (which is where the reverberant energy in a recording is concentrated) may contribute to subjectively enhanced depth.

In the August "Audio Q. and A." I wrote about frequency-response irregularities' being largely responsible for the "mysterious" subjective effects produced by some components or combinations of components. I indirectly made the point that the "I-love-a-mystery" syndrome that afflicts some audiophiles leads them away from any understanding of the significant mechanical, acoustic, psychoacoustic, and electronic factors that determine what they hear. This lack of understanding, in turn, tends to make them easily gulled (as in gullible) by the sometimes off-the-wall technical claims of those with products to sell.

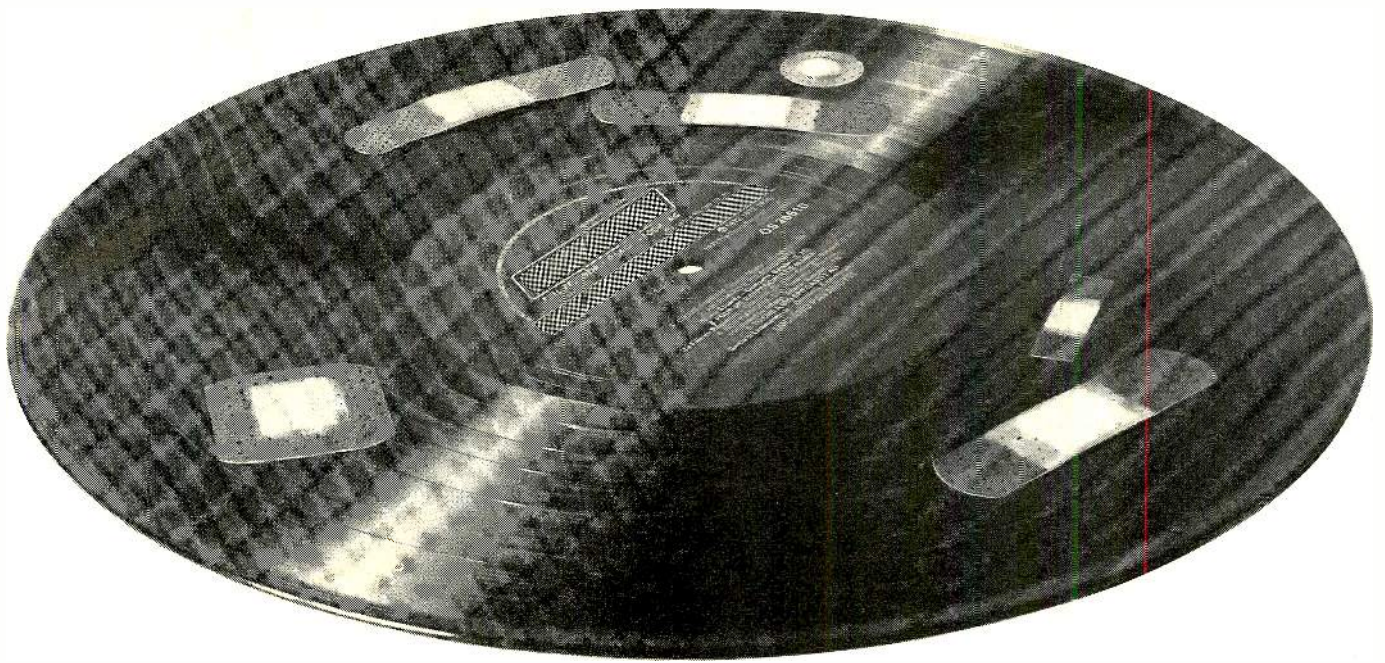
The solution? Simply learn all you can about the technical realities of a product before you commit your bucks to its purchase. STEREO REVIEW will be as helpful as it can, but it certainly can not do the whole job. Be critical, be scientific, and don't be too ready to accept "expert opinion" (including that which appears in these pages). The path to real audio understanding is long, difficult, and sometimes tedious, but taken in easy steps and with the right frame of mind, it can also be a lot of fun. □

Diamond in the Buff

Q. In test reports and manufacturers' ads I've seen the term "nude" diamond stylus, with the implication that it is somehow superior. Can you explain why?

BARNEY KREISEL
Altoona, Pa.

A. One doesn't have to subscribe to the principles of the American Sunbathing Association to appreciate the virtues of nudity in phono styli. To start, those styli that aren't naked are called bonded, not clothed. The drawings below (courtesy of Audio-Technica) illustrate the differences between a bonded and a nude stylus. The lower-cost bonded stylus consists of a diamond tip cemented to a metal shank which in turn is mounted on the stylus cantilever. The nude diamond, meaning that it has no metal shank, is mounted directly on the cantilever. The result is lower tip mass and therefore better high-frequency tracking and response.



If you don't clean and preserve your records with Sound Guard, you're only scratching the surface.

Have you ever considered what it would cost to replace your record collection at today's prices? With that kind of investment at stake, it's no wonder that many music lovers have become more aware of record care. Regular cleaning of your records is important and necessary, but cleaning alone won't prevent them from wearing out. To protect your investment you need more than cleaning. You need both Sound Guard Cleaner and Sound Guard Preservative.

Sound Guard Record Preservative is a revolutionary dry lubricant which virtually eliminates record wear without affecting the fidelity of the record. And when you drag the hardest

substance found in nature—diamond—through the soft, intricate vinyl canyons of a phonograph record at phenomenal rates of acceleration, it doesn't matter how light you're tracking. Something's got to give, and that's the vinyl. But with a Sound Guard-treated record, even after 100 plays, there is no audible degradation of performance.*

Before and after you preserve your records, be sure to use our superior cleaner to remove the dust and oily films that can further mar

performance. (The cleaner will not remove the preservative's protective coating.)

Sound Guard offers the only complete program of record preservation and maintenance. It requires a little more time and effort than just cleaning. But how much did you say it would cost you to replace your record collection?

Sound Guard. Everything else is a lot of noise.



Sound Guard™

Sound Guard preservative- Sound Guard™ cleaner.
Sound Guard™ Total Record Care System.
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We have the test results to prove it—write us and we'll send them to you

CIRCLE NO. 10 ON READER SERVICE CARD

Real Power for the Real World: The Apt 1 Amplifier



Apt Corporation believes there's only one good reason to create a new product: a genuine need. The Apt 1 Amplifier is just such a product. With 3 dB of Dynamic Headroom, it can deliver as much as *twice* its 100w average rated power (20 Hz-20 kHz @ 0.03% THD) on musical peaks—just as program material so often requires. And, it can deliver this extra performance into any actual loudspeaker, not just on the test bench. The Apt 1 also incorporates new approaches to power supply, driver stage, and protection circuit design, which all contribute to a uniquely *useful* amplifier.

Problem Solving in a Real System: The Holman Preamp



You don't live in an ideal world—neither does your stereo music system. The Holman Preamp is the result of over 2 man-years of research into how and why components behave in real-world hi-fi systems. As such, it provides an unprecedented balance of features and performance, which combine toward a common goal: *sonic excellence*.

The Holman Preamp and the Apt 1 Amplifier; individually or together they make music systems work better, and *sound* better.

For information, check the appropriate box(es) below and send with your name and address to:

Apt Corporation
Box 512
Cambridge, Massachusetts 02139

- Apt 1 Amplifier brochure and the name of your local dealer.
- Holman Preamp brochure.
- For an Apt 1 Owner's Manual, please send \$4 (\$5 foreign).

CIRCLE NO. 4 ON READER SERVICE CARD

Audio Basics

By Ralph
Hodges



A DECADE IN AUDIO

ALMOST exactly ten years ago I first sat down at this desk to begin addressing the audio-minded public on matters high fidelitarian. Long enough ago, surely, for me now to take stock, to measure whether I have achieved the goals I set for myself—to recall, for that matter, what those goals *were*.

First of all, it was of course my earnest desire to draw a regular paycheck. Second, I wanted to pass on to those who shared my interest in high fidelity the important factors necessary to attaining it (as soon as I learned them myself, that is); in other words, I wished to help educate the world about sound. (I think I can safely say that my triumphs in this endeavor fall somewhere between Napoleon's assault on Russia and Custer's last stand, but at least I was under no illusions from the outset.) Finally, it was my ambition to devise the finest hi-fi system ever heard by man. And what better environment for doing that than STEREO REVIEW, where sound and sound reproduction are all-consuming preoccupations, where many of the most innovative minds in the audio field are accustomed to come with the first word of their latest developments?

You might think, as far as the last goal was concerned, that I'd have been wiser to have gone into investment banking instead, gotten a good head start on my first million, and then written an enormous check to the account of some local hi-fi emporium. And perhaps you're right. But unless happy accident plays a part, the best possible sound still requires more than a large bank account and the courage to use it. Professional sound men strain their clients' budgets to assemble the best and costliest equipment available, and yet they must routinely contend with on-the-spot difficulties that require expertise, experience, and sometimes even inspired intuition.

DID ten years of effort get me the sound system I wanted? In a sense it did; at least there were *whole weeks* when I was perfectly satisfied—nay, delighted—with everything I heard. But then, as in the case of Napoleon, there would come a time when I'd get inexorably pushed back to the borders of the Marginally Acceptable, sometimes even driven to the frontiers of the Absolutely Insufferable. These setbacks ranged from the introduction of a subtle harshness in the sound (once de-

tected, impossible to ignore) to what is best described as a sense of strain under stress, as when, in addressing a challenging orchestral climax, the system sadly reveals itself as only an electromechanical contrivance rather than a magical eavesdropper on real music.

This Problem of Fitful Satisfaction has, in one or more forms, afflicted all the serious high-fidelity enthusiasts I know. Depending on their expectations and past experiences, they tend to attribute it either to the system (the beginnings of gradual degradation in some part, or even a change in the weather) or to themselves (indigestion, stress, the first symptoms of a brain tumor, or just the keener perceptions of a good ear that has become even better at distinguishing illusion from reality). Their solutions have ranged from the purchase of an entire new system to the scheduling of a long vacation. As for myself, I am one of those who are convinced that there is always a real, identifiable problem, and I set about trying to identify and fix it. These are the things I have most often tried to fix:

(1) *The listening room.* Were it not for its important role as a container and sustainer of sound, the listening room would have to be considered as nothing more than a stumbling block on the road to audio perfection. Rooms



emphasize some frequencies and diminish others in a way that puts even the finest speakers at their mercy. No living-size room I know of really *benefits* a sound system,
(Continued on page 30)

Why do we make more than one speaker?

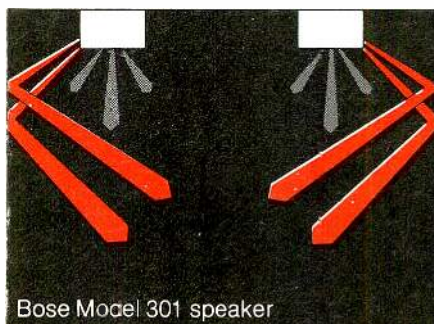
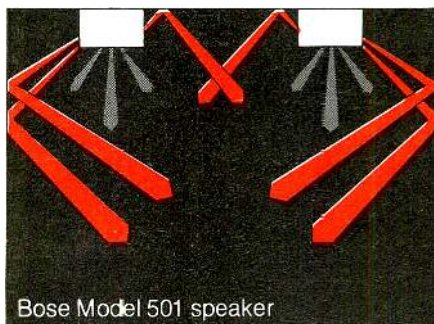
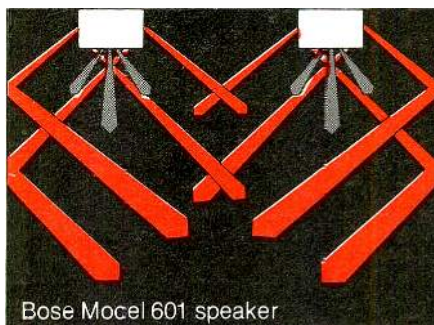
Just about everyone who recognizes the name Bose® also knows the Bose® 901® Direct/Reflecting® speaker. They know it as the very unconventional speaker that, soon after its introduction, became internationally the most highly reviewed speaker regardless of size or price. And now, more than 300 design improvements later, it is the standard bearer for the state-of-the-art in our technology.

So why do we manufacture any other speakers? Because we appreciate that not everyone is able to acquire the 901 system as his first investment. And we would like that investment to be in Bose. Toward this end we have adopted a definite design goal for each of our speakers.

Our continuing goal for the 901 is to produce the best speaker regardless of price and our objective for each of our other speakers is to produce the best speaker for its price. We pursue these goals by identifying three price points below the 901 speaker and putting as much of the 901 system technology into each design as the price will allow. Each is a Direct/Reflecting® speaker and each offers a measure of the spaciousness and clarity of sound for which the 901 speaker has become famous.

The Model 601

Direct/Reflecting® speaker is simply the finest speaker we know how to make using woofers and tweeters (rather



than the more-expensive full-range drivers used in the 901 speaker). In its elegant walnut enclosure are two high-performance woofers and four tweeters, arranged to provide that balance of reflected and direct sound most suitable for a floor-standing speaker.

The Model 501

Direct/Reflecting® speaker is the Bose economy floor-standing speaker. A long excursion 10" acoustic suspension woofer, two tweeters and a control for directing the energy from one of the tweeters combine to provide a speaker of exceptional value.

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Direct/Reflecting® bookshelf speaker represents one of our most challenging designs. The object was to provide a clear and spacious musical sound from an enclosure that fits comfortably on a bookshelf. You can imagine our pride when an independent market survey found the 301 to be the best selling speaker in the U.S.A.

Whatever your price range, if you cannot start with the best speaker, you can own a substantial portion of the technology that makes it the best. And you can own a measure of the special performance benefits that only a Bose Direct/Reflecting® speaker can provide.

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Super Avilyn VHS and Beta cassettes offer performance so superior, that they are ushering in a new era in home video: the age of "high fidelity for the eyes."



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CIRCLE NO. 26 ON READER SERVICE CARD

though some are better than others. I prefer an acoustically "dead" room, full of plushy, overstuffed objects that, by absorbing sound, reduce the tendency of the room to have an aggressively audible effect on it. But this is just a personal preference. Periodically STEREO REVIEW discusses listening-room acoustics, but even a lengthy feature article is scant space in which to do so complex a subject full justice. The important thing is to realize that the problem is often a very real one that demands to be faced and solved.

(2) *The program sources.* By these I mean principally record players and tape decks (poor FM sound, which is often the fault of the broadcaster, has always seemed to me a little too ambitious a project for any individual to take on). It has been my experience that the principal source of record-player flutter (rapid waverings of pitch) is not uneven platter rotation, but rather that disorderly, almost invisible dance the tone arm performs in response to record-warp perturbations and externally generated vibrations, including those that are fed back to it by the loudspeakers. And you can add to the objectionability of this flutter its side effects: the generation of modulation distortions and the disturbance of correct cartridge-tracking geometry. Evidently, some listeners are not bothered as much by these problems—or as convinced of their existence—as others. But I am bothered, and I have at one time or another had recourse to the whole catalog of "fixes." Now it is just being discovered that cassette decks can benefit significantly from similar fixes. But be warned: service facilities cannot always be helpful in these matters. Nobody plays exactly the same records and tapes or lives in exactly the same dwelling as you. And probably nobody *hears* in exactly the same way as you do either.

(3) *Preamplifiers and amplifiers.* The "left wing" of the audio establishment seems to have convinced itself that all is not well with even the most highly acclaimed audio electronics. Here at least is an area that receives much publicity. If your local library subscribes to the *Journal of the Audio Engineering Society*, you can thumb through almost any recent issue and discover a treatise on some hotly debated form of amplifier distortion and why it does or does not exist. These distortions are often said to arise through an unfortunate mating of the amplifier with an unsympathetic associated component, up to and including unsuitable connecting cables. Unfortunately, no investigator can claim to have pinned these phenomena down so firmly that the objective, unblinking eye of science can take their measure, so they remain, for the time being, audio goblins.

Now that may not sound like a great deal of progress after ten years of struggle, but the gains have been great enough to keep me at it. Indeed, far from giving up the quest, I have determined to continue it in new pastures. This is my last staff contribution to STEREO REVIEW but not, I hope, my last to the fund of audio knowledge, for by the time you read this I will have joined Dolby Laboratories in San Francisco, where my goals will be: drawing a regular paycheck, educating the world about sound, and devising the finest hi-fi system known to man. I am consistent, you see. A fond farewell to all my readers.

STEREO REVIEW

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The new AR Vertical™ Speakers

They simply had to happen.

Because when a speaker as spectacular and full of innovation as the AR9 is introduced, it's only a matter of time 'til its most important design features are incorporated into other speakers.

To be brief.

The AR9 presented the concept of an array of vertical mid and highrange drivers to give a very precise stereo image.

This design feature is now part of all AR Vertical Speakers.

The AR9 introduced the AR Acoustic Blanket™ which absorbs reflections from the front of the enclosure and noticeably smooths high end response...another innovation that is

now part of all AR Vertical Speakers.

Placing woofers in the side of the enclosure (and thus close to the wall behind the speaker) improves bass response dramatically in the AR9. Side-mounted woofers and newly designed slim enclosures accomplish the same objective in the other AR Vertical Speakers.

Liquid-cooled high end drivers give the AR9 terrific power handling capacity.

All the AR Vertical Speakers share these drivers with minor design variations.

So there you are.

Four of a kind (left to right): The AR92, a three-way system with new 10" woofer at about \$300. The AR90, a four-way system with a pair of 10" woofers at about \$550 each. The AR9, a four-way system with a pair of 12" woofers about \$750. And the AR91 with 12" woofer at about \$400 each.



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They're the finest expression of AR's continuing pursuit of 'truth in listening.'

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Tape Talk

By Craig Stark



IMPROVING CASSETTE TREBLE RESPONSE

In last month's column I reported on the new Dolby HX system which was unveiled at the Summer Consumer Electronics Show in Chicago. This month I want to describe a rather different handling of the problem of cassette high-frequency limitations: the Tandberg "Dyneq" circuit, introduced at the same show in the company's Model 440A deck.

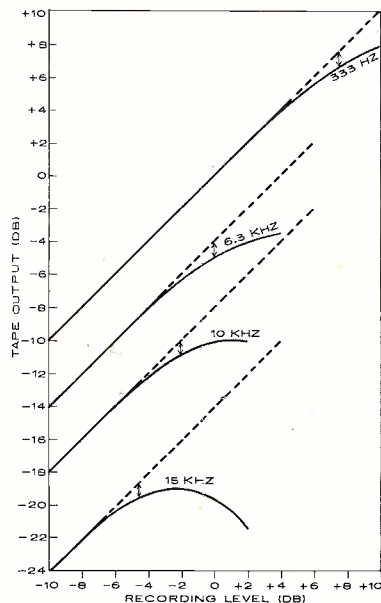
Let's begin by restating the problem. With the present cassette format, a great deal less energy can be stored on magnetic tape at high frequencies (so-called "short" wavelengths) than at low frequencies ("long" wavelengths). Thus, while at low signal levels (for example, -20 dB) the frequency response of a good deck and tape can be held to within ± 2 dB throughout the audible range, if the input-signal level is raised to 0 dB, treble response falls off rapidly above a few kilohertz, dropping even *below* a -20 -dB output level somewhere in the 10,000- to 15,000-Hz range.

An illustration of the extent of this loss is shown in the accompanying graph, in which the precise input-vs.-output characteristics for several fixed frequencies are plotted. Given an ideal situation, the output of the tape would increase linearly with recording level, following the dashed diagonal lines shown for each frequency. In the real world of the cassette recorder, however, we find that even at the comparatively low frequency of 333 Hz (the top trace shown), if the input level is raised to $+7.5$ dB the available maximum output is only $+6.5$ dB. Thus 1 dB of "compression" occurs at this recording level, and such compression inevitably brings distortion.

As the frequency is raised, the "linear" output capability of the tape is reduced. At 6,300 Hz, the 1-dB compression point occurs at an input level of -4 dB. At 10,000 Hz, a -12 -dB input yields 1 dB of compression, and at 15,000 Hz that degree of compression corresponds to an input level of -18.5 dB. The 15,000-Hz graph shows also that even if you care nothing about distortion (nonlinearity) and keep raising the recording level indefinitely, there is no way (using normal bias) that this tape will put out more than -19 dB at that frequency. Indeed, higher input levels serve not only to create massive distortion but actually to drive the tape's output *down*. This, of course, is precisely what happens when cassette recordists hear audible high-frequency

saturation. The distortion that is heard does not consist of high-frequency harmonics, for these lie well above the range both of the ear and of the cassette deck. Rather, it consists of intermodulation products formed as the high-frequency harmonics interact with the lower frequencies of the music program.

The distortion—and even the loss in output—caused by trying to record more high-frequency energy on the tape than it can accept is not always (or even usually) the fault of the musical material itself. The real problem is that the high-frequency levels are enhanced by a deliberate treble boost, called *record equalization*, that is designed to offset predictable high-end losses that are characteristic of the recording process. So long as the treble boost does not force the high-frequency content above the signal level that the tape can accept without excessive distortion, all is well. But in almost all recorders the amount of record treble boost ("equalization") at a given frequency is set by relatively simple electronic circuits that take no account either of the musical content or of the tape's capacity. Thus, for example, the record equalizer



will supply a boost of approximately 15 dB to any 15,000-Hz signal fed to it, whether the original signal level was at $+10$ dB or -50 dB!

As Herman Lia, Tandberg's chief engineer for magnetic products, considered the matter, the best solution seemed to him to lie in varying the amount of record equalization applied to the signal according to the musical dynamics present—hence the name "Dyneq," for "dynamic equalization." In the Tandberg system, whenever the high-frequency content of the music is at a sufficiently low level to be able to profit from the normal record treble boost, that boost is applied, resulting in flat frequency response. When, on the other hand, musical high-frequency content would overload the tape if subjected to the boost, the treble pre-emphasis supplied by the recorder is actually reduced proportionately. Therefore, at the extremely high frequencies the output from the tape is actually *increased* for those signal levels at which excessively high record treble boost would have resulted in saturation and a consequent reduction in output level. More important still, so far as I could determine from listening tests with the Dyneq circuit switched in and out, I seemed to hear a distinct increase in musical clarity when no high frequencies were being boosted beyond what the tape could accept. I have not yet had an opportunity to confirm these impressions through my own laboratory measurements, but I have seen credible spectral analyses—performed on the very tapes I heard—that relate the increased clarity to a lack of intermodulation-distortion products.

VARYING the record equalization (as a way of matching sensitivity changes that occur when the bias is dynamically varied) is, of course, also a part of the Dolby HX approach. And technical literature received from Akai suggests that some of their "ADR"-equipped units also modify the treble boost, though through a different control mechanism than that used by Tandberg. None of these techniques will turn a cassette deck into a studio mastering recorder—nor will metal-alloy tape or two-speed cassette decks. All such approaches reveal, however, a continuing and consumer-rewarding search for the best engineering solutions to the inevitable compromise between physical principles and product performance.

Tape Clubs

Q. Some years ago, through listings in the pages of STEREO REVIEW, I took up the enjoyable hobby of corresponding by tape ("tapesponding") with members of tape clubs, both here and overseas. I stopped when I went off to college, but now that I have time again and would like to resume, I can't find clubs listed anywhere. Are there any left you could tell me about?

JAMES H. ESSER
Pittsburgh, Pa.

A. A check of my "Tape Club" file shows that the material is several years out of date. If there are any Tape Club Corresponding Secretaries (no single individuals, please!) who want to make their clubs' existence and activities known to readers like Mr. Esser, please write to me at STEREO REVIEW, One Park Ave., New York, N.Y. 10016, and I'll try to list the names in a subsequent column.

IMPORTED CANADIAN WHISKY - A BLEND - 80 PROOF - CALVERT DIST. CO., N.Y.C.

Right from the start, its Canadian spirit rises above the rest. What makes it such a popular choice? Super lightness. Superb taste. If that's what you'd like, take off for Lord Calvert Canadian.



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Canadian Whisky of choice matured in a blend of Eighty-Three Whiskies

The spirit of Canada:
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- Linear Synchronous Motor Drive System
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- Frequency Servo Control
- Automatic Return Mechanism

THE LINEAR DRIVE QUARTZ LOCK MT6335 IS THE KIND OF TURNTABLE YOU'D EXPECT FROM THE NEW FISHER.

Fisher's technological leadership in high fidelity was never more elegantly stated than in the new MT6335 Linear Drive quartz lock turntable. Just as direct drive surpassed belt-driven turntables in terms of performance and reliability, so has Linear Drive from the new Fisher brought turntable performance into a new state-of-the-art.

SIMPLER IS BETTER. Nothing could be simpler or quieter than Linear Drive. The only moving part is the platter itself. There are no complicated motors or rotating electronic components—just a totally silent, dependable drive system with virtually nothing to go wrong, even after thousands of playings. (The MT6335 comes with an unheard-of five-year warranty.) Proof of the incredible stability and performance is seen in the specs: 0.035% wow and flutter. Rumble is an inaudible -70 dB (DIN B).

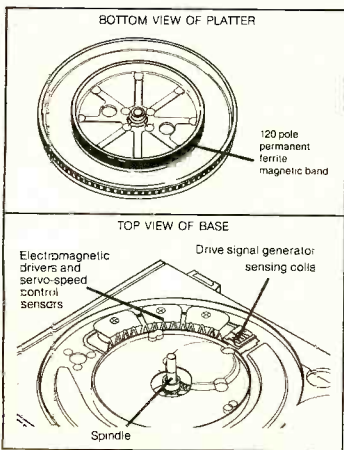
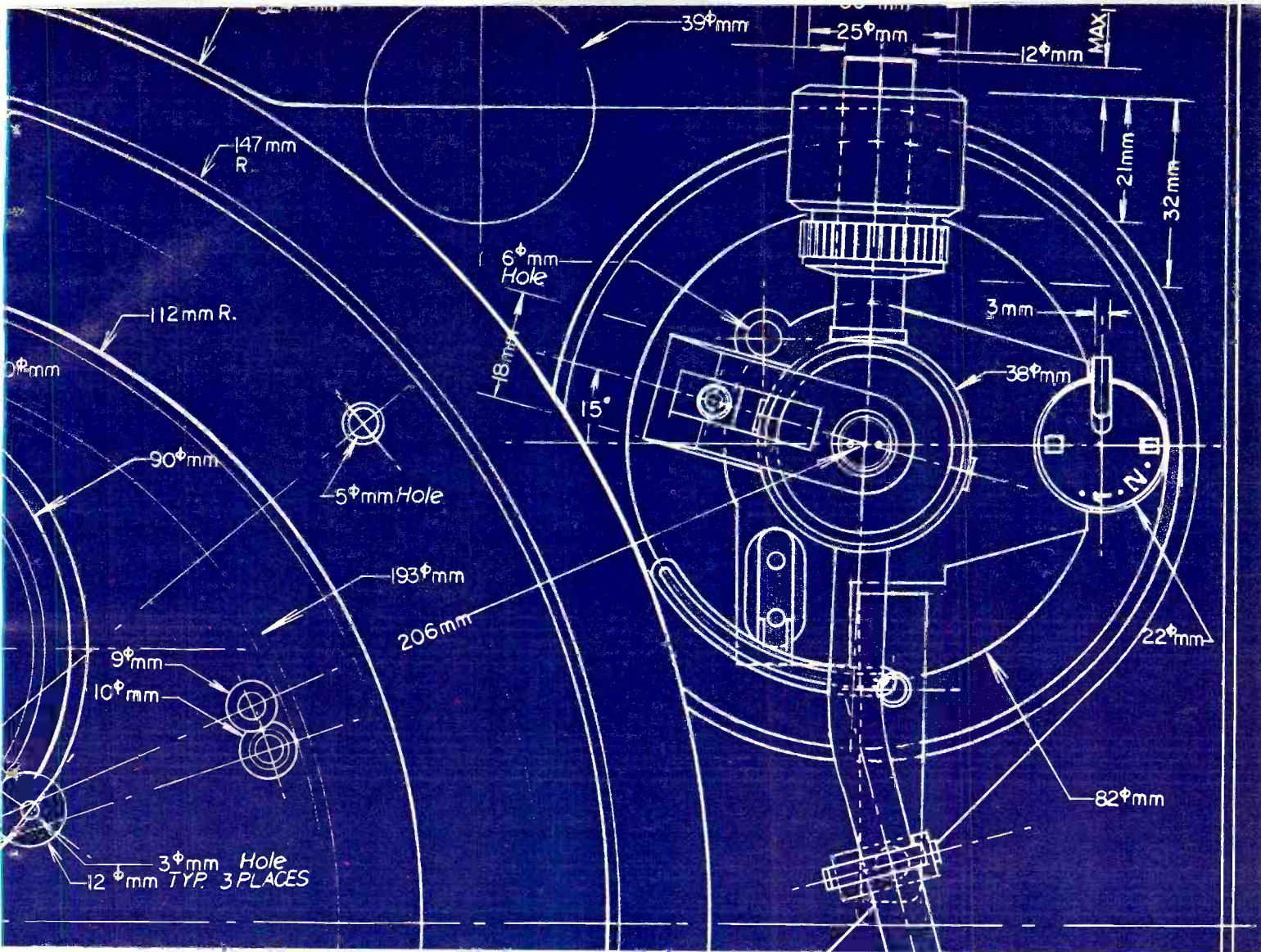
QUARTZ LOCK ACCURACY. Total speed accuracy is assured by

the most effective method in use today—a quartz lock phase locked loop servo circuit. Platter speed is continuously monitored and compared to a quartz reference signal for instantaneous speed correction. Deviation from 33 $\frac{1}{3}$ or 45 rpm is virtually zero.

STROBE & SPEED CONTROL.

Other features combine to make the MT6335 a top-performing, easy-to-operate high fidelity turntable. There's a strobe light and fine speed control to alter record pitch and confirm speed accuracy, viscous damped cueing, automatic tonearm return and shut-off—and all controls are front-panel mounted where you can operate them with the dustcover closed. A carefully crafted, fully counterbalanced S-shaped tonearm accommodates most any cartridge and built into the handsome base is a stylus overhang gauge.

LINEAR DRIVE—THE HEART OF THE MT6335 TURNTABLE. The



vide constant, smooth platter rotation. Conventional 12 or 16 pole direct drive systems can't compare to the MT6335 in terms of low wow and flutter, and freedom from "cogging." The utter simplicity of Fisher Linear Drive means years of trouble-free performance.

IT'S WHAT YOU'D EXPECT FROM THE NEW FISHER. We invented high fidelity over 40 years ago. We've never stopped moving forward. The MT6335 is a good example of that technological leadership. Part of the new Fisher. Where the only thing about us that's old is our tradition for quality and craftsmanship. See the MT6335 at your Fisher dealer. All these features and an under \$250 price.

New guide for buying high fidelity equipment. Send \$2.00 with name and address for Fisher Handbook to: Fisher Corporation, Department H, 21314 Lassen Street, Chatsworth, California 91311.

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SPECIFICATIONS:

Motor	120 Pole Linear Drive Quartz Phase Locked Loop	Tracking Force Range	0.6—3.5 grams
Drive System	Direct	Maximum Tracking Error	± 1.5%
Wow and Flutter (WRMS)	0.035%	Anti-Skate Control	Calibrated Adjustable
Rumble (DIN 45539B)	—70 dB	Cueing	Viscous Damped
Speed Variation	0% (Quartz Lock On)	Weight	18 lbs.
Speed Control Range	± 6% (Quartz Lock Off)	Dimensions (WxDxH)	17 1/2" x 14 1/2" x 6"

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The first name in high fidelity®



It might be said that those inclined toward the enjoyment of accurately reproduced music are also likely to have other sophisticated pursuits. That is evidently the case with Eric and Gilda Hilton, of Long Island, New York, who here demonstrate, in a single photograph, their interest in four separate fields. Mr. Hilton is an industrial photographer, and he and his wife are both audiophiles, oenophiles, and cabinetmakers by avocation. Their home system, as illustrated in the unusually detailed accompanying photograph, has been installed in an array of hand-built cabinets that serve to hold a portion of their wine collection as well.

The cabinet system was built by the Hiltons during the summer and autumn of 1978 and consists of ten separate cabinets constructed of oak-veneer plywood, with solid oak and

walnut trim pieces and smoked-glass door panels. The wood was stained and given a lacquer finish, followed by polishing with steel wool and waxing. Six of the cabinets are of identical dimensions and therefore interchangeable, and the mid-section cabinets will accept standard rack-mount-size equipment.

The equipment pictured consists of (top left) a Soundcraftsmen 2205-600 graphic equalizer; (left-hand cabinet, top to bottom) a Sansui AX-7 audio mixer, a Pioneer CT-F1000 cassette deck, and a Sansui AU9900A integrated amplifier; (middle cabinet, top to bottom) a Pioneer RT-707 open-reel tape deck and a Sansui TU9900 AM/FM tuner. The turntable is a Technics SL 1100A, used with either a Shure V-15 Type IV or a Stanton 681 EEE cartridge.

The system's speakers are the Perfectionist Audio Components TM1, a transmission-line design in oak-finish cabinets. Additional equipment not shown in the photo includes a Uher 4400 portable open-reel recorder, several Sennheiser condenser microphones, a pair of Koss Pro/4 Triple A headphones, and a B.I.C. Beam Box antenna. □

Is your system an Installation of the Month? To find out whether it is, send a clear snapshot and a brief description of its components to STEREO REVIEW, Dept. IOTM, One Park Ave., New York 10016.

THE COMPUTER RADIO. AT 6:00 AM, IT'S SMARTER THAN YOU ARE.



TIME

Introducing The Great Awakening from General Electric. For starters, it's smart enough to let you set the time directly... no flipping around the clock.



WAKE-UP 1

You can program it to change stations for you. So it will rock you to sleep with Strauss, switch to your news station, and wake you at 6:15.



WAKE-UP 2

Then it comes back on to wake up your better half to Beethoven at 7:53. All with push-button ease.



ALARM OFF

When you forget to set the alarm... The Great Awakening remembers to remind you.



RADIO AM

You can scan all the AM or FM stations by pressing a button or, to tune in one station, just punch in the frequency of your choice on the keyboard.



RADIO FM

You can also program up to six stations into the memory. And recall any one with the touch of a finger.



SNOOZ TIME

For a little extra sleep press the Snooz bar. It lets you sleep an extra minute or an extra hour. You tell the memory how long.



ERROR

The Great Awakening is so smart it even tells you when you've made an error. But it's easy to correct... just press a button.



WE BRING GOOD THINGS TO LIFE.

GENERAL  ELECTRIC

CIRCLE NO. 25 ON READER SERVICE CARD

Model 7-4880

All nine new Dual turntables feature ULM... the Ultra Low Mass tonearm and cartridge system with 8 grams total effective mass.

All it takes to appreciate the significance of Dual's new Ultra Low Mass system is a clear understanding of what happens when the stylus tracks warped records.

As the record warp rises and falls, the stylus should be able to follow it with a minimum of resistance from the tonearm. Otherwise, tracking angle and tracking force will vary widely as the stylus digs in on the way up the warp and takes off on the way down.

The high inertia of a conventional tonearm and cartridge combination, with approximately 18 grams total effective mass, can cause tracking force to vary as much as 30 percent. And a warp as small as 1.5 mm (barely discernible) can generate harmonic distortion of 2.7 percent. That's audible.

The new Dual ULM tonearm and cartridge system has only 8 grams total effective mass. Tracking the same warped record under the same conditions, harmonic distortion is reduced to only 0.01 percent. That's 270 times less!

Not only is the overall sound audibly improved, but stylus and record life are significantly extended.

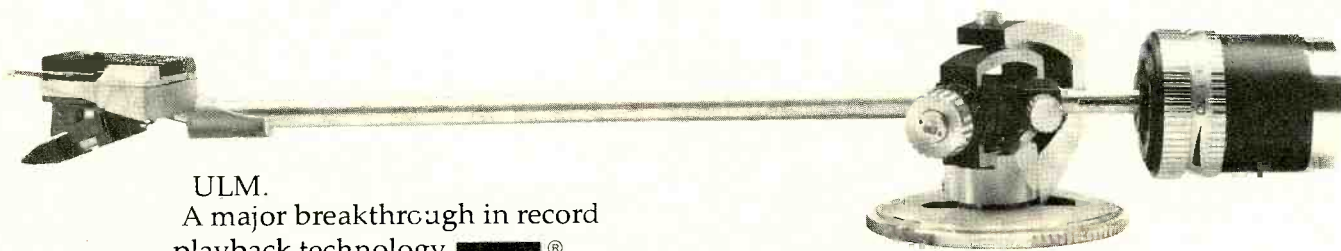
What has made the ULM system possible? First, Dual's straight-line tubular tonearm with its gyroscopic gimbal suspension and unique system for setting tracking force without increasing effective mass. This tonearm can now accept a cartridge weighing as little as 2 grams. Second, a new generation of cartridges that resulted from a collaboration between Dual and Ortofon. These ULM cartridges weigh only 2.5 grams, including mounting bracket and hardware.

Together, the new ULM tonearm and ULM cartridge form a perfectly matched system, with total effective mass less than half that of conventional tonearms and cartridges.

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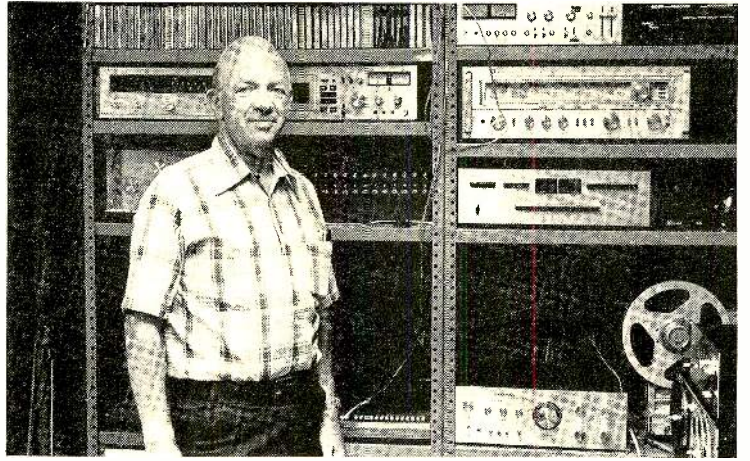
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Technical Talk

By Julian D. Hirsch



• Are Stereo Images Real? •

ONE criterion that has been applied to the evaluation of many types of audio components—particularly loudspeakers, but also amplifiers, phono cartridges, and even cables (!)—is usually referred to as *stereo imaging*. Being (thus far) largely undefined in a technical sense, it has proved to be an ideal catchall for many of the unknown or imperfectly understood effects that prevent music reproduction in the home from providing the subjective auditory sensations of being at an original performance.

As an abstraction, "stereo imaging" is a rather appealing and deceptively simple concept, and it is therefore easy to assume that we understand what someone else means when he uses the term. It is only when we get down to specifics that we may begin to question the very idea of an exact position in space from which a sound presumably originates, and the re-creation of that effect during its reproduction in another environment.

That, at least, is *my* interpretation of the meaning of a "stereo image." If a sound originates at a certain point in space, which may be defined by a set of three-dimensional (X, Y, Z) coordinates, or in polar form as being located at a certain distance on a specific vector from the listener, it should appear to originate from that point (or, at least, from that direction) when it is heard in the original environment. If that is so, then an ideal stereo recording (or perhaps a more complex multi-channel recording) should be reproducible in a different room and still give a listener a sense that the sound is coming from the correct point or direction.

My problem is that I do *not* experience this sort of definite localization of sound when I attend a concert or any other live performance, vocal or instrumental. I can usually

tell if the source is at the right or the left of the stage, or perhaps in the center. But that is about the limit of my spatial resolution in a real-world listening situation. That is very different from hearing impulses or tone bursts, perhaps in an anechoic environment where directions can be discerned quite readily. In my experience, a soloist somewhere in the orchestra cannot be located from a listening position in the rear half of the auditorium (where, by definition, half the audience is located) without visual clues. Even when I have spotted the soloist visually, closing my eyes blurs his physical relationship to the rest of the orchestra.

To me, this is not at all disturbing, but merely the way things are, and I therefore expect no more than that from my home music system. It surprises me that so many audiophiles *do* expect their stereo systems to locate, precisely, a certain instrument on their stereo stage. If that can be done, it is surely a gross distortion of reality, no matter how intriguing or pleasing the effect may be. I have even heard claims that the height, or vertical position, of a sound source is detectable in reproduction with certain speakers and other components. Barring the remote possibility of a performer swinging from a trapeze or standing on a balcony, I cannot even imagine how that would enter into a real musical situation.

There can be no doubt that the localization of sounds in space is a subject of great interest to psychoacoustic researchers. This was, after all, basic to the development of the various quadraphonic systems a few years ago. Unfortunately, too many quadraphonic records sounded as though they'd been made as aids to psychoacoustic testing rather than to re-create a musical experience in a listener's

home. I don't know how much, if anything, that had to do with the demise of "quad," but for me it destroyed a good part of the potential appeal of the technique.

Often when I receive speakers for testing, the manufacturer emphasizes the stereo-imaging qualities of his product. I am disappointed that I cannot comment on these qualities—in most cases because I do not find their presence or absence to have much to do with how "good" I find the speaker's sound to be. It is very easy to hear differences between speakers, and many of them could probably be described as "stereo-imaging" qualities. It is not so easy to decide which, if any, of these qualities is the most accurate or realistic.

Another meaning of the term "stereo image" covers the effect of the listener's moving about relative to the speakers. There will normally be some tendency for the apparent positions of different sounds to shift laterally as the listener moves about. The more "stable" the image, the less it will shift as the listener moves. I can certainly agree that I find a stable image a desirable quality. However, I do not believe that a shifting of the stereo image as the listener moves is necessarily bad. In fact, the theory of stereo reproduction predicts that such shifts will take place.

Apparently some people are much more sensitive to this effect than others, and I am blessed (or cursed, depending on one's viewpoint) with an almost total tolerance for image shifts. I do hear them—and I could not care less. It is not a stereo image that gives a stereo program its sense of realism for me; it is the ambience that has been recorded, plus the expected qualities of flatness of frequency response, low distortion, and the like. For someone else there might be an entirely different set of priorities. (Continued on page 44)

Tested This Month

Mordaunt-Short Festival Series 2 Speaker • Pioneer SA-7800 Integrated Amplifier
Audio-Technica AT25 Phono Cartridge • Rotel RT-2100 FM Tuner
Allison Electronic Subwoofer

zu 2

ff

zu 2

p

This system contains the first five staves of music. The top two staves are vocal lines in G major and 2/4 time. The third staff is a vocal line with lyrics 'zu 2' and dynamic marking *ff*. The fourth staff is a piano accompaniment line with dynamic marking *p* and lyrics 'zu 2'. The fifth and sixth staves are piano accompaniment lines. The music is interspersed with colorful watercolor illustrations of landscapes, including trees, hills, and a sun.

ff

ff

ff

ff

p

p

p

ff

This system contains the next five staves of music. The top two staves are piano accompaniment lines with dynamic marking *ff*. The third and fourth staves are piano accompaniment lines with dynamic marking *ff*. The fifth and sixth staves are piano accompaniment lines with dynamic marking *p*. The music is interspersed with colorful watercolor illustrations of landscapes, including trees, hills, and a sun.

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Music is full of color. Incredibly beautiful color. Color that you can hear... and (if you close your eyes) color you can almost see. From the soft pastel tones of a Mozart to the blinding brilliant flashes of hard rock to the passionately vibrant blues of the Blues.

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Music does have color. Yet when most people listen to music they don't hear the full rich range of color the instruments are playing. They either hear music in black-and-white, or in a few washed-out colors.

That's a shame. Because they're missing the delicate shading, the elusive tints and tones, the infinite hues and variations of color that make music one of the most expressive, emotional and moving arts of all.

Music has color. All kinds of color. And that is why Sony is introducing audio tape with Full Color Sound.

Sony tape with Full Color Sound can actually record more sound than you can hear.

So that every tint and tone and shade and hue of color that's in the original music will

be on the Sony tape. Every single nuance of color, not just the broad strokes.

Sony tape with Full Color Sound is truly different. Full Color Sound means that Sony tape has a greatly expanded dynamic range — probably more expanded than the tape you're using. This gives an extremely high output over the entire frequency range, plus a very high recording sensitivity.

There's even more to Sony tape with Full Color Sound, however. Sony has invented a new, exclusive SP mechanism for smoother running tape, plus a specially developed tape surface treatment that gives a mirror-smooth surface to greatly reduce distortion, hiss and other noise. Each type of tape also has its own exclusive binder formulation, that gives it extra durability.

Any way you look at it — or rather, listen to it, you'll find that Sony tape with Full Color Sound is nothing short of superb.

If you're not hearing the whole rainbow on your audio tape, try recording on Sony tape with Full Color Sound. Then you'll be hearing all the glorious full color that makes every kind of music, music.



Of course, it is presumably possible to evaluate the imaging accuracy of a loudspeaker by some form of "live-vs.-recorded" comparison. It is not easy to do, however, and such tests have plenty of logical and practical weaknesses. For me, one of the most damning criticisms that can be leveled against this sort of testing, with which I have had considerable experience, is that a speaker that is de-

monstrably accurate may not sound very good at all when compared with a speaker that is much less accurate. With apologies to Charlie the Tuna, it seems to be a matter of whether we want good sound or sonic accuracy! Sometimes both are combined in a single product, but this is rare, and there is usually a drawback such as high price or undesirable physical qualities.

Meanwhile, my advice to speaker buyers is not to be unduly concerned about stereo imaging unless it is something you can really hear in live music. If you can tell from the back of the hall, with your eyes shut, which clarinetist in the orchestra is playing a solo, it might pay to look for a speaker that can deliver the same effect, if such a product exists. Good luck.

Equipment Test Reports

By Hirsch-Houck Laboratories



Mordaunt-Short
Festival Series 2 Speaker

MORDAUNT-SHORT is a small but well-known (in Britain) English loudspeaker manufacturer whose products have only recently become available in this country. Although most of their products are physically compact, they have been designed to meet the quality standards one would normally apply to much larger and costlier speakers.

The Festival Series 2 is a two-way system whose sealed enclosure contains an 8-inch (nominal) woofer and a ¾-inch dome tweeter. The crossover frequency is 3,500 Hz, with the low-pass section having a 12-dB-per-octave slope and the high-pass section cutting off at 18 dB per octave. Nominal impedance is 8 ohms. The Festival Series 2 is rated to deliver a sound-pressure level of 96 dB at 1 meter in an anechoic environment when driven by 6.7 volts (5.6 watts) of pink noise and to be able to handle up to 45 watts of "contoured random noise."

The walnut- or teak-finish wooden cabinet of the Festival Series 2 is 17½ inches high, 11 inches wide, and 7¼ inches deep. Together with its 14-pound weight, this qualifies the Festival as a true "bookshelf" speaker sys-

tem. The black cloth grille snaps off to reveal the drivers. The input terminals are recessed into the rear of the cabinet, and there are no user-accessible level adjustments or fuses. The Mordaunt-Short Festival Series 2 is sold in pairs at \$385 per pair.

● **Laboratory Measurements.** We placed the Festival Series 2 speakers approximately at ear level, a foot from the back wall, for our listening and testing. The reverberant-field measurement of the frequency response showed considerable high-frequency "beaming." With one speaker on the microphone axis and the other about 30 degrees off, the difference between the measured response curves above 10,000 Hz was about 10 dB. The close-miked woofer response was very smooth in the midrange (with a rise of about 6 dB at the woofer acoustic resonance of 85 Hz) before dropping off at 12 dB per octave at lower frequencies.

The combined response curve indicated that the tweeter output averaged about 5 dB more than the output at lower frequencies, and there was a slight but distinct dip of about

2.5 dB at the crossover frequency (about 3,000 Hz). The overall response variation of the speaker was established by the woofer resonance and the crossover dip; it was +6, -2.5 dB from 55 to 20,000 Hz. Neglecting the woofer peak (which would in any case be modified by room size and placement of speaker and listener), the response was +4.5, -2.5 dB from 130 to 20,000 Hz.

The sensitivity of the Festival Series 2 was typical of acoustic-suspension speaker systems. Driven by 2.83 volts of random noise in an octave centered at 1,000 Hz, the speaker's output at a 1-meter distance was 84.5 dB.

The woofer distortion was measured with constant input levels corresponding to 1 watt and 10 watts into an 8-ohm load from 100 Hz downward in frequency. At 1 watt, the distortion was under 1 per cent down to 70 Hz, rising to 5 per cent at 41 Hz. Increasing the drive to 10 watts caused an appreciable increase in distortion at all frequencies; it was 2.5 per cent at 70 Hz and 13.5 per cent at 40 Hz.

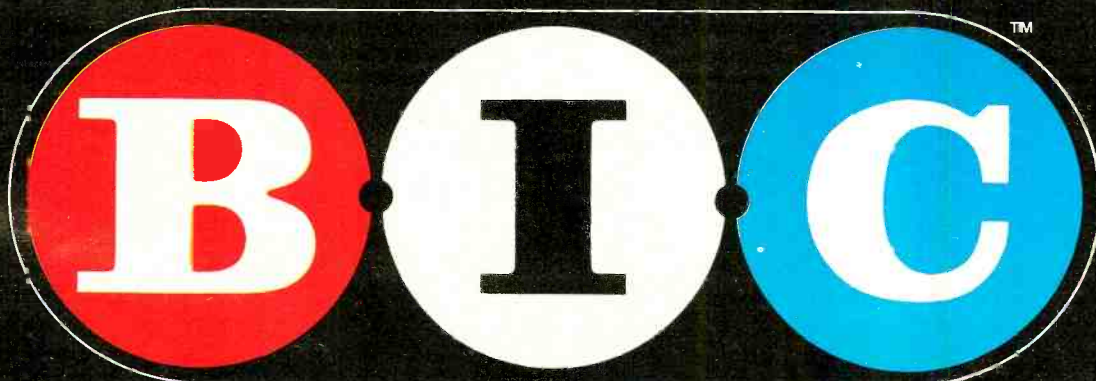
The system impedance reached its minimum of about 7 ohms from 150 to 200 Hz and averaged about 8 to 10 ohms over most of the audio band except for a bass-resonance rise to about 19 ohms at 75 Hz. The tone-burst response of the speaker was excellent.

● **Comment.** Although our measurements indicated that the Mordaunt-Short Festival Series 2 was a "good little speaker," the question of how good could be answered only by listening. The answer was soon apparent—very good (for a small speaker).

One cannot expect a speaker of this size, and of conventional design, to match the performance of a larger, more expensive system, and it does not. Nevertheless, with the Festival Series 2 speakers placed on top of a pair of large floor-standing systems, we were struck by the fact that the similarities in their sound qualities were much more prominent than their differences. The Festivals cannot deliver really deep bass, and they do not attempt to "fake it" with an artificial mid-bass rise. As a result, on program material lacking strong content below about 100 Hz, they sounded remarkably like the comparison systems (which were about six times their size and weight). With most program material we used, the Festivals were very smooth and clean sounding, sometimes a little bright or thin (these terms really refer to the same thing—a degree of im-

(Continued on page 51)

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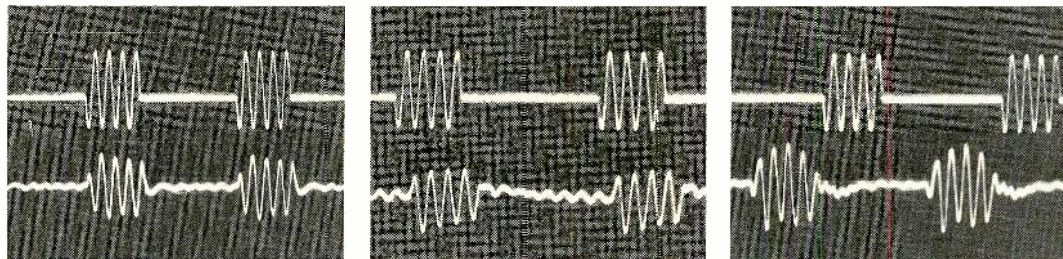
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The Mordaunt-Short Festival Series 2's excellent tone-burst response is shown at (left to right) 100, 1,000, and 10,000 Hz. Input-signal traces appear at top in each scope photo.



balance between the strong, extended high end and the less prominent bass). We must again emphasize that the Festival by itself does not give the impression of being bassy; this is audible only when one compares it with speakers having a very deep, smooth bass response. Considering the size of the Festival's woofer, which is closer to 6½ than 8 inches in diameter, this is a very creditable achievement.

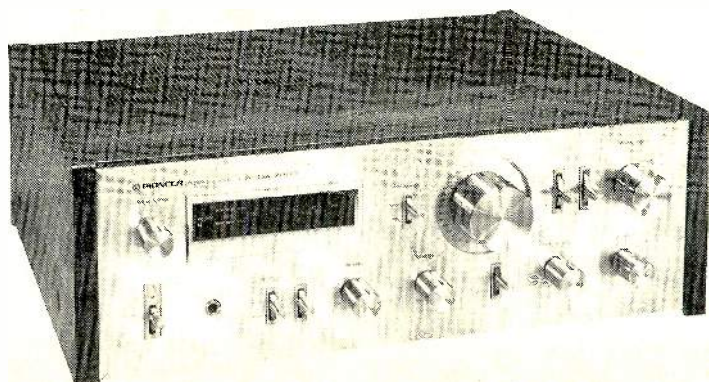
One would have a hard time finding a conventional speaker (that is, one without motion feedback or built-in amplification) the

size of the Mordaunt-Short Festival Series 2 that would sound appreciably better (naturally, this is a judgment that can only be made by the individual listener). Although the manufacturer states that the Festival can be used with amplifiers rated at up to 90 watts, and with more powerful amplifiers if special care is exercised, we would recommend fusing the speaker if super-power amplifiers are used. We had no difficulties driving the Festivals to very high listening levels with a 200-watt amplifier, and the program material did not harm the speaker in any way. However, a

mishap in the amplifier (apparently an ultrasonic oscillation) blew out the tweeter of one of the Festivals. The tweeter of the large comparison system on the same channel would also have been destroyed if its manufacturer had not put a fuse in the tweeter circuit.

If you are a pipe-organ or bass-drum aficionado, the somewhat expensive Festival would not be an ideal choice; but for most music listening at moderate levels it is a first-rate hi-fi reproducer.

Circle 140 on reader service card



**Pioneer SA-7800
Integrated Stereo Amplifier**

PIONEER describes its new SA-7800 integrated amplifier as a "non-switching amplifier" (NSA). This is not to distinguish it from the so-called "class-D" or pulse-type switching amplifiers, but to emphasize a circuit design that achieves a smooth, crossover-notch-free transition from one output transistor of a push-pull pair to the other as the waveform passes through the zero-voltage axis.

The Pioneer SA-7800 is rated to deliver 65 watts per channel to either 8- or 4-ohm loads, from 10 to 20,000 Hz, with no more than 0.009 per cent total harmonic distortion. The power amplifier and tone-control amplifier sections

are each direct-coupled, and the single coupling capacitor between the two sections is the only barrier to full d.c. coupling from the amplifier's high-level inputs to the speaker outputs.

Although the front panel of the SA-7800 is in most respects conventional, it has a dual fluorescent power "meter" framed in a bezel near the upper left corner. In operation, parallel lines of bright blue dots in the meter indicate instantaneous power peaks from less than 0.001 watt to a maximum of 80 watts referenced to 8-ohm loads. The power display has a fast attack and a much longer decay

time, so that one sees a continuous display of the peak power level in watts delivered by the amplifier.

In most conventional class-B or class-AB amplifiers, the current flow is not transferred smoothly from one set of output transistors to the other as the polarity of the signal waveform changes. There is always a certain amount of discontinuity, or switching action, that results in "crossover" or notch distortion. This appears as a small "jog" in the waveform at the zero-voltage axis which introduces a large number of high-order harmonics into the amplifier output. Although these harmonics are at a very low level in a well-designed amplifier, they are considered to be audibly offensive out of proportion to their magnitude.

In a true class-B amplifier, the crossover notch can be quite severe, so most high-fidelity amplifiers are biased to operate in class AB (which has both transistors conducting—to some degree—all the time, thus minimizing the crossover distortion). This requires that more heat be dissipated from the output transistors, calling for larger heat sinks and power supplies and increasing the size, weight, and cost of the amplifier. An amplifier may also be operated in full class A—with much larger no-signal current flow—giving very low efficiency but with no crossover distortion.

Pioneer's NSA circuit combines the cool operation and high efficiency of class B with the extremely low distortion of a class-A amplifier. Apparently it varies the bias on the transistors dynamically according to the signal requirements. Part of the cool operation of the SA-7800's output stages can be credited to an unusual heat-sink design, consisting of a

(Continued overleaf)

large number of very light, curved aluminum plates fastened to the output transistors. Although they are completely enclosed within the cabinet, air enters at the bottom and passes over the fins before exiting at the top, resulting in highly effective cooling.

The SA-7800 has a rather elaborate protective system that disconnects the speakers instantly if any abnormal d.c. voltage appears at the amplifier outputs. This circuit also provides a turn-on delay of several seconds.

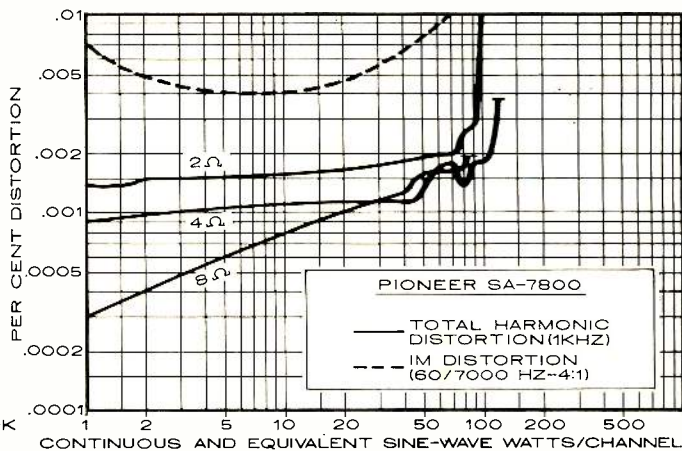
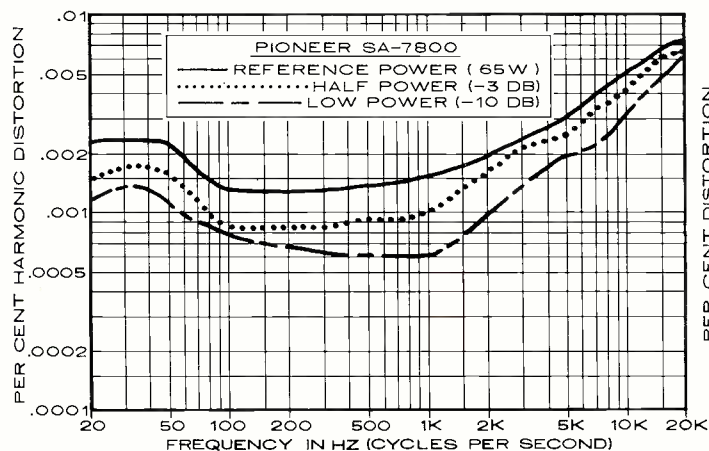
In addition to the fluorescent power display, the most prominent feature of the panel of the SA-7800 is the large volume knob, lightly detented at thirty-two positions and calibrated in decibels of attenuation. The conventional bass and treble tone controls are operated by smaller knobs, a level switch bypasses the tone-control circuits, and another inserts an infrasonic filter with a nominal

The output at 1,000 Hz, with both channels driven to clipping, was 82.6 watts per channel into 8 ohms, 118 watts into 4 ohms, and 57 watts into 16 ohms. The IHF clipping headroom was 1.04 dB at 8 ohms and 2.6 dB at 4 ohms. The IHF dynamic headroom was 1.7 dB at 8 ohms and a very high 4.2 dB at 4 ohms, corresponding to short-term outputs of 95.6 and 170.5 watts per channel.

The amplifier required only 16 millivolts (mV) at a high-level input for a reference output of 1 watt, and the A-weighted signal-to-noise ratio (S/N) was 78.7 dB. The phono sensitivity was 0.23 mV, with a 77.2-dB S/N. The phono input overloaded at about 300 mV at low and mid frequencies. At 20 kHz the overload was at a level equivalent to a midrange input of 110 mV. The measured phono-input impedance was 50,000 ohms in parallel with 250 picofarads.

er. the shape of the distortion curve was similar, but the measured values were lower.

The tone controls had conventional response curves, with the bass turnover frequency shifting from under 200 Hz to about 500 Hz as the control was advanced; the treble-response curves hinged at about 2,000 Hz. The loudness compensation boosted both low and high frequencies, but only to a small extent. The infrasonic filter dropped the response by 2.5 dB at 20 Hz. The RIAA phono equalization was very accurate—within ± 0.5 dB from 20 to 20,000 Hz. When it was measured through the inductance of a phono cartridge, the high-frequency response rose above 5,000 Hz to a maximum of +1.5 dB at 10,000 Hz before falling off to -2 dB at 20,000 Hz. The phono r.f.-interference filter consists, according to the schematic, only of a 2,200-ohm resistor in series with each phono



6-dB-per-octave slope below 15 Hz. Also along the bottom of the panel are the center-detented balance control and the mode switch (STEREO, REV [reversed stereo], L + R, L, and R). Other lever switches control power and muting (a 20-dB gain reduction). The speaker selector connects either, both, or neither of two pairs of speakers to the amplifier outputs. Nearby is a stereo-headphone jack.

The function switch selects PHONO, TUNER, or AUX input sources. Lever switches next to it cross-connect two tape decks for dubbing in either direction and for monitoring the playback from either machine. The selected program source (including TAPE) is indicated by illuminated words above the power-display dots. A loudness switch completes the front-panel controls of the SA-7800.

On the rear apron there are insulated spring-type speaker connectors, the various input and output jacks, and four a.c. outlets, two of which are switched. Next to the phono inputs is a slide switch that connects an r.f.-interference filter into the phono inputs.

The Pioneer SA-7800 is 17¾ inches wide, 14¾ inches deep, and 6½ inches high, and it weighs 28 pounds. It is supplied in a wooden cabinet, vinyl clad with a walnut finish. Price: \$450.

● **Laboratory Measurements.** The one-hour preconditioning period at one-third rated power and five minutes at full power left the top of the SA-7800 only moderately warm.

The Pioneer SA-7800 produced some of the lowest distortion readings we have ever measured. In order to measure the distortion, it was necessary to pass the output signal through the Radford distortion analyzer to attenuate the fundamental component and then to pass the harmonics from the Radford's output to our Hewlett-Packard spectrum analyzer. With both channels of the SA-7800 driven at 1,000 Hz into 8-ohm loads, the distortion was an incredible 0.0003 per cent at 1 watt (which we believe to be the residual distortion of our Hewlett-Packard 239A audio oscillator). It increased linearly to 0.001 per cent at 17 watts and 0.0016 per cent at the rated 65 watts. At the clipping point of about 80 watts, the distortion was still only 0.002 per cent.

Driving 4-ohm loads, the distortion was 0.0009 per cent at 1 watt, 0.0011 per cent at 40 watts, and 0.0038 per cent at 120 watts. Although the amplifier is not rated for it, we also measured its distortion and power output with 2-ohm loads. Beginning with 0.0014 per cent distortion at 1 watt, it rose to 0.002 per cent at 70 watts and 0.003 per cent at 90 watts (the outputs clipped at 114 watts). The intermodulation distortion (IM) with 8-ohm loads was 0.007 per cent at 1 watt, 0.004 per cent in the 5- to 10-watt range, and 0.013 per cent at 80 watts.

The distortion at rated power (8 ohms) was just over 0.002 per cent at 20 Hz, under 0.0015 per cent in the midrange, and 0.007 per cent at 20,000 Hz. At half power and one-tenth pow-

input. This had no measurable or audible effect on the performance of the preamplifier. Since we had no r.f. interference problems (nor any standard way to generate them), we could not judge the filter's effectiveness.

When the amplifier was overdriven, the protective relay shut off the outputs readily with a very rapid off-on action that caused interruptions of the program. The relay also shut off the amplifier when it was faced with a 250-kHz input signal, thereby limiting the slew factor to 12.5. The fluorescent power-indicator calibration (which is at decade power intervals) was quite accurate.

● **Comment.** In the design of the SA-7800, Pioneer seems to be returning to greater simplicity of control functions (we note the absence of switchable tone-control turnover frequencies, midrange tone controls, elaborate switchable filters, and the like). However, in respect to true operating versatility the SA-7800 would be hard to fault.

The fluorescent power indicator is not a "gimmick" or purely cosmetic feature. An accurate peak-responding meter such as this is one of the most educational features that can be included in an amplifier. We are still occasionally surprised to find that wide-dynamic-range programs whose lower-level passages are heard at milliwatt levels can nevertheless overdrive an amplifier—even one with as much power as this. It can happen.

(Continued on page 54)

can you be bribed?

You get \$35.21 in bribes when you try 10 DAK ML90 high energy cassettes risk free for only \$2.19 each. Your bribe is bigger than your purchase!

Hats off to Maxell. Their UDXL cassette established a new standard of sound quality for all cassettes.

The new DAK ML90 starts another new technology. A technology of protection from Hi frequency loss and of extreme reliability.

Later we are going to offer you valuable bribes, just for testing these cassettes. risk free; so read on!

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 each month in our factory. Many of 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.

When we first started, 12 years ago, DAK's cassettes failed, just like many others. So we installed over \$20,000 worth of high speed duplication equipment at our factory and set out to design the perfect cassette.

MOLYSULFIDE

Failure after failure. For six years we substituted, remade, tested and retested until we positively linked the major cause of cassette failure to the slip sheets, or liners in the cassette. Evidently, 3M and TDK were hot on our heels, because they have now also come out with new liners.

We developed polyester slip sheets with raised spring loaded ridges to guide each layer of tape as it winds. We coat the liners 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 much more resistant to wear.

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

Static electricity within the cassette was drastically reduced by the low friction of the molysulfide and easily bled off, so that its tendency to erase very high frequencies was drastically reduced. A very important consideration for often played tapes.

MAXELL IS BETTER

Yes, honestly, if you own a \$1000 cassette deck like a Nakamichi, the fre-

quency responses of Maxell UDXL or TDK SA are superior to DAK and you just might be able to hear the difference.

DAK ML has a frequency response that is flat from 40cps to 14,500 ± 3 db. Virtually all cassette recorders priced under \$600 are flat ± 3 db from 40cps to about 12,000cps, so we have over 2000cps to spare, and you'll probably never notice 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.

YOU WIN

You are paying less for the 10, 90 minute cassettes than you would pay for the comparable bribes we are offering if you went to a Radio Shack store.



Yours Free

CHECK THE VALUE OF THE DAK BRIBES AT RADIO SHACK

The next time your batteries are dead in a calculator, radio, flashlight or battery operated recorder, you'll be glad you have this versatile battery eliminator AC adaptor.

You'll save lots of money on batteries because now you can plug in, instead of using up expensive batteries. 4 voltages: 3, 4.5, 6 and 9 volts plus 4 plugs to fit virtually anything battery powered. Radio Shack sells a similar 4 voltage adaptor for \$9.95.

Think of it, 10 of the most commonly used six foot hook up cords with RCA plugs at each end. You can connect friends recorders, extra tuners, or virtually any stereo equipment. You'll certainly appreciate these cords in the years to come. Radio Shack sells their

FREE CATALOGUE "HOW TO RECORD" BOOKLET



six foot cords for \$1.89 each.

You need clean tape heads to make good recordings. The easiest way to clean your heads is with DAK's 12 oz. deluxe spray head cleaner, complete with handy snorkel tube. Radio Shack doesn't sell a single large 12 oz. can, but 12 oz. from them costs \$6.36.

The comparable Radio Shack prices are not list prices, but the actual prices you would pay at a store when this ad was written.



Yours Free

WE WIN TOO

Customers like you are very valuable in the form of future business. We anticipate receiving over 6000 orders and 4500 repeat customers from this advertisement to add to our list of over 57,000 "actives." We are betting you will buy our cassettes again, and we are putting our money where our mouth is!

TRY DAK ML90 FREE

We want you to 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 bribes to DAK for a full refund.

To order your 10 DAK ML90 minute high energy cassettes and receive your \$35.21 bribe with your credit card, simply call toll free 800, 423-2636, (in Calif. call 213-984-1559) or send your check for \$21.90 plus \$3 for postage and handling for each group of 10 cassettes and bribes 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 additional 10 you buy and of course you get all 3 bribes with each group of 10 tapes.



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

and without the peak meters one might easily suspect the amplifier of being defective.

The protective system of the SA-7800 was so effective as to be disconcerting. For instance, on some flamenco music, the sound was severely chopped up, puzzling us until we noticed that the stamping of feet was driving the amplifier to and beyond its maximum output, and the relays were shutting off the speakers! Still, using acoustic-suspension speakers, the playing level was not at all loud.

Our experience suggests that this amplifier will serve best with speakers of moderately high efficiency unless one tends to listen at rather modest levels.

The distortion of the NSA circuit—or rather the *lack* of it—is clearly evident, and most impressive. Although the significance in respect to listening quality of such vanishingly low distortion can be debated, it is certainly a technical achievement of no mean proportions. From our measurements alone, we

would have guessed that this was a pure class-A amplifier of exceptional quality, except for the fact that it runs cooler than most class-AB amplifiers of similar power. As our measurements also show, the SA-7800 is rated very conservatively. One thing is certain—the Pioneer SA-7800 is as fine-performing a medium-power amplifier as we have seen, and it is available at a most attractive price.

Circle 141 on reader service card



Audio-Technica AT25 Phono Cartridge

LIKE many Audio-Technica phono cartridges, the new AT25 moving-magnet cartridge features the company's proprietary dual-magnet design. The AT25 is an integrated cartridge/head-shell unit that plugs directly into the end of any tone arm designed for the universal four-pin plug-in head shell.

Most moving-magnet cartridges have two coils and pole pieces per channel, with the coils wired to reduce the sensitivity to hum induced by an external magnetic field. In spite of this mode of connection, it is usually necessary to shield the cartridge's coil system with mu-metal or a similar high-permeability material. Audio-Technica uses toroidal-wound coils (one per channel) instead of the usual solenoid type. These doughnut-shaped coils, though much more difficult and expensive to wind (especially in the sizes used in a phono cartridge), have the advantage of being virtually immune to external hum pickup and crosstalk between the coils since an ideal toroid has no external magnetic field of its own and is not sensitive to external fields from other sources.

The laminated Permalloy core of each coil is split, with its ends serving as the pole pieces. The magnet for each channel, a tiny rod extending at right angles from the stylus cantilever just forward of its pivot point, fits into the corresponding gap in such a way that its motion induces a voltage in the coil. The two toroids are placed parallel and quite close to each other, with a mu-metal shield between them to eliminate possible electrical crosstalk (since the toroids cannot be made absolutely perfect in their self-containment of magnetic fields).

It is not feasible to wind as many turns of wire on a nearly microscopic toroidal core as on a straight core, so the inductance of the AT25 coils (85 millihenries) is only a fraction

of that of a typical magnetic cartridge. However, the electromagnetic efficiency is high, so the cartridge output is comparable to that of other fine cartridges of conventional construction. The low inductance makes the cartridge response essentially independent of load capacitance, much like a moving-coil cartridge and for the same reason.

The stylus cantilever, made of beryllium only 0.3 millimeter in diameter, is supported in a toroidal-shape rubber damping ring which establishes the stylus compliance. Each cartridge is individually adjusted for compliance during manufacture. The two tiny magnets, at right angles to each other and to the cantilever, are just forward of the damping ring.

At the free end of the cantilever is a nude-mounted diamond with a 0.09-millimeter square shank that accurately establishes its orientation. The elliptical contact radii are 0.2 x 0.7 mils. The stylus assembly is replaceable by the user, though not quite so simply as the usual "slide in" replacement stylus. The stylus of the AT25 is firmly anchored in place by a set screw, and a small screwdriver is supplied with each replacement stylus.

The cartridge body of the AT25, made of magnesium for light weight and high rigidity, has an integral carbon-fiber finger lift and a rubber pad on top of the body to damp any internal vibration modes. The four-pin plug that is part of the body fits any arm designed for the universal four-pin bayonet-locking head shell. Since there are some differences among arms in the stylus overhang required for minimum tracking error, the AT25 cartridge can be shifted slightly within its body structure by loosening a small Allen set screw near the plug with a wrench furnished with the cartridge. The actual distance from the stylus to the end of the tone arm (from 47 to 55 millimeters) is shown on a scale on the side of the car-

tridge. If the tone-arm manufacturer specifies that dimension (as many do), the setup is extremely simple. The cartridge can also be rotated slightly about its axis to position the stylus perpendicular to the record surface; the same set screw, when tightened, clamps the cartridge firmly in position for both overhang and azimuth.

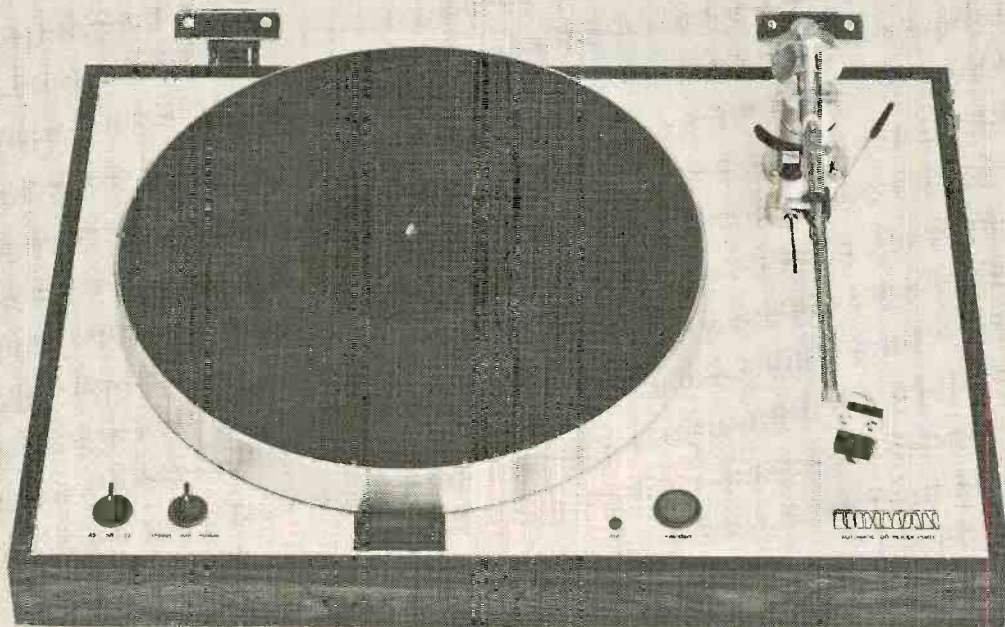
The weight of the Audio-Technica AT25 is 17.3 grams, which is roughly comparable to the combined weights of a typical cartridge and tone-arm head shell. Audio-Technica recommends that the cartridge be terminated in 47,000 ohms in parallel with 100 to 200 picofarads of capacitance (the exact value is not critical). The range of tracking force is 0.8 to 1.6 grams, with 1.2 grams being the suggested setting. The output at a 5-centimeter-per-second lateral velocity is 2.2 millivolts, with the channel levels matched within 0.5 dB. The rated frequency response is 10 to 25,000 Hz, with no tolerance stated. The instruction booklet (more complete than most in its description of the design and construction of the cartridge) does list the specific records and test equipment used to establish the cartridge ratings. The same cartridge packaged in a conventional format, for installation in any arm having standard 1/2-inch mounting centers, is known as the AT24. The price of the AT25 is \$275; the AT24 is \$250.

● **Laboratory Measurements.** The Audio-Technica AT25 was plugged into the tone arm of a Denon DP-2500 record player. With the Denon tone-arm mass (nominally 20 grams), the low-frequency resonance was at 7 Hz, with an amplitude of about 10 dB. The cartridge was terminated in 47,000 ohms in parallel with the 70-picofarad capacitance of the Denon arm and its signal cables. At a velocity of 3.54 centimeters per second the output was 2.2 millivolts, as rated, and the channel levels were matched within 0.2 dB. The verticle angle of the stylus was measured as 20 degrees.

We measured the frequency response and channel separation of the AT25 with a number of records, including the CBS STR 100 and the JVC TRS-1007, as well as with an Audio-Technica record, the 6605. With either the CBS or JVC record, the frequency response was flat within ± 1.5 dB up to 15,000 Hz, rising to about +4 dB at 20,000 Hz. Although we did not measure above that frequency, it was apparent that the stylus resonance was somewhere above 20,000 Hz, with an amplitude greater than +4 dB. With load-capacitance

(Continued on page 56)

LUX PD-277



FULLY AUTOMATIC DIRECT DRIVE TURNTABLE THE LUX ANSWER TO THE QUALITY VS. CONVENIENCE QUESTION.

Until the Lux PD-277, music lovers seeking a quality, noise-free, wow-less turntable and a precision-tracking, low-mass tonearm had little choice. They assembled their own, perhaps using one manufacturer's turntable and another's tonearm. Satisfactory performance came only after hours of fiddling with assembly and adjustment.

Of course, the resulting player lacked an automatic tonearm lift, set-down or return. The stylus had to be manually—and very carefully—placed in the lead-in groove. And at the end of every disc, there was a mad rush to lift the arm as it ground its way round and round the run-out groove. But these inconveniences were the price many audiophiles were willing to pay for the quality they sought.

Lux's audio engineers appreciated the problem and created the solution: the second-generation fully automatic, direct-drive turntable.

Incorporating the latest in sophisticated direct-drive design, the PD-277's DC servo-controlled brushless and slotless motor provides a 0.03 percent wow and flutter specification and signal-to-noise of 60 dB. A novel high-density mat with contours and materials specifically designed to damp spurious platter and

record vibrations is integral to the die-cast aluminum platter—not simply resting on it.

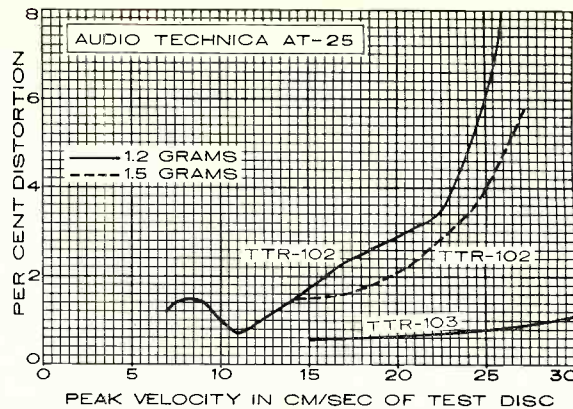
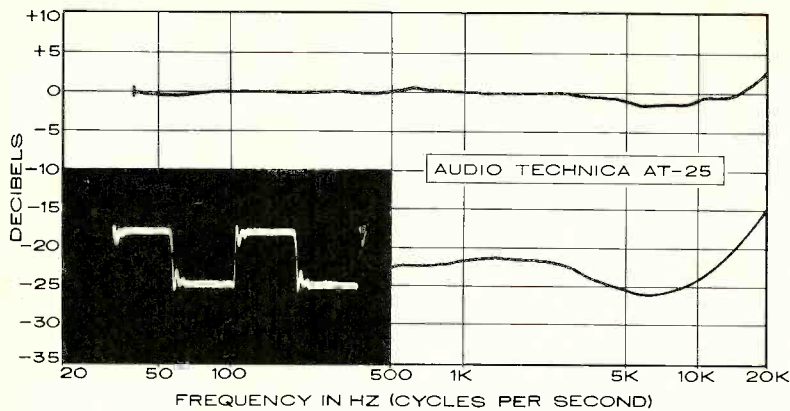
Similar attention is given to electromechanical detail in the Lux straight-line tonearm. Achieving the lowest practical mass by use of a stripped-down integrated headshell, this 240mm tonearm will accept and bring out the best from any of today's fine phono cartridges. Other critical mechanical problems, such as resonance and tracking instability, are solved by the arm's nested-tube design and vertical-pivot construction.

All essential functions of the PD-277 are electronically controlled. For example, a separate motor operates the tonearm, instead of conventional noisy, drag-producing mechanical arrangement. And the end-of-record lift is triggered by a photo-electric sensing system. And, of course, the arm motor completely disengages when not in use.

The Lux attention to detail also includes other necessities—and niceties—such as adjustable anti-skating, a ± 4 percent speed control with stroboscopic readout, an oil-damped manual cue system and a hinged, detachable, damped dust cover.

You can experience Lux's very quiet resolution of the quality vs. convenience question at selected audio dealers.

LUX AUDIO OF AMERICA, LTD.
160 Dupont Street, Plainview, NY 11803
In Canada: Lux Audio of Canada, Ltd., Ontario
CIRCLE NO. 39 ON READER SERVICE CARD



In the graph at left, the upper curve represents the smoothed, averaged frequency response of the cartridge's right and left channels; the distance (calibrated in decibels) between it and the lower curve represents the separation between the two channels. The inset oscilloscope photo shows the cartridge's response to a recorded 1,000-Hz square wave (see text), which indicates resonances and overall frequency response. At right is the cartridge's response to the intermodulation-distortion (IM) and 10.8-kHz tone-burst test bands of the TTR-102 and

TTR-103 test records. These high velocities provide a severe test of a phono cartridge's performance. The intermodulation-distortion (IM) readings for any given cartridge can vary widely, depending on the particular IM test record used. The actual distortion figure measured is not as important as the maximum velocity the cartridge is able to track before a sudden and radical increase in distortion takes place. There are very few commercial phonograph discs that embody musical audio signals with average velocities much higher than about 15 cm/sec.

variations from 70 to 420 picofarads, the frequency response changed by no more than 1.5 dB in the range from 10,000 to 20,000 Hz and was totally unaffected elsewhere.

Channel-separation measurements of a phono cartridge are extremely dependent on the test record used (more precisely, on the relationship between the stereo left-right axes of the cutter used to make the record as well as those of the playback cartridge). With the STR 100, the separation averaged about 21 dB at 1,000 Hz, 22 dB at 10,000 Hz, and about 17 dB at 20,000 Hz. The JVC record gave fairly similar results, except that the 20,000-Hz separation was about 24 dB. With the Audio-Technica record, the 1,000-Hz separation was 27 dB, and the readings were 23.5 and 19 dB, respectively, at 10,000 and 20,000 Hz.

The AT25 had exceptional tracking ability. At a 1-gram force, it tracked all our high-velocity records easily, including the 80-

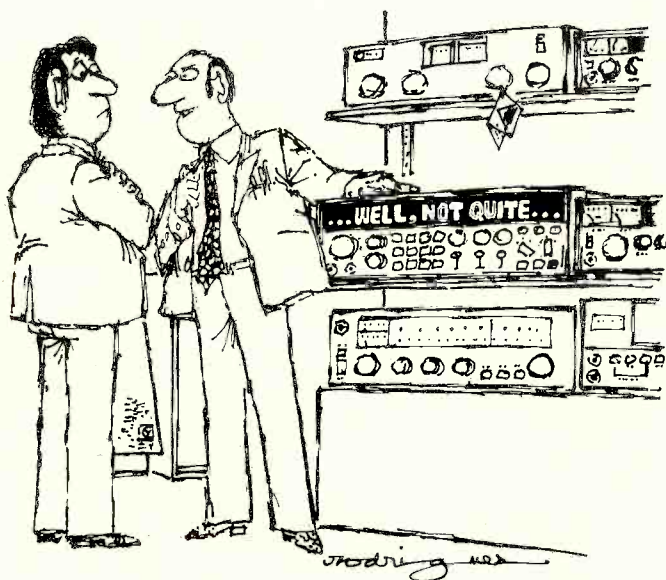
micrometer level of the German HiFi Institute record (a similar test is included on the A-T 6605 record). An increase to 1.2 grams enabled the cartridge to track the maximum level of 100 micrometers, a feat matched by only a few cartridges we have tested.

The high-frequency tracking distortion was measured with the Shure TTR-103 record. The tone-burst distortion from this record was extremely low (less than 0.6 per cent) at 15 centimeters per second and increased smoothly to 1.1 per cent at 30 cm/sec. The intermodulation distortion, measured with the Shure TTR-102 record, was low at normal program levels. The readings were between 0.7 and 1.5 per cent for velocities up to 14 cm/sec. They rose to 2 per cent at 16 cm/sec and 13 per cent at the record's maximum of 27 cm/sec. Increasing the force to 1.5 grams, near the cartridge's maximum rating, improved IM distortion at 27 cm/sec to 5.6 per cent.

Subjective tracking tests with the Shure "Audio Obstacle Course" records confirmed the exceptional performance of the AT25. At 1.2 grams it tracked all the test material on both the ERA III and ERA IV records. The square-wave output from the CBS STR 112 test record was excellent, with only a couple of cycles of low-level ringing at about 25 kHz.

● **Comment.** The unusual internal construction and external packaging of the Audio-Technica AT25, together with its very high price, would lead one to expect equally unusual performance. We were not disappointed. Although no single one of the AT25's performance characteristics would by itself necessarily earn it a place at the forefront of cartridge technology, every one of them was at the very least good or excellent. In the aggregate, the cartridge is nothing less than superb. Although the AT25's combined cartridge/head-shell format does restrict its use to arms designed for the universal four-pin plug-in shell, such arms are used in a large number of the world's high-quality record players. In any event, the needs of those who use other types of tone arms should be met very well by a sister cartridge, the AT24.

As we see it, the major weakness of most integrated cartridge/head-shell designs lies in the undesirably low resonance frequencies that result when they are mounted in most tone arms. (For example, the AT25's 7-Hz resonance in the Denon arm is lower than is preferable.) Nevertheless, the AT25 is one of those cartridges to which one can listen for extended periods without any hint that it is making some special contribution of its own to the music. It is as clean and uncolored as one could wish. The high-frequency rise is above the range where it could color the sound, and we could detect no increase in noise from its presence. Finally, there is the considerable "plus" of a cartridge whose performance is essentially independent of load capacitance. It will work as superbly in your system as it did in our test setup.



"... Sure, I realize \$4,000 is a lot of money, but this baby does EVERYTHING!"

Circle 142 on reader service card

(Continued on page 58)

discover . . .



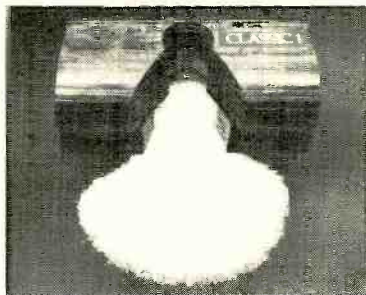
The inside story of a classic.

Introducing a new type of record cleaner. Meet the CLASSIC 1, the only cleaner of its kind. Developed to satisfy you, the discriminating audiophile.

Neutralizing the static charges that attract and hold destructive micro-particles of dust and dirt on your record's surface is one of the major problems in record care.

Ordinary cleaners attempt to reduce static charges by applying fluid directly to the surface of the record or cleaning unit. Direct application of fluid involves an inherent risk of harmful residue build-up and should be avoided except in the case of abnormally dirty or greasy records. In fact, normal maintenance should not involve wetting the record.

At last, the CLASSIC 1 has the answer to safe and effective cleaning. Not only are static charges reduced, but the problem of residue formation is eliminated. Cleaning is safe and effective because inside the CLASSIC 1 is

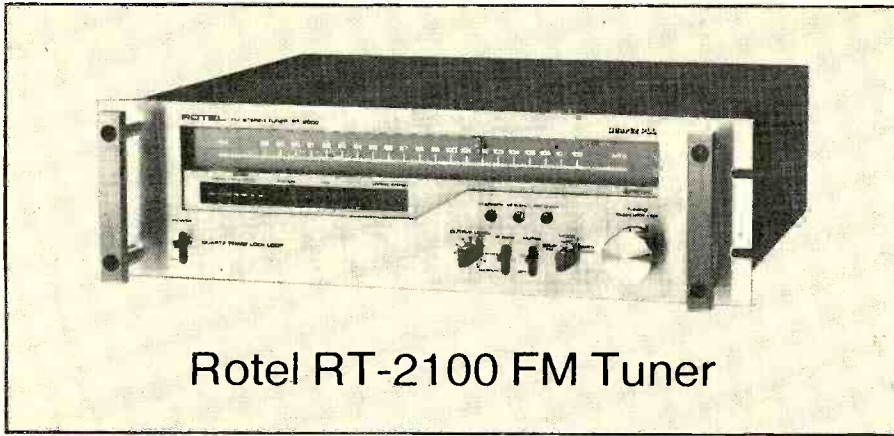


the exclusive MICRO STOR SYSTEM which utilizes a humidification/cleaning process rather than a 'wet' technique.

The secret to the MICRO STOR SYSTEM is a permeable matrix of many thousands of tiny glass beads which retain the cleaning fluid. Through capillary action, a vapor penetrates the velvet surface creating a field of humidity sufficient to reduce static charges. Disc contaminants can now be removed safely and easily without wetting the record and risking residue build-up.

Discover the ultimate in record care. The CLASSIC 1, a Sound Saver product.

Available at finer audio dealers . . .



Rotel RT-2100 FM Tuner

THE new Rotel RT-2100 is a deluxe FM-only stereo tuner with such features as a quartz-locked tuning system, dual digital and analog station-frequency displays, selectable narrow and wide i.f. bandwidths, and built-in Dolby decoding circuits.

From its distinctive front-panel styling, the RT-2100 is immediately recognizable as a Rotel product. The long dial scale is calibrated at uniformly spaced intervals of 1 MHz. The large tuning knob, at the lower right of the panel, operates a smooth flywheel mechanism. A small blackout window below the left half of the dial scale displays the signal-strength/multipath-distortion indicator, a bright red digital frequency readout, and several LEDs that provide tuning information and indicate when a stereo transmission is being received. The signal-strength indicator is a horizontal row of seven LEDs which light up in sequence to form a line whose length is proportional to signal strength. When a MULTIPATH button on the panel is engaged, the LEDs are blanked unless there is appreciable multipath distortion, which causes the line length to fluctuate with program modulation.

The digital frequency display is the readout of a counter operated from the continuously tunable local oscillator. When the tuner comes within about 60 kHz of a signal, one of two red LEDs comes on to show which direction one should tune to reach the center of the channel. Within about 8 kHz of the channel center, a green TUNED light comes on and the red lights are extinguished. When the TUNED light is on, releasing the tuning knob energizes the lock circuits, causing a second green light to come on.

In the Rotel quartz-lock system, the nominally 10.7-MHz i.f. signal is compared to a signal from an internal 10.7-MHz crystal oscillator, and any frequency difference shifts the local-oscillator frequency until the two are identical. This gives the RT-2100 the continuous tuning ability of a conventional tuner plus the absolute tuning accuracy of a synthesized tuner. When the tuning knob is touched, the quartz-lock circuit is disabled so that the frequency can be shifted at will.

Lever switches on the front panel control the i.f.-bandwidth and muting-lock functions (the two are switched simultaneously) as well as the power to the tuner. There are two pairs of audio outputs in the rear of the tuner, one at a fixed level and the other controlled by a small front-panel output-level knob. A similar knob selects the tuner's operating mode: MONO, STEREO, AUTO (automatic selection of mono or stereo conditions), and DOLBY FM.

The last, in addition to passing the signals through Dolby decoding circuits, switches the tuner's de-emphasis time constant from 75 to 25 microseconds.

Three small pushbutton switches control the MULTIPATH display, a HI BLEND for mixing the higher audio frequencies to reduce noise when receiving weak stereo signals, and REC CHECK. The last replaces the regular tuner audio outputs with a 400-Hz tone whose level is presumably internally set to correspond to 50 per cent modulation and can be used to set recording levels. (This presumption is based on the service manual for the tuner; the multilingual operating manual is unclear, if not actually incorrect, in its reference to REC CHECK and several other features.)

The Rotel RT-2100's front panel is slotted for mounting in a standard EIA 19-inch rack and is fitted with rugged handles. The overall dimensions are 19 inches wide, 5 5/8 inches high, and about 13 inches deep. The tuner weighs 16.5 pounds. Price: \$640.

● **Laboratory Measurements.** We attempted to measure the tuner performance using both narrow and wide i.f. bandwidths, since this can affect its performance in many ways. In the process, we discovered (although it is not even hinted at in the instruction manual) that the bandwidth narrows automatically when the signal level falls below 38 dBf (45 microvolts, or μV) if the front-panel switch is set to WIDE. It can always be changed to NARROW by operating the switch manually, but if

the input signal is weaker than 38 dBf, the bandwidth is narrowed regardless of the switch position.

The IHF usable sensitivity was 11 dBf ($2\mu\text{V}$) in mono, and the stereo sensitivity was set by the switching threshold at 23 dBf ($7.5\mu\text{V}$). The 50-dB quieting sensitivity was the same as the usable sensitivity in mono, with total harmonic distortion plus noise (THD + N) of 3.2 per cent. In stereo the 50-dB quieting sensitivity was 35 dBf ($30\mu\text{V}$) with 0.5 per cent THD + N.

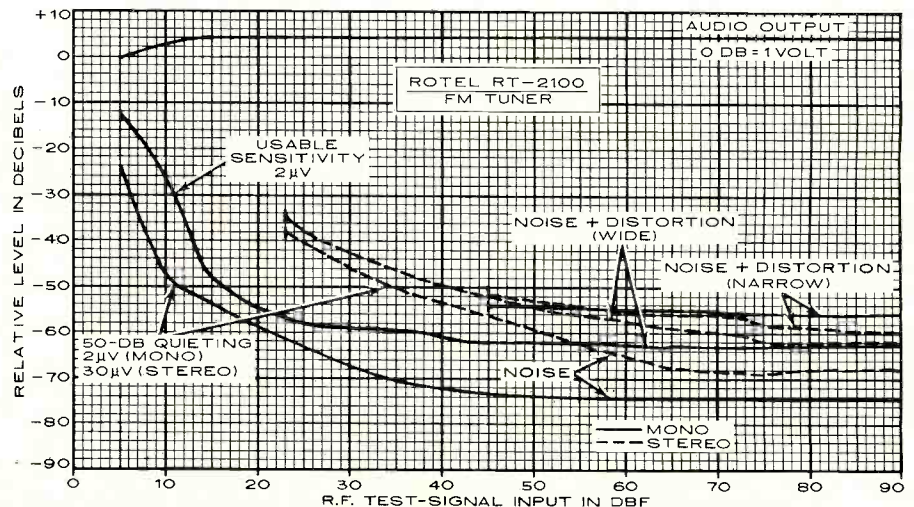
At an input of 65 dBf ($1,000\mu\text{V}$) the mono distortion was a very low 0.07 per cent with wide i.f. bandwidth and 0.165 per cent with narrow. In stereo, the distortion was 0.11 per cent (W) and 0.17 per cent (N). The signal-to-noise ratio (S/N) at a 65-dBf input was 74.5 dB in mono and 68 dB in stereo with either wide or narrow bandwidth.

The capture ratio and selectivity were functions of i.f. bandwidth (surprisingly, the AM rejection was not affected by the bandwidth). The capture ratio at 45 dBf ($100\mu\text{V}$) was 1.53 dB (W) and 1.8 dB (N). With a 65-dBf input, the readings were 1.22 dB (W) and 1.33 dB (N). The AM rejection was a very good 70 dB measured at either input level and with either bandwidth.

The alternate-channel selectivity with narrow bandwidth was a very good 87 dB, and the adjacent-channel selectivity was 9.5 dB. Since the alternate-channel selectivity had to be tested with a small input (our generator's maximum output of $200,000\mu\text{V}$ prevented us from starting with a "desired" signal at the preferred 45-dBf level), we were unable to switch the tuner to wide for alternate-channel selectivity measurements (this was the point in our tests where we discovered the automatic bandwidth-switching feature). However, adjacent-channel selectivity could be measured at a higher input level, and it changed to 4.9 dB at the wide bandwidth.

The stereo and muting thresholds were identical at 23 dBf ($7.5\mu\text{V}$). The tuner hum level was -68 dB, and the pilot-carrier leakage was a very low -80 dB. The signal-strength indicators had a peculiar characteristic, with the lowest one coming on at an input of 32 to 35 dBf (about the weakest signal that one might be able to receive with full fidelity in stereo) and the highest one coming on at 43 dBf. The practical effect of this was that all

(Continued on page 60)



FROM PICKERING

The New Shape of Sound

THE STEREOHEDRON[®] SERIES

From one of the oldest names in sound development comes the latest sound innovation... the Stereohedron Stylus tip... with expanded contact area for truest fidelity. And now it's available from Pickering in three great cartridges.

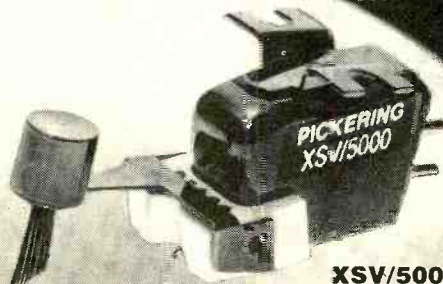
The critically acclaimed XSV/3000, the new XSV/4000 with expanded frequency response range, and the ultimate in lightweight compliance, the Pickering XSV/5000 which captures all the high frequency information contained in today's finest recordings... creating a whole new experience in recorded sound.



XSV/3000



XSV/4000



XSV/5000

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PICKERING "for those who can hear the difference"

101 Sunnyside Blvd., Plainview, N.Y. 11803

CIRCLE NO. 41 ON READER SERVICE CARD

the lights were on for virtually every receivable station in our area, rendering the display useless for anything but multipath indication. (It is probable that an internal adjustment would correct this, since the service information claims a range of 65 dBf.)

Fortunately, and to the credit of the tuner, its multipath-distortion indicator was one of the most effective we have used, and we found it most convenient to leave the switch set to multipath and adjust the antenna for an absence of glowing lights. The REC CHECK signal level corresponded to a 57 per cent modulation level. It is internally adjustable and is probably close enough to 50 per cent to be useful when setting recording levels.

The stereo performance of the Rotel RT-2100 was impressive. The frequency response was +0.7, -0.2 dB from 30 to 15,000

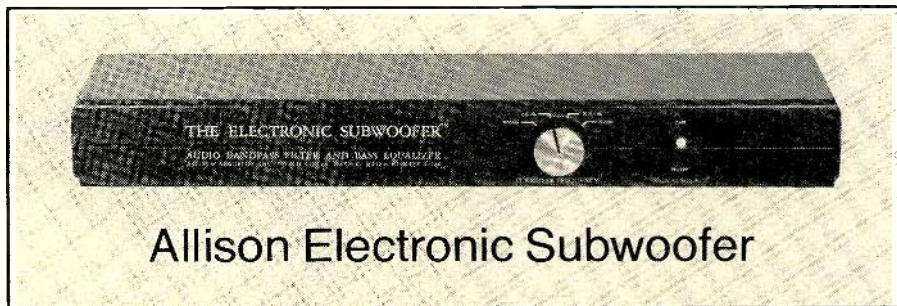
Hz, and the channel separation over that range was unusually uniform. With the wide bandwidth, it was 45 to 47 dB at middle frequencies, exceeded 40 dB from 65 to 9,000 Hz, and was still 34 or 35 dB at 30 and 15,000 Hz. The narrow i.f. bandwidth had little effect on the separation, which was about 40 dB from 100 to 1,000 Hz and 32 to 33 dB at 30 and 15,000 Hz.

● **Comment.** Tuning the Rotel RT-2100 is exceptionally easy and noncritical. The tuning lights are totally unambiguous, and the lock circuit makes mistuning impossible. Although we tended to use the digital frequency display when tuning the RT-2100 (its location next to the tuning lights makes that most logical), the analog dial scale was very accurate and could have been used with equal success.

The muting action is completely positive, since it is accomplished with reed relays that interrupt the audio outputs. There are no noise or modulation bursts when tuning on or off a signal. Although we made no measurements of the Dolby circuits, they seemed to perform properly on the two or three local stations that use the Dolby system. We would have appreciated having a LED on the panel to show when the Dolby circuits were on, however, since the *mode* knob is small and its position is not easily determined at a distance.

We found the RT-2100 to be as fine-sounding and pleasant to use as it was handsome to look at. It is certainly a worthy companion for Rotel's high-end amplifiers, which it is styled to match.

Circle 143 on reader service card



THE term "subwoofer," though often used loosely, is generally applied to a special speaker that is designed to reproduce only the very lowest bass frequencies, those lying below the effective range of typical speaker systems. Strictly speaking, this would limit the upper frequency range of the subwoofer to about 50 Hz when used with a conventional full-range speaker system, or perhaps 100 to 150 Hz when used with miniature speakers having restricted bass output.

Subwoofers are usually characterized by large size, weight, and cost, and they usually need an expensive low-frequency crossover system as well. Often the best results are obtained when the crossover is electronically active and the subwoofer is driven by a separate amplifier.

The Allison "Electronic Subwoofer" (ESW) is a novel and effective answer to most of the objections leveled against subwoofers. It is a special-purpose equalizer whose response is designed specifically to complement the natural bass rolloff (12 dB per octave below the bass resonance frequency) of an acoustic-suspension speaker system. Although specifically designed for Allison speaker systems, it can also be used with some other types of acoustic-suspension speakers. However, because of the possibility of driver damage, the ESW must *not* be used with any form of vented, passive-radiator-equipped, or dipolar speaker system or with miniature sealed speakers that have limited power-handling ability.

When properly employed, the Allison ESW can extend the already substantial bass response of an Allison speaker down to 20 Hz with an essentially flat characteristic. This sort of performance is rarely obtained even with properly functioning subwoofers; many of those that do go down to 20 Hz (and by no means all of them do) are not necessarily "flat," since their level balancing depends on the judgment of a listener working with program material that is as much felt as heard.

The boost applied by the Allison ESW begins at about 50 Hz and reaches its maximum at 20 Hz. The response drops off rapidly at frequencies beyond that. The maximum boost supplied by the ESW is from 11 to 14 dB. This places extra demands on the power amplifier as well as on the speaker, since the amplifier may have to deliver more than twenty times as much power at the lowest frequencies as it would without the ESW.

In addition to (or instead of) its equalizing functions, the Allison ESW is an unusually effective audio "bandpass" filter. With the bass equalization active, the response drops at 24 dB per octave below 20 Hz and at 18 dB per octave above 20,000 Hz. The ESW can also be used in a FILTER ONLY mode, giving a flat response from 20 to 20,000 Hz and cutting off at a rate of 36 dB per octave below 20 Hz and 18 dB per octave above 20,000 Hz.

The only operating control on the ESW is a TURNOVER FREQUENCY knob, with settings for FILTER ONLY and three different woofer resonance frequencies (35.5, 41, and 48 Hz),

corresponding to those of the various Allison speaker models and closely matching those of some other popular acoustic-suspension systems. The switching operations within the ESW must be more complex than they appear to be on the surface, since Allison uses a digital-logic system instead of straightforward mechanical switching. There is also a toggle switch that replaces the amplifier's tape-monitor switch when the ESW is installed in the tape-recording loop (it can also be connected between the preamplifier and the power amplifier).

In spite of its apparent simplicity, the circuitry of the Allison ESW is quite sophisticated. Its active filters employ wide-band BiFET "op-amps" capable of a 13-volt-per-microsecond slew rate and having a 50-kHz power bandwidth. The specifications of the ESW are printed in some detail in the instruction booklet, but it can simply be considered as a noiseless, distortionless device when connected to a music system. It has unity gain and a rated noise level (A-weighted) better than 93 dB below 1 volt. The distortion is less than 0.1 per cent throughout the audio range under any normal operating conditions.

The Allison Electronic Subwoofer is a very compact unit—14 $\frac{3}{8}$ inches wide, 4 $\frac{3}{4}$ inches deep, and 1 $\frac{3}{4}$ inches high—and it weighs a mere 2 pounds, 5 ounces. It draws only 2 watts from the 120-volt a.c. power line and can be left on continuously or switched by the amplifier. It is designed so that no switching transients reach its outputs. It is finished in charcoal grey. Price: \$290.

● **Laboratory Measurements.** We measured the electrical performance of the Allison ESW by itself and also the acoustic output of a pair of Allison:Four speaker systems driven through the ESW. Listening tests were also carried out using these speakers.

The frequency response of the Allison ESW varied less than 1 dB overall between 20 and 20,000 Hz in the FILTER ONLY mode. The low-frequency response was down 36 dB at 10 Hz and better than 60 dB at 5 Hz compared with the 20-Hz level. Above 20,000 Hz, the

(Continued on page 62)

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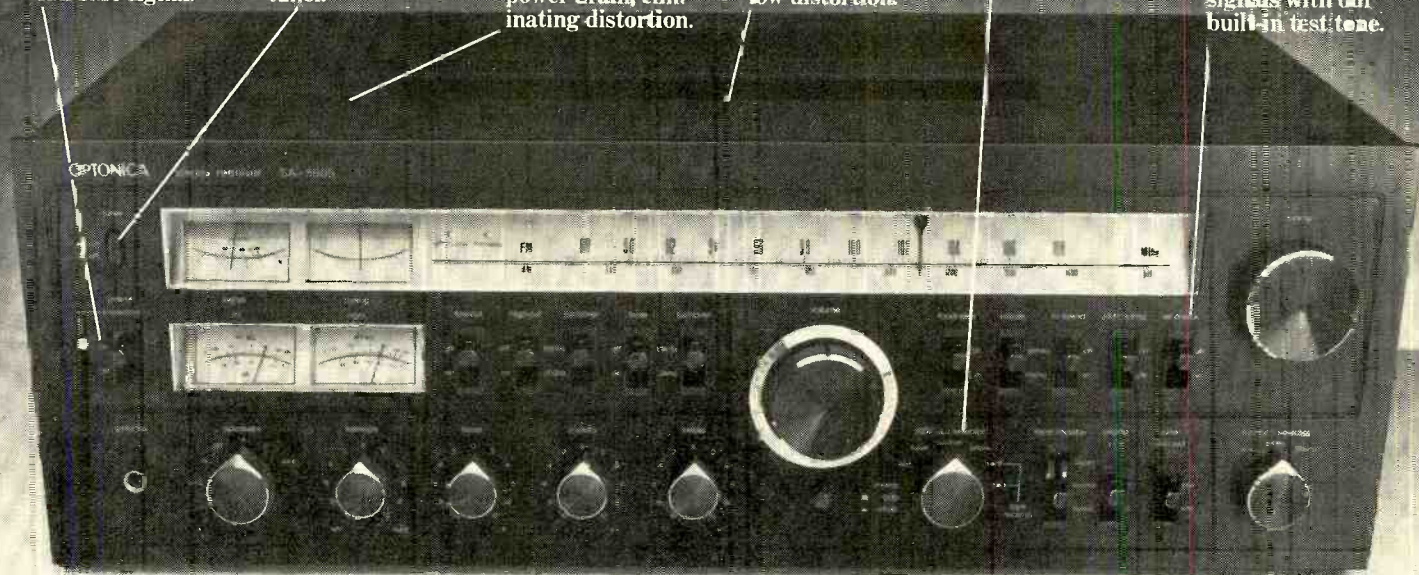
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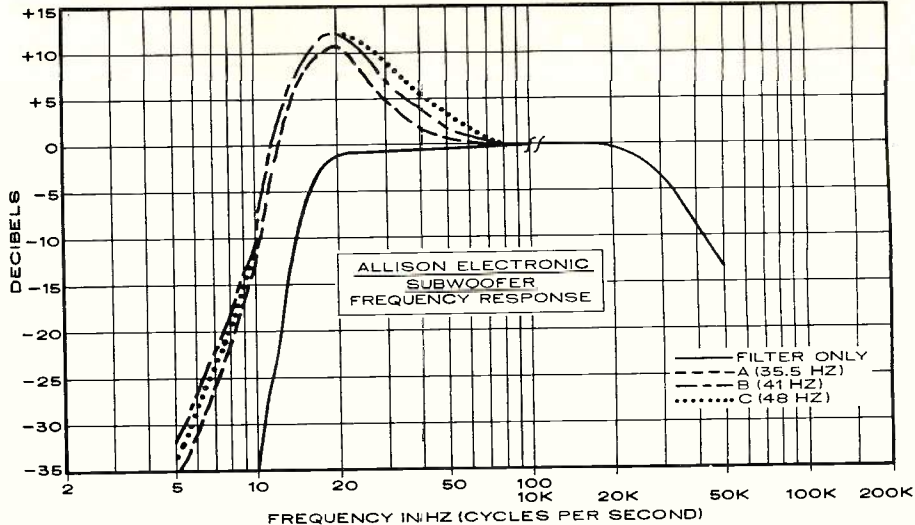
CIRCLE NO. 54 ON READER SERVICE CARD

response fell to -3 dB at 30,000 Hz and -13 dB at 50,000 Hz. The gain was unity with a high-impedance termination and -0.4 dB with the IHF standard termination of 10,000 ohms in parallel with 1,000 picofarads.

The boost characteristics of the ESW closely matched the curves shown in the Allison specifications. The A-weighted noise level was below our measurement capability of -80 dB referred to 1 volt. The harmonic distortion at 1,000 Hz rose from less than 0.002 per cent at a 0.1-volt output to 0.0045 per cent at 1 volt and 0.008 per cent at 2 volts. At 20 Hz, the distortion was 0.016 per cent at 0.1 volt, decreasing to 0.0032 per cent at 0.3 volt and 0.005 per cent at 1 volt. At 16,000 Hz (which we used instead of the usual 20,000 Hz so that we could measure the third-harmonic-distortion level on our spectrum analyzer), the distortion rose linearly from 0.013 per cent at 0.1 volt to 0.1 per cent at 1 volt and 0.2 per cent at 2 volts. The output clipped at 3.6 volts at all frequencies.

The effect of the ESW on the bass output of the Allison:Four (a compact speaker system with a single 8-inch woofer) was dramatic. Without the equalizer (FILTER ONLY), the close-miked response of the woofer was up 2.5 dB at 65 Hz and fell off at 12 dB per octave to -16 dB at 20 Hz. The "B" position of the equalizer (for a 41-Hz woofer resonance) is recommended for use with the Allison:Four in a normal installation. With it, the acoustic output of the speaker was flat within +3, -2 dB from 20 to 200 Hz. As a matter of interest, we also measured the overall frequency response of the speaker (which was tested and reviewed in STEREO REVIEW in June 1978). With the aid of the ESW, the combined frequency response was within ± 4 dB from 20 to 20,000 Hz. Quite impressive for a bookshelf-size speaker in the \$200 price range!

● **Comment.** Allison states plainly that most of the time the ESW will make no *audible* change in the output of a music system (the same is true of any genuine, properly adjusted subwoofer). If the program material does not have substantial content below about 40 Hz (and most of it does not) there is little or no benefit to be derived from using the boost of the ESW. However, its filter action is superb—it completely removed infrasonic rum-



ble from the amplifier and speakers, releasing the formerly wasted power for generating useful program output. Also, the reduction in ultrasonic energy afforded by the filter should prevent even the most TIM-prone amplifier from generating that form of distortion.

We used the ESW with a 200-watt-per-channel amplifier to drive the Allison:Four speakers. As expected, 99 per cent of the time there was no audible change when switching from FILTER ONLY to one of the boost positions, even when the program *seemed* to have a lot of deep bass (appearances can be deceptive). The best demonstration we found for the ESW was a recording of the Hammond Castle pipe organ, made by Richard Burwen and released by Decibel Records. It has enormous energy in the 20-Hz region, much of which is lost when played through ordinary speakers that cut off at 30 Hz or higher.

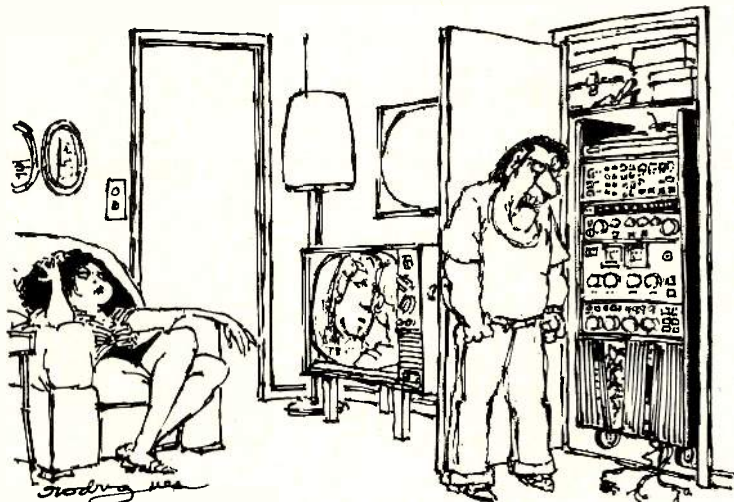
Our experience with this record (and a few others) left us with admiration and respect for the little Allison:Four, whose woofers could absorb almost the full output of the 200-watt amplifier at 20 Hz before their cones rattled out a plea for mercy! The bass output was, of course, completely out of keeping with the *size* of the speakers, being of the room-shak-

ing and foot-tingling variety, though not as loud as one would get from a good larger-woofer system.

Another characteristic of the ESW technique when it is used with special sources such as the Decibel record is that the average volume must be set very low, to a barely audible level. To listen to the organ at a more normal level was to invite disaster when the low pedal notes came on at full force, driving the amplifier to its full power and beyond. As a rule, the amplifier fuses blew almost simultaneously with the sounds of distress as the speaker cone reached its excursion limits, and we eventually learned to keep the volume control well below its normal settings.

Allison implies, though without stating it in so many words, that unless the program really *does* have content in the bottom audible octave, one is better off using the FILTER ONLY setting of the ESW. And it is worth noting that you should not expect the ESW to help any FM broadcast or the majority of commercial records and tapes. Our experience with the Allison ESW suggests that it would be a mistake to try to use it with any amplifier rated at less than 100 watts. Our 200-watt-per-channel unit was barely adequate for a 15 x 20-foot listening room. The average power could be well below 1 watt, barely moving the meters on the amplifier, but a crescendo plus the boost could easily overdrive both the amplifier and the Fours. If both were larger, there would be no such problem.

In closing, we can say that the Allison Electronic Subwoofer, with the appropriate amplifier and speakers, can probably equal or surpass the performance of many, if not most, of the separate "subwoofers" we have seen. One of the chief advantages of the Allison approach would seem to be its compactness. Not every listening room can hold one or two large subwoofer commodes, but an Allison ESW can be tucked away anywhere. Although \$290 is quite a sum to pay even for the best audio bandpass filter we have seen, that can be considered a bonus feature of the ESW. And we cannot imagine getting the kind of bass output we extracted from the Allison: Four speakers from any conventional systems selling for the combined price of the Fours and the ESW (roughly \$700).



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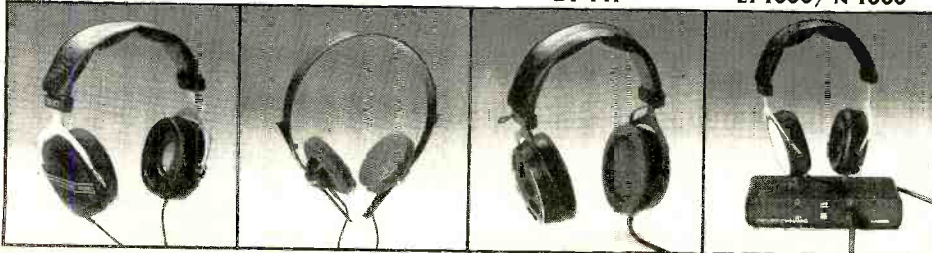
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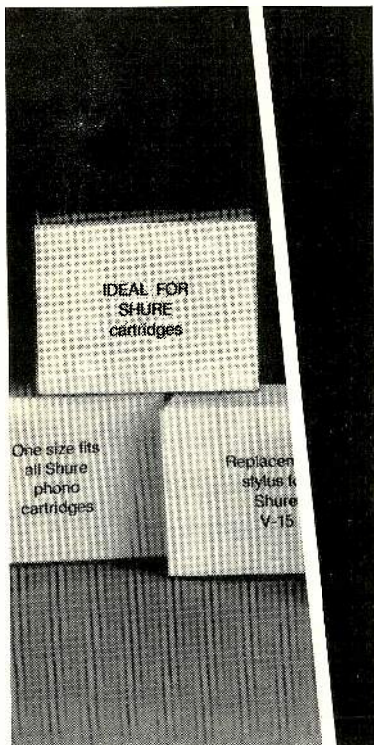
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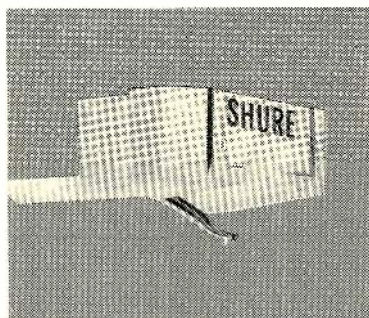
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Going on Record

By James Goodfriend



WHAT'S IN A (GENERIC) NAME?

As classical music passed from the nineteenth century into the twentieth, a lot of seemingly irreversible things happened to it, not the least of which was a virtual revolution in what a given piece of music was to be called. The poetic subtitles of the Romantics were the beginning of it, but the *generic* titles, even when they were not actually given (as was the case with most symphonic poems), were implicit and understood. We continue to have symphonic poems, sonatas, Masses, preludes, and the like even today, and people continue to feel as comfortable with the names as they ever did, though *some* of the meaning has gone out of them. But what would an earlier time have thought of a piece called a "casual development" (Henry Cowell), an "engram" (Arthur Cunningham), a "sarcasm" (Serge Prokofiev), or a "figment" (Barbara Kolb)?

The eighteenth century knew pretty well what to expect from any new composition called "partita," or "symphony," or "sonata da camera." Such generic terms represented specific forms and styles of music, and even when the composer made a departure from the expected, it was comprehensible to the audience *as* a departure. It was the same earlier. Even such an exotic (to us) title as *Missa L'Homme Armé* was perfectly understandable to contemporaries of Josquin des Prez; it was a Mass, and everybody knew what a Mass was, and it was based musically on the song *L'Homme Armé*, and almost everybody who knew anything about music knew what *that* was. But a fifteenth-century man would not know what to expect from any piece called a "zone" (Max Schubel), a "phonemena" (phonemenum?—Milton Babbitt), a "tangent" (William Bergsma), or an "excursion" (Samuel Barber), and, frankly, neither do we.

What we have here is a severe case of separation of the "what you see" from "what you get," and I wonder if it hasn't added to the difficulties many listeners seem to have with twentieth-century music. It isn't that listeners are averse to *poetic* titles; they rather favor them, as anyone who has ever compared the sales of titled Beethoven sonatas with those of untitled ones can attest. But people expect a title to tell them something of importance or interest about the music they are about to hear, and I wonder what musical meaning is

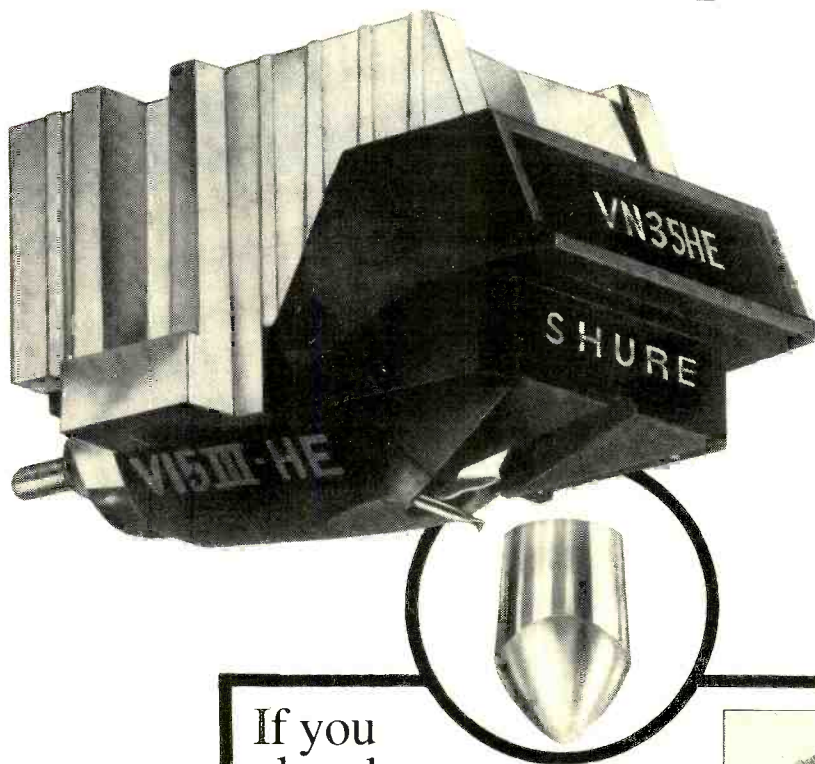
conveyed by such names as "gravities" (Richard Felciano), "infinities" (Meyer Kupferman), "alternances" (Makoto Shinohara), or "news items" (William Mayer), whatever the quality of the music subsumed by them.

Probably Satie was to blame. It would not be the only one of his jokes to have had serious repercussions. But Debussy was at fault too. "*Prélude*" was okay, and "*étude*" was virtually rear-guard, and one can always get away with "suite," no matter what precedes it. But "*images*" (pictures) was an invitation to trouble (with Moussorgsky too), and "*estampes*" (prints) has led to a whole gallery of graphicisms: "line drawings" (Leo Kraft), "silhouettes" (Nicolas Slonimsky), "pastels" (William Mayer), "*aquarelles*" (watercolors, Francis Chagrin), "*gráficos*" (prints, Maurice Ohana), "*incisioni*" (engravings, Vittorio Rieti), "woodcuts" (Jan Kapr), and even *Fifteen Prints after Durer's "Apocalypse"* (Luboš Fišer), culminating in that currently "in" word for original prints, "multiples" (Richard Moryl).

WOULD you say that there was something of a search for the exotic going on here? I would. Some composers seem to seek it through the use of outmoded musical terms, such as "tropes" (Niccolo Castiglioni), "cadeneces" (Robert Hughes), "bicina" (Anthony Iannaccone), and "sequences" (Luciano Berio), risking, perhaps, a certain misunderstanding thereby. Of course there can be no misunderstanding at all about a title like *Cybernetic Cantilevers* (Gordon Mumma). That can mean *only* a piece of modern music of a certain sort—unless it refers to a steel sculpture of a bridge partly supported by sound waves. But *that* we've learned only through experience. The tendency has been, all along, to call music by nonmusical names—artistic, literary, scientific—perhaps in the hope of making it more palatable.

It seems to me, though, that someone is missing a bet here, for surely there are more *appetizing* titles to be found than most of those cited above. "What shall we listen to tonight, dear, *Three Cucumbers for Piano Solo*?" "No, I'm in the mood for something more substantial. How about *Five Filet Mignons, Rare, with Garlic, for Brass Choir and Double String Orchestra, Hold the Potato*?"

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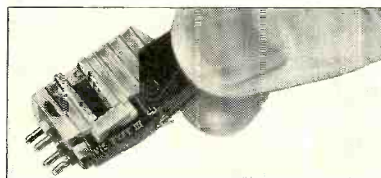
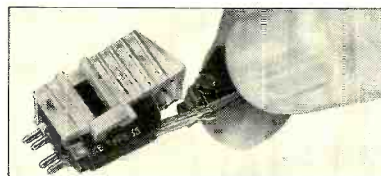
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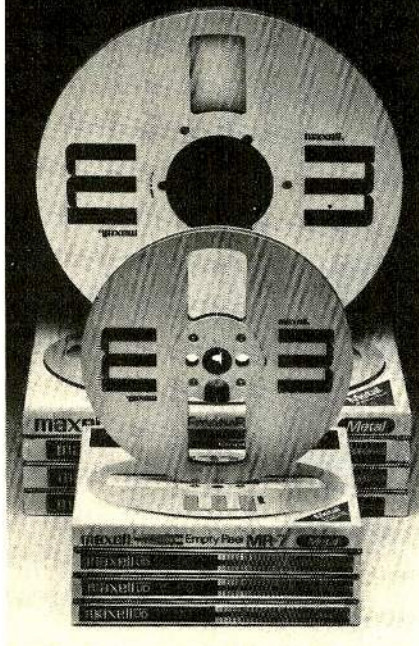
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The Pop Beat

By Paulette Weiss



SECOND-GENERATION ROCK

A FEW months ago, as I was sorting through yet another pile of new pop records sent to this office for review, Music Editor Jim Goodfriend, my boss, asked rather plaintively, "Do we *have* to review so many second-generation rock bands?" I knew just what he meant. Something inside me rolls over and goes to sleep at the mere thought of groups like Foreigner and Toto, groups that are technically proficient, enormously popular, and totally devoid of originality. They are the craftsmen of rock, masters of the recycled riff and the thrice-familiar lyric, all produced, performed, and recorded to a fare-thee-well.

Their music is functional, of course. It keeps a lot of people entertained, and it fills the airwaves, fills the concert halls, and fills the record companies' coffers. Despite fans' claims to the contrary, such music just ain't Art, it's Craft. But it's also too ubiquitous to be ignored. In the twenty-five years that rock-'n'-roll has been with us, bands that make this kind of music have increased in number and have carved out for themselves a spacious gold- and platinum-lined niche in the music business.

What Jim Goodfriend means by "second-generation rock" has less to do with chronology, I think, than with approach. That is, a band is not "second-generation" simply because it has been recently formed, but because its talent is limited to a facile reshuffling of elements other musicians have discovered or created before them. A band like Dire Straits, although newly formed and also dependent on the same musical elements, escapes the second-generation label by *reshaping* these aural elements to create a distinctive, original sound.

Once the question was raised, I decided to do a little research into the background and psychology of a second-generation band. Part of the research was an interview with Tycoon, a better-than-average group of this kind, and it proved to be an interesting example. Technical proficiency seems to be almost taken for granted. All six members of Tycoon have served a more extensive apprenticeship than the usual knocking about in garage and bar bands that almost all rock musicians have experienced as kids.

"You sort of have to have a Ph.D. in rock-'n'-roll to get here," Tycoon bassist

Mark Kreider said. Originally trained in classical music, Kreider switched to rock and worked for years as a session man for the likes of Johnny Winters and Aerosmith. Lead vocalist/guitarist Norman Mershon played professionally in bands from the age of thirteen and spent the last several years as stage manager and assistant engineer at the Record Plant. The other members of the group are all similarly experienced.

"But no one had actually done his own album as the spearhead of a band," Mershon said. "Each of us had always been more or less in a supportive role. At some point we realized that instead of helping other people get their sounds together, we could do it for ourselves."

The sound they got together was a calculated amalgam, as it usually is the second time around. "We had firm parameters when we began," Gershon continued. "We wanted a vocal band with nice melodies and a good beat." Their first album, "Tycoon" (Arista 4215), was an impressively professional debut and immediately spun off the hit single *Such a Woman*.

THAT'S another trait of second-generation bands: commerciality. A good record-company a-&-r man can hear those nicely reshuffled licks that bring in the cash from a mile away. Even before Tycoon's demo tape began the regular round of submission to various record companies, an a-&-r man with prescient ears crashed a rehearsal and liked what he heard.

The word spread, the demo circulated, and a feverish courtship began. Within one week, interviews with eager executives from A&M, Atlantic, and Arista were scheduled three days in a row.

"It was amazing—a triple-A week," Gershon said. "We never even got to the Bs and Cs in the music business."

No matter what its position in the alphabet, a record label is likely to find the second-generation band even more attractive now that the industry's big boom period seems to have ended. Even more than in past years, surefire acts will dominate the industry's output in the early Eighties, so you can count on a steady flow of rehashed rock (and, of course, disco) to amuse you on the road to 1984. Have a nice trip. □

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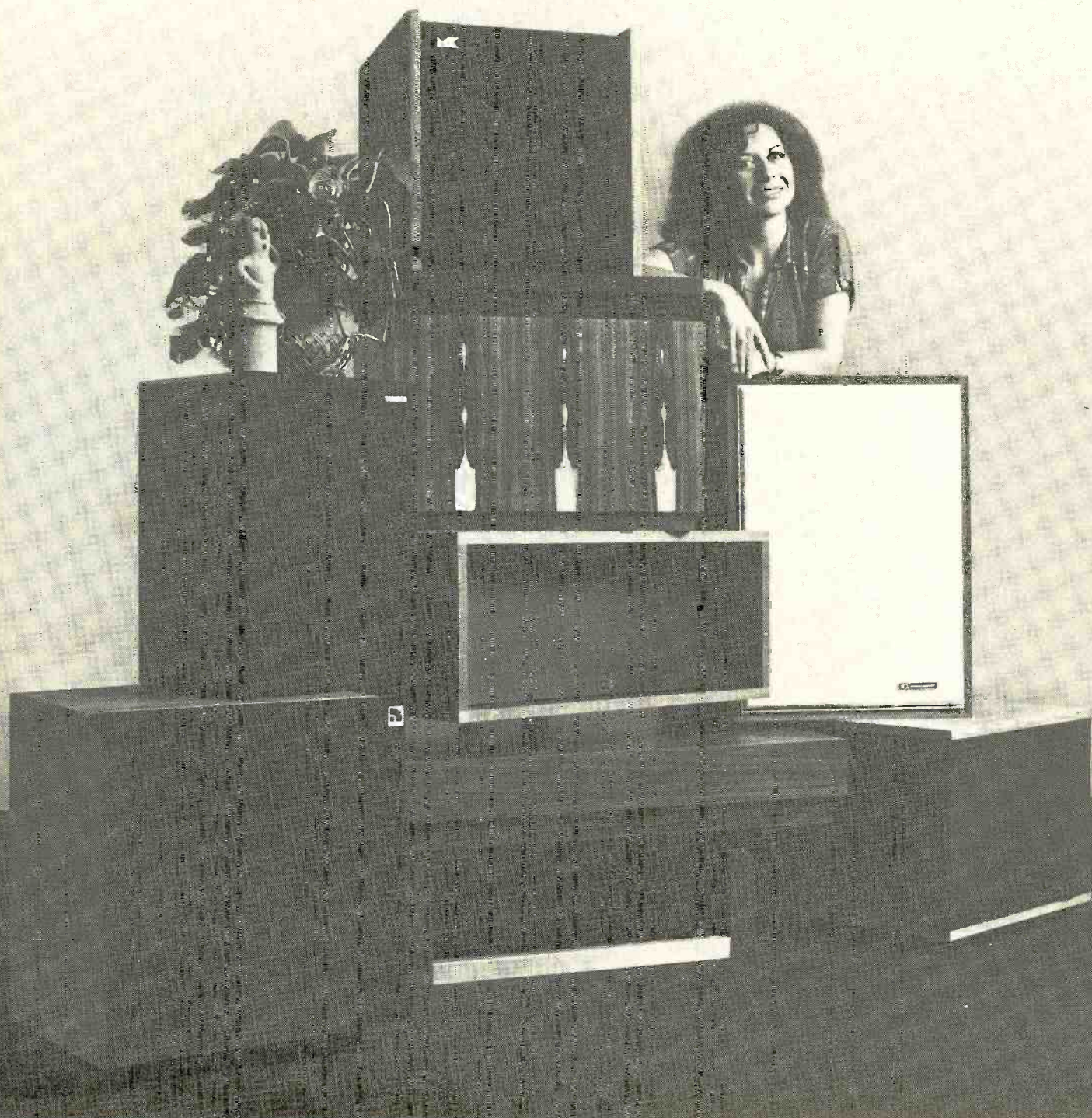
CIRCLE NO. 34 ON READER SERVICE CARD



A brand-new generation of low-end loudspeakers has come along just when they're needed to reproduce the low frequencies built into recent recordings

SUBWOOFERS

By Peter Mitchell



IN recent years speaker manufacturers have given a great deal of attention to a new product category: the "subwoofer." Subwoofers are used (with some overlap) in two ways:

- The true "subwoofer," as its name suggests, is a loudspeaker intended to reproduce the lowest audible frequencies, particularly the octave or so below the useful output of the woofers in most conventional "full-range" speaker systems. Since most popular speakers are effective down to around 40 to 60 Hz, the essential operating range of the subwoofer would extend down from that range to 30 or even 20 Hz. Thin-panel loudspeaker systems with electrostatic, planar-magnetic, or other specialized drivers (see "Exotic

Loudspeakers," STEREO REVIEW, August 1978) typically have dipole radiation patterns which suffer from front-to-back cancellation of the bass frequencies. With these, a subwoofer can be used to cover the range below about 100 Hz.

- Another "subwoofer" application is as a complement to "mini" speakers. Many of these, less than a cubic foot or so in volume, provide startlingly good performance and are easy, because of their small size, to accommodate in terms of decor (see "Nineteen Minispeakers," STEREO REVIEW, August 1979). Since their sole fault is limited bass output, there is a trend toward assembling three-piece speaker systems in which two small

"satellites" are combined with a floor-installed woofer module or "bass commode." (These bass units are often referred to as "subwoofers"; properly speaking, however, this designation should apply only to those with an unusually extended deep-bass response.) Typically, the crossover between the bass commode and the satellite speakers is set at around 200 Hz. This means that the entire bass range is handled by the bass commode, and the satellites provide all frequencies from the lower midrange on up. While the primary emphasis in this article will be on the use of subwoofers (and other means) to reproduce the lowest musical frequencies, many of the principles and comments apply as well to the use of bass modules with small satellites.

Program Material

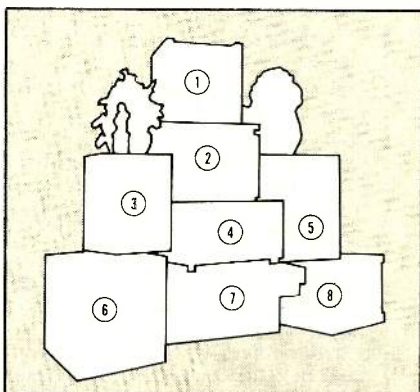
To begin, let us look at the scarcity of very low bass frequencies in recordings, and then at the difficulties that arise in reproducing them when they do occur. When Telarc's first digitally mastered recording (featuring Frederick Fennell conducting the Cleveland Symphonic Winds in music by Holst and Handel) was released last year, many purchasers were startled to find inside a blunt notice warning of possible woofer damage from the rather vigorous bass-drum *thwacks* that occur at several points in the recording. In a similar vein, the jacket notes for Crystal Clear's "The Fox Touch," a direct-to-disc recording of Virgil Fox at the pipe organ, included advice about fusing one's loudspeakers to protect them from overdrive by the powerful low pedal tones on the record. These and a few other discs have become audiophile spectacles, favorites for showing off the low-end response of those stereo systems that can handle such signals without breakup.

Why are such low frequencies rarely present at a high level—or even at an audible level—in recordings? Why is it that records so rarely embody the natural balance of low-frequency energy in musical sound? The answer is a complex one, for there are actually quite a number of points in the recording process where deliberate, inadvertent, or unavoidable bass losses can occur. For example, whatever deep-bass energy the microphones pick up may be intentionally removed by filtering. In concert-hall recording this is done to remove "room rumble" caused by floor vibration stimulated by subway trains, elevator motors, air-conditioning compressors, and nearby street traffic. Such rumble is usually too low in level to be audible, but it tends to be recorded at an exaggerated level by direct conduction to the microphones via their stands. Again, in studio recordings of popular music, low-cut equalization is often applied to bass-drum and bass-guitar tracks in order to produce a crisp, "tight" sound that has its max-

imum energy levels in the 60- to 100-Hz range. In addition to being popular, this kind of sound has the practical advantage of being able to produce a strong, punchy, high-volume impact without requiring either excessively large record-groove modulations or woofer-cone motion.

Even more deep-bass loss is likely to occur during the disc-cutting process. There are some mastering engineers who cut records with extended bass response (or attempt to), but the more common practice is to use a "blend-and-cut" filter. At low frequencies, the two channels are blended into mono in order to avoid large vertical modulations of the groove, which can cause difficulties both for the cutter head and the playback cartridge. And frequencies below 50 Hz or so are often filtered out because the lower the frequencies the larger the groove

modulation cut into the record, and thus the less the available playing time (successive grooves have to be spaced farther apart to accommodate large groove wiggles). Of course, with many of today's recordings, this excuse for low-end limiting doesn't apply, since playing time is generally planned to be under 20 minutes anyway. The consequences of *not* making this trade-off between bass level and playing time is illustrated by a recording I found in Japan: a "Stereo Laboratory" remastering of the London recording of Solti conducting Berlioz's *Symphonie Fantastique*. Normally this 53-minute work is squeezed onto two sides of one disc, but here it was extravagantly spread out over four sides ranging from 8 to 15 minutes in length; the two-disc set retails for 56,000 yen, or about \$26. In truth, the bass *does* sound cleaner, fuller, and less limited; but is the improvement sufficient to justify the extra cost? Meanwhile, back in the U.S., CBS has just installed a new "Discomputer" system in its cutting rooms, to be used in mastering both Columbia records and those of other labels that use CBS' disc-pressing services. This system "previews" the signal on the master tape before cutting begins, analyzing both signal amplitude and phase in order to insure optimum handling of the groove-modulation levels and more efficient groove spacing. The intention, of course, is to resolve the conventional conflict between bass-modulation levels and playing time.



ON the facing page Popular Music Editor Paulette Weiss peers over a mountain of subwoofers: (1) Miller and Kreisel "Volkwoofer," (2) Janis W-1, (3) Visonik Sub-1, (4) Braun LW 1, (5) Dahlquist DQ-1W, (6) Audio Pro B2-50, (7) Altec Lansing LF-1, and (8) Speakerlab SD 1000.

What's Down There?

When the sound of a stereo system whose speakers roll off below 50 Hz is compared with that of a system that is flat down to 20 Hz, the most impressive thing about the comparison is how little difference it makes—*most of the time*. (Those subwoofers that produce a dramatic effect when they are switched in are usually found to be boosting the mid-bass range—say, 50 to 100 Hz—in addition to whatever they provide at

SUBWOOFERS...

"Once you have heard the lowest octave reproduced correctly, you may not want to live without it."

the very low frequencies.) Very few musical instruments are capable of significant output below 50 Hz, and even those are called upon to provide it only occasionally. Striking the lowest keys on most pianos elicits only upper harmonics; the fundamental is too weak to hear. The contrabassoon, the double-bass viol, and the tuba have a few notes below 50 Hz, but most of their music usually lies between 50 and 100 Hz. A bass drum can produce a massive deep-bass output, but often this is not evident even at a live performance. Some pipe organs emit floor-shaking tones as low as 16 Hz, but many organs built in the Baroque style cannot even manage the low C at 32 Hz. So even if all records were made with a flat low-end response instead of the rolloffs described earlier, a subwoofer would be called upon to provide the lowest octave of audible sound only very occasionally.

On the other hand, once you have heard that lowest octave reproduced correctly, you may not want to live without it. Hearing (and, equally important, *feeling*) the tonal foundations of a Bach fugue or a Mahler symphony can be immensely satisfying. Owning a subwoofer is a little like owning a super-power amplifier: most of the time the whole of its expensive capability is unused; but during those moments when the full capacity of the system is called into play, the cost seems fully justified. For classical-music listeners, at least, one of the pleasures of a subwoofer is quite *unspectacular*, having to do with sounds whispering just at the threshold of audibility. One of the distinguishing characteristics of a large concert hall is its "ambiance," the continuous background of reflected sounds. In a large hall this reverberant ambiance is strongest at very low frequencies, and its reproduction (judging from the minority of recordings that capture it accurately) can contribute a great deal to the sense of realism of the sound—the sense of hearing an acoustical event taking place in a real environment, rather than a dimensionless reproduction provided by a pair of speakers. (Accurately recorded ambiance, incidentally, is more often encountered in live-concert rather than studio-made recordings.)

While the very lowest bass frequencies are often said to be felt rather than heard, don't assume that the chest-thumping bass heard/felt at live rock concerts necessarily requires a subwoofer for its reproduction. The impact of bass in live rock or at a disco is usually owing to its volume level rather than to depth of frequency. The strong bass beat in many rock performances—or at a disco—actually has its dominant energy in

the 60- to 120-Hz range. I once blew out a woofer trying to "feel" the beat in a rock record by turning up the bass control on the amplifier and the 30-Hz control on an equalizer to maximum boost. What I should have done was to turn *down* the 30-Hz control to reduce the woofer's back-and-forth excursion in response to record warps and other infrasonic excitation) and turn *up* the 60- and 120-Hz controls, since those are the frequencies at which the bass guitar and the drums in rock recordings have their maximum energy. (This is why many loudspeakers are designed to have a bump in their response curve centered around 70 to 80 Hz.)

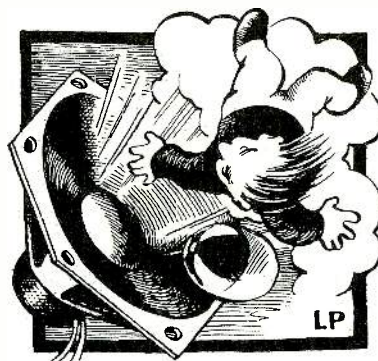
Deep-bass Reproduction

The lowest audible frequencies are the most difficult and hence the most costly to reproduce. The problem is aggravated by the nature of human hearing. It is well known that at *all* levels the ear requires more bass energy than midrange or treble

energy to produce the same perceived "loudness," and this disparity increases as volume levels decrease. At very low frequencies, sound-pressure levels below 60 dB are below the threshold of audibility and are not heard at all! It is the compression of the curves at low frequencies that is important; a 10-dB bass cut produces a subjective loss as great as a 20-dB volume change at mid frequencies. Consequently, even modest bass rolloffs in microphones, tape recorders, disc cutters, and loudspeakers can push a low-bass tone below the threshold of audibility. Fortunately, the converse is also true: in many cases, a relatively modest boost in the low bass will bring inaudible bass fundamentals up to a satisfying loudness level.

The greatest difficulty in deep-bass reproduction is imposed by those physical laws that govern the behavior of loudspeakers. Let's assume that you have a conventional loudspeaker system, of either acoustic-suspension or vented design, whose response is reasonably flat down to 40 Hz. In order to

BASS EQUALIZATION



WHATEVER a loudspeaker's inherent frequency response may be, its ability to create deep bass is limited in the final analysis only by its "displacement volume" (its ability to move air), which is simply the product of its cone area and the length of its linear excursion (how far the cone can move back and forth without excessive distortion). This is as true for a separately enclosed "subwoofer" as it is for the woofer in a conventional, full-range speaker system. Indeed, a great many of the speaker systems sold during the past twenty years have 8-, 10-, or 12-inch woofers with enough excursion (up to 1/2 inch or so) to provide satisfying amounts of deep-bass output, so you may be able to satisfy your craving for better bass simply by providing some electronic assistance to your present speakers.

The principal difficulty is that electronic boost is required only within a relatively narrow frequency range. In general, most recordings (and most speakers) have full bass response down to about 50 Hz or so, with response falling off below that frequency. But we want to present the bottom

octave of the musical spectrum at a realistic loudness level without muddying up the sound with excessive boost of the middle-bass frequencies above 80 Hz or so. That is why a conventional bass tone control—or even an octave-band equalizer—won't do the job. And we emphatically do *not* want to waste amplifier power or cone excursion by amplifying the *non-musical* noise signals below 20 Hz (the result of motor and bearing rumble, floor vibration, disc warps, tone-arm resonance, and acoustic feedback from speakers to phono stylus). Fortunately, it turns out that the low-frequency performance of many sound systems can be made cleaner and tighter simply by including in the circuit a "subsonic" (or, more correctly, "infrasonic") filter.

The low-frequency response of many loudspeakers is more or less flat down to a "system-resonance" frequency in the 40- to 60-Hz range, with a uniform and predictable rolloff below. It is therefore possible to design an equalization (boost) circuit that will complement this response and yield a composite response flat down to 30 or even 20 Hz. This has been done by Allison Acoustics in a product called the Electronic Subwoofer (see test report on page 58 of this issue).

A similar but less elaborate bass equalizer is manufactured by Cerwin Vega. Called the DB-10 "Bass Excavator," it is preferred for use with speakers of the "vented" or non-air-suspension type. It yields maximum boost down to 30 Hz and then cuts off sharply. This limit was chosen because vented and vent-substitute speakers (bass-reflex, tuned-port, ducted, passive-radiator, and drone-cone speakers are all of this type) cannot be equalized very far below the frequency to which the drivers and enclosure are tuned or acoustic loading will fail. Above its judiciously selected cutoff frequency, the DB-10's equalization effectively re-

make that loudspeaker flat down to 20 Hz, the size of the speaker's cabinet would have to be increased by a factor of eight, or else its efficiency would have to be reduced by a factor of eight, necessitating an eightfold increase in amplifier power to drive it. Since the same physical laws apply to subwoofers as to bookshelf speakers, flat response to 20 Hz or below is a rare and expensive commodity. A sensible compromise is to make the system flat to 30 Hz; this requires a box only about two and a third times larger than normal—still a practical size for living-room use—and gives usable response down to the 20- to 25-Hz range.

The actual response that you will get from a given subwoofer depends, as it does with a full-range speaker, on your listening room. Loudspeaker systems designed for flat response to a given low frequency often roll off well above that frequency in typical living rooms. When low-frequency sound waves strike the walls, only part of the energy is reflected back into the room to sustain the sound field; the rest, in effect, passes

through the walls and floor (perhaps to reappear in your neighbor's apartment). The response of a woofer or subwoofer is also dramatically affected by the acoustical properties of the listening room, a subject that could easily take up an article or two of its own—and has.

Subwoofers employ assorted design principles: acoustic-suspension, passive-radiator, slot-loading, transmission-line, etc. As with conventional speakers, the design used is less important than *how well the design is executed*. There are good and bad loudspeakers of every type, and over most of their operating range well-designed speakers of all types should yield equally satisfactory results.

One or Two?

Subwoofers are rather expensive luxuries, and so the option of buying just one instead of two is appealing. Indeed, many of the currently available subwoofers are ex-

plicitly intended for "common-bass" use. Such systems employ "matrixing" crossovers, a woofer with dual voice-coil windings, or even two or four woofers in the same cabinet—all of which schemes are intended to provide the bass of both channels from one enclosure while maintaining stereo separation for the midrange and treble frequencies. Common-bass reproduction works because the human ear is insensitive to the direction from which very-low-frequency tones arrive. We localize bass-drum or bass-viol sounds by focusing on the "attack transient" that begins each note; this works because such transients contain overtones at midrange frequencies. But when *pure* low-frequency sounds are heard, it is very difficult to pinpoint their origin in space with certainty, especially in the semi-reverberant environment of a living room. So it is assumed that we can safely relegate the low frequencies below 200 Hz or so to a separate box and locate it anywhere—even behind the listener—without noticeably affecting stereo localization. (Continued overleaf)

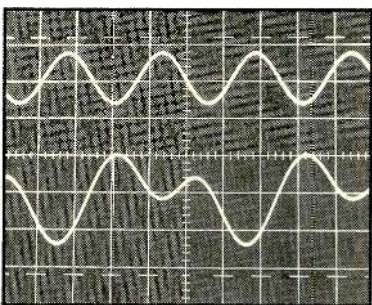
stores the solid impact of the low-bass frequencies that are rolled off in many recordings.

However, there is an important limitation affecting all such schemes for electronically boosting the bottom end of recordings and loudspeakers. At those moments when the boosted low frequencies are being reproduced, increased power demands are being made on your amplifier, so you may not be able to play music quite as loud as usual before encountering amplifier clipping. And the lower frequencies require dramatically increased woofer excursion; to reproduce a 30-Hz tone, a woofer must move *four times* as far as it does when reproducing a 60-Hz tone at the same level. Electronic bass boost works well when the woofer cone's excursion capacity is not already being fully exploited under normal conditions. And in many cases the use of an infrasonic filter provides a compensating saving (in amplifier power and cone excursion) that is wasted by a non-filtered system.

BUT you should be alert to the possibility that bass equalization may cause you to reach—or exceed—the safe excursion limits of your woofer. *Do not* assume that such equalization will permit you to produce the sound-pressure levels of a disco with a couple of 10-inch woofers. You will only succeed in making the voice coils clatter against the magnet structures, and the resulting damage is likely to be considered abuse not covered by the manufacturer's warranty. The object of electronic bass equalization is to bring the deep-bass frequencies in music up to equality with the rest of the musical spectrum—not to blow out windows. And when you play some of the recent direct-to-disc or digitally mastered recordings that have unusually strong deep bass in their grooves, be alert to the possible need to *cut back* the equal-

ization in order to avoid overdriving your woofers.

Bass equalization is not a new idea, of course; Bose and Electro-Voice are among the manufacturers of speakers whose bass performance is achieved by a special complementary equalizer supplied with the speakers. Some of the subwoofers in the accompanying listing also have built-in amplifiers carefully designed to work with the specific characteristics of the drivers and enclosures they are intended for. And a new series of KLH speakers employs an "analog bass computer," an equalizer with a built-in excursion lim-



These oscilloscope traces illustrate the action of the dbx Model 100 (top photo), the home version of the dbx "Boom Box" used in discos. The upper trace is of a pure 74-Hz tone fed into the unit, which generates a 37-Hz tone and mixes it with the input signal to produce the composite waveform shown below.

iter that automatically limits the boost whenever the signal would exceed the woofer's safe operating range.

If you have noticed that disco records played at home don't have the belly-whomping impact you feel at your neighborhood dance parlor, it may not be just the difference in loudness that you're hearing—or even the result of the disco's having perhaps twenty square feet of woofer cone operating while you are making do with a mere two square feet. These are important factors, but another part of the difference may be due to the disco's use of a device called the Boom Box (made by dbx, it's also available in a version for home use, the dbx Model 100 subharmonic synthesizer—\$200). As noted earlier, limitations of the disc medium make it difficult to cut high levels on records at very low frequencies. The subharmonic synthesizer detects signals in the 55- to 100-Hz range, assumes that they are the second-harmonic overtones of low-bass fundamentals rolled off when the record was made, synthesizes those "fundamental" signals in the 27- to 55-Hz range, and adds them into the sound at a level set by a front-panel control. The result is a dramatically solid low-bass punch for recordings of all sorts of music. When added with discretion and taste, the synthesized deep bass seems surprisingly natural even with classical music—though you have to be tolerant of those occasions when it creates "fundamentals" that never existed, adding a rumbling quality to a baritone voice or introducing a growling bass-fiddle line under the cello in a string quartet. On these occasions the unit's bypass switch comes in handy. The dbx Model 100 also has an infrasonic filter that rolls the signal off sharply below 20 Hz; this helps to preserve available woofer excursion for reproducing musical bass tones, both natural and synthesized.

SUBWOOFERS...

"You will find that the assembly of such three-piece systems has been made relatively easy."

If you are harboring doubts about the wisdom of common-bass reproduction, note that in many records the bass is already essentially monophonic. Whenever there are large amplitude or phase differences between the stereo channels, the groove modulation will be vertical as well as lateral, but vertical modulations are more difficult to cut and play cleanly than lateral modulations. So, as mentioned earlier, it is common during the record-manufacturing process to combine the lowest frequencies into a monophonic signal that will be cut as a totally lateral modulation. As long as this blend is confined to low frequencies, stereo imaging is not impaired; the ear "hears" each low-frequency sound as being located wherever its corresponding midrange overtones are in the stereo sound field.

Not all recordings are made with blended bass, however. Classical music in particular is often recorded with widely spaced microphones, yielding a stereo image that depends on phase and amplitude differences between the signals reaching each mike. With such recordings it is preferable to use separate woofers or subwoofers in each channel in order to preserve the stereo information in the signal. The audible benefit for the classical-music listener is a fuller and more realistic reproduction of the texture of low-frequency sounds and a more natural sense of "depth" in the stereo image. Whether the benefits are worth the cost and inconvenience of paired subwoofers is a decision that each audiophile must make for himself.

Choosing a Subwoofer

If you are attracted by the flexibility and spacious imaging of compact or minispeakers and wish to use them with a subwoofer, it may make sense to select a bass commode from the same manufacturer who supplied your "satellites." You will find that the assembly of such three-piece systems has been made relatively easy, relieving you of the need to decide on such things as the crossover type, frequency, slope, driver phasing, and so on. Typically, a crossover is already included in the bass module; you simply run wires from both channels of your amplifier to the bass commode, and then run wires from the commode to each satellite speaker. The blending of the bass from both channels is also provided in the commode, either by means of a "matrixing" circuit in the crossover or by the use of two voice coils on the subwoofer so that it is driven directly by the inputs from both amplifier

channels. Some bass commodes also contain level controls that permit you to adjust the relative volume of the bass unit and the satellite speakers.

If your satellite speakers are made by a manufacturer who does *not* make subwoofers, check with the manufacturers listed in the accompanying table. Some of them had you in mind when designing their units; system assembly will be nearly as easy as if you purchased a three-piece suit off the rack.

But if you are setting out to add deep bass to an existing stereo system with full-range speakers, then you have a number of questions to resolve. Should you use one subwoofer or two? Should the crossover be active or passive? At what frequency should it take place and how steep should it be? Should the subwoofers be in phase or out of phase with the main speakers at the crossover frequency? Typically, there is no single "right" answer to these questions; instead, there are pros and cons to be balanced.

For example, if the low end of the main speaker and the upper end of the subwoofer are each rolled off gradually at 6 dB per octave, then an "ideal" crossover transition can be obtained with no phase or response irregularities where the two overlap. But many designers prefer steeper, 18-dB-per-octave crossover slopes in order to avoid audible contribution from the subwoofer at mid frequencies, as well as to protect the main speakers from being overdriven by large low-frequency signals. If you set the crossover frequency low (for example, 50 Hz), then the bass unit is truly functioning as a "sub" woofer and you can use a gradual crossover with no worries about its midrange output. Moreover, at such a low frequency, an imperfect crossover transition will be inconspicuous. On the other hand, a high crossover frequency (such as 200 Hz) has the very desirable property of keeping large-exursion bass signals out of the main speakers, permitting the latter to play much louder without audible harmonic or intermodulation distortion.

A passive crossover is frequently used at the output of the amplifier; it sends the low frequencies to the bass unit and the remainder of the frequency spectrum to the main or satellite speakers. This technique essentially employs a conventional crossover network not unlike the crossovers found in ordinary speakers. It has the important virtues of simplicity, modest cost, ease of system installation, and generally good performance. But the ultimate crossover frequency and slopes will depend in part on the complex impedances of the speakers being joined, and the effect this will have on performance cannot easily be predicted (though the manufacturer himself may have information that will help).

The theoretically superior (but much more costly) option is the active or "low-level" crossover, which is installed at the output of the preamplifier and splits each channel's signal into low- and high-frequency segments which are separately amplified by individual stereo power amplifiers (a biamplified system, in other words). A broad range of electronic crossovers is available, both from subwoofer suppliers and from amplifier manufacturers. Some are designed for a fixed crossover frequency

and slope; others provide a flexible choice of frequencies, slopes, or both, giving you the freedom to optimize the matching of unrelated woofers and upper-range speakers—and also the chance to produce a badly unbalanced system. Some audiophiles, using just their ears and a lot of trial-and-error listening, can succeed in setting the controls of a flexible electronic crossover to obtain a smooth and natural-sounding transition from woofer to upper-range speaker. But in most cases the best approach is to get help from measuring instruments. I strongly recommend that you borrow or buy a real-time spectrum analyzer such as the Ivie IE-10A, Scott 830Z, Phase Linear 1200 Series Two, or Audio Control C-50A; each of these is supplied with a calibrated microphone with which you can observe the frequency response of the speakers and quickly arrive at good preliminary settings of crossover frequencies and woofer/upper-range balance. If you like, you may then fine-tune the system by ear. (Note that some real-time analyzers have appropriate test-signal sources built in.)

In addition to its potential flexibility, an active crossover provides several other advantages that help justify its cost and that of the extra amplification required. For one thing, the woofer is connected directly to its driving amplifier, whose damping factor is then fully applied to controlling the woofer's motion for tight and detailed bass. And biamplification is found to yield unusually clean, transparent sound at very high peak-loudness levels. Low-frequency signals can drive the amplifier right up to clipping without causing the treble to become harsh or gritty, since the higher frequencies are being handled by a separate amplifier.

THE most widely quoted advantage of using subwoofers and satellites instead of single-cabinet full-range speakers is the flexibility it provides; you can put the mid-range/treble speakers where they yield optimal stereo imaging and locate the woofers to take best advantage of room boundaries and resonances. Such flexibility may not be unlimited, however. In recent years there has been much discussion of the possible importance of phase linearity in loudspeakers, and many systems have been designed to eliminate the slight delay (less than one millisecond) between the woofer and midrange in conventional speakers. If you place a bass commode several feet from the associated satellite speakers, you are introducing a large phase shift or signal delay (approximately one millisecond per foot of distance); your ears will have to decide whether there are audible consequences that would mandate a different woofer location. In any case, as with any speaker-system setup, the watchword is experimentation. Try a variety of woofer locations until you find the arrangement that provides the best tradeoff among conflicting requirements—including an attractive appearance and a practical relationship to the room's furnishings. Part of the fun of being an audiophile, after all, is the opportunity it provides to mix and match stereo components and to customize a complete system (including the decor of the listening room) to match your visual tastes and sonic preferences. □

SUBWOOFERS: A REPRESENTATIVE SAMPLER

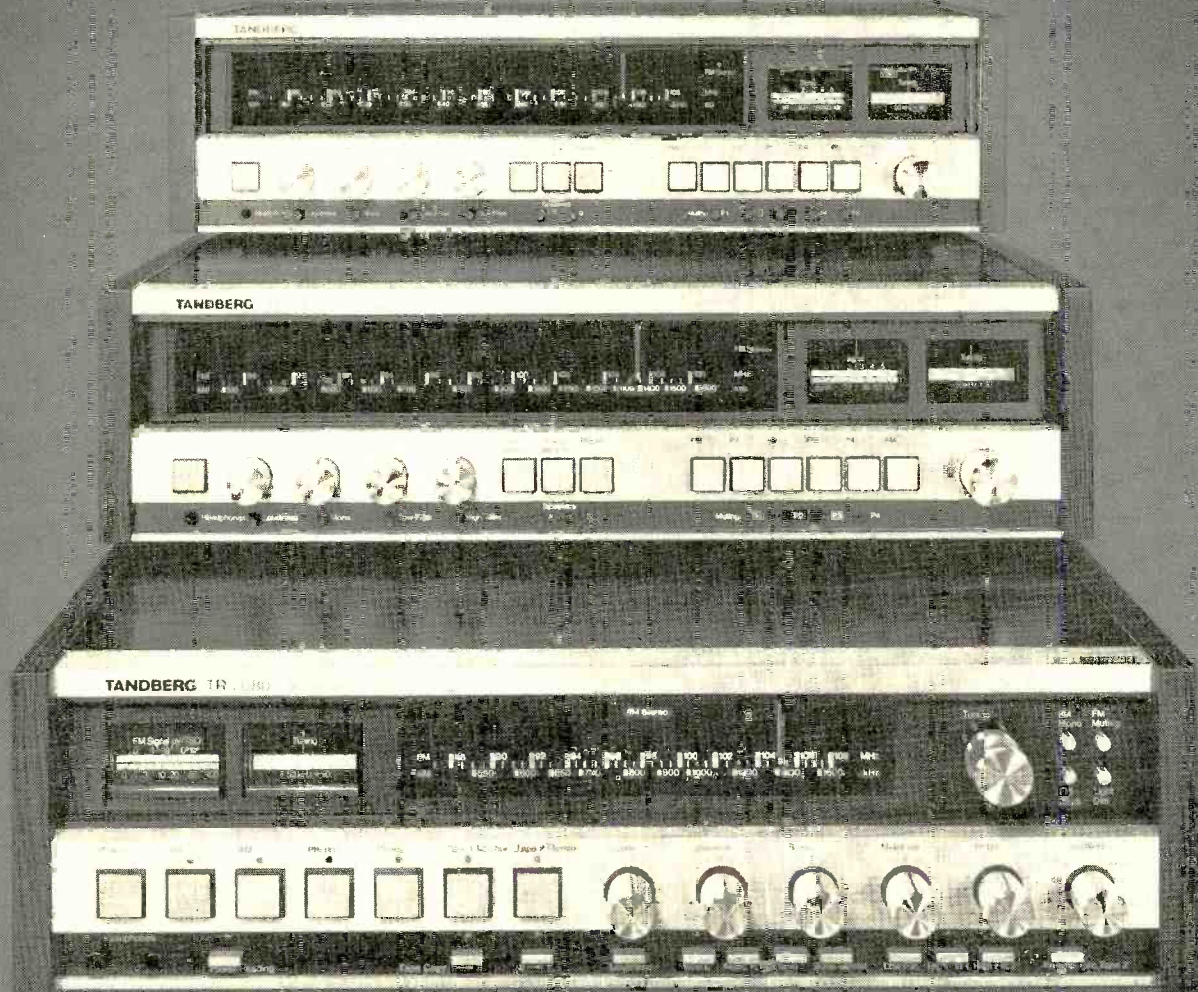
Manufacturer	Model	Driver	Enclosure type	Dimensions, in.	Uppermost crossover frequency, Hz	Low-frequency limit, Hz (-3 dB)*	Price	Notes
Acoustique 3A 871 Montée de Liesse St. Laurent, Québec, Canada	SB 800	Two 11-inch	Sealed	12 x 30 x 27	100	30 (-1.5 dB)	\$1,000	Servo-controlled 150-watt power amplifier and 100-Hz electronic crossover included
	SB 1000	Three 11-inch	Sealed	12 x 27 x 48	100	30 (-1.5 dB)	\$1,200	
	SB 1200	Four 11-inch	Sealed	14 x 35 x 30	100	30 (-1.5 dB)	\$1,400	
Adcom 11 A Jules Lane New Brunswick, N.J. 08901	Adcom GW-1	10-inch	Sealed	17½ x 15½ x 17½	200	28	\$ 230	200-Hz crossover included
	Braun LW 1†	Two 10-inch	Sealed	28 x 12½ x 27½	200	27	\$ 700	Passive crossover and sensitivity control included
Altec Lansing 1515 S. Manchester Ave. Anaheim, Calif. 92803	LF-1	12-inch	Vented	16 x 36 x 36	80	20	\$ 550	Passive 80-Hz crossover included
	LF-2	12-inch	Vented	16 x 36 x 36	80	20	\$ 850	Selectable 40, 60, or 80 Hz crossover and 100-watt power amplifier included
Burhoe Acoustics Melrose, Mass. 02176	Infrared	10-inch	Passive radiator	20 x 18 x 30	100	20	\$ 425	Dual voice-coil summing circuit and passive 100-Hz crossover included
Cizek Audio Systems 15 Stevens St. Andover, Mass. 01810	MG-27	Two 10-inch	Sealed	29 x 17¾ x 12½	200	27	\$ 295	
Contrara Research 5719 S. Avalon Blvd. Los Angeles, Calif. 90011	Piccola Bass Cube	12-inch	Sealed	18 x 20 x 18	80	n.a.	\$ 275	Dual voice-coil summing circuit and passive 80-Hz crossover included
Dahlquist Inc. 601 Old Willets Path Hauppauge, N.Y. 11787	DQ-1W	13-inch	Sealed	26 x 18½ x 14¾	120	24	\$ 275	
DCM Corp. 670 Airport Blvd. Ann Arbor, Mich. 48104	The Time Bass	Two 8-inch	Vented	31 x 18¾ x 18¾	80	32	\$ 770 pair	Passive 80-Hz crossover included. No summing circuit; two units needed for stereo
Fried Products 7616 City Line Ave. Philadelphia, Penn. 19151	D	10-inch	Vented	18 x 14 x 31	125	24	\$ 500 pair	Kit
	T†	Two 10-inch	Trans. line	44 x 25 x 21	125	14	\$ 500 pair	Kit; available factory built for \$1,500
	Super Monitor	12-inch	Trans. line	30 x 15 x 38	125	14	\$ 800 pair	Kit
	O	10-inch	Trans. line	31 x 24½ x 13½	125	17	\$ 500 pair	Kit
General Sound 2434 S. 24th Phoenix, Ariz. 85034	1011 Bass Extender	10-inch	Vented	19 x 18 x 18	200	36	\$ 350	Dual voice-coil summing circuit and crossover included
Hartley Products 620 Island Road Ramsey, N.J. 07446	18-inch	18-inch	Sealed	See notes	100	16	\$ 650	Systems built to order†
	24-inch	24-inch	Sealed	See notes	100	16	\$ 950	
Intersearch P. O. Box 5424 Rockford, Ill. 61125	Audio Pro B2-50	Two 6½-inch	Vented	21 x 18¼ x 17½	250	20	\$ 795	Variable-frequency electronic crossover and 80-watt power amplifier included
Janis Audio Assoc. 2889 Roebling Ave. Bronx, N.Y. 10461	W-1	15-inch	Slot-loaded	17½ x 22 x 22	100	24	\$ 695	Janis Interphase crossover/amplifier required (\$495)
	W-2	15-inch	Slot-loaded	17½ x 22 x 22	100	29	\$ 450	
Mesa Electronic Sales 2940 Malmo Drive Arlington Heights, Ill. 60005	MS-80	10-inch	Passive radiator	16 x 18 x 16	115	33	\$ 249	Matrix crossover included
Miller & Kreisel Sound 10391 Jefferson Blvd. Culver City, Calif. 90230	M&K Bottom End II Cube	12-inch	Sealed	18 x 18 x 16½	150	26	\$ 170	Dual voice-coil summing circuit
	Goliath II Cube	12-inch	Sealed	18 x 18 x 16½	150	26	\$ 235	Dual voice-coil summing circuit and variable 50- to 150-Hz crossover included
	Volkwoofer	12-inch	Sealed	18 x 18 x 16½	100	15	\$ 445	Electronic crossover and 60-watt servo-controlled amplifier included
	Studio Disco IV	Four 12-inch	Sealed	23 x 23 x 40	300	26	\$ 495	Dual voice-coil summing circuit
Ohm Acoustics 241 Taaffe Place Brooklyn, N.Y. 11205	NT†	Two 8-inch	Passive radiator	16 x 15 x 15	140	32 (-4 dB)	\$340	Passive 140-Hz crossover included
RTR Industries 8116 Deering Ave. Canoga Park, Calif. 91303	DAC/1	12-inch	Passive radiator	21¼ x 29¾ x 28	120	15	\$ 575	Crossover included
Speakerlab 735 N. Northlake Way Seattle, Wash. 98103	PSW1†	Two 10-inch	Sealed	18 x 29 x 15½	180	35	\$ 250	Kit; vinyl walnut-finish cabinet
	SD 1000	12-inch	Sealed	20 x 20 x 16	180	23	\$ 750	
Ultralinear Loudspeakers 3228 E. 50th St. Los Angeles, Calif. 90058	S-1	10-inch	Passive radiator	13 x 18¾ x 13¾	300	33	\$ 250	Dual voice-coil summing circuit and 300-Hz crossover included
Visonik of America 701 Heinz Ave. Berkeley, Calif. 94710	Sub-1	12-inch	Sealed	23¾ x 17 x 13¾	150	28	\$ 400	Dual voice-coil summing circuit and crossover included
	Sub-2	10-inch	Sealed	19 x 14¼ x 12¼	150	42	\$ 300	

*Figures are not directly comparable, in some cases, owing to differing methods of measurement

†Stereo pair of woofers operating in a single enclosure

‡Subwoofer drivers also available without cabinets for user installation: 18-inch, \$325; 24-inch, \$375

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In this world of mass produced look-alikes, there are always a select few products that stand out above the rest. Their purchase price is often less premium than you may imagine, particularly when you consider their extraordinary operating flexibility, construction and years of dependable service. And, of course, their superior level of performance.

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tions of the receiver offer specifications & flexibility normally associated with individual components whose total price would be much, much more than the TR 2080. So, perhaps it is even possible to consider it a batgain.

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WHAT'S NEW IN AUDIO

Ralph Hodges concludes his report on the 1979 Summer Consumer Electronics Show

As I was saying last month, the second half of our coverage of the highlights of the 1979 Summer Consumer Electronics Show (CES) in Chicago will survey tape equipment, loudspeakers, and the growing variety of devices both large and small, inexpensive and costly, that

are known as audio accessories. Taken together with last month's coverage of receivers, amplifiers of all types, tuners, and record players, it ought to be enough to keep the average buyer busy at least until the turn of the year balancing his ambitious audio aspirations against the limitations of his budget.

Tape Equipment

If the 1979 CES had a center of innovative activity, it was in the area of cassette technology. Pure-metal-tape capability is now available on decks from almost every major manufacturer. Two-speed cassette decks are emerging at a rapid rate. Miniature computers (microprocessors) order the playing sequence of selections on a tape, adjust the recording circuits for optimal results with virtually any tape, and store all commands for retrieval at a later time. In addition, new schemes have been brought to bear on the perennial problem of cassette high-frequency headroom: last month's "Tape Talk" column described the Dolby HX system, and this month's is devoted to Tandberg's "Dyneq" circuit. (For further details on these new developments, check with the manufacturers.)

Nakamichi has fulfilled a long-standing promise by introducing its own two-speed cassette deck—one with the normal speed of 1 7/8 ips and a half speed of 15/16 ips! The Model 680 is said to maintain flat frequency response out to 15,000 Hz at the slower speed by virtue of a three-head transport with a remarkably narrow playback-head gap. Similar ingenuity has been applied to the problem of erasure effects for the very short wavelengths occasioned by the slower speed. The Nakamichi 680 employs the same innovative transport mechanics as the Models 581 and 582, plus a memory function that automatically seeks and plays any designated selection on a tape. It can also record and erase pure-metal tape. Price: \$1,350. Nakamichi has also brought out its new two-band compander noise-reduction system, developed in cooperation with Telefunken, as an outboard unit called the "Hi-Com II" (\$420).

Tandberg's new cassette deck, the three-motor, three-head TCD-440A, also features automatic program selection, metal-tape capability, and the unique new "Dyneq" circuit that varies recording pre-emphasis in

accordance with the requirements of the program material (see page 32). A user-accessible bias adjustment along with built-in test-tone oscillators can be used to optimize the \$1,600 machine for any tape.

Of four new cassette decks from Dual, the top two models offer a choice of automatic reverse in record and playback (Model 839 RC, \$850) or full three-head operation (Model 830, \$500). The two lower-cost models, at \$420 and \$330, share with the more expensive decks such features as recording-level indicators (LED displays or meters) that register the effects of recording pre-emphasis and a transport that permits instantaneous cassette insertion and removal.

Six new Technics cassette decks include the metal-capable RS-M63 (\$450), a three-head design with various modes of memory rewind/play, the auto-reversing RS-M68 (\$550), the microprocessor-equipped RS-M56 (\$500), which will sort among as many as twenty selections on a tape to pick out the desired one, and three models ranging in price from \$250 to \$175, two of which have fluorescent recording-level indicators. And for its "professional series," Technics has added the \$550 RS-M65; it has a direct-drive capstan motor and a low-silhouette chassis that can be rack mounted.

Phase Linear's first cassette deck, the Model 7000 Series Two, offers such features as fully automatic adjustment of bias, equalization, and sensitivity for any tape type (including pure metal), a three-head dual-capstan transport with speed regulated by a quartz-crystal oscillator operating in a phase-locked-loop configuration, and a memory that will store adjustment data for up to nine different tapes. A large hinged panel covering two-thirds of the deck's front conceals all but the essential controls and indicators. The 7000 Series Two costs \$1,350 and seems worth it from its appearance alone.

In the same vein, Eumig has created the three-head, \$1,550 FL-1000, a deck seen

only in prototype form up until now. Besides being self-adjusting for any tape brand or type, the machine operates under total digital control, all transport and electronic control functions having been assigned a digital code. This permits interfacing with any eight-bit home computer system so that the user can create a program to govern any function the machine is capable of.

A multitude of new cassette decks from Marantz is capped by the SD 9000 (\$775), a two-speed (1 7/8 and 3 3/4 ips), three-head machine with a keyboard for an internal microprocessor that governs a number of program-sequencing, timer (built in), and clock functions. At a lower price there's the SD 8000 (\$650), also metal-capable and keyboard-equipped but in a two-head format with the same two speeds. Marantz Models SD 6000 through SD 1000 (\$500 to \$235) are two-speed machines as well, one of which (the SD 4000) has three heads and two of which can handle metal tape.

Two major Japanese manufacturers have devised one cassette machine apiece to exploit the possibilities of metal tape without breaking the purchaser's budget. The JVC KD-A6 is a relatively straightforward metal-compatible deck with solenoid transport controls and a (low) price that was not available at press time. The Hitachi D-75S (\$400) is similarly basic and also has solenoid-switched controls. Metal tape is significant at Sansui this season as well, with the \$520 SC-5330 leading a pack of five metal-capable machines that descend in price to \$320. All the Sansui metal decks have "Sendust" record/playback heads. The SC-5330 is graced with a number of automatic features involving tape rewind and repeat. The least expensive models, the SC-1330 and SC-1300 (both \$320), are comparatively straightforward machines. A basic non-metal deck, the \$200 D-90, has also been added to the line.

B.I.C., the company that made the first move to two-speed cassette decks, will crown its line this year with the \$850 T-4M, the "M" presumably referring to metal-tape

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capability. The T-4M is another machine with a test-tone oscillator and continuously variable bias adjustment to "trim" the electronics for flattest response with any tape. And B.I.C. has also brought out the two-speed C-1 car cassette player in production form: 12 watts per channel of amplifier power and a price of \$230. The company's other car-player introduction, the \$210 T-05, is a single-speed unit.

Joining Luxman's impressive \$1,000 K-12 are two new metal-capable machines, the \$745 K-10 and the \$495 K-5A. Like the K-12, both are designed to interface with the novel Luxman cassette, which contains a sophisticated tape-guidance system and adjustments to reduce tape skew. Like the Luxman models, the new Yamaha TC-920B (\$600) uses a Sendust record/playback head made with a proprietary technique called the "Pure Plasma Process." Although the deck is not set up to handle metal tape, it does have a double-gap ferrite erase head.

Five new cassette decks from Sony include two—the TC-K75 (\$600) and the TC-K65 (\$500)—that handle metal tape. The rest, spread over a price range of \$400 to \$250, will handle all other types of tape. Sony also has a new portable cassette recorder with Dolby noise reduction and chromium-dioxide and ferrichrome tape capability. The TC-D5 (\$680) also has a built-in monitor amplifier and speaker—with a total weight of only 3½ pounds. The five latest decks from Fisher also offer metal-tape capability in the top two models, two-speed operation in all, and a three-head transport in the top-of-line CR4029 (\$500). The CR4028 is the other metal deck, with an automatic search/play function that will seek out any desired selection on a tape.

Kenwood's newest cassette decks, the \$350 KX-760 and \$235 KX-550, feature particularly large flywheels for tape-motion stability. And Sherwood has entered the cassette field with its first product, the CD-200. Optonica's RT-6502/6 is an elaboration on the celebrated RT-6501, the first micro-processor-controlled cassette deck addressed by a full keyboard. The new machine (\$520) incorporates all the micro-processor functions of its predecessor, plus metal-tape capability and generally improved specifications. Two other Optonica models, the RT-6202/6 (\$460) and RT-6101/5

(\$340), also handle metal tape, while the non-metal RT-6001/5 (\$270) has Optonica's "Automatic Program Search" function.

The inauguration of Sanyo's "Plus" series continued with seven cassette decks, all metal-capable. Two of them, the Plus RD5372 (under \$500) and RD5370 (\$400), employ three heads, while a third, the Plus D65 (under \$400), features auto-reverse. New for its main line of stereo components is the \$190 RD5035, which would seem to be the lowest price point at the moment for metal-tape capability. At \$100, the Sanyo RD5006 will handle chromium-dioxide tape, although it lacks noise reduction.

Toshiba now offers two full-size cassette decks that handle metal tape and a "mini" machine that doesn't. The PC-X40 and PC-X20 (\$380 and \$300, respectively) are similarly styled and featured units, with the PC-X40 adding a keyboard for an automatic play-selection feature. The mini deck, the D15 (\$550), provides remote-control operation and a number of automatic features. Aiwa also has a mini cassette deck, the \$210 SD-L22U, as well as two new full-size machines that can utilize metal tape. The \$1,000 three-head AD-6900 Mark II U per-

... anyone out there
remember open reel?"

mits all transport functions to be governed by a wireless (infrared) remote controller, and it also has internal test oscillators for use with a bias fine-tuning adjustment. Second in line is the AD-L40U at \$490, and two other machines, the AD-M200U (\$260) and AD-M100U (\$210), are new offerings in the category of "conventional" cassette decks.

At about \$533, the CG332 from Uher is appreciably less expensive than some of the company's previous cassette offerings, and it is able to handle chromium-dioxide and ferrichrome tapes. Vector Research has initiated its cassette line with the three-head metal-compatible VCX-600 (\$750) and continued it with the VCX-500 (\$575) and VCX-300 (\$400), both of which can also utilize metal tape.

Although the above hardly completes the show's roster of cassette-deck introductions, the remainder of them came mostly from manufacturers who also presented new open-reel machines (anyone out there remember open reel?). And so, for convenience, the following mentions will group all tape products together under their respective brand names.

Teac's strength in open reel next year will come from the dual-capstan Models X-7 and X-10, with 7- and 10½-inch-reel capacity, respectively. Both are also available with an "R" suffix, which refers to auto-reverse in recording and playback, achieved by the use of six heads instead of the three provided on

the unidirectional models. The 10½-inch machines can be easily interfaced with dbx noise reduction. Among Teac cassette-deck introductions are the three-head C-2 with metal capability, the similarly furnished C-3, the auto-reversing CX-650R and A-550RX (with built-in dbx noise reduction), and the CX-260 with fluorescent recording-level meters and CX-210 with conventional meters.

Pioneer's open-reel RT-909 (\$895) combines the overall format and styling of the rack-mounting 700 series with some features of the manufacturer's most elaborate open-reel machines. Speeds are 7½ and 3¾ ips in a quarter-track stereo configuration with a dual-capstan transport. Both 7- and 10½-inch reels are accommodated, and alignment adjustments for the head block are accessible through perforations in the head cover. Auto-reverse is initiated by means of sensing foil applied to the tape as well as when the tape counter returns to a zero setting. A non-reversing model, the RT-901 (\$795), is also on the way.

Pioneer's cassette units are all metal-capable this year. The CT-F1250, leading the five-model line at \$695, has user-adjustable bias, equalization, and sensitivity; dual-capstan drive; a host of automatic features; and three heads. The CT-F750 provides auto-reverse in both playback and recording for \$395, employing a stationary four-track record/playback head. Other new Pioneer models are priced from \$595 to \$295.

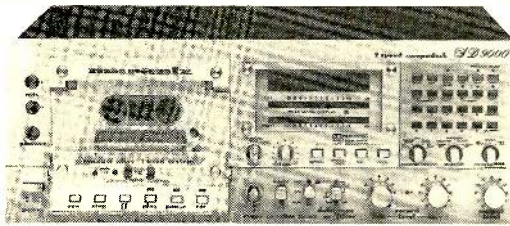
Akai remains very active in open reel, with a new 10½-inch-reel model, the GX-620 (\$750), and the GX-255 (\$650), a 7-inch-reel near-equivalent (with auto-reverse in playback). On another front, Akai has adapted its glass-and-crystal-ferrite cassette heads to metal-tape duty and installed them in four new cassette decks: the GX-M30, GX-M50, GX-F80, and GX-F90.

Finally, the Sharp RT-4488 (\$500) cassette deck can handle metal tape and program any number of playback schemes through a front-panel keyboard and built-in micro-processor. And beyond analog recording, both Sharp and Toshiba have announced production-ready digital audio processors to mate with their video cassette equipment. Sharp's is the PCM-XI, and Toshiba's is simply the PCM. Prices are still tentative.

Speaker Systems

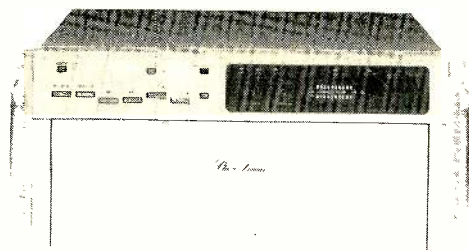
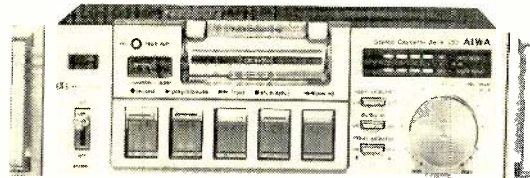
Loudspeakers tend to outnumber all other new products at these shows, and they often manage to provide examples of both the best and the worst of what can be seen and heard. While not exhibiting widespread adherence to any new trend of technology or styling, the manufacturers this year seemed to demonstrate that they had lost none of their vitality and willingness to innovate.

If you are old enough to remember when the so-called "Cambridge (Mass.) Sound" represented the conservative, "establishment" approach to high-fidelity reproduction, you will soon realize that there have been some changes made. Acoustic Research, which once championed the "book-



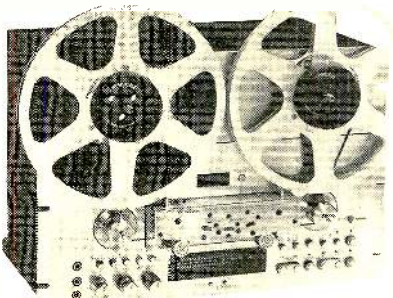
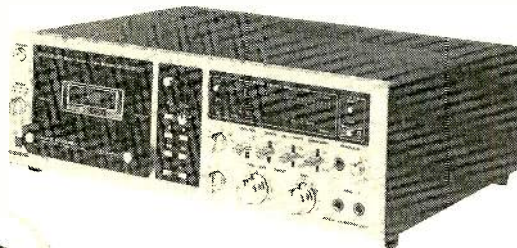
Marantz SD 9000
cassette deck

Aiwa SD-L22U cassette deck

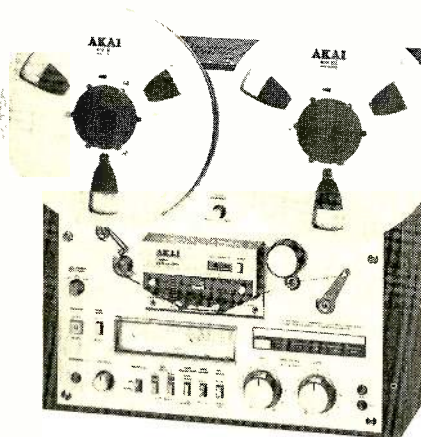


Phase Linear Model 7000
Series Two cassette deck

Dual 839RC cassette deck



Pioneer RT-909 tape deck



Akai GX-620 tape deck



Sony TC-D5 portable cassette recorder

shelf" speaker, is now most enthusiastic about its floor-standing models, newest of which are the \$400 AR91 and \$300 AR92. Both are three-way designs differing most significantly in woofer size (12 and 10 inches, respectively).

KLH, the other "dowager empress" of the Cambridge set, has also departed from tradition to introduce "Computer Controlled" speaker systems, the KLH 1, KLH 2, and KLH 3 (from \$1,000 to \$420 the pair). The "computer," which goes between preamp and power amp or in the tape-monitor loop, regulates the output of the power amp in accordance with the low-frequency requirements of the music signal—and if they are a factor for any given signal—the excursion limitations of the woofers. A new noncomputerized small system, the KLH 4 (\$260 the pair), is also available.

BACK when Cambridge was the capital of the speaker world, the so-called "California Sound"—brassy, aggressive, up-front—was the major contender for the crown. California speaker manufacturers still assume that listeners prefer (and therefore they design for) loud listening levels, but over the years they have tamed the tigers in their designs by smoothing and extending frequency response. The L150 from JBL is a three-way, floor-standing design with a 12-inch passive radiator. Other JBL introductions include the Radiance Series, a total of three two- and three-way designs that can be used with their sculpted grilles either in place or removed (revealing a baffle board clad in metal-finish Mylar), and the three-way L222, described as a "home disco" system. An equally famed California manufacturer, Altec, brought a new subwoofer to the show, reinforcing a trend that has enjoyed worldwide popularity of late (see page 68).

Once there was also thought to be a "Japanese Sound"—something which, if it ever truly existed, has now largely disappeared through the efforts of Technics and others. This year Technics has enlarged its "Linear Phase" line with the Models SB-L300 and SB-L200 (both three-way), and the SB-L100 (two-way). All three employ horn tweeters with a tapered radial flare. As a result of complex analyses of waveform propagation, JVC has also fastened on a new tweeter design, designated the "Dyna-Flat" ribbon device. Although more closely related to the new planar-diaphragm tweeters than to the classic corrugated-diaphragm ribbon design, the JVC driver does utilize a shallow horn, as did many of the original ribbon tweeters. Its first use will be in the new Zero-5 three-way speaker system.

We are not aware that anyone has ever identified a generic New York City Sound, but if there is one it ought to belong to Ohm Acoustics, the only current speaker-system manufacturer in the metropolitan area. Ohm's latest introductions include the Model M minispeaker (\$145), which can be teamed up with the Ohm N subwoofer (\$320) for a full-range home system. The Model N encloses two 8-inch woofers in a single cabinet, while the compact Model M

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measures 7½ x 4½ x 4½ inches. An improved version of the \$200 two-way Ohm E has also been announced.

A major development from ESS is the new "Transar" system, the Transar II, which at a price of \$4,400 permits the user to select his own amplifier instead of the ESS-manufactured (and strongly recommended) electronics of the Transar I. In addition, several of the established ESS lines have been expanded with models employing new versions of the Heil tweeter, and a small design suitable for home or automobile use and incorporating a Heil tweeter has also been introduced.

New Allison speaker systems continue to move in the direction of more compact designs. The Allison:Five (\$160) is a rectangular bookshelf unit with an 8-inch woofer and 1-inch convex-diaphragm tweeter. Drivers of the same size and type are used in the smaller Allison:Six (\$125), enclosed in an 11¼-inch cube. Both have top-mounted woofers intended to be placed as close as possible to the wall.

The Interface line from Electro-Voice is completely new for this year. The series remains at seven models, all employing low-frequency sections conforming to mathematically derived Thiele alignments and four sold with active equalizers. However, appearance and internal design have been changed, and a new dome tweeter has been incorporated into a number of models. Prices range from approximately \$260 to \$1,750 per pair. And from B.I.C. there is a new line altogether, the "SoundSpan" series, with upward-facing midrange and tweeter drivers that radiate into 360-degree deflector assemblies. Enclosures are columnar, and prices for the three models (TPR 200, 400, and 600) are from \$180 to \$350.

Latest developments from Wharfedale, the \$850 E-90 and \$300 E-30, are big and small, respectively. The E-90 encloses five active drivers in a tall ported cabinet. And from Sony comes the SSU-2070, a three-way sealed-enclosure design costing \$200.

A price of \$295 distinguishes the new ADS L630, a three-way system with dome midrange and tweeter drivers, available with optional floor stands. Another three-way, the Jensen Model 30, has a price of \$170. Yet another three-way system, the A-200 from Boston Acoustics, is the first product

from a brand-new company formed by graduates of another highly distinguished speaker-manufacturing team. The enclosure of the \$400 floor-standing system is unusually shallow and particularly attractive.

KEF's expansion into the U.S. market from its native England continues vigorously, with the latest introductions being the compact two-way Model 101 (\$250), the \$175 Model 303 and \$295 Model 304 (both available with optional pedestal stands), and kit versions of the popular 104ab and Cantata models, priced, respectively, at \$250 and \$395. The kits come in pairs and include drivers, acoustic filters, crossover networks, controls, and fuse blocks, plus instructions for building suitable cabinets. Mitsubishi's floor-standing MS-40 is the largest home system yet to employ that manufacturer's honeycomb-sandwich cones, a mode of construction eloquently described by its name and very effective in promoting high rigidity without excess mass. Avid's \$135 Model 110, a two-way design with an 8-inch woofer, is the latest Avid system to employ the company's diffraction-minimizing system construction. Onkyo's F-5000 is a

"planar-film-diaphragm tweeters incorporating seventy-two drivers."

shallow-enclosure, phase-coherent design with integral stand for floor installation.

Following closely on the heels of the floor-standing Model 500 is the 200C (\$275), a redesign of the floor-standing Epicure/EPI 200. It has a planar passive radiator, an 8-inch woofer with increased power handling, and a 1-inch inverted-dome tweeter. Centrex, a brand name held by Pioneer of America, has new systems utilizing 12-inch (CL-100, \$280 per pair) and 8-inch (CL-40 and CL-35, \$160 and \$120 per pair) woofers, plus a new minispeaker at \$250 the pair.

Two very promising speaker systems seen at the winter CES in Las Vegas are now on the verge of becoming nationally available. The no-compromise B&W 801 has been assigned a price of approximately \$1,200, and it seems as impressive as ever. The Design Acoustics D-4A, with its combination of cone and dome tweeters and intricate floor-standing enclosures, will sell for \$297. Advent has introduced its first three-way system at \$250, plus a new two-way design, the Advent/4, at less than \$100. And a new loud-speaker series from Cizek, the "Classic Series," begins at \$590 per pair for the two-way KA-1. Cerwin-Vega, moving ever further into high-power applications, has begun introducing speaker systems under the Metron brand name that was formerly reserved for their electronic lines. The two SUFT-FET models employ planar-film-diaphragm tweeters in arrays incorporating as many as

seventy-two drivers. Low-frequency modules employing a combination of 15- and 8-inch woofers can be added to create full-range systems. The company has also brought out a line of car speakers.

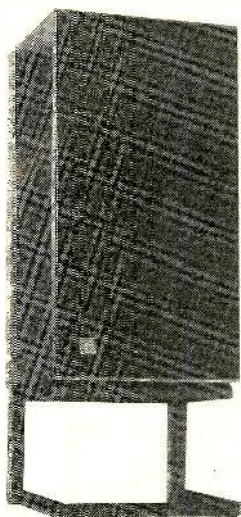
Ultralinear is promoting floor-standing speaker systems, the \$150 DW-8 and \$200 DW-10, with attractive (\$150 and \$200) prices, plus four new "bookshelf" designs from \$70 to \$200. Visonik's latest, the Euro 6 and Euro 8, also install on the floor. Woofers of 8 and 10 inches are used, and prices are \$300 and \$380. The MS145 (\$140) expands an existing speaker line from Fisher, but waiting in the wings is a new series utilizing woofer cones that appear to be made of a metal foam; leaders of the series are the STE-1150 and STE-1110.

New systems from Audioanalyst begin with the A-400XL "Phantom Array" (\$360), a four-way system with eight symmetrically arranged driver arrays on two angled panels. They continue with the two-way PhaseMatrix M5 (\$189) and finish up with the \$139 two-way PhaseMatrix M4v-II. On the Audioanalyst drawing board is a passive network that is intended to derive a difference signal from the two stereo channels, delay it, and route it to auxiliary speakers for ambiance enhancement. It should be available soon as an outboard unit or built into a proposed new speaker system, the three-way M-12.

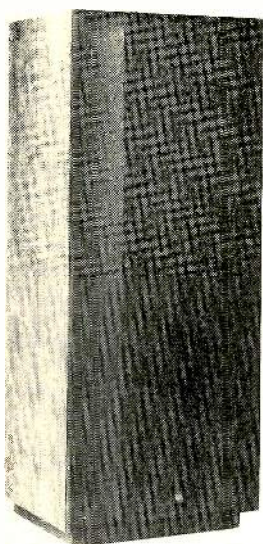
Acoustique 3A plans to have numerous new speakers available this year, two of which are floor-standing (Alto and Allegro) and described as disco-type designs. Another (Prelude) will employ the company's correctional feedback system based on the acoustic output of the woofer, and a fourth (Auditorat) will inaugurate a new phase-coherent line. Prices run from \$219 to \$539. A new transmission-line system, the Infini 120, is scheduled for introduction late this year.

A modification of the transmission line (intended to make it applicable to smaller enclosures than would otherwise be possible) will be used by IMF for the new ALS 30, a system employing two oval woofers and a 4-inch midrange/tweeter. DCM Corporation has also been concerning itself with low-frequency response, and the result is the Timebase, a subwoofer intended to be used in pairs with the manufacturer's Time Window system and to blend harmoniously with its transient-response characteristics. A pair is \$770, with internal passive crossover networks included.

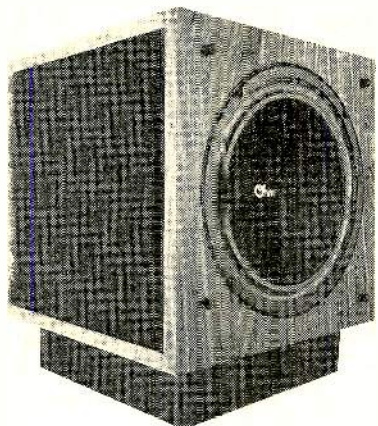
Qysonic, a company that has traditionally sought deep bass from small boxes, is now seeking the same from even smaller boxes: the Tad II (\$225) and the Spree (\$140). The secret is said to be a fairly complex resistive port with some acoustically capacitive elements included. Symdex has integrated a new version of its Sigma speaker system with the new Omega woofer and crossover. And a new Canadian company, Jumetite Laboratories, has begun producing speaker systems featuring ribbon tweeters operational down to 600 Hz. The first of these, the CR 602, is priced between \$950 and \$890.



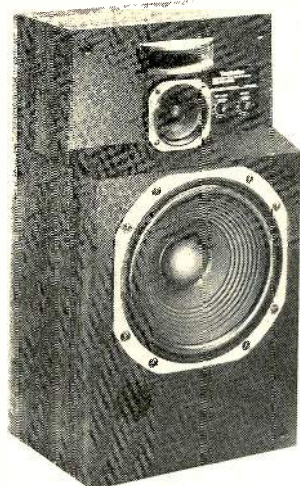
ADS L630 speaker system



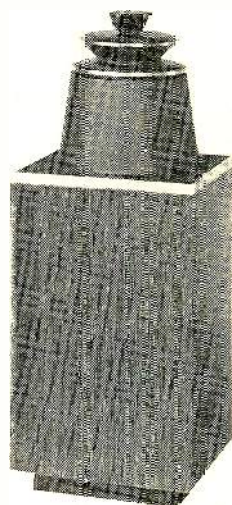
JBL L150 loudspeaker



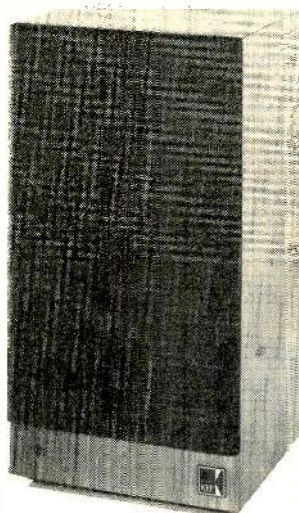
Ohm N subwoofer



Technics SB-L300 speaker



B.I.C. SoundSpan system



KEF Model 101 speaker

depending on finish. An add-on tweeter, the Satellite/1 from Audio Scientific by Superex, uses a pair of dome drivers in a truncated pyramid enclosure; operating frequency range is 4,000 Hz and above.

The Dahlquist team has managed to create a three-way speaker system of conventional rectangular ("bookshelf") appearance while still retaining the features of phase coherency and "open-air" mounting of the midrange and high-frequency drivers. Designated the DQ-3, the system will cost about \$225. A new Beveridge electrostatic system, as tall and imposing as its predecessors, has built-in 10-inch dynamic woofers top and bottom and is said to be capable of outputs 5 to 6 dB greater than previously introduced models. The buyer can use amplifiers of his choice with the Beveridge System 3 (\$3,500 per pair), and 50 watts per channel is said to be quite adequate for satisfactory performance.

And a few other introductions of note: three new models from Radio Shack, the largest being a \$260 column with two 10-inch woofers; a host of new speakers from Mesa, including everything from large subwoofers to diminutive minispeakers; and, finally, a whole speaker complex from Burhoe Acoustics. This takes two almost-full-range speaker systems (SuperCrimsons) placed at the front of the room, two smaller systems at the rear, a subwoofer module almost anywhere desired, and an electronic module at the site of the amplifier or receiver. In addition, the "Ruby" electronic module, designed in cooperation with Sound Concepts, delays signals from the rear, inhibits their treble content, and feeds the subwoofer. No additional amplification is required with the system.

Accessories

An "audio accessory" can be anything from an inexpensive stylus brush to a digital signal-delay device approaching \$1,000 in price. In today's market there is no lack of entries in any category.

One of the latest signal-delay units is not digital but operates instead on the bucket-brigade principle. Though its price of \$195 hardly approaches that \$1,000 mark, the Pioneer SR-303 can be used to provide a single delay of up to 100 milliseconds for "doubling" vocal or instrumental parts or to provide artificial reverberation in a recirculation mode. An eye-catching front-panel display indicates the degree of signal processing applied. Pioneer has also introduced an octave-band equalizer, the SG-9800 (\$395), with twelve slider controls per channel, and a new version of its dynamic-range expander, the \$195 RG-2.

Phase Linear's new equalizer, the Model 1100, is a parametric design with five control bands per channel and generous overlap between them. A useful adjunct to the Model 1100 is provided in the Phase Linear 1200 Series Two real-time analyzer; the display is in octave bands with twenty LEDs per octave. Also included with the \$800 instrument is a built-in pink-noise generator and an in-

NEW PRODUCTS

CEC '79

dividually calibrated condenser microphone said to be of professional quality.

More equalizers are coming from Sansui in the form of the octave-band SE-7 graphic device (\$300), with separate controls for each channel, and the octave-band SE-5 (\$200), with controls that affect both channels simultaneously. New from ADC is the Sound Shaper 3, called a "Paragraphic" equalizer, evidently because the center frequencies of the twelve controls per channel can be switched a half octave up (or down). The Nikko EQ-2, at a modest \$200, is a six-band equalizer with each control affecting roughly an octave and a half. And the Rotel RE-700 goes it one better: seven bands at \$180.

Among other types of signal processors seen was the new MXR Dynamic Expander, which affords as much as 8 dB of upward expansion and 21 dB of downward expansion for \$300. Release time is user-adjustable, and expansion characteristics are linear. Audio Pulse, which introduced the first truly digital signal-delay/reverberation-synthesizer device to the market some years ago, is now offering its third-generation Model 1000. Employing the same principles of delta modulation, recirculation, and cross-connection as the company's previous products, the new model provides considerably more control flexibility and several operational refinements based upon real-world acoustics. It also contains a dynamic-range expander with associated LED display and outputs for up to eight channels with various delays. The AP102 speaker system is also offered by Audio Pulse for use in reproducing the delay channels. A more modest de-

lay device, the Model ATD-1, is also now available from Nikko at \$450.

Readers who have followed the progress of the Tate four-channel matrix decoder in these pages for some years will be gratified to learn that it is now *finally* honest-to-goodness (we hope!) available. Fosgate, the prominent car-stereo manufacturer, is introducing the Tate system in its first home product, the Tetra II (\$995). Styled like a small studio console, the Tetra II is inserted between preamp and power amp or in the tape-monitor loop, where it provides complete control over channel balance and stereo panorama and dimension. There is also an elaborate LED display to indicate circuit activity. The system is intended principally for SQ decoding, but it is said to enhance two-channel material dramatically.

Headphones are getting lighter (often because of more efficient magnetic materials), better, and (inevitably) more expensive. The Koss Tech II, available for the first time in the U.S., is priced at \$60, as are the Pickering OA 5A and the Stanton Dynaphase 55. Sennheiser's latest models, the HD 430 and HD 420, are \$119 and \$85, respectively. And Toshiba has new headphones, the HR 811 and HR X1, for \$75 and \$65.

Equipment cabinets continue to appear from both furniture makers and component manufacturers. The vertical complexes by Crown adopt the rack-mount scheme, with a choice of six high-quality finishes offered. Akai offers a choice of rack- or shelf-mounting in several vertical and horizontal formats. The new Sound Stack cabinets are all verticals with shelf-mount facilities in several optional forms, as are the products from Hados (HHS Enterprises).

In record care, Ampex has devised a brush that applies a cleaner and antistatic agent, together with tools for inspecting and cleaning phono styli. It has also introduced a new kit for comprehensive tape-recorder maintenance. Both kits cost \$9. Sound Guard's Record Buffer (\$4) can be used for both wet and dry cleaning. Robins' Robo-Lite (\$20) snaps onto the bottom edge of a turntable dust cover and turns on automatically when the cover is raised, illuminating the record and the machine's controls. Audiotex (GC Electronics) now has a combination record brush and piezoelectric destatizer, the RC-2000, plus new speaker and phono cables. Monster Cable, manufacturer of high-quality speaker wires of heavy

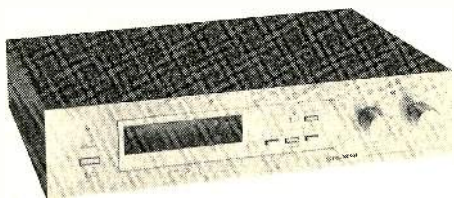
gauge, has supplemented them with connectors that will take the large wire size. Many are gold plated. More connectors—female-to-female patch-cord extenders in this case—come from Audio-Technica at \$8 per pair, also gold plated. The company has also introduced Lifesaver (\$13), a dry record lubricant with antistatic properties. Le-Bo products concentrated on tape for this show, with new carrying cases that will take up to sixty cassettes and twenty-four eight-track cartridges.

Perhaps the ultimate record accessory is dbx's revival of its "Encoded Disc" format. It takes specially encoded records and plays them back through a dbx Model 21 decoder (\$109). The result is said to be unimpaired dynamic range and inaudible surface noise. As many as two dozen record labels have reportedly agreed to undertake production of the encoded discs, and dbx expects at least a hundred records to be available within a year at prices between \$8 and \$16.

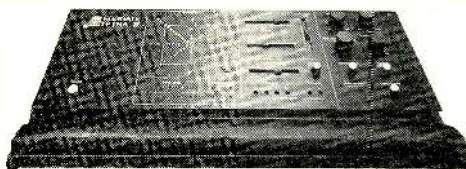
Finally, although coverage of car-stereo developments has appeared elsewhere this year (see the July issue and last month's "New Products"), a few highlights deserve special mention. These include new mobile speakers from Altec, Bose ("Direct/Reflecting"), and JBL. ADS also has a new car speaker, the two-way L300i (\$117.50 per pair), plus a new 50-watt-per-channel automotive amplifier, the Power Plate 100 (\$295).

Envoi

It is a special frustration to read about the introduction of so many new products and not be able to get further information on the specific items that interest you. We hope that won't be your fate, but we should warn you that many of the above products do not yet have firm dates for availability and a few are still largely experimental. Withdrawal of a new development for more work or other reasons is routine in the audio industry. When that happens, we have no means of serving as a further source of information. In every case, the manufacturer is the best source of data—at least until we have received material for a "New Product" writeup or a sample for test. □



Pioneer SR-303
reverberation amplifier



Fosgate Tetra II
SQ decoder



Nakamichi High-Com II
noise-reduction system

Sansui is breaking up a very successful relationship. The TU-717 has a new mate: The AU-719.

Sansui has just introduced an exciting new integrated amplifier, the AU-719. It represents the very latest developments in audio and electronics technology. It is so good, in fact, that it has replaced its rave-reviewed, best-selling predecessor as the partner of the TU-717 tuner.

The TU-717's performance has been extravagantly praised by professional critics and knowledgeable consumers alike. With advanced features like switchable IF bandwidth and specs like 81dB signal-to-noise ratio and 0.06% THD, it's only natural.

We expect the tuner's new mate to receive a tremendous reception and set industry amplifier standards for a long time to come. Here's why.

INTRODUCING DD/DC

What particularly distinguishes the new AU-719 amp is Sansui's patent-pending DD/DC (Diamond Differential/DC) circuitry that provides the extremely high drive current needed to reduce THD by adding large amounts of negative feedback without compromising slew rate or adding TIM.

Slew rate refers to an amplifier's ability to respond to rapidly changing musical signals. The slew rate of the AU-719 is an astounding 170V/ μ Sec.

MAGNIFICENT MUSIC

Many modern amplifiers have extremely low total harmonic distortion specs. And that's important. But THD is measured with steady test signals and is not really representative of an amp's ability to deal

with music. Sansui alone, with its DD/DC technology, is able to provide both low THD and lowest TIM simultaneously. Instead of the harsh metallic sound you sometimes get on a conventional amp when the musical signals are complex, with the AU-719 you hear only magnificent music.

THD is less than 0.015% at full rated power of 90w/channel, min. RMS, both channels into 8 ohms from 10 - 20,000 Hz. Overall frequency response is awesome: DC - 400,000 Hz, +0, -3dB. Hum and noise are a super-silent -100dB on aux and -88dB on phono. The phono equalizer, which adheres to the standard RIAA curve within ± 0.2 dB from 20 - 20,000 Hz, also uses our unique DD/DC circuit for record reproduction that's second-to-none.

CONTROL YOURSELF

The unit is equipped with a full complement of versatile controls and connections to create the system and sound that's right for you, including two phono and two tape inputs, defeatable tone controls with switchable center frequencies, deck-to-deck tape dubbing and a very convenient 20 dB muting switch.

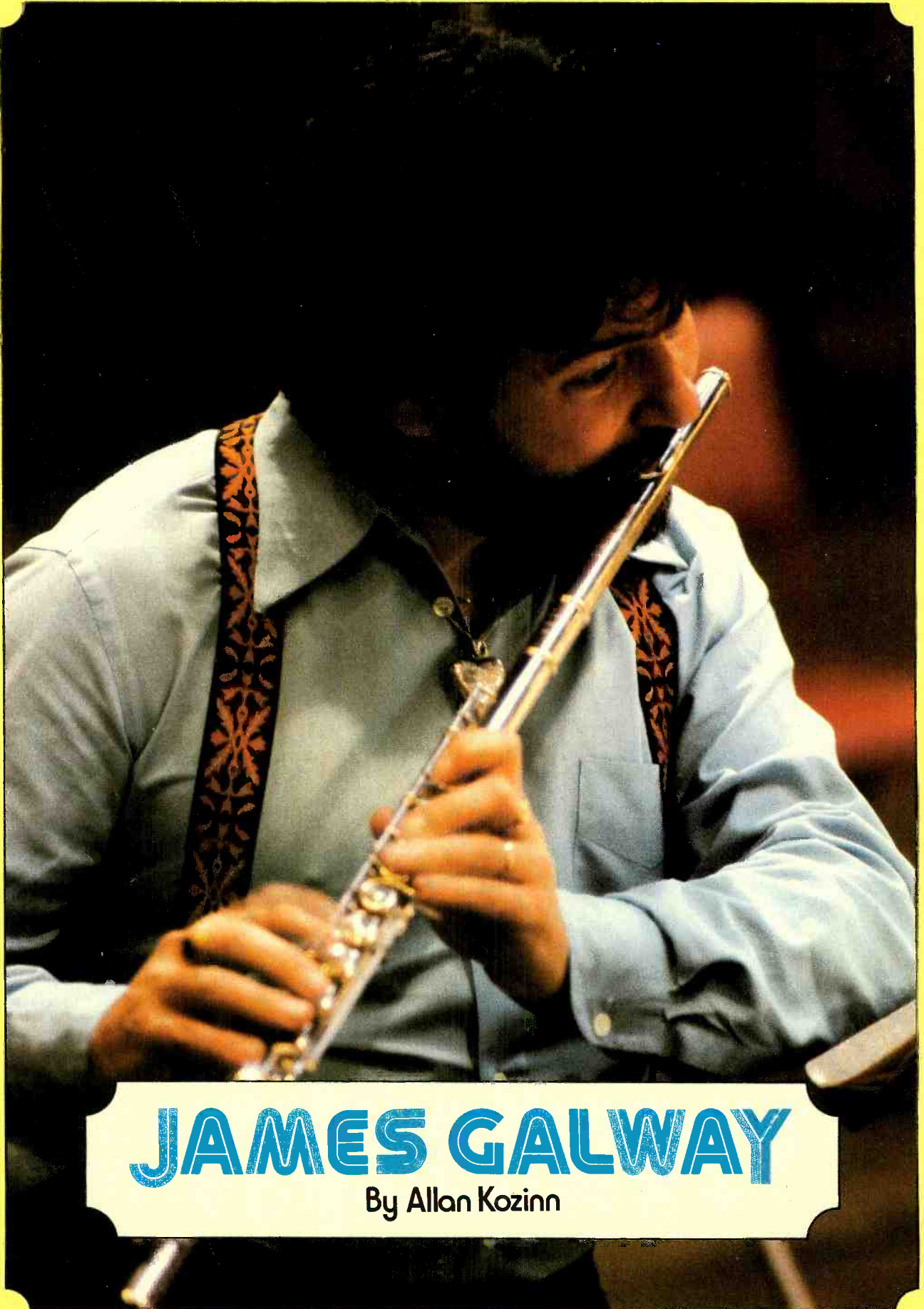
Audition the new AU-719 and matching TU-717 at your authorized Sansui dealer. We think it will be the start of a very successful relationship.

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CIRCLE NO. 51 ON READER SERVICE CARD





JAMES GALWAY

By Allan Kozinn

IF James Galway's flute playing were not so dazzling, he'd be just the sort of performer critics love to hate. For nearly two years before he made his U.S. debut, Galway was known here primarily as the man who turned Vivaldi's *Four Seasons* into a set of flute concertos. Reports from Europe, meanwhile, painted a picture of the diminutive Irishman not only as an extraordinary player capable of giving Jean-Pierre Rampal a run for his money, but as a budding pop star whose version of John Denver's *Annie's Song* was sailing up the hit-singles charts of the Common Market in hot pursuit of his recording of François Gossec's *Tambourin*. His first American tour, in the summer of 1978, was given as massive a publicity campaign as a classical artist could hope for, particularly in New York and Los Angeles, where posters of his bearded countenance beamed from thousands of billboards and newsstands.

On stage, Galway's manner is one of seemingly calculated nonchalance—a kind of comment not on the music, but on the conventional atmosphere and demeanor of the classical concert hall. He walks out with an informal, bemused air, one hand in his pocket, the other carrying his flute over his shoulder like a fishing rod. It's almost as if he were daring the critics to pan him. But those who have heard Galway play know that these lighthearted showbiz shenanigans detract not a whit from the superb musical sense he developed as principal flutist of the London Symphony, the Royal Philharmonic, and the Berlin Philharmonic, to say nothing of the polish his playing has gained since he went solo in 1975. As Galway sees it, his unorthodox approach to music making is the secret of his success.

ITHINK it's very apparent how much I enjoy playing," he says, "and I really do. You can't put on an act night after night, because people can tell. You see, I want to play to and for my audience, rather than coming in and saying, 'Now listen to this thing I've practiced, and don't you think it's wonderful that Mozart wrote this when he was only eight?' That's for the birds. People come to hear you the way they used to come to hear Rachmaninoff or Kreisler. They want some magic, and that's what I want to give them.

"I have a lot of kids coming to my concerts," he adds, "because the flute is sort of a kids' instrument. It's very easy to play at a certain level. And then, of course, there are so many approaches to the flute. There's the German intellectual way of playing, where everything is organized. Or there's the

French method, where everything is *détaché*. There's also the *other* way—the way of really getting into the piece, changing the colors, and taking chances with the music so that something electric happens. Every performance and performing situation is different and must be regulated by what the audience needs."

GALWAY, who is now thirty-nine, has been playing the flute since he was ten years old. He tried the violin first but gave it up, partly because his instrument was "full of woodworm, covered with adhesive tape, and falling to bits" and partly because the flute was just a more natural instrument for a Belfast lad to be involved with.

"Both my father and my grandfather played the flute, and the whole place [Ireland] is covered with flute bands. They'd be playing a lot of traditional Irish music as well as a lot of classical music. So I thought, 'Well, I'll learn the flute, get in a band, and have a good time.'"

Which is what he did until his father, a shipyard worker, decided that the time was ripe for James to find serious work. Young Galway, however, had ideas of his own. "My teacher," he recalls, "had considerable professional experience and told me to forget about getting a job and to keep practicing—I could always find a job if it didn't work out. So, with that in mind, I got a scholarship to the Royal College of Music in London."

He also spent some time in Paris engaged in what seems to have been a rather unorthodox course of study with Jean-Pierre Rampal, whose influence Galway plays down these days.

"I used to go along to Rampal's house and have breakfast with him or listen to his records. I actually played for him once or twice. But my studies consisted mainly of following him around Paris like he was the greatest.

"I haven't listened to a record of Rampal's in about fifteen years. After my six months in Paris, I got to doing my own thing, and I stopped listening to other flute players. I wanted to be influenced by something greater. I wanted the variety of tone and the dedication that Maria Callas had, the virtuosity of Jascha Heifetz, and the general freedom of Horowitz. No flute player is on the same plane as those three."

Upon his return to London from Paris, Galway fell into a series of jobs that a blues musician might call "paying dues." The first was in a small ensemble at Stratford, providing incidental flourishes for Shakespeare plays.

"It was tremendous being on the scene with all those actors, but musi-

cally it was the most boring experience I've ever had. It was just ten bars here and ten bars there. My next jobs, at Sadler's Wells and the Royal Opera House, weren't much better. Opera is very nice to listen to, but if you play in the orchestra you find yourself going around to filthy theaters and playing in dirty pits. And you have no idea *how* dirty some of them are until you've played there. Symphony orchestras were definitely a step higher."

A step, perhaps, but after two weeks as principal piccolo in the BBC Symphony, three years as principal flute of the London Symphony, a season with the Royal Philharmonic, and six years with the Berlin Philharmonic, Galway was more interested in great leaps. Even as principal flutist, solo opportunities were few, and the scarcity of free time made it impossible for him to work up a good solo repertoire or a part-time solo career. By 1975, Galway was beginning to balance the security (including the pension) he had with the Berlin Philharmonic against the artistic freedom he might have as a soloist.

Herbert von Karajan—whom Galway usually refers to as "Herbie"—first sent another player to convince Galway to stay in the orchestra. But eventually even Karajan advised him that "if that's what you want to do, do it while you're still young." On his thirty-sixth birthday, Galway left Berlin. Three years later, he had a string of LPs selling 250,000 copies (total) per year in Europe alone, two hit singles, miles of press acclaim, and true superstar status right down to the posters and the James Galway T-shirts.

As in *The Wizard of Oz*, there's a man behind the curtain controlling the machinations in this story, and that's Galway's British manager, Michael Emmerson. Emmerson believes that artists should have strategically planned careers, and his plans for Galway—to say nothing of what he's already *done* for his star flutist—are something to listen to. For instance, an important part of the Emmerson master plan involves television: if you've seen any of the major talk shows (even inadvertently) while Galway's been in the country, chances are you've seen him.

In Britain, Galway is on the tube ever more frequently, and his performances on these shows are videotaped, as are all of his master classes and some of his concerts. The videotapes, Emmerson explains, will not only make it possible for Galway to cut his touring schedule down to three months a year by 1981, when he is only forty, but "they will provide a complete audio-

visual record of his repertoire so that he will be able to communicate with millions of people rather than hundreds or thousands."

Conventional recordings, naturally, play an important part in this plan too, and while Galway has made some "straight classical" albums (the Mozart concertos, the Franck and Prokofiev sonatas, Bach concertos, and the Vivaldi *Four Seasons* transcription), those that have received the most attention are albums of short encore pieces and poppy arrangements. The latest of these records is the chart-topping "Annie's Song" LP, a disc Galway says he and Emmerson planned piece by piece for nine months. With a program ranging from Mozart, Fauré, and Villa-Lobos to Denver by way of Irish and Basque folk tunes, the album, the flutist is sure, has something for everyone.

"Those records are fun to make," he says, "and they get people into the concert hall who would never have come to a classical-music concert otherwise. And once they're in the hall, they seem to enjoy *everything*. Sometimes they get very enthusiastic and shout right in the middle of a work—which doesn't bother me a bit."

OF course, there is an entirely serious side to Galway too, a side that will become even more evident as the rest of his European recordings find release in the U.S. Galway's British discography, for example, includes a French concerto disc, a Schubert recital featuring his transcription of the *Arpeggione* Sonata, and, most recently, a disc featuring the new flute concerto he commissioned from Joaquín Rodrigo. There is also a second (chronologically the first) recording of the Mozart flute concertos, which Galway recorded with the New Irish Chamber Orchestra at the start of his career.

"I don't think two recordings of the Mozart is too much," he insists. "Rampal's recorded them more than twice. But this other record was really just a business mistake: you see, the people who recorded it first were going to bring it out some time next century, so meantime we recorded them again for RCA, who wanted to bring them out immediately. The second version is a little different, though. In the G Major Concerto I improvised a cadenza in the last movement. But conductors don't really like it when you improvise, even at a cadenza. They like to know exactly what's coming, and I guess I don't blame them. I find that the older conductors are the best. I played in Berlin with Jochum recently, and he said to me in his raspy voice, 'Now,

• JAMES GALWAY • Selective Discography



• **MOZART: Concerto in C Major for Flute and Harp (K. 299).** Berlin Philharmonic, Herbert von Karajan cond. ANGEL S-36857.

• **MOZART: Concertos for Flute: No. 1, in G Major (K. 313); No. 2, in D Major (K. 314). Andante in C Major (K. 315).** Lucerne Festival Strings, Paul Baumgartner cond. RCA ARL1-2159.

• **PROKOFIEV: Sonata for Flute and Piano, Op. 94. FRANCK (arr. Galway): Sonata in A Major (originally for violin).** Martha Argerich (piano) for RCA LRL1-5095.

• **VIVALDI (arr. Galway): The Four Seasons.** I Solisti di Zagreb. RCA LRL1-2284.

• **ANNIE'S SONG.** Works by Denver, Debussy, Kreisler, Villa-Lobos, Marais, and others. National Philharmonic Orchestra, Charles Gerhardt cond. RCA ARL1-3061.

• **THE MAGIC FLUTE OF JAMES GALWAY.** Pieces by Handel, Rachmaninoff, Gossec, Schumann, Bach, Chopin, and others. National Philharmonic Orchestra, Charles Gerhardt cond. RCA LRL1-5153.

Jimmy, you must write out the cadenzas for me.' And I said, 'Okay, maestro, I'll write them out.' So I drew a big flower in the middle of the page with the cadenza inside it, and you can imagine how he looked during the concert, following the cadenza with his finger on the page. But he accompanied me marvelously."

One of Galway's main concerns, on records and off, is the expansion of the flute repertoire. A good portion of the material he's already recorded is taken from the repertoires of other instruments, although he insists that the flute repertoire itself is by no means limited.

"I transcribe," he explains, "for the sheer joy of playing great music. I could go around like all the other flute players before me and play the same things they play. But playing *The Four Seasons* or the slow movement of the Mozart Clarinet Concerto is like being in heaven for a few minutes."

NOT all of Galway's transcription attempts are successful. Last year he tried to transcribe Rodrigo's *Concierto de Aranjuez*, originally for guitar, but found that the flute could not do the work justice. Instead, he transcribed another Rodrigo guitar work, the *Fantasia para un Gentilhombre*, and also commissioned a flute concerto from the composer, one in a long series of Galway commissions that includes works by Sir Lennox Berkeley, Richard Rodney Bennett, John Mayer, and Henri Lazarof. The Lazarof work, *Cadence V* for flute and tape, was recorded by Galway and released last year on CRI 381.

"The kind of contemporary music I like is music with nationalistic roots. National feeling can be found in everything from Mozart and Beethoven to Tchaikovsky, Debussy, Ravel, Copland, and Gershwin. It's music of the people, presented on a plate by a master cook.

"As for avant-garde music, well, I don't go in for that much. Playing it usually means preaching to the few already converted. I'd rather convert the masses. A lot of people are into very technical things—multiphonics and all—but I've yet to hear a performance of that sort of music that has stood up in the concert hall and made people want to hear it twice.

BUT the important thing, for me, is that I can bring all this great music to people and make them like it. And to do that, I've always got to be in top form. You can't afford to get lazy or to stop delivering. When I play with an orchestra, I very often hear that old line, 'Well, it'll be better at the show.' But I'm not interested in that. I want it perfect every time, whether it's a rehearsal, a performance, or a TV show, and whether it's in Carnegie Hall or a stadium in Akron, Ohio. I want to give my absolute best all the time, so that whenever I play, people leave the hall feeling that they've just been to the best concert they've ever heard." □



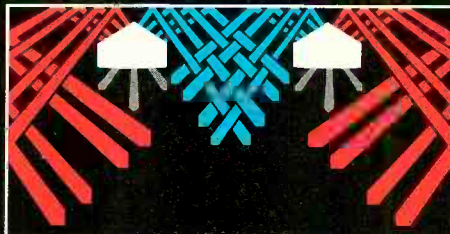
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Yamaha, the industry

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

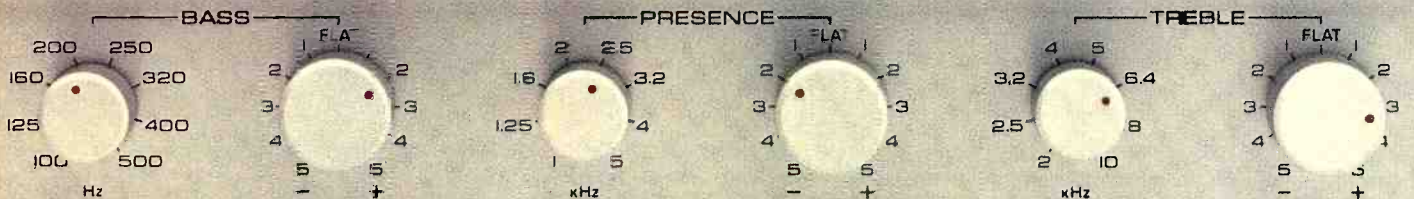
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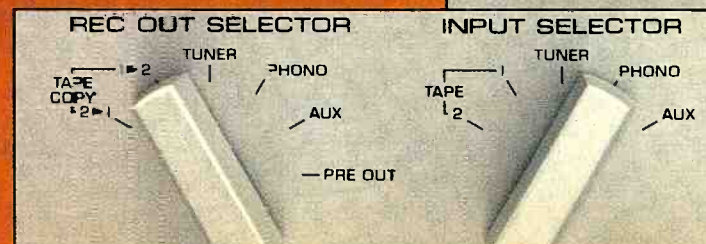
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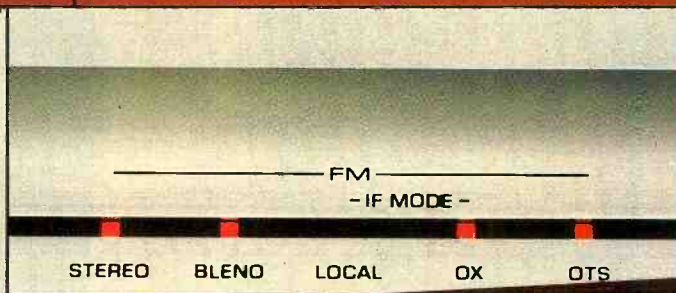
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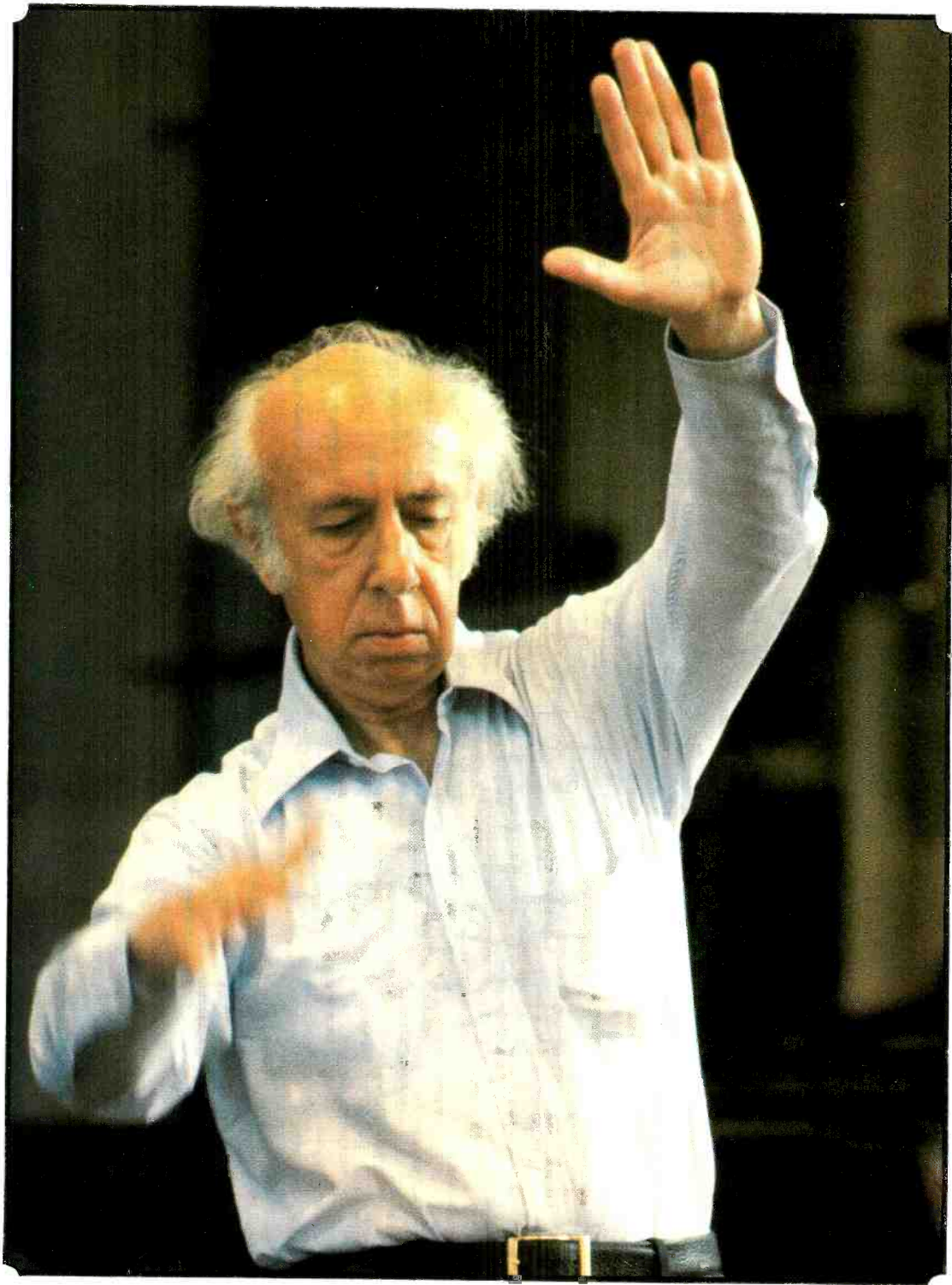
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Morton Gould
(Photo: Kevin Burke)

STEREO REVIEW'S SELECTION OF RECORDINGS OF SPECIAL MERIT BEST OF THE MONTH



Morton Gould: State-of-the-art Digital Recordings

DIGITAL recording, described only months ago as "the sound of the future," has already made itself a real factor in today's record market, and its general superiority to other recording approaches is too apparent by now to require much discussion. The expanded dynamic range, the stunning transients, the "unmeasurably low" distortion, and the freedom from background hiss surely speak for themselves. Furthermore, the master tapes can be edited, and no additional components are required for playback on a two-channel stereo system.

Commensurate with the technical benefits is the seriousness of artistic purpose already so hearteningly apparent in digital releases from various sources. Instead of the Ping-pong games and roaring locomotives that helped usher in stereo more than twenty years ago, there has been *real music* of solid substance. Nippon Columbia, the digital pioneer, has emphasized chamber music among the hundred and fifty or so classical releases on its Denon/PCM label so far, and it has shown a similarly thoughtful attitude in its smaller jazz series. London, the first Western giant to get into the digital action, has followed its initial release of a live Vienna Philharmonic New Year's concert (reviewed in *STEREO REVIEW* in June) with Mahler and Mendelssohn symphonies (they are reviewed by David Hall on page 142 of this issue); RCA has initiated its digital activity with the Bartók Concerto for Orchestra, performed by Eugene Ormandy and the Philadelphia Orchestra (to be reviewed next month), and is readying Mozart concertos played by Emanuel Ax with Eduardo Mata conducting the Dallas Symphony.

In the West, the giant companies face not only Denon's five-year lead, but also real competition from some enterprising smaller companies at

home. Sound 80 has given us Copland and Ives played by the Saint Paul Chamber Orchestra under Dennis Russell Davies; Telarc presented a stunning disc of Borodin and Stravinsky with Robert Shaw and the Atlanta Symphony and is recording other U.S. orchestras; and now Chalfont has brought out its first three digital discs, all taped in London last year. Like the Telarc and RCA releases, these were recorded using Thomas Stockham's "Soundstream" system; they are the most impressive specimens of this recording technique I've heard outside the Denon series and probably the finest-sounding records yet pressed in this country.

"... the most significant development affecting home listening pleasure since the introduction of electrical recording...."

A record of organ music played by Carlo Curley is especially intriguing because the instrument used is the Allen digital-computer organ in the Great Hall of London's Alexandra Palace. The phrasing in the Bach Toccata and Fugue in D Minor may border on the eccentric in spots (young Curley, according to a liner blurb, is known as the "Liberace of the organ"), but the performance hangs together well, and Curley's own arrangement of Jeremiah Clarke's famous Trumpet Voluntary (formerly attributed to Purcell) is the sort of tour de force anyone with ears must admire and enjoy. Most exciting, though, is the sound, far and away the

most lifelike reproduction of an organ I have yet heard—so vivid, indeed, that I feel a little odd about calling it "reproduction." This will surely be *the* organ demonstration record for some time; it is the sort of thing that can turn audio buffs into organ fans, and vice versa.

The other two discs, offering attractive symphonic pops with Morton Gould conducting the London Symphony Orchestra, will appeal to a wider audience. One program is made up of delectable Spanish pieces (with the aforementioned seriousness of purpose further indicated in the form of annotation by the renowned Spanish scholar Gilbert Chase); the other, even more enticing, contains super-virtuoso performances of Ginastera's *Estancia* suite and Shostakovich's brassy *Festive Overture*, together with Ravel's *Boléro* and the polka and fugue from Weinberger's *Schwanda*. In the Spanish package some of the interpretations are not the most subtle or idiomatic, perhaps, and the polka rhythm does not take hold in the Weinberger as it does under Reiner or Kempe, but the handling of the fugue, and the balancing of the organ and orchestra at the end, are masterly, and so is the pacing of the *Boléro*. More to the point, the sound is so glorious that one simply revels in it. The LSO, obviously enjoying its assignment and its conductor, is at or near its peak on all four sides, and nothing, from an insinuating little counter-figure for clarinet in *El Corpus en Sevilla* to the incredibly live percussion in *Estancia*, fails to make its full effect. This is just the way a real orchestra sounds—or *hopes* to sound.

Some caution is advisable in playing these discs. The drum thwack at the beginning of the *Tricornet* excerpt sent the needles on my power meters from a shade above 2 watts to a shade under 200. This sort of thing could knock out a speaker or overload an amplifier in a

less-than-heavyweight playback system. I would suggest starting out at a modest volume level and cranking up gradually to what you feel yours can safely handle—and then just let yourself be amazed. The dynamics in the *Boléro* (which is, after all, a seventeen-minute crescendo) are ideally graded by Gould and ideally projected in the recording—which means, among other considerations, that the whisper level of the opening music allows one to hear surface or background noise that is unnoticeable elsewhere on the disc, and that the conclusion rips the roof off but does so more cleanly than you are likely to have heard it done even in a concert hall.

CHALFONT is now associated with Varèse Sarabande, and two further discs from the same series of recording sessions (all produced and engineered in England by Jerome Ruzicka and Brian Culverhouse—see “Exploring the Digital Frontier in Watford and Tooting,” December 1978 STEREO REVIEW) are scheduled for release on the latter label by the time these words appear in print. Both are again with the LSO under Gould, but this time they are being pressed in Japan by JVC. One is made up entirely of Gould’s own compositions, including the marvelous *Latin-American Symphonette* and the *Philharmonic Waltzes*; the other is devoted to movie music, presenting Walton’s *Spitfire* Prelude and Fugue and the epilogue from Bliss’ score for *Things to Come* as well as excerpts from Gould’s own *Windjammer* and other Hollywood scores. I look forward to enjoying these as much as the three Chalfonts, which I have been playing daily since I received them and which further validate the judgment that digital recording is the most significant development affecting home listening pleasure since the introduction of electrical recording more than fifty years ago.

—Richard Freed

SHOSTAKOVICH: *Festive Overture, Op. 96.* **RAVEL:** *Boléro.* **GINASTERA:** *Estancia Suite.* **WEINBERGER:** *Polka and Fugue from Schwanda.* London Symphony Orchestra, Morton Gould cond. **CHALFONT** (in association with Varèse Sarabande and distributed by Discwasher) ● SDG 301 \$15.

DANZAS FANTÁSTICAS. Falla: *La Vida Breve: Spanish Dance No. 1. The Three-Cornered Hat: Final Dance. El Amor Brujo: Pantomime: Ritual Fire Dance.* **Albéniz** (orch. **Fernández Arbós**): *Iberia: El Corpus en Sevilla: Triana.* **Turina:** *Danzas Fantásticas, Op. 22, No. 3 (“Orgía”).* **Granados:** *Goyescas: Intermezzo.* London Symphony Orchestra, Morton Gould cond. **CHALFONT** (in association with Varèse Sarabande and distributed by Discwasher) ● SDG 302 \$15.

CARLO CURLEY GOES DIGITAL. **J. S. Bach:** *Toccatà and Fugue in D Minor (BWV 565); Fugue à la Gigue (BWV 577).* **Mozart:** *Fantasia in F Minor (K. 608).* **Widor:** *Symphony No. 5: Toccatà. Symphony No. 6: Finale.* **Clarke** (arr. **Curley**): *Trumpet Voluntary (The Prince of Denmark’s March).* **Pierné** (arr. **Curley**): *Scherzando.* Carlo Curley. Allen digital-computer organ, Alexandra Palace, London. **CHALFONT** (in association with Varèse Sarabande and distributed by Discwasher) ● SDG 303 \$15.

The Clash’s New Album: Putting the Punk Phenomenon in the Perspective It Deserves

It’s too bad so few people got to see the Clash on their over-in-the-wink-of-an-eye American tour, because the press hype on them was so adulatory that the average rock fan was, with good reason, pretty skeptical. *Nobody* could be as good as the critics were saying these guys were (at least that’s what I thought), and “Give ’Em Enough Rope,” the album released concurrently with the tour, while exciting at times, was thin-sounding enough to make you wonder what the fuss was all about.

I caught the band’s New York show, and I walked out slack-jawed, an instant (if belated) fan. It was the kind of raucous yet controlled outpouring of sound that inspires dreams and sends you out into the night feeling two feet off the ground. Had they followed

Bruce Springsteen as the final segment of ABC’s documentary *Heroes of Rock ’n’ Roll*, America would finally have been able to place the punk phenomenon in the perspective it deserves.

Anyway, here at last is the Clash album for people who still don’t get it. Epic has cannily taken nine cuts from their English debut album and fleshed it out with singles the group has graced us with so far in their brief, brilliant career. The result is that you hear what Lester Bangs has called “that rarest of rare birds—a band growing before you.” By the end of side one, which closes with a revelatory new version of the venerable *I Fought the Law* (it transforms the original’s rueful braggadocio into something almost heroic), you realize you’re listening to an outfit that has long since transcended the narrow confines of mere punk and evolved into what is simply the last great hard-rock band in the world. The only applicable parallels are with the finest work of the Stones, the Who, or the MC5.

Simon Frith has observed that most English audiences come away from Clash gigs feeling like better people, and while we Yanks can’t pretend to understand the social ferment that brought these guys to the fore at home, on purely musical levels “The Clash” is the kind of record that gives you an inkling of what he meant. At the risk of sounding maudlin: I find listening to it somehow cleansing. With most of mainstream rock (and virtually all disco) mired on the level of “screw the world, let’s party,” the Clash provides a ringing affirmation that there’s more to life after all and proves that music can still *matter* in ways undreamed of in the philosophies of the minions of Robert Stigwood. All that and a back-beat too. If the rock-and-roll idealist in you has been out to lunch for the last

THE CLASH: Mick Jones, Paul Simonon, Joe Strummer, Nicky Headon



couple of years, you simply have to hear this album.
—Steve Simels

THE CLASH. The Clash (vocals and instrumentals). *Remote Control; Clash City Rockers; I'm So Bored with the U.S.A.; Complete Control; White Riot; White Man in Hammersmith Palais; London's Burning; I Fought the Law; Janie Jones; Career Opportunities; What's My Name; Hate and War; Police and Thieves; Jail Guitar Doors; Garageland.* EPIC JE 36060 \$7.98, © JEA 36060 \$7.98, © JET 36060 \$7.98.

First Recording: Dmitri Shostakovich's Brilliant—and Bawdy— *Lady Macbeth of Mtsensk*

LADY MACBETH OF MTSENSK is one of the most famous works of twentieth-century music, but its reputation is by no means purely musical. By 1934, the year *Lady Macbeth* was written, Dmitri Shostakovich was the *enfant terrible* of Soviet music. In the early days of the Russian Revolution many advanced artists and philosophers naturally tended to identify revolutionary art with political change. Shostakovich was of the next generation, a brilliant talent who was completely a product of the Soviet period—the new Soviet musical man, one might say. His First Symphony was a sensation, and every new work by the young composer created a furor of excitement. I would not, however, describe Shostakovich's style as avant-garde in any sense. It is a very neat amalgam of modernism, Mahlerism, Russianism, Neo-Classicism, populism, and sass—the perfect new style for the new, brash, young Soviets.

Unfortunately, Stalin didn't see it that way.

The good dictator caught up with *Lady Macbeth* in 1936 in Moscow. He was so enraged at what he heard that he stalked out, and the next day *Pravda* printed bitter denunciations not only of the work but of its composer. Overnight a great success was turned into a non-work. The long Stalinist night had begun, in art as in every other aspect of Soviet life. Some of the more radical artists and composers actually vanished, from the public eye at least. Others, including Shostakovich, made long and painful recantations and seriously attempted to reconcile their personal styles with the demands of "socialist



At the playback: Galina Vishnevskaya, Nicolai Gedda, Dimitri Petkov

realism" as Stalin and his henchmen interpreted it. Only in 1958, after Stalin's death, did Shostakovich venture to take advantage of the so-called cultural "thaw" to bring out a revised version of the opera under the name *Katerina Ismailova*. Now, however, Angel has given us a recorded restoration of the original work, and, whatever its shortcomings and brutalities, it is indisputably a powerful one.

It is the presence in the West of Shostakovich's friend and colleague Mstislav Rostropovich and his wife, the soprano Galina Vishnevskaya, that has made this recording possible. That plus the half-Russian tenor Nicolai Gedda, the Bulgarian bass Dimitri Petkov, and a bunch of Scandinavians who seem to be able to manage a more than passable singing Russian—for, of course, it would have been inconceivable to record this very *Russian* Russian opera in any other language.

How does *Lady Macbeth* appear after all these years? Well, alas for the tender sensibilities of Josef Stalin, this is, even today, pretty raw stuff. *Katerina Ismailova*, our provincial Russian *Lady Macbeth*, takes a lover out of sheer boredom and then wipes out everyone who stands in her way—until the bumbling police catch up and shuffle 'em off to Siberia. There are the cold-blooded murders; the brutal personalities of all the characters; the picture of a pre-Revolutionary society dominated by boredom, violence, and corruption. And there are some absolutely animalistic sex scenes raucously scored by the composer in a style one critic has dubbed "pornophony."

Whatever one's feelings about this work and its highly ambivalent moral

and musical tone, it must be admitted that, in a perverse way, it belongs in the great tradition of passionate, larger-than-life tragedy; think of *Manon*, *Cavalleria*, or even *Tristan*. And, bawdy and sensationalist though it may be, it is much too brilliant a work to be consigned to the dustbin of history, particularly by a boor and a murderer (you might call that crocodilian morality). The Shostakovichian wit—not stylish like the French but gutsy—is everywhere. The composer never surpassed his early works for invention, originality, and even emotional impact.

This recording is a brilliant realization—really an act of love—on the part of Rostropovich and Vishnevskaya. Vishnevskaya, who is such a variable singer, has never sounded better—and in music that might have been conceived for her. This non-Russian-speaking listener found most of the vocalism highly convincing and Rostropovich's conducting breathtaking in its level of excitement.

Will *Lady Macbeth* make it back to the stage in this country? I say "back" because, if I am not mistaken, the work was conducted by Stokowski in the 1930s in Philadelphia and New York (at the Met but not produced by it). In some ways it was easier to get an opera like this—new or old—on the stage then than it is now. We don't (knock wood) have any cultural Stalinism in this country, but it cannot be denied that the *economic* closeout of new ideas in music theater can be just as effective.

—Eric Salzman

SHOSTAKOVICH: *Lady Macbeth of Mtsensk.* Galina Vishnevskaya (soprano), Katerina Ismailova; Nicolai Gedda (tenor).

Sergey; Dimitar Petkov (bass), Boris Timofeyevich Ismailov; Werner Krenn (tenor), Zinovy Borisovich Ismailov; Robert Tear (tenor), a peasant; Taru Valjakka (soprano), Aksinya; Martyn Hill (tenor), a teacher; Birgit Finnilä (mezzo-soprano), Sonyetka; others. Ambrosian Opera Chorus; London Philharmonic Orchestra, Mstislav Rostropovich cond. ANGEL SCLX-3866 three discs \$24.94.

Another Taste of Honey: There's Something New To Discover with Every Replay

THE Grammy award-winning "best new group" for 1978 has scored another triumph. *Boogie, Oogie, Oogie* girls Janice Johnson and Hazel Payne, with their back-up team, have delivered an elegant, up-mood album that is mostly for dancing but will also yield rich rewards for those who simply listen. In fact, each time I play it I listen more. The two singers are so resourceful and the arrangements so startlingly fresh that there's something new to discover with every replay: a flute obbligato, a Forties rhythm, an exquisite harmony, exotic syncopations.

The best moment among so many good ones is *Take the Boogae or Leave It*, which deserves to be as big a hit as *Boogie, Oogie*. In this cut, disco gets what is probably the most intricate vocal treatment in its brief history: jazz-based close harmony of *astounding* versatility—it's so good! And I must

TASTE OF HONEY:
shining musicianship
from (left to right)
Donald Johnson, Janice
Johnson, Hazel Payne,
and Perry Kibble



Harry Langdon/Capitol

put in a good word too about *I Love You*, in which Janice and Hazel work absolute wonders with a series of variations on those three little words to a gentle reggae/disco beat.

Taste of Honey's classy arrangements and shining musicianship confirm the impression that they are something new and special: a fusion of jazz, dance music, and talent.

—Edward Buxbaum

TASTE OF HONEY: Another Taste. Taste of Honey (vocals and instrumentals); instrumental accompaniment. *Do It Good; The Rainbow's End; Dance; I Love You; Race; Let's Begin; Take the Boogae or Leave It; Your Love.* CAPITOL S00-11951 \$8.98, © 8X00-11951 \$8.98, © 4X00-11951 \$8.98.

Della Reese and Jazz à la Carte In a Very Live Album Of Vintage Jazz

"ONE OF A KIND" is the third album produced by the Jazz à la Carte players, a group of musicians who claim they got the idea of starting their own record company after their producer, Terry Gibbs, created a sensation on the vibraphone at a restaurant party in Playa del Rey, California. The party was being held, it seems, in honor of the 101st anniversary of the birth of Sherlock Holmes' mother, but don't let that put you off. The six performers in the group really make great music, and with the addition of Della Reese, apply-



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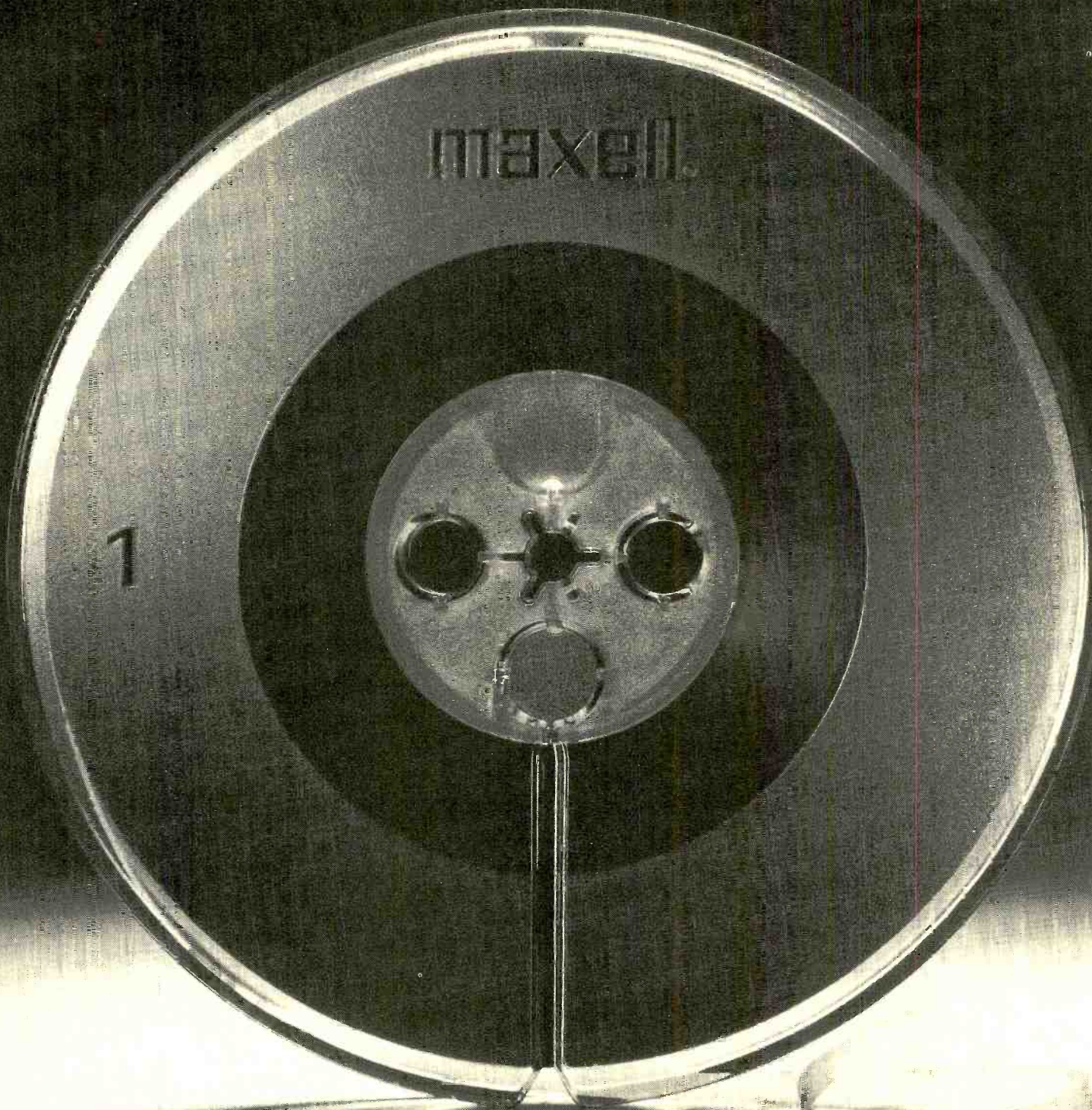
DELLA REESE: lusty style

ing her lusty style and splendid musicianship to turning old standards into fresh experiences, they have put together a first-rate album.

Whether she is fixing her intelligent attention on sleek Cole Porter ballads such as *Ev'ry Time We Say Goodbye* and *Get Out of Town*, being upbeat and exuberant with Irving Berlin's *The Best Thing for You Is Me*, or serving up the old blues clichés in a zesty new blend in her own *Everybody's Blues*, Della Reese lives up to her liner-note billing as "a jazz-singer's jazz singer." It scarcely seems possible that anybody could breathe fresh vitality into *Mack the Knife* at this late date, but Della does it as a samba, and it works. She converts *I'm Old Fashioned* into something more affecting than tired camp, and her grandstand treatment of *Make Someone Happy* as a finale made this listener very happy indeed.

The support she gets from the group could not be more expert or more appropriate, and the recorded sound, captured in this instance in a van outside the restaurant where the singer was performing, is exceptionally alive. Even the audience applause sounds, for once, real enough that you want to join in. (And I should not omit to mention that label credit for *Mack the Knife* goes to Kurt Vile!) —Paul Kresh

DELLA REESE: One of a Kind. Della Reese (vocals); Lou Levy (piano, conductor); Jimmie Smith (drums); Kenny Burrell (guitar); Bob Magnusson (bass); Bob Cooper (tenor sax); Chile Charles (conga drums). *Close to You; Ev'ry Time We Say Goodbye; After You've Gone; The Best Thing for You Is Me; Everybody's Blues; Mack the Knife; Get Out of Town; Little Boy Lost; I'm Old Fashioned; Make Someone Happy.* JAZZ À LA CARTE Vol. 3 \$8.98 (from Jazz à la Carte, 7319 West 87th Place, Los Angeles, Calif. 90045).



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POPULAR DISCS AND TAPES

Reviewed by CHRIS ALBERTSON • EDWARD BUXBAUM • NOEL COPPAGE • PHYL GARLAND
PAUL KRESH • PETER REILLY • STEVE SIMELS • JOEL VANCE

ABBA: *Voulez-Vous*. Abba (vocals and instrumentals). *I Have a Dream; Does Your Mother Know; If It Wasn't for the Nights; As Good as New; Angeleyes; The King Has Lost His Crown;* and four others. ATLANTIC SD 16000 \$8.98. © TP 16000 \$8.98, © CS 16000 \$8.98.

Performance: **Delightful hooley**
Recording: **Clean**

You may not believe it, but Abba is worried. Despite all the group's hit singles over here and its near domination of the European market, they still feel they have not made it big in the United States of Buckland. So, with this album, an all-out merchandising campaign begins. An insert in the sleeve advises consumers that they can now purchase Abba caps, T-shirts, belt buckles, jackets, wrist watches, bracelets, souvenir books, posters, and even a complete fan-club kit, proudly demonstrating their allegiance by paying to display the group's registered trademark.

Abba has certainly made every musical effort to ingratiate themselves with Americans, and they're more skillful at it than the British were in the Sixties. There isn't a single note, riff, figure, throat warble, or rhythm scheme in Abba's music that isn't based on what has been done or is being done in the United States. One marvels at the clinical precision of their pastiches. But despite the corn, the commercialism, and the pandering, on any

Abba album there is usually one knockout song you can't stop playing. This time it's *I Have a Dream*, which could be sung effectively by anyone from a night-club doxy with fifty-pound eyelashes to a company of Girl Scouts. Abba, Abba! Despite my brain's saying "no," my heart says "yes." There's no other group for which I am so willing a sucker. See if it doesn't happen to you too. J.V.

AMERICA: *Silent Letter*. America (vocals and instrumentals). *Tall Treasures; No Fortune; 1960; All Night; Only Game in Town;* and six others. CAPITOL SO-11950 \$7.98, © 8XO-11950 \$7.98, © 4XO-11950 \$7.98.

Performance: **Marking time**
Recording: **Excellent**

America consists of lead singers/songwriters Dewey Bunnell and Gerry Beckley and their back-up band (the group began as a trio some six years ago). Their first hit was the laconic *A Horse with No Name*, which on first hearing sounded like Neil Young. They went on to have other hits with albums produced by George Martin of Beatles fame. Martin is known for the distinctive, clean sound of any record he produces, and in the case of the Beatles he contributed ideas that helped make their recordings the classics they are. But even a producer as accomplished and professional as Martin cannot *perform* for his act. America always has a certain charm, but Bunnell and Beckley depend mostly on their own material, and this time around it's only so-so. The strongest cut here, *Only Game in Town* (released as the single), is not by them, and the others are just filler. J.V.

PAUL ANKA: *Headlines*. Paul Anka (vocals); vocal and instrumental accompaniment. *Headlines; Andi; Life Song; Together Again;* and five others. RCA AFL1-3382 \$7.98, © AFS1-3382 \$7.98, © AFK1-3382 \$7.98.

Performance: **True glitter**
Recording: **Excellent**

"Headlines" is such a glittering job of *haute-commercial* record making that I'm a bit in

awe of it. Paul Anka's perfectionism is such that there isn't a note left unspotlighted, a phrase left unaccented, or a state-of-the-art embellishment left unused in either the performance or the production. The repertoire, however, is considerably below form for Anka, with a couple of dank posies of his own offered up along with such wilted corsages as his collaborations with Sammy Cahn (*Headlines*) and with Alan and Marilyn Bergman (*Leave It All to Me*). Anka performs everything with his usual enormous self-confidence and razzle-dazzle showmanship, and when it all falls together, as it does at least once here (in *Learning to Love Again* with its superb up-front arrangement by Domenic Frontiere), it's like being on the inside of a roman candle. Unfortunately, like fireworks, the glow fades away fairly quickly. P.R.

RECORDING OF SPECIAL MERIT

ATLANTA RHYTHM SECTION: *Underdog*. Atlanta Rhythm Section (vocals and instrumentals). *Do It or Die; Born Ready; I Hate the Blues/Let's Go Get Stoned; Indigo Passion;* and four others. POLYDOR PD-1-6200 \$7.98, © 8T-1-6200 \$7.98, © CT-1-6200 \$7.98.

Performance: **Crafty**
Recording: **Very good**

The Atlanta Rhythm Section can't be blamed if the idiots who've tight-playlisted the radio almost drove us all nuts with *So into You*, and even if they could, their new "Underdog" album would be suitable atonement. I don't know about underdogs, but the ARS is working *understatement* the way it was meant to be worked, and the album contains some of the cleanest, most satisfying, and most laid-back rock I've heard lately. This lack of, or avoidance of, excess, from Ronnie Hammond's almost pristine, almost crystalline vocals on through every instrument, should not be confused with the dispassionate dry competence that has afflicted so many rock bands of this era. The ARS songs have themes to them, and the band obviously cares about writing and presenting them. The solos are not wildly

Explanation of symbols:

- Ⓜ = open-reel stereo tape
- Ⓢ = eight-track stereo cartridge
- Ⓒ = stereo cassette
- Ⓚ = quadraphonic disc
- Ⓛ = digital-master recording
- Ⓛ = direct-to-disc recording

Monophonic recordings are indicated by the symbol Ⓜ

The first listing is the one reviewed; other formats, if available, follow it.

original, but they are sensitive and sensible. The timing is delicate, and so is the overlay of instruments—too delicate for “good planning” to account for; look instead for good instincts, which also account for some holes going effectively unfilled. Possibly the radio will latch onto one or two of these songs and almost drive me nuts again, but at the moment I’m having a hard time finding anything in “Underdog” to complain about. Maybe RCA can complain that the dog on the cover looks like its Little Nipper, but then RCA is connected with NBC, the biggest underdog around right now. N.C.

CHARLES AZNAVOUR: *We Were Happy Then*. Charles Aznavour (vocals); instrumental accompaniment. *Then; It's Heaven; Take Me Along; We Had It All; Pretty Shitty Days; I Will Warm Your Heart*; and four others. DRG SL 5189 \$7.98, © SCL 5189 \$7.98.

Performance: **For fans**
Recording: **Good**

Here's Charles Aznavour in English—and, as usual, in despair. *Pauvre Charles!* If he gets any more intense about such things as *We Had It All*, *It's Heaven*, and *Let's Turn Out the Lights* he'll pop his vocal cords (or something) for sure. Actually, amidst all the din and drama there's one very fine song and performance here. *Pretty Shitty Days* has the same laconic, streetwise Parisian charm Aznavour showed in Truffaut's film *Shoot the Piano Player*. The rest? Well, Piaf might have been able to make something of these songs, but Aznavour only manages to sound hysterical as he goes from one *crise d'amour* to another. His fans, however, often as excitable as Charles himself, will probably think it's the greatest thing since *yaourt*. P.R.

THE B-52's. The B-52's (vocals and instrumentals). *Planet Claire; 52 Girls; Dance This Mess Around; Rock Lobster; Lava; There's a Moon in the Sky (Called the Moon)*; and three others. WARNER BROS. BSK 3355 \$7.98, ©M8 3355 \$7.98, © M5 3355 \$7.98.

Performance: **Paging Jack Lord**
Recording: **Excellent**

The B-52's are pretty shrewd. Not only are they the first truly *fey* punk band in history (which shows that they have noted the public's heretofore unsuspected craving for a New Wave version of a hippie minstrel such as Donovan), they have also absorbed the only valuable lesson provided by Brian Eno's work with Roxy Music. To wit: *all* avant-garde rock, of any period and of any school, from ELP to Pere Ubu, is really surf music in disguise. That's right, folks, the Ventures (famous for their rendition of the theme song from *Hawaii Five-0*) have to be recognized as the most radical rock band of all time, and if you think the B-52's don't know this, then just check out the guitar reproduced on their album's inner sleeve.

They are also, like most other punk bands with intellectual pretensions, a one-joke act (the *Village Voice* has already, with a straight face, compared them to Flannery O'Connor, no less). But they are pretty cute, and I must admit that their *Rock Lobster*, which makes about as much sense as *Mellow Yellow* and will be similarly dated in five years, is an inspired bit of silliness. Further, their remake of *Downtown* may, with luck, force Petula Clark to abandon the music business entirely. The

Sheri Lynn Behr



Southside Johnny Lyon

The Jukes: Solo Flight

THE world knows I'm almost evangelistic on the subject of Southside Johnny and the Asbury Jukes. And it's no secret that a lot of other folks think they're a bunch of anachronistic bar-band journeymen who've achieved success by riding the coattails of their pal Bruce Springsteen. Consequently, it comes as no surprise to me that "The Jukes," the band's fourth album, is a conscious attempt to make a personal statement. Production, for the first time, is not by E-Streeter Steve Van Zandt, but by Muscle Shoals soul veteran Barry Beckett. And the band wrote all the songs themselves this time: no Springsteen giveaways, oldies, or instant Van Zandt make-out classics. The result? An inconsistent, occasionally wonderful record that is often moving and melodically memorable but is cursed with some wacky lyrical excesses that don't bother me unduly if I avoid the lyric sheet (Johnny's singing is so gut-bucket compelling that I generally couldn't care less if he's spouting nonsense).

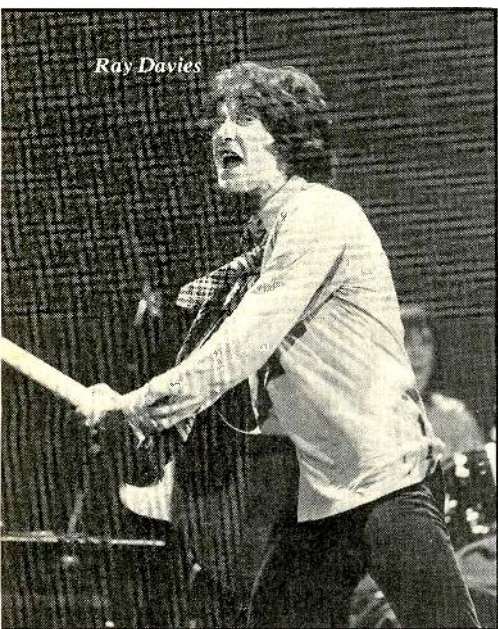
When everything comes together, in fact, this is riveting stuff. *All I Want Is Everything*, which mates Graham Parker with the Jukes' trademark Jay and the Americans Latin influences, is a kind of neo-punk *Rebel Without a Cause*, something a romantic like Van Zandt could never have penned for them, and *I'm So Anxious* (which has the juiciest horn riff since the halcyon days of Sam and Dave), *Paris* (Johnny has joked that it's about Detroit), *Living in the Real World*, and *Vertigo* are major successes that effectively nudge the Jukes even further into the mainstream while still maintaining stylistic links with their past. Two of guitarist Billy Rush's songs are less felicitous, however. *Security* is a nice enough blues tune with wry lyrics, but Rush's affect-

ed Dr. John drawl is unconvincing and wears thin rather quickly. Worse, *Your Reply* makes the mistake of talking directly to God; somehow the idea of a street kid from Jersey waiting for a Mailgram from the Big G strikes me as a bit of overreaching.

But, then again, that has always been part of the Jukes' charm, and that a bunch of white sleazes from Asbury Park should turn out to be standard bearers for Sixties black music is the cream of the jest. Asbury r-&-b purists will doubtless lament the direction "The Jukes" points the band in, but I suspect that where they're going is potentially even more exciting than where they've been. If their last album, "Hearts of Stone," was the contemporary equivalent of "The Rolling Stones Now," which is to say the summation of a particular school of blues-inflected rock, then this new one suggests that once they get a few of the bugs out of the synthesis they're pursuing, their most mature and considered work is still ahead of them.

In the meantime, "The Jukes" rates as one of the better albums of 1979, and if nothing else it should put to rest once and for all the idea that these guys can't cut it without the rest of the Jersey Mafia to help them out. Clearly, they can. —Steve Simels

SOUTHSIDE JOHNNY AND THE ASBURY JUKES: *The Jukes*. Southside Johnny Lyon (vocals); the Asbury Jukes (vocals and instrumentals). *All I Want Is Everything; I'm So Anxious; Paris; Security; Living in the Real World; Your Reply; The Time; I Remember Last Night; Wait in Vain; Vertigo*. MERCURY SRM-1-3793 \$7.98, © MC8-1-3793 \$7.98, © MCR-1-3793 \$7.98.



Ray Davies

Charlyn Zlotnik

The Kinks Make a New Bid

SIMPLY put, what happened as the Seventies progressed was that people went from saying they could change the world to saying they couldn't. They went from "tell me more" when one started to talk—or sing—about the gory details (war, racism, pollution, whatever) of how we live now to "I don't want to hear about it." They went from Godard and Truffaut to *Star Wars* and *Superman*, movies that asked *not* to be taken seriously. They went from rock with a highly developed social conscience, like that of the Kinks, to disco and other would-be-apolitical, would-be-escapist things. But the Kinks are still around, and they still have a constituency, albeit one that has done a slow flip-flop, and the Kinks' problem has been how to adjust the message so it'll get through these attitude changes. After a measure of wobbling about, Ray Davies and his mates have put a *program* together in their new Arista album, "Low Budget."

Note, in passing, that "program" is not a synonym for "great album," but it does mean getting the machinery back on the track—or a track—putting something together in the way of a statement (since Davies could not conceivably be Davies without making statements; one can't imagine his doing Frampton-type "Ah love mah baby" songs), and this does have the effect of elevating the project musically. Perhaps we should just keep in mind that *all* heavy-adjustment albums are flawed musically.

By way of adjusting, Davies has broadened his approach and softened his language, backing off a bit from the extreme of *any* direction.

In the old days the damned Tories could represent right-wingers everywhere and Davies could have at them, throwing in a reminder now and then that power corrupts. But you'll have to look awfully hard to find any easy villains in "Low Budget." The villain implicitly is the situation, so the songs deal with various aspects of it. There are three topical ones, in the broad sense. One has Captain America calling other "citizens": "I built you up when you were down on your knees/So won't you catch me now, I'm falling." Another is about the gasoline shortage, probably because Davies felt obligated to do one on that (it doesn't say anything new—what *can* one say?). The third (*Wish I Could Fly Like Superman*), uses a disco beat because that goes with the theme, which is that Superman is a fantasy hero of the day because we feel so puny and helpless: "I looked in the mirror at my pigeon chest/I had to put on my clothes, it made me depressed." Other songs deal with attitudes, nervous tension ("man's invention, is the biggest killer that's around today"), being low on funds (identifying with people strapped for money is another basic tenet of the Kinks), overpopulation, and how life, as Davies has said before, ain't nothing but a movie.

Through all this, Davies' language is more ironic than preachy. And in a couple of places, *Attitude* and *Misery*, he reminds us (perhaps himself) that dwelling on the negative just doesn't work: "You got to learn to be positive/It's your only chance/Stop being defensive/Join in the dance." Yet the *old* Davies is still there, and he comes through strongest in *Little Bit of Emotion*, which has one of those charmingly simple melodies he sometimes uses, this time to say that the fear of showing real emotion is one of our main problems right now.

THE whole album is thematically a pretty good shot at the Situation Now, and I can't find much fault with how it's worded for the times. The only problem may be getting the constituents nowadays to listen to *any* words, even those in "Low Budget." Musically it's . . . well, like a John Prine album; the tunes are there to hang the words on. Additionally, the Kinks have lost, over the past three or four years, the old looseness and unpredictability in their sound. They used to sound as if somebody were about to hit a wrong note any minute, but now they just sound like a veteran rock band—except, of course, you couldn't get Ray's fey vocals anywhere else.

So this one is a risk-taker, with Davies gambling that he can get through to his fans again with *words*. He's got to make them care again, or admit that they *still* care, otherwise it's either quit or write "Ah love mah baby" songs. I hope he gets a hearing, for his kind of commentary seems to be what we need as the Seventies exit quietly, with a fixed grin.

—Noel Coppage

THE KINKS: *Low Budget*. The Kinks (vocals and instrumentals). *Attitude; Catch Me I'm Falling; Pressure; National Health; (Wish I Could Fly Like) Superman; Low Budget; In a Space; Little Bit of Emotion; A Gallon of Gas; Misery; Moving Pictures*. ARISTA AB 4240 \$7.98, Ⓟ AT8 4240 \$7.98, © ATC 4240 \$7.98.

rest of it? I think I prefer my *Ride the Wild Surf* straight. S.S.

DAVID BOWIE: *Lodger*. David Bowie (vocals, keyboards); Dennis Davis (drums); George Murray (bass); Carlos Alomar (guitar); other musicians. *Fantastic Voyage; African Night Flight; Move On; Red Sails; D.J.*; and five others. RCA AQL1-3254 \$8.98, Ⓟ AQS1-3254 \$8.98, © AQK1-3254 \$8.98.

Performance: **Muddled**
Recording: **Average**

Well, Bowie *does* make you suspect he has intelligence—the album just before this, for instance, had a certain, um, *élan* about it—and so you listen. And usually picture him laughing all the way to the bank while you're actually trying to sort out the gobbledegook. That's what I'm doing this time, but at least I didn't have to pay for the damned thing. Bowie has always killed off his background—about the only *real* thing we've ever known about him is that he's afraid of flying (and in *Move On* here he mentions boats and trains but not planes). Now he's killed off the Ziggy Stardust and Ch-Ch-Changes phase, but in this one he seems to be a character in search of an author. He's leaning toward being something between Lou Reed and John Cale; accordingly, Brian Eno, the all-time number-one avant-rock groupie, blessed the project and helped write some of the so-called melodies. But Bowie doesn't really have his latest part sorted out. He can't decide whether to be cryptic and mysterious and maybe throw in a little stream of consciousness or to identify with the street crowd. His lines here are mostly short and mostly futile, given some of the high-flown themes he hints he's trying to illuminate; outside of the straightforward (and mediocre) *Fantastic Voyage*, the best you can hope for are a few limp language games set to some of the year's most boring and empty tunes. N.C.

CATE BROTHERS BAND: *Fire on the Tracks*. Ernie Cate (vocals, keyboards); Earl Cate (vocals, guitar); Terry Cagle (drums, vocals); Ron Eoff (bass, vocals). *Time Is a Thief; Looks Like You Made It; I Won't Wait; In So Deep; Fire on the Track*; and five others. ATLANTIC SD 19240 \$7.98, Ⓟ TP 19240 \$7.98, © CS 19240 \$7.98.

Performance: **Good, but frustrating**
Recording: **Very good**

There's much to admire about this—stylish vocals, disciplined instrumentals, clean and intelligent guitar solos, pleasant melodies—but it has what I call the Jimmy Reed Syndrome: the songs all sound alike. Well, not quite *all*, but too many have the same tempo, almost the same melody, the same narrow, straight-ahead structure, and probably (I don't have an instrument around at the moment to check this) the same key. Gives it a sort of drone-like quality, and that's too bad, for the Cate Brothers, one song at a time, are *good*. They still may be my favorite blue-eyed-soul act (admittedly that's not a very crowded field in the landscape of my mind), and there are two or three tasty singles in this brew, but if you try to chugalug the whole thing you'll wind up in a daze. N.C.

THE CLASH (see *Best of the Month*, page 92)

(Continued on page 100)

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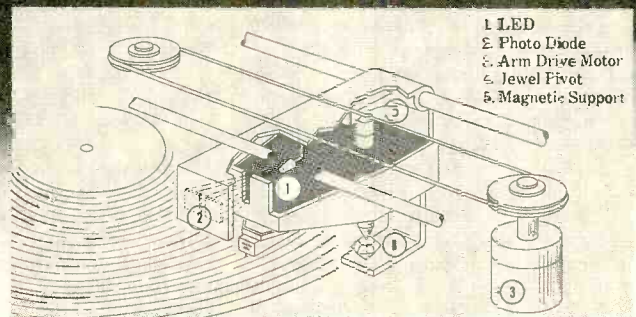
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Charlyn Zornik

Joni's "Mingus"

JONI MITCHELL's album "Mingus" is going to catch considerable flak for being ponderous where the late Charles Mingus was light-hearted, for being tight to uptight where he was loose, and for being un-Mingus-like in general. And the flak launchers will be right, in their own context. I'm no Mingus expert, but my impression is that, in addition to being something of a mystic off the stage, he was a catalyst for improvisation and a sort of bridge between traditional and "modern" (as in far-out) jazzmen on the stage. No doubt this is connected with his having worked with Louis "Satchmo" Armstrong on the one end and Charlie "Bird" Parker on the other. Mingus kept the layman from getting lost while giving his instrumentalists all the improvisational freedom they needed, but Joni's "memorial" album has dangled near no improvisation.

But then it is not supposed to be a Charles Mingus album. It is a Joni Mitchell album for which Mingus wrote four melodies and doubtless provided inspiration. Mitchell, candid to a fault, would be the first to tell us she does not have an easy relationship with spontaneity. In fact she does tell us, in the notes, "I was trying to please Charlie and still be true to myself. I cut each song three or four times."

"Mingus" seems mainly a continuation of the course Joni has been on (with a partly folkie hiatus in "Hegira") ever since "The Hissing of Summer Lawns." She's been looking for a way to grow, and jazz, a very broad category indeed, has seemed to offer her the greater possibilities.

It seems to me that her experimentation these last few years has been good for her as a vocalist but has narrowed her scope as a writer. Her lyrics had much more insight in the "For the Roses" mode. The ballad tradition as modified by her (and Bob Dylan and Gordon Lightfoot and Jackson Browne and precious few others, actually) is a better format for her Joyce Carol Oates/Woody Allen/soap-opera commentary on relationships than one can readily wring from the conventions of jazz, which puts several things above lyrics.

Musically, Joni's been toying with sound effects more than with melodies, and she still is in "Mingus." The four that Mingus wrote would serve fine as take-off points for improvisation, but instead of stretching them she has merely decorated them. The two melodies she wrote, those for *God Must Be a Boogie Man* and *The Wolf That Lives in Lindsey*, are themselves sketchy sound-effects hangers rather than the old swoops and sweeps of her folkie days.

But as a vocalist Joni has grown tremendously in the last few albums. Where she used to dart self-consciously into and out of falsetto, like changing gears in an old MG, she now glides with confidence over a remarkable number of notes and makes no big deal of it; it seems normal and effortless. Her voice has become, as jazz likes its voices to become, an instrument.

I find "Mingus" more listenable than "Don Juan's Restless Daughter," although not by much. It is too bad she couldn't have loosened up the way Mingus himself would have. The thing is bound to lose her some of her more casual fans, who were attracted to a nice folk singer from Canada, but, like Ingmar Bergman, she has a number of diehard fans who'll hang in there, and I guess that includes me (I don't know whether I'm bragging or complaining). The most "accessible" song is probably *The Dry Cleaner from Des Moines*, which unfortunately catches Joni getting a little too cute with the lyrics. The song is about luck; just before it there's a taped comment by Mingus about how good his had generally been, but Joni's lyrics, tongue-in-cheek or not, are about how bad hers is.

In her liner notes, Joni gives credit to the musicians involved in the out-takes (surely a first in the giving-credit department); these included John McLaughlin and Gerry Mulligan. Of those who made it to the finals, so to speak, only Wayne Shorter truly seems to matter. Mingus having been a bassist, you'd think the bass of Jaco Pastorius (of Weather Report) would have a leading role, but here it's just another bass. On the other hand, there's something to be said for putting this tight a rein on Herbie Hancock.

MINGUS died, as Joni further notes, in Mexico on January 5, 1979, at the age of fifty-six, and his body was cremated the next day. "That same day fifty-six sperm whales beached themselves on the Mexican coastline and were removed by fire. These are the coincidences that thrill my imagination." Now that, I think, is a Mingus-like observation (or Jung-like—he called such coincidences "synchronicity"). Where jazz is concerned, though, I like to think Joni Mitchell is still working on it, diligently if not always efficiently, and she's by no means finished.

—Noel Coppage

JONI MITCHELL: *Mingus*. Joni Mitchell (vocals, guitar); Jaco Pastorius (bass); Wayne Shorter (soprano sax); Herbie Hancock (electric piano); other musicians. *God Must Be a Boogie Man*; *A Chair in the Sky*; *The Wolf That Lives in Lindsey*; *Sweet Sucker Dance*; *The Dry Cleaner from Des Moines*; *Goodbye Pork Pie Hat*. ASYLUM 5E-505 \$8.98, © 5T5-505 \$8.98, © 5C5-505 \$8.98.

TIM CURRY: *Fearless*. Tim Curry (vocals); instrumental accompaniment. *Right on the Money*; *Hide This Face*; *I Do the Rock*; *S.O.S.*; *Cold Blue Steel & Sweet Fire*; and five others. A&M SP 4773 \$8.98, © 8T 4773 \$8.98, © CS 4773 \$8.98.

Performance: **Funny but spotty**

Recording: **Loud**

Tim Curry is the demonically energetic British actor who portrayed Dr. Frank N. Furter in the stage and film versions of *The Rocky Horror Show*. He has a gift for accents, and his tour de force on this second album is *I Do the Rock*, which is not a song so much as Noël Coward-type patter on the political, social, and jet-set personalities of the day, backed up by a riff. It is very funny patter, and Curry runs several accents through it—French, upper-crust British, Indian, and a kind of ersatz Spanish—all of which blend into each other. The words are unintelligible in spots, but you can still appreciate his zany brilliance.

Curry is basically unsubtle, however, and his magic doesn't sustain itself. He is often entertaining but tends to squander his energy, sometimes becoming annoying rather than entertaining (*Right on the Money*, *Hide This Face*, *Charge It*). On a few tracks here he sings in a ballad style—with an actor's spoken interjections—but it's evident he's restraining his energy with some difficulty. The lunatic comedy will appeal only to a cult audience, and the ballads and de facto rock-and-roll suffocate Curry's personality. But there are some interesting moments. J.V.

RECORDING OF SPECIAL MERIT

EARTH, WIND & FIRE: *I Am*. Earth, Wind & Fire (vocals and instrumentals); vocal and instrumental accompaniment. *In the Stone*; *Can't Let Go*; *After the Love Is Gone*; *Boogie Wonderland*; *Star*; and four others. COLUMBIA FC 35730 \$8.98, © FCA 35730 \$8.98, © FCT 35730 \$8.98.

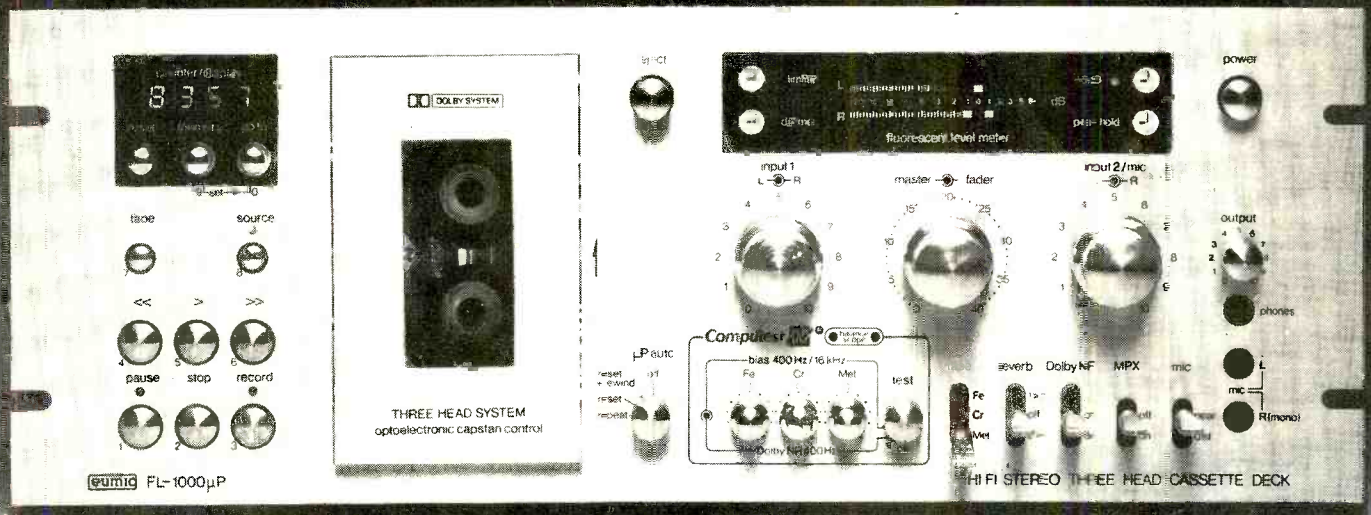
Performance: **Down to earth**

Recording: **Very good**

As Earth, Wind & Fire have strengthened their grip on success, the mystical and extraterrestrial emblems adorning their albums have gained proportionately in grandiosity. This latest one, with a title echoing the majesty of Jehovah and an inside cover featuring a portrait of the group costumed and posed as princes out of fable, is no exception. Such bombast may be considered forgivable in this case, however, because of the excellence of the music on the record.

As usual, this astral outfit blasts off in a balls-of-fire flurry of rhythm, which is cleverly varied through the album, even within selections, without losing its driving thrust. There is some evidence of capitulation to disco, particularly on *Boogie Wonderland*, to which the Emotions lend a few spirited soprano embellishments, but the emphasis throughout is on a dazzling interplay between precision ensemble voices—employed like horns—in rapid, robust exchanges with the group's instruments augmented by a large orchestra. The opening track, *In the Stone*, is less imaginative than many of Earth, Wind & Fire's previous efforts, but performing gusto compensates for the slim substance. My favorite is *After the Love Is Gone*, which is laced with unexpected Wonder-ful progres-

(Continued on page 102)



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sions. Some will say that this highly creative group has gone disco. If so, I hope more disco albums like this one will follow. P.G.

RECORDING OF SPECIAL MERIT

DAVE EDMUNDS: Repeat When Necessary. Dave Edmunds (vocals, guitar); Rockpile (vocals and instrumentals); other musicians. *Girls Talk*; *Crawling from the Wreckage*; *Dynamite*; and eight others. SWANSONG SS 8507 \$7.98. © TP 8507 \$7.98. © CS 8507 \$7.98.

Performance: **Exhilarating as usual**
Recording: **Fine**

Nothing new here. Edmunds continues to rock out a tad harder than his co-worker Nick

Lowe (this can be looked upon as part two of Lowe's "Labour of Lust," and I just wish that the two of them would get on the same label so they could release these projects as double albums), but as usual he leavens everything with enough pop sweetening that his Fifties obsessions don't become troubling. Some of this stuff, in fact, is the most compelling neo-rockabilly he's given us yet, in particular Graham Parker's new *Crawling from the Wreckage* and *Sweet Little Lisa*, the latter with a mindboggling flash solo by guest guitarist Albert Lee (presumably on loan from Emmylou Harris' band).

The standout track here, however, is *Girls Talk*, another in what seems like an endless series of nasty-but-nice instant classics from

the pen of Elvis Costello, who continues to make misogyny sound like more fun than it actually is. Edmunds sings it through his nose while the guitars roar and the hooks grab you. It's already (deservedly) a Top-10 hit in England, and if American radio programmers would only remember that there's a rock audience out here too I wouldn't have to tell you what a beauty it is—you'd already have heard it. Meanwhile, the rest is the usual Edmunds mix—a little blues, a little country, a little vintage schlock—all of it quite exhilarating. Danceable, too. Highly recommended. S.S.

ELECTRIC LIGHT ORCHESTRA: Discovery. Electric Light Orchestra (vocals and instrumentals). *Shine a Little Love*; *Confusion*; *Need Her Love*; *The Diary of Horace Wimp*; *Last Train to London*; and four others. JET FZ 35769 \$7.98. © FZA 35769 \$7.98. © FZT 35769 \$7.98.

Performance: **Okay**
Recording: **Good**

Ordinarily, the Electric Light Orchestra turns out delightful, harmless albums of pure pop/rock. I am distressed to report that this time out leader Jeff Lynne, for reasons or excuses I cannot fathom, has made a bow to the Bee Gees; several of the tracks have a falsetto/castrato vocal attack, and the drumming is keyed to boom-boom disco. Granted that it is hard to follow an album as charming and pleasing as ELO's last one, this disc is still a weak effort. What it lacks most of all is the saving grace of humor that usually sustains ELO. The one attempt at humor here, *The Diary of Horace Wimp*, is forced and unconvincing. But Lynne is a resilient fellow, so I expect he'll bounce back in good form on the album after this one. I hope so, anyway. J.V.

NICK GILDER: Frequency. Nick Gilder (vocals); vocal and instrumental accompaniment. *You Really Rock Me*; *Time After Time*; *Metro Jets*; *Electric Love*; *The Brightest Star*; *Worlds Collide*; and four others. CHRYSALIS CHR-1219 \$7.98. © 8CH-1219 \$7.98. © CCH-1219 \$7.98.

Performance: **Fair**
Recording: **Good**

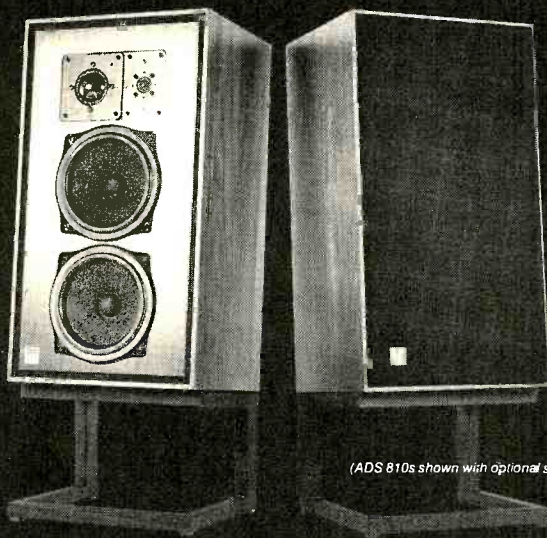
Nick Gilder is a veteran singer/songwriter who finally scored in 1978 with the hit single *Hot Child in the City*. He writes with James McCulloch and sings much in the manner of Reg Presley of the Troggs, giving us high-pitched vocals with an insinuating, affected lisp applied to the rather limited subject matter of girls on the stray or on demand. Commercially, I suppose, this is enough for those whose sexual fantasies are serviced by unadorned rock-and-roll. Like many rockers, Gilder tries to straddle youth and maturity; the result is an unconvincing compromise. J.V.

LOUISE GOFFIN: Kid Blue. Louise Goffin (vocals, piano); Lee Sklar (bass); Danny Kortchmar (guitar); David Kemper (drums); other musicians. *Kid Blue*; *All I've Got to Do*; *Hurt by Love*; *Red Lite Fever*; *Long Distance*; and five others. ASYLUM 6E-203 \$7.98. © ET8-203 \$7.98. © TC5-203 \$7.98.

Performance: **L.A. de da**
Recording: **Average**

Goffin? Goffin? Could Gerry and Carole have a kid this old? At any rate, Louise Goffin has a
(Continued on page 104)

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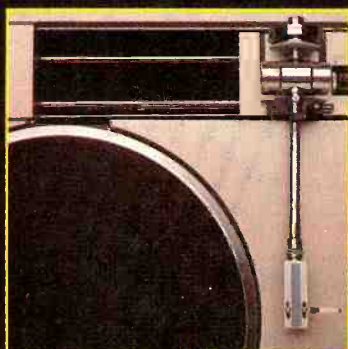
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Carole King way with words, which is to say she's semi-inarticulate most of the way through this, and Danny Kortchmar in producing the sound behind her has me just about thoroughly burned out on L.A. rock. I mean it's OD time, friends, and I may not recover in time for the new Karla Bonoff record. Many of these same people have played with some zip behind Linda Ronstadt and James Taylor, so maybe it's the tunes, mostly by Louise, which in truth don't swing much. The one that comes closest to working is *Jimmy and the Tough Kids*, which is made to seem inarticulate on purpose, with our heroine telling us, and telling us, how she just wants to be "one of the kids." As a vocalist, she bears a strong resemblance to Carole, with a thin-line voice

that has a certain appeal in its cleanliness, but through most of this it's about as excited—and exciting—as a loaf of day-old Wonder bread. N.C.

ISLEY BROTHERS: *Winner Takes All*. Isley Brothers (vocals and instrumentals). *I Wanna Be with You; Liquid Love; Winner Takes All; Life in the City; It's a Disco Night; (Can't You See) What You Do to Me?*; and seven others. T-NECK PZ2 36077 two discs \$13.98, © ZAX2 36077 \$13.98, © ZTX2 36077 \$13.98.

Performance: **Inspired jive**
Recording: **Good**

The Isleys do more with less than any other soul group I can think of; few other perform-

ers could stretch into a two-disc set musical contents that could be reasonably presented in no more than ten minutes. They are able to make it work for several reasons. First of all, they have been around since the late Fifties and know all the tricks. Second, this collection of semi-disco riffs has an occasional, unexpected modulation in every tune, which prevents the selections from being monotonous. Finally, there is the unique voice of Ronnie Isley; nobody sings more professionally, almost with an I-do-this-for-a-living attitude, but with such subtleties that even the brothers' concern for sounding commercial cannot smother his talent. When is somebody going to give that man a medal? J.V.

KANSAS: *Monolith*. Kansas (vocals and instrumentals). *On the Other Side; People of the South Wind; Angels Have Fallen; Stay Out of Trouble*; and four others. KIRSHNER FZ 36008 \$7.98, © FZA 36008 \$7.98, © FZT 36008 \$7.98.

Performance: **Still an Eagles variant**
Recording: **Good**

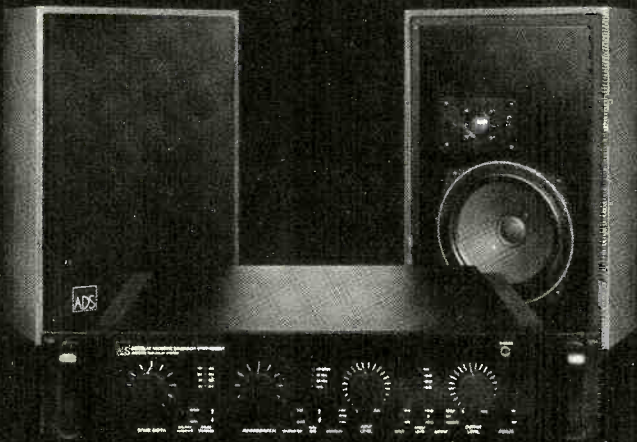
My experience is that you don't get much music out of groups named after cities and states. The naming of the group is sort of an original abdication of originality, and Kansas, like Chicago, continues to take it from there. This new opus is *packaged* so as to suggest that something interesting could issue. Bruce Wolf's jacket paintings show American Indians, in space helmets, reasserting control of the land after the white man has blown it, teepees pitched in the shadow of crumbled freeways, etc., under a quotation from an 1889 Ghost Dance chant: "Soon the earth would be covered with dust, and a new earth would be born. All nations of Indians long dead would come back to life. The white man would disappear and the buffalo would return." If Kansas had written songs tight on that theme, the album might have been able to compete with a rerun of *The Planet of the Apes*, at least, but what they did was write an assortment of mundane, cliché-ridden toasts to various rock conventions ("Well, it's hard to face the music/But it's something everybody has got to do . . .," "You're in my rock-and-roll/You're in my very soul . . ." and so on) and then strike an assortment of pompous attitudes in playing them. Musically, several other groups, notably the Eagles, have mined just about every inch of ground this album covers. Technically, Kansas does everything but write with authority, but a rookie hooker would be more convincing at faking passion . . . and possibly might even have more to say. N.C.

CAROLE KING: *Touch the Sky*. Carole King (vocals, piano); instrumental accompaniment. *Crazy; Eagle; Seeing Red; Move Lightly; Good Mountain People*; and five others. CAPITOL SWAK-11953 \$7.98, © 8XN-11953 \$7.98, © 4XN-11953 \$7.98.

Performance: **Sincere**
Recording: **Good**

Is there anything more dated than the recent past? Carole King, whose "Tapestry" album was a landmark (watershed, what-have-you) expression of the sensibilities of the late Sixties and early Seventies, now sounds as out of sync with the times as, say, Elliot Gould looks when he's cast as leading man. Too much
(Continued on page 106)

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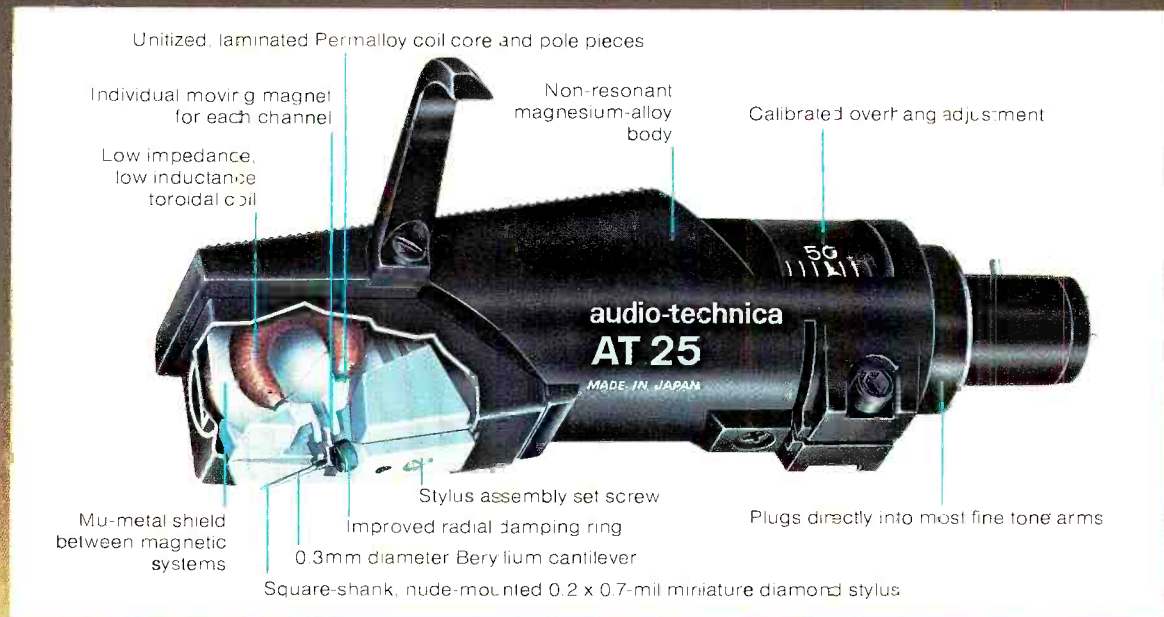
* Quoted by permission, *Stereo Review*, April 1979, and *The Complete Buyer's Guide to Stereo/Hi-Fi Equipment*, November 1978.



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time has passed for King to personify poetic youth, and yet not enough time has passed for her to bask in the soft focus of nostalgia. It's a sticky place for any composer-performer to be, obviously, and King herself seems quite aware of her current anomalous position. She expresses it here in *Time Gone By*: "I remember time gone by/When peace and hope and dreams were high/We followed inner visions and touched the sky/Now we who still believe won't let them die . . ." Brave enough words, but unfortunately I don't hear anything on this country-inflected album, either in composition or in performance, that convinces me that King is *doing* much more than doodling out there on the sidelines. P.R.

L.T.D.: *Devotion*. L.T.D. (vocals); instrumental accompaniment. *One on One*; *Share My Love*; *Stand Up L.T.D.*; *Say That You'll Be Mine*; *Sometimes*; and four others. A&M SP 4771 \$8.98, ® AAM 4771 \$8.98, © AAM 4771 \$8.98.

Performance: **Better than the material**
Recording: **Satisfactory**

It's almost a shame that L.T.D. sings so well here, for they seem capable of handling material more sophisticated and demanding than the run-of-the-mill stuff on this record. There is quite likely the same problem confronting numerous r-&b groups trying to carve out an identity in a field as congested as a rush-hour subway train. That problem is compounded by the limitations currently imposed on this genre: the music must have the prevailing flavor of the day, with stock, uncomplicated changes, and the lyrics must be restricted to such subjects as dancing, love, sex, or the lack of any of these. I'd like to know whatever happened to the humor and commentary on day-to-day travails characteristic of the old r-&b classics. Even the love songs here seem dishonest, with no uninhibited, gut-level funkiness. "Devotion" is no better or worse than most of what is being done by other r-&b groups today. We are long overdue for the arrival of a group that does something just a little bit different. Even a smidgin of originality would be welcome. L.T.D., alas, does not offer us even that much. P.G.

CHUCK MANGIONE: *Live at the Hollywood Bowl*. Chuck Mangione (flugelhorn, electric piano); Chuck Mangione Quartet; orchestra. *Feels so Good*; *I Get Crazy*; *Love the Feelin'*; *B'Bye*; *Main Squeeze*; *The XIth Commandment*; and nine others. A&M SP-6701 two discs \$12.98, ® 8T-6701 \$12.98, © CS-6701 \$12.98.

Performance: **Excessive**
Recording: **Excellent**

Modestly billed on the cover as "An Evening of Magic," Chuck Mangione's new live album is so big, glittering, and gaudy that it reminds me of one of those "customized" convertibles that some people who can't live without glitz in their lives are having made from production-line hardtops. The wheels, like this album, have a certain tacky-splendid illogic: they are equipped with air-conditioning.

There is glitz to burn in Mangione's florid run-throughs here of such things as *Feels So Good*, a bloated two-part *Children of Sanchez*, and the marzipan-stuffed *The XIth Commandment*. The luxury-option illogic is the addition of a *seventy-piece* orchestra to accompany the Chuck Mangione Quartet, a

ploy that adds absolutely nothing to the music making but does, I suppose, "class it up" to some ears. Mangione's work is now dead-center pop and attractive enough in its own, highly commercial way. His fans will probably be euphoric about this spangled effort, but the only time I think I'd really enjoy it would be while riding along in one of those convertibles. Fat chance. P.R.

MICHAEL NESMITH: *Infinite Rider on the Big Dogma*. Michael Nesmith (vocals, guitar); Paul Leim (drums); John Hobbs (bass); David MacKay (guitar); other musicians. *Dance*; *Magic*; *Tonite*; *Flying*; *Carioca*; and five others. PACIFIC ARTS PAC7-130 \$7.98.

Performance: **B-plus**
Recording: **Good**

If I thought these songs meant only what they say, I'd tell you not to bother, but Mike Nes-



TEDDY PENDERGRASS
Aggressive intensity

mith, the thinking person's ex-Monkee, was up to something here and almost pulled it off. Under the surface of these cryptic ditties there lurks a healthy skepticism about this whole mess we call the late Seventies. "All I want to do is dance and have a good time," he says, to get it started, then goes into a gentle satire of Fifties revivalism of the Penguins/Five Satins sort and a truly funny little piece about watching TV ("You get the gum/I'll get the Pez/Lucille Ball/Desi Arnaz"). And there's *Flying*, which has to be about getting drugged to the gills, and at the end there's a sort of summing-up called *Capsule*, subtitled *Hello People a Hundred Years from Now*: "There are a bunch of different holy men pointing different ways/Don't think. Do think. Watch out what you say/And we all tried. Yes, we tried/We all kept pluggin' like a salmon up a stream. . . ." Most of it rests easily in a fairly straightforward rock framework. What hurts it is that the material thins out in spots. *Factions*, about a modern couple's conflict over her fondness for music he says is "too loud to hear," turns preachy; *Horserace* is fairly pointless and pulls up lame; *Light* is

an overdressed throwaway. Still, this is a rather bright little album, and between the lines it has something to say. N.C.

HENRY PAUL BAND: *Grey Ghost*. Henry Paul Band (vocals and instrumentals); instrumental accompaniment. *So Long*; *Crossfire*; *Foolin'*; *Wood Wind*; *Grey Ghost*; and five others. ATLANTIC SD 19232 \$7.98, ® TP 19232 \$7.98, © CS 19232 \$7.98.

Performance: **So-so**
Recording: **Clean**

The Henry Paul Band here seems quite crafty at times, with a good feel for blending instruments and voices and for putting space around them; at other times they lapse into self-indulgence and give us an overdose of the rock guitar break, 150 cymbal bashes in a row, and similar threadbare devices. The quality of the songs is spotty, generally tending to grow worse as the album progresses. Early in the album there's intelligent use of the acoustic rhythm guitar, mixed so you can hear it, but later that feeling for texture and contrast seems to erode. So it goes. N.C.

RECORDING OF SPECIAL MERIT

TEDDY PENDERGRASS: *Teddy*. Teddy Pendergrass (vocals); instrumental accompaniment. *Come Go with Me*; *Turn Off the Lights*; *All I Need Is You*; *Do Me*; and four others. PHILADELPHIA INTERNATIONAL FZ 36003 \$7.98, ® FZA 36003 \$7.98, © FZT 36003 \$7.98.

Performance: **Cavemanly**
Recording: **Very good**

I rate this a "Recording of Special Merit" somewhat grudgingly, for I remain unmoved by the Neanderthal sensuality of Teddy Pendergrass. Yet I am willing to concede that there are women—and, indeed, some men—who might fall into rapture at the prospect of making love belabored by barked orders to "Do it like *dis!*" and "Do it like *dat!*" Talk about machismo! All this dude needs is a club and a loincloth, if some of these songs are to be believed. But he does *sing* well, with raw virility and an aggressive intensity that commands attention. Interestingly, when he drops the posturing, as in *Come Go with Me*, *I'll Never See Heaven Again*, and *All I Need Is You*, he projects considerable charm. At such times he sounds rather like a short-winded Isaac Hayes, with just a trace of the old Otis Redding shining through. About half the material here is by Gamble and Huff, and it stays true to their formula, but everything is ideally suited to the Pendergrass treatment, with *Life Is a Circle* especially accentuating the positive in his powerhouse approach. P.G.

POUSETTE-DART BAND: *Never Enough*. Pousette-Dart Band (vocals and instrumentals). *Long Legs*; *The Loving One*; *We Never Give Up*; *Cheated*; *Cold Outside*; *Gotta Get Far Away*; and four others. CAPITOL ST-11935 \$7.98, ® 8XT-11935 \$7.98, © 4XT-11935 \$7.98.

Performance: **Okay**
Recording: **Good**

The Pousette-Dart Band tries hard here and has some nice ideas in the arrangements, but the material is ho-hum and the singing doesn't
(Continued on page 108)

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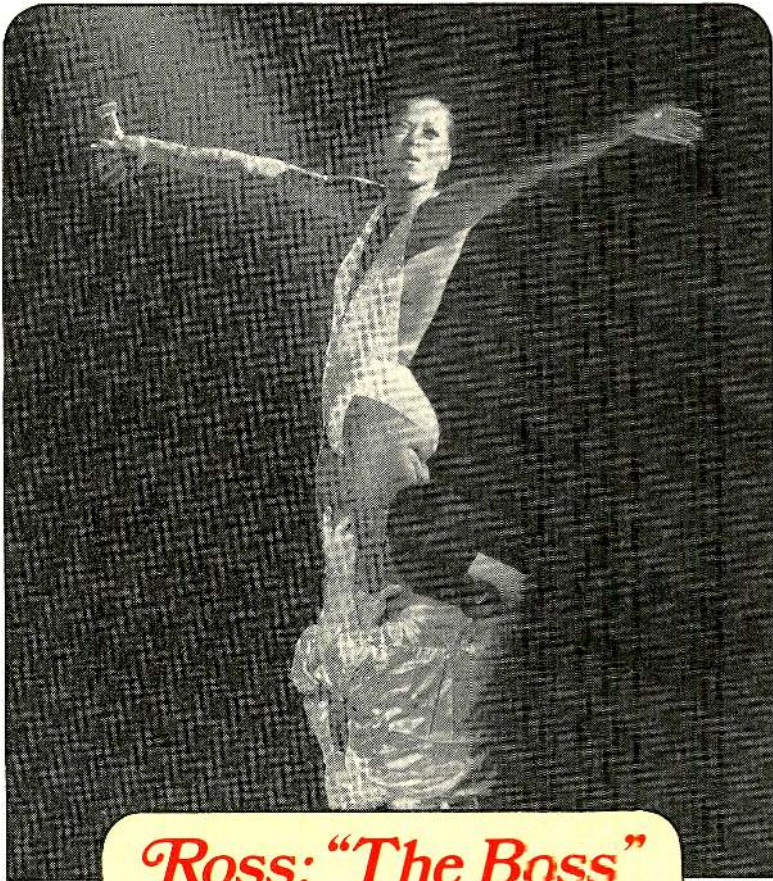
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Ross: "The Boss"

DIANA ROSS' newest Motown album, "The Boss," has turned me on quicker (and better) than anything since Donna Summer recorded her first musical orgasm deep in the heart of Bavaria and changed the record business forever. It's not that the gorgeous Ross tries to hustle any of Summer's old tricks in this disco-slanted album. (When you have going for you what Ross has going for her, you don't need moans and groans; you leave that to the customers.) It's just that Ross is working the opposite side of the same street, and her impact on it is as sensational as Summer's is on hers.

Diana Ross has, through a variety of circumstances, acquired and developed such a singular glamour that by now she need only lower her eyelid to be seductive or lend an occasional impatient rasp to her voice to be arousing. Listen to her show off this skintight collection of songs custom-made for her by Nickolas Ashford and Valerie Simpson and you'll hear glamour. One of the reasons you can hear it, of course, is that Ross has been around long enough that the mind's eye can easily summon up an image to go with the voice. But the voice itself has a lot to do with it. It isn't what you'd call a great voice, yet it gets her point across with every phrase and with every lazily assured intonation. Her best, most sizzling work here is in the title song, but she also zips through *I Ain't Been Licked* and *Once in the Morning* with all the sexy, classy pizzazz of an Avedon lingerie ad (Donna Summer would probably work the

same material in such a way as to suggest an illustration from *The Joy of Sex*). Ross slows down almost into ballad time for *All for One* and a couple of other songs, which I guess shows as well as anything that when you're Diana Ross you don't "make a disco album," you just "include some disco tracks."

FOR some time now it's been rather fashionable to knock Ross, dismissing her either as some sort of sleek, trained feline conjured up by Berry Gordy or as a pretentious, not too bright sex symbol. It's the same brand of sour grapes they used to pelt Josephine Baker with when she finally made the leap from Cotton Club showgirl to international star of the *Folies Bergère*—so how sweet it is that Ross is finally set to star as *la belle Josephine* in a new film biography. I think she'll be as splendid in her way as Baker was in hers. I remember seeing Baker, toward the end of her career, acknowledge an audience's ovation by saying, "I don't sing very well, I can't dance much; all I have is a great many kind friends." Sweet, but wrong. She had much, much more than that. And so does Diana Ross. —Peter Reilly

DIANA ROSS: *The Boss*. Diana Ross (vocals); vocal and instrumental accompaniment. *No One Gets the Prize; I Ain't Been Licked; All for One; The Boss; Once in the Morning; It's My House; Sparkle, I'm in the World*. Motown M7-923R1 \$7.98. © M8-923HT \$7.98. © M75-923HC \$7.98.

have a cutting edge. It's interesting that they have a try at *Hallelujah, I'm a Bum*, an old novelty song from the Twenties, but though it sounds like they had fun doing it, the rowdiness the song needs just isn't there. Maybe the band is too laid-back to display any real chops, or maybe this is just a throwaway album made to fulfill contract obligations. Either way, it's nothing to shout "Hallelujah!" about. J.V.

QUEEN: *Live Killers*. Queen (vocals and instrumentals). *We Will Rock You; Bicycle Race; Love of My Life; Don't Stop Me Now; Sheer Heart Attack; We are the Champions; Death on Two Legs; Tie Your Mother Down*; and thirteen others. ELEKTRA BB-702 two discs \$11.98, © BT8-702 \$11.98, © BC5-702 \$11.98.

Performance: **So-so**
Recording: **Good**

I've admired Queen for their crispness and attack. Though the band can seem technical, even surgical, they have a terrific ensemble sound, and their "Fat Bottomed Girls" album was a hilarious essay on the gullibility of the rock audience. But live albums, like this one, always make me uneasy. Few bands sound as good in front of the mob as they do in front of the control board. Queen, alas, is no exception. Their discipline falls apart in this two-record set, principally because they are now an established act and can muddle through their hits to enraptured audiences who bellow and moo predictably. It's all pointless, like a Saturday night at the bowling alley when the guys drink too much warm beer and don't score with Shirley, the *zafitig* cutie behind the popcorn machine. Maybe Queen will write a song about that for their next studio album.

J.V.

EDDIE RABBITT: *Loveline*. Eddie Rabbitt (vocals); David Hood (bass); Roger Hawkins (drums); Larry Byrom (guitar); other musicians. *Pour Me Another Tequila; Gone Too Far; One and Only One; Suspicions; So Fine*; and five others. ELEKTRA 6E-181 \$7.98, © ET8-181 \$7.98, © TC5-181 \$7.98.

Performance: **Sofftttt**
Recording: **Very good**

Chances are, listening to this a couple of times will remind you of that toilet-paper commercial in which the wife discovers, after God knows how many years, that softness really is important to her husband. Eddie Rabbitt is a true creation of the late Seventies, when the rewards for being innocuous can be great. The songs here, which he and Even Stevens and producer David Malloy mostly wrote, are even more innocuous than on his last album. Lyrics as deep as Peter Frampton! "I'm glad we got it together . . .," "I'm so glad that I met you baby . . .," "I fall in your arms and it feels so fine . . ." I tell you, friends, listening to this is one of the few experiences that could make me want Larry Canady around as an antidote. Larry Canady, you may recall, is the Eau Gallie, Florida, football coach who, to make his team more ferocious, bites the heads off frogs. N.C.

GERRY RAFFERTY: *Night Owl*. Gerry Rafferty (vocals, guitar, keyboards); vocal and instrumental accompaniment. *Days Gone Down; Night Owl; Get It Right Next Time*;

(Continued on page 110)

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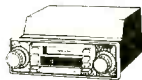
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Take the Money and Run; The Tourist; and five others. UNITED ARTISTS UA-LA958-1 \$6.98, © EA958-1 \$6.98, © CA958-1 \$6.98.

Performance: **Thin**
Recording: **Good**

Here's a musical memory test you should try on someone else's copy of this album—don't spend money for your own unless you pass the test, which is in two parts. Ready? Here we go. Part one: play the album twice; now see if you can remember any of the melodies on it. If you can't, go on to part two: hum the melody line of Rafferty's previous hit, *Baker Street*. No, no—you're humming the saxophone riff that *everybody* remembers; that doesn't count, you have to hum the *melody*.

Did you fail the test? Don't feel bad; I did too. Really, this is a remarkable album. Even a close, determined listening yields nothing for the brain, heart, or feet. All the songs have much the same tempo, the breathy, thin vocals are all delivered at half power, and the instrumental accompaniment tick-tocks along without accomplishing anything. Even the *Baker Street*-style sax riffs don't hook up because there's nothing to hook *on* to in these songs. There's so much air in the material and performances that you could fly a jumbo jet through them. Amazing. J.V.

LOU RAWLS: Let Me Be Good to You. Lou Rawls (vocals); instrumental accompaniment. *Lover's Holiday; Sweet Tender Nights; Tomorrow; Let Me Be Good to You*; and four others. PHILADELPHIA INTERNATIONAL JZ 36006 \$7.98, © JZA 36006 \$7.98, © JZT 36006 \$7.98.

Performance: **Flashing amber**
Recording: **Routine**

Lou Rawls, with the lead-fingered assistance of Gamble and Huff (who wrote and produced three of the drearier songs here), has now been pushed so far into MOR that this album ought to have a blinking amber light on it. But even warning lights don't prevent all accidents, and there is one major disaster here: a lugubrious performance of *Tomorrow* from *Annie* that has all the flaccid impact of a Porsche running head-on into a giant squid. Rawls' voice and (previous) style deserves better than this. A lot better. P.R.

RENAISSANCE: Azure d'Or. Renaissance (vocals and instrumentals). *Jekyll and Hyde; The Winter Tree; Only Angels Have Wings; Golden Key; Forever Changing*; and five others. SIRE SRK 6068 \$7.98, © M8S 6068 \$7.98, © M5S 6068 \$7.98.

Performance: **Preentious confusion**
Recording: **Excellent**

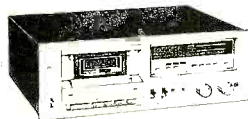
Renaissance is an onward-and-upward group of four instrumentalists plus lead vocalist Annie Haslam. They started out a few years ago rather strong in the melody department, often building their music on classical compositions and going in for ambitious—indeed, pretentious—projects such as their interminable LP "Scheherazade and Other Stories," not to mention songs with tunes borrowed from the works of Debussy, Prokofiev, and Rachmaninoff. Lately, Renaissance has been turning more to a rock sound and trying to make all their music on their own rather than teaming up with orchestras. This change in approach has not rendered them any less preten-

(Continued on page 112)

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tious, however, and they continue to deal with rather lofty subjects—among them, in this album, the city of Lyons in the midst of a flood, a “magical isle” called Kalynda, a fantasy about a “secret mission,” and the dual spirit of a Jekyll-and-Hyde type. The lyricist, Betty Thatcher, is particularly proud of the “diverse and upbeat” stanzas she has contributed to these songs, but Haslam, alas, although she boasts a terrific range, has a tendency to mouth the words in a mumbly manner that makes them all but incomprehensible. I wonder if they know what *azure d’or* means or if that’s there for the sound of it too. P.K.

SMOKEY ROBINSON: *Where There’s Smoke*. Smokey Robinson (vocals); vocal and instrumental accompaniment. *It’s a Good Night; I Love the Nearness of You; The Hurts on You; Cruisin’*; and four others. TAMLA T7-366R1 \$7.98, © T8-366H \$7.98, © T75-366H \$7.98.

Performance: **Charmingly uncluttered**
Recording: **Good**

Perhaps I was spoiled by “Smokin’” (Tamla T9-363A2), Smokey Robinson’s last live album. It was a treasure trove of all the aged-in-soul songs that made him the dean of rhythm-and-blues writers back in the early Sixties when Motown was synonymous with the vibrant sound of an emerging urban generation. It would be difficult even for Smokey to produce another gem comparable to *Ooh, Baby Baby*, but if he could, it isn’t on this disc. Of course, these songs are new and haven’t had a chance to imbed themselves in our minds to the point where the lyrics seem like old friends, but in their freshness and consistent quality they are nevertheless a pleasure to hear.

The range of the material is relatively broad, from *It’s a Good Night*, an interesting disco play on the basic melody of the standard *It’s a Good Day*, to *Share It*, which is almost old-fashioned in its directness and simplicity. Indeed, one of the elements of Robinson’s staying power is the elegant leanness of his music. Where others employ electronic gimmickry and endless overdubbing, he relies steadfastly on the music to convey its own message as he sings in a high, clear tenor that is satin in its sheen. Emphasis in the instrumental back-up is on rhythm and guitar, with only occasional tasteful intrusions by strings and other voices. The disco flavor of several tracks is adroitly underplayed as he bends the mold to suit his style, such as on a subtly rocking item called *Get Ready*. My favorite here is *Cruisin’*, which is enhanced by a graceful, laid-back Caribbean rhythm. Maybe this isn’t a landmark album in Robinson’s long and fertile career, but it is solid, ingratiating music that should wear well. P.G.

RECORDING OF SPECIAL MERIT

MEL TORMÉ: *Easy to Remember*. Mel Tormé (vocals); instrumental accompaniment. *They Didn’t Believe Me; September Song; County Fair; Blues in the Night; April Showers; From Me*; and six others. GLENDALE GL 6018 \$7.98 (from Glendale Records, P.O. Box 1941, Glendale, Calif. 91209).

Performance: **Excellent**
Recording: **Superbly good**

This collection of twelve tracks apparently from the late Forties (no dates are given)

offers Mel Tormé singing standards in a voice whose style and mannerisms are beautifully timeless. Tormé doesn’t sound mannered at all to today’s ear, and his stylishness only seems to add luster to his reputation. He accomplishes an almost flawless performance of Rodgers and Hart’s *It’s Easy to Remember* and sings a darkly textured and moody *Blues in the Night* and an oddly mocking *Love Me or Leave Me* with all the ease and solid musicianship that have been his hallmarks. As a bonus, there’s his own classic *County Fair*, and what a delight it is to hear it again after all these years. The sound is surprisingly good, ample and full bodied without that ghostly performed-in-a-vacuum deadness that mars so many restorations. A really satisfying album. P.R.

DENIECE WILLIAMS: *When Love Comes Calling*. Deniece Williams (vocals); instrumental accompaniment. *When Love Comes*



MEL TORMÉ
Beautifully timeless style

Calling; Why Can’t We Fall in Love?; God Knows; Like Magic; I Found Love; and five others. ARC/COLUMBIA JC 35568 \$7.98, © JCA 35568 \$7.98, © JCT 35568 \$7.98.

Performance: **Not her best**
Recording: **Very good**

For this third solo set, and following her excellent duet album with Johnny Mathis last year, Deniece Williams did not work with producer Maurice White, though she is appearing on his new label. Instead, she co-produced the album herself with David Foster and Ray Parker Jr., the latter the leader of Raydio. A difference in quality is immediately apparent. Although Williams wrote most of the songs, as she did on her previous albums, somehow they don’t seem to come across as well. Furthermore, the order is awry. The most hum-drum and predictable numbers are used as openers, including the inevitable, overly long disco track, now a requirement on all pop albums except those by the Mormon Tabernacle Choir. Not until the last track on the first side does anything highlight Williams’ sense of musical style or her distinctively high, babydoll voice. This is *Touch Me*, a ballad that gets off to a string-laden melodramatic start and settles down into a lush romantic groove. It is moving in its unrestrained sentimentality, and the album takes a sharp up-

ward turn thereafter. The title track, *When Love Comes Calling*, *Like Magic*, and *Turn Around* are all solid up-tempo swingers, and *God Knows* features some spectacular, almost glass-shattering soprano passages by Williams. P.G.

HANK WILLIAMS JR.: *Family Tradition*. Hank Williams Jr. (vocals, guitar); Allen Lindgreen (keyboards); Chet McGracken (drums); Ray Pohlman (bass); Reggie Young (guitar); other musicians. *To Love Somebody; Old Flame; New Fire; Always Loving You; We Can Work It All Out; Paying on Time*; and five others. ELEKTRA 6E-194 \$7.98, © ET8-194 \$7.98, © TC5-194 \$7.98.

Performance: **Good; songs uneven**
Recording: **Better than average**

I guess the trouble is not so much with this album as with my expectations: I’m a believer in the long-term importance of Hank Junior, and this thing is unfocused, scattershot, all-over-the-place—good, bad, and indifferent. Within that context, the narrower problem is, as he says in the last ditty, “I just ain’t been able to write no song. . . .” Not literally so, as he wrote five of these, but figuratively so, as four of them are rehashes of ideas he’s explored better before (including the title song, which says, again, “I got to go my own way”) and the fifth, *I’ve Got Rights*, is a rather mean-spirited ode to violence reminiscent of that Charles Bronson movie *Death Wish*. It’s some sort of exercise in cathartic allegory, I suppose. Elsewhere, Williams tries too hard to outsize the overexposed, chestnut nature of *Only Daddy That’ll Walk the Line*, and of course there’s no excuse for any new recording of *I Fought the Law*. And the Steve Young tune, *Always Loving You*, would be all right if it didn’t steal much of its melody from the earlier Steve Young tune, *Seven Bridges Road*. What does work is Williams’ man-sized version of *To Love Somebody*, which Barry Gibb (!) wrote years ago for Otis Redding. Most of the vocals, for that matter, are robust and sure, and there’s a sneaky lick or two in the instrumentals . . . which still, unfortunately, doesn’t overcome the grab-bag, hit-or-miss nature of the programming. N.C.

TAMMY WYNETTE: *Just Tammy*. Tammy Wynette (vocals); instrumental and vocal accompaniment. *They Call It Making Love; We’ll Talk About It Later; Somewhere; Mama, Your Little Girl Fell; I’m Not Ready Yet*; and five others. EPIC KE 36013 \$7.98, © KEA 36013 \$7.98, © KET 36013 \$7.98.

Performance: **Just average**
Recording: **Good**

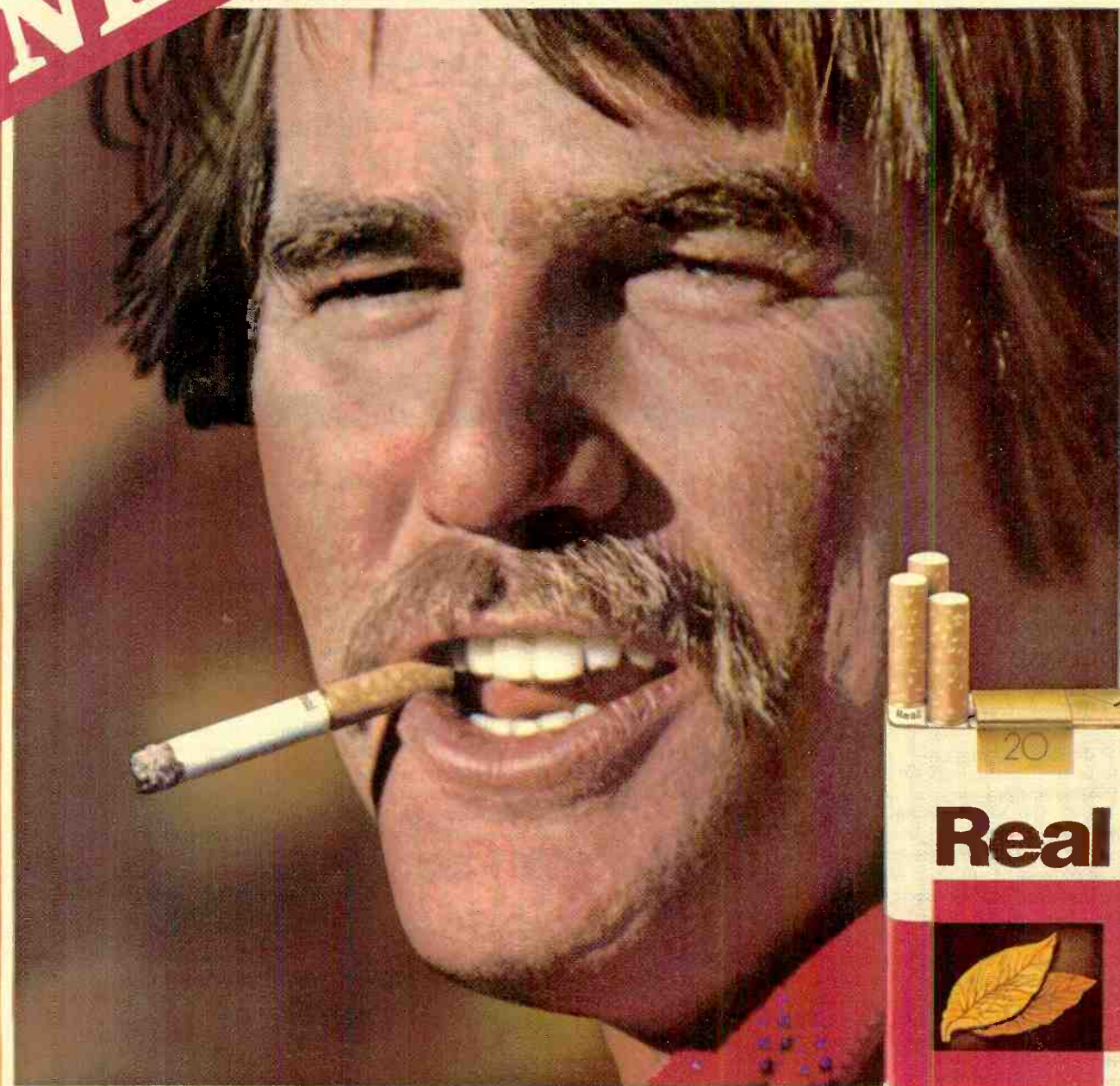
Nothing unexpected here, no truly fetching songs and no unspeakably bad ones, nothing very gross or very inspired in the backing. It would do nicely as one’s very first Tammy Wynette album, as it displays what she does—phrasing fighting its way around a sob, surprising range, and so forth—and is neither the best nor the worst example of how Billy Sherrill produces her. He loads it up with too much instrumentation only a few times and in general makes it only about twice as slick as it needs to be—about average, in other words. But Tammy is one of the bona fide stylists of any kind of music, and this is a fairly representative sampling of how she does it. N.C.

(Continued on page 116)

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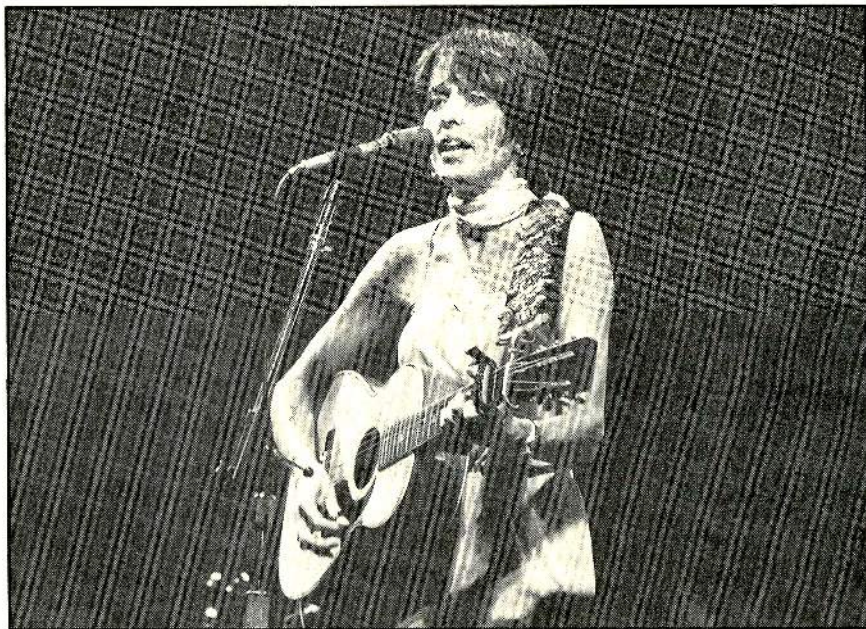
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Joan Baez, Wrinkles and All



Charlyn Zlotnik

I've always believed her, if not always in the causes she's chosen to become involved in. But her commitment to what she believes in has always seemed to me to be deeper, more genuine, and less self-serving than Dylan's, and simply light years away from the sophomore, pseudo-intellectual melodramatics of such Hollywood/London townhouse-bred revolutionaries as Jane Fonda and Vanessa Redgrave. Joan Baez is for real, and she comes across that way no matter what the direction her life or her feelings have taken her.

Her latest album on the Portrait label, "Honest Lullaby," is just as real. In some ways, to be sure, dismayingly so: her voice is now a rough, often growling alto, as topless as Carol Doda's act. She is a couple of years beyond the perfect thirty-six, and she sounds it—in all the best ways: mature, experienced, secure, and (most of all) wise. Even though the waterfall-pure soprano has clouded and the impetuous, dramatic earnestness has melted into a calm sincerity, it is the sense of wisdom that permeates Baez's new work that is so striking. She's lived a lot and she's learned a lot. Simply to hear her move confidently through the old J. Fred Coots/Sam Lewis classic *For All We Know* is to be assured that this is no burnt-out Sixties "girl" retreating to a standard so she can't be judged against her previous work, but instead an adult calmly talking about chance, possibility, and some of the immutable facts of life as she's experienced them. And she tells us reassuringly that it's all okay, just that way, with the grace note of utter believability that's always lightened her work, whatever the subject. It is that very believability, I think, that will form the basis for the second half of her career: she has become someone people identify with and from whom they can derive a certain comfort.

One measure of the power of her conviction and of her plain speaking is a conversation I had recently with a beautiful woman who had just passed her thirty-first birthday (an occasion, in our jiggly, media-drenched

society, that can probably be likened only to being forced out onto that storm-swept exit from Shangri-La where a belle turns into a beldame within hours). Strong-minded and independent though she is, the lady in question had been feeling decidedly gloomy. But that was before she saw Joan Baez on the Johnny Carson show, plugging this very "Honest Lullaby" album and discussing why she refused to have the album's cover photo retouched. "I earned those lines," was the gist of her argument, and the implication was that she *liked* what she had earned. Since Baez never looked better or more appealing, the lady took it as an opportunity to rethink the matter more constructively, and she decided that change and growth aren't so bad after all, even though many of her contemporaries determinedly choose to remain adolescent going on infantile. In other words, she *believed* Baez.

BAEZ says it best in the title song: "I look around and wonder/How the years and I survived . . ." The answer: "I had a mother who sang to me/An honest lullaby." The song is one of the best things she's done in years and certainly the most mature. The first three verses are about her own growing up in the Fifties, when things were in many ways just as tacky as they are right now (although I can't imagine one of the Debbie Reynoldsish pop stars of that era ever refusing any retouching on *her* album covers). It has about it much of the poignancy and haunting regret of Janis Ian's *At Seventeen*—with the difference that Baez restricts the commentary and the judgments pretty much to herself and even admits "I taught myself to sing and play/And use a little trickery/On the kids who never favored me . . ." In other words, she knew she had talent, and she knew the social uses of it. Honest indeed. The last verse is about her son Sasha, now eight, and what she hopes will be their relationship in the Eighties: "And while the others play with you/I hope to find a way with you/And sometimes spend a day

with you/I'll catch you as you fly/Or if I'm worth a mother's salt/I'll wave as you go by . . ." Another honest lullaby.

Yes, Trendies please note, it is a song about (omigawd!) Mother Love. It takes a certain kind of guts, after three-quarters of a century of variations on the "Mummie Let Me Down" and/or "Mommie Was a Bitch" theme in the arts, not only to praise one's own mother but to admit to being a loving mother oneself.

IHOPE I'm not giving you the idea that Ms. Baez has just nominated herself as Chief Usherette into a new age of Sweetness and Light. Not at all. She delivers the aching lines of Janis Ian's *Light a Light* with all the hard-etched, weary, dispossessed candor that's written into it, and she sizzles through *No Woman, No Cry* by Vincent Ford with the kind of urgency and suppressed anger that first established her reputation in the Sixties. And Pierce Pettis' *The Song at the End of the Movie* provides Baez with the sort of material she's always done easily and enormously effectively—the sad, sweet, punchy ballad.

All in all, quite an album and quite an achievement for Joan Baez. She offers happy proof in "Honest Lullaby" that no matter how often you change your mind or your life, you can sail through it all as long as you have something you really believe in. What? Well, that's up to you. Baez has found *her* answers, and her generous sharing of them is going to make a lot of people feel a lot better. I'd say that she is the first of the major pop figures of the Sixties to take a well-deserved seat among the immortals.

—Peter Reilly

JOAN BAEZ: *Honest Lullaby*. Joan Baez (vocals, guitar); instrumental accompaniment. *Let Your Love Flow*; *No Woman, No Cry*; *Light a Light*; *The Song at the End of the Movie*; *Before the Deluge*; *Honest Lullaby*; *Michael*; *For Sasha*; *For All We Know*; *Free at Last*. PORTRAIT JR 35766 \$7.98. © JRA 35766 \$7.98. © JRT 35766 \$7.98.

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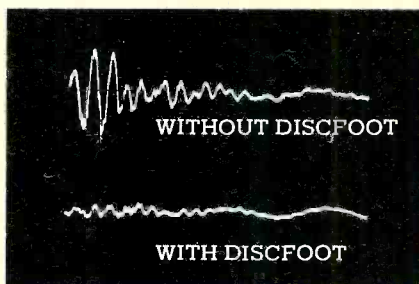
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The Telling Test

The oscilloscope photo shows the output of two identical audio systems on the same shelf with their styli contacting the platters. The shelf is being struck by a rubber mallet. The top trace shows a turntable with absorptive "replacement" feet. The lower trace shows a DiscFoot System operating in conjunction with the existing turntable feet. Note the dramatic (tenfold) improvement in shock and feedback isolation.

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DISCO



THELMA HOUSTON: *Ride to the Rainbow.* Thelma Houston (vocals); instrumental accompaniment. *Saturday Night, Sunday Morning; I Wanna Be Back in Love Again; Love Machine; Imaginary Paradise;* and four others. TAMLA T7-365R1 \$7.98, Ⓢ T8-365H \$7.98, © T75-365H \$7.98.

Performance: **Engaging**
Recording: **Good**

With so many women singers competing for the title of Disco Queen, somebody might as well put in a word for Thelma Houston. Perhaps she hasn't been nominated for the honor because she is less raucous than most and has been identified with other types of material, but "disco" best describes most of what she has been doing lately. Disco predominates on her new album, though the songs seem less repetitious in her hands than is common in the genre, possibly because Houston sings with an engaging lightness and buoyancy, bouncing along between the beats so that attention is focused on the melody rather than the pulse beneath it. The melodies come through clearly on *Saturday Night, Sunday Morning* and *Love Machine*, both of which are highly hummable. Nevertheless, I still prefer to hear her sing straighter stuff. Check out her rendition here of Stevie Wonder and Syreeta Wright's *Just a Little Piece of You* as well as *Paying for It with My Heart*, and I think you'll agree that there's more to Thelma Houston than what meets the beat. P.G.

RECORDING OF SPECIAL MERIT

PAUL JABARA: *The Third Album.* Paul Jabara (vocals); vocal and instrumental accompaniment. *Foggy Day/Never Lose Your Sense of Humor/Just You and Me; Disco Wedding/Honeymoon (In Puerto Rico)/Disco Divorce.* CASABLANCA NBLP 7163 \$7.98, Ⓢ NBL8 7163 \$7.98, © NBL5 7163 \$7.98.

Performance: **Totally winning**
Recording: **Excellent**

Paul Jabara's last album, "Keeping Time," was a superior production by an uncommonly gifted (and thinking) artist, but somehow it got buried. His new release should set things right. The guy is terrific and deserves to be as successful a performer as he is a composer. Third time lucky?

His chances are helped immeasurably by a sensational, bouncy, bright piece of joyful noise called *Never Lose Your Sense of Humor*, among the more infectious disco productions of the year. Jabara's good friend and *Thank God It's Friday* co-star Donna Summer lends a hand and turns the song into an innovative duet. You've got to hear Donna as "good humor" and Paul as "bad humor" battling it out vocally. Almost as good (and a lot campier) is the *Disco Wedding/Honeymoon/*

Disco Divorce medley, which has a nonstop disco beat, gospel fervor, a little traveling music, Puerto Rican atmosphere, and lots of love and hate. It's fun, different, interesting, and danceable all at once—you won't believe it until you've heard it. So go hear it! E.B.

LOVE AND KISSES: *You Must Be Love.* Love and Kisses (vocals); vocal and instrumental accompaniment. *Ooh La La La La; Your Middle Name Is Money; Find Yourself a Dream; You Must Be Love.* CASABLANCA NBLP 7157 \$7.98, Ⓢ NBL8 7157 \$7.98, © NBL5 7157 \$7.98.

Performance: **When they're good . . .**
Recording: **Fine**

The whole first side of this album should really be labeled "Love and Kisses Meet Alec Constandinos." Unlike the familiar choral sound of their previous releases "Romeo and Juliet" and "How Much, How Much I Love You," the arrangements here thrust Alec himself front and center as a solo vocalist. Unfortunately, he's not interesting enough to provide much distinction.

But *You Must Be Love*, which takes all of side two, is Love and Kisses as they should be: that lush, string-laden disco sound, pitting male against female voice groups and packed with dance power. When this gang is good, they are very, very good. The arrangement is lifted nicely above the ordinary by simulated-piano work of uncommon artistry. Alan Hawkshaw's electronic keyboard darts in and out during the nearly seventeen minutes of the song with flashes of cool jazz, Rachmaninoffian chords, rinky-tink, boogie-woogie, and even a bizarre bit of Debussy-like impressionism. It may seem odd, but it sounds great. More "sway it" than "shake it," this is hypnotic dance music that gets trippy but is too good-humored to get heavy. This side of the release is decidedly welcome. E.B.

MELBA MOORE: *Dancin' with Melba.* Melba Moore (vocals); instrumental accompaniment. *Free; Play Boy Scout; Promised Land;* and two others. BUDDAH BDS 5720 \$7.98, Ⓢ AT8 5720 \$7.98, © ATC 5720 \$7.98.

Performance: **Facile**
Recording: **Routine**

Melba Moore ought to learn how to say no. Over the last decade her career has been scatter-shot, as if in the hope that the next bit of type-casting would give her the stardom that seemed just around the corner after her sensational Broadway debut in *Purlie*. Since then she's tried TV, Vegas, and being a "serious" singing actress, and now she's taking a crack at the role of Disco Queen. This last is a nimble enough caper, since Moore is a flexible and clever performer, but it doesn't really do anything for her, and as a dance album it's routine, routine, routine. P.R.

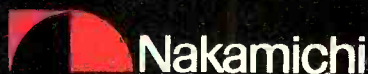
HELEN REDDY: *Reddy.* Helen Reddy (vocals); instrumental accompaniment. *Minute by Minute; Perfect Love Affair; You're So Good; Make Love to Me; Sing My Heart Out;* and four others. CAPITOL SO-11949 \$7.98, Ⓢ 8XO-11949 \$7.98, © 4XO-11949 \$7.98.

Performance: **Clockwork disco**
Recording: **Good**

Here's Helen Reddy, the Ice Duchess of Pop, in a disco album that goes like clockwork—
(Continued on page 118)

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and is about as interesting. Her sound and performances are Precise, Rigid, and, above all, Accurate. Her seven-minute time-and-motion study of *Make Love to Me* (an otherwise engaging, empty-headed piece of fluff) is about as feverish and abandoned as John Travolta's agent closing a deal. *Let Me Be Your Woman* has the properly improper lustiness of disco passion in its lyrics, but Reddy's performance seems to carry with it an unspoken condition: only if you finish your oatmeal first. The album is engineered so that her adonoidal, girdled voice always rises above it all. Would that the listener could do the same.

P.R.

RECORDING OF SPECIAL MERIT

THE SYLVERS: *Disco Fever*. The Sylvers (vocals); instrumental accompaniment. *Mahogany; Come and Stay All Night; Dance Right Now; Gimme Gimme Your Lovin'*; and four others. CASABLANCA NBLP 7151 \$7.98, © NBL8 7151 \$7.98, © NBL5 7151 \$7.98.

Performance: **Joyous**
Recording: **Super**

Considering the people behind this record, the happy result comes as no surprise. Giorgio Moroder was co-producer, and none other than Juergen Koppers, the Munich Master himself, was mixing engineer. The Sylvers' contribution is a mellow, close harmony as easy on the ear as the arrangements are on the feet. The songs are all rather joyous. *Is Everybody Happy* bounces along smartly, *Hoochie Coochie Dancin'* could easily get you into a mild sweat, and *I Feel So Good Tonight* certainly communicates the right spirit for fun dancing. Moreover, each side of the disc is an unbroken party sequence. This is altogether a most delightful record—happy, youthful, and beautifully engineered.

E.B.

TASTE OF HONEY: *Another Taste* (see Best of the Month, page 94)

RECORDING OF SPECIAL MERIT

MIKE THEODORE ORCHESTRA: *High on Mad Mountain*. Mike Theodore Orchestra (vocals and instrumentals). *High on Mad Mountain; Wonder Man*; and two others. WESTBOUND WT 6109 \$7.98, © TP 6109 \$7.98, © CS 6109 \$7.98.

Performance: **Hot and heavy**
Recording: **Good as they come**

For those who like their disco hot and heavy, this album is a must. The title song is over eight minutes of powerful salsa disco, excellently programmed to introduce new textures and counter-rhythms through its entire length. For a wonderful trip, listen for soaring lines beginning "Come with me baby to the sun." But come back in time for the final reprise of the main theme. Wow!

The whole album is in the same mode. *Disco People* comes closest to *High on Mad Mountain* in impact—again, because Theodore knows that disco people need variety for stimulation. Heavy electronic throbs give way to romantic strings, double-tempo chords intervene, sexy voices enter on top, rock-hard guitar riffs introduce a fresh direction, and so on. Theodore clearly loves working with lots of music and knows just what to do with it.

Never mind that some critics will complain of overarrangement or call this music "ma-

nipulative." The many, many pieces of these extravaganzas fit together perfectly, and when you're out there dancing, you wait for stuff like this to take you away.

E.B.

NANCY WILSON: *Life, Love and Harmony*. Nancy Wilson (vocals); vocal and instrumental accompaniment. *You're the One; Heaven; Here's to Us; Sunshine; This Is Our Song*; and four others. CAPITOL ST-11943 \$7.98, © 8XT-11943 \$7.98, © 4XT-11943 \$7.98.

Performance: **She survives**
Recording: **Homogenized**

Nancy Wilson's last few albums have been uncommonly strong stuff, gutsy expeditions into territory she'd always been considered too commercial or too sexy for. They were artistic successes on every count for this pop singer turned singing actress, but they didn't



Westbound Records

MIKE THEODORE
Music to take you away

do much at the cash register. So, inevitably, we are now presented with Disco Nancy, and what a bummer that is—almost. "Almost," because Wilson emerges from the arrangements often enough, and strongly enough (particularly in the title song, *Sunshine*, and a nice ballad called *This Is Our Song*), to convince even a casual listener that she'll survive this and any other fads that the music biz is likely to force on her in the future. The arranging, production, and conducting are all by Larry Farrow (he and Carolyn Jones wrote the songs). Farrow has a frozen, one-note approach to everything, but Nancy Wilson manages to survive that too.

P.R.

RECOMMENDED DISCO HITS

- **CAROLINE CRAWFORD: *Nice and Soulful*.** MERCURY SRM-1-3792 \$7.98, © MC8-1-3792 \$7.98, © MCR4-1-3792 \$7.98.
- **CORY DAYE: *Cory and Me*.** NEW YORK INTERNATIONAL BXL1-3408 \$7.98, © BXS1-3408 \$7.98, © BXK1-3408 \$7.98.
- **DESTINATION: *From the Beginning*.** MCA/BUTTERFLY FLY-3103 \$7.98.
- **SWAMP DOG: *Come and Dance with Me*.** ATOMIC ART 334-A disco disc \$3.98.

(List compiled by John Harrison.)



THEATER • FILMS

RICHARD RODNEY BENNETT: *A Different Side of Sondheim*. Richard Rodney Bennett (vocals, piano); Milt Hinton (bass); Bobby Rosengarden (percussion). *I Do Like You; Take Me to the World; You Must Meet My Wife; Anyone Can Whistle; So Many People*; and five others. DRG SL 5182 \$7.98.

Performance: **Not different enough**
Recording: **Very good**

After hearing this record, I'm still not sure what's "different" about this side of Sondheim from the side we already know, and I'm not at all convinced that, as Rex Reed says in the liner notes, "Stephen Sondheim and Richard Rodney Bennett make an invincible armada." Such songs as *You Must Meet My Wife* and the *Night Waltz* from *A Little Night Music* retain their original, undeniable charm as Bennett (who is also a serious composer of serious music) interprets them. But I can imagine more persuasive vocalizing than he contributes to *I Do Like You* from *A Funny Thing Happened on the Way to the Forum* or the surprisingly touching lines in *I Remember* from a TV special about department-store dummies who come to life after closing time. Bennett's pianism is fleet and cool and matches the moods of the clean-cut Sondheim ballads, including several from *Anyone Can Whistle*, to which it is applied, but it also at times comes dangerously close to the style of the corner cocktail lounge.

P.K.

MANHATTAN (George Gershwin). Music from the film with selections from the original soundtrack. *Rhapsody in Blue*. Gary Graffman (piano); New York Philharmonic. Zubin Mehta cond. *Land of the Gay Caballero/Someone to Watch over Me; Mine; I've Got a Crush on You/Do, Do, Do; Oh, Lady Be Good/'S Wonderful*; and three others. Dick Hyman (piano); Milt Hinton (bass); Eric Cohen (drums); other musicians. COLUMBIA JS 36020 \$8.98.

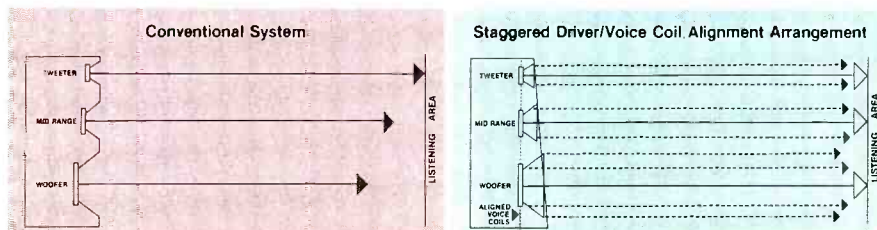
Performance: **Opulent**
Recording: **The works**

No matter how you feel about Woody Allen's films, you have to give the man credit for being one of the few American directors still making personal films—and making them pay off—at a time when the industry seems headed back toward big-budget "entertainment" films in which the producer is often the real star. This album is a gaudily pleasant memento of Allen's dark-grey comedy of (no) manners about a bunch of hip, daytime Draculas who go about the nasty business of draining one another's vital spirits under the guise of being "real." Recording producer Andy Kazdin has shot the works sonically. For *Rhapsody in Blue* Zubin Mehta conducts the New York Philharmonic in his best overrich, opu-

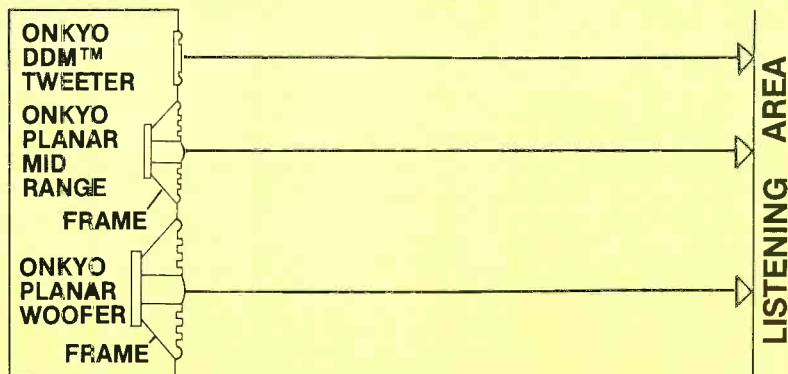
(Continued on page 120)

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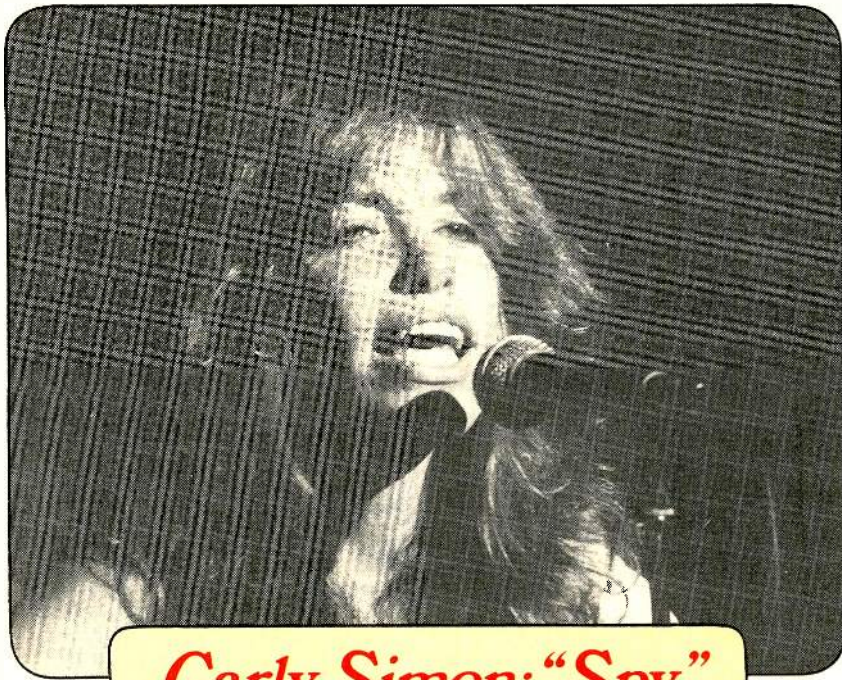
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Stuart G. Lieben

Carly Simon: "Spy"

RECORD sales are way off and the heat is consequently on in the executive suites, so a lot of commercial hopes are riding on such major new releases as Carly Simon's "Spy" from Elektra. Carly is just fine—never better, in fact—and if quality still sells, the record will do well. Even in such flaky times as these, real talent like Carly Simon's will flourish.

The title of "Spy" comes from Anaïs Nin, who called herself "an international spy in the house of love," and Carly's songs on it show her at her tough-minded best, asking no quarter and offering none. Like her literary counterparts Mary McCarthy and Joan Didion, Carly Simon sees and allows herself to feel a great deal more than the average privileged, upper-middle-class young woman—probably much more than she'd like to. In *We're So Close* she offers a clear-eyed description of one of those strangely bloodless relationships so many people cling to these days: "He says: we're beyond flowers/He says: we're beyond compliments/We're so close we can dispense with love/We don't need love at all." Those are the kind of narrowed, play-safe expectations many people are living with today, and no matter how much it may chill the marrow of sentimentalists or romantics, Carly Simon has the courage to tell it like it is.

She also has the courage to touch on something that's rarely discussed: violent female rage. *Vengeance* tells of a woman stopped by a policeman for a traffic violation; he uses his position of authority to molest her verbally with gross sexual innuendo, and finally she strikes back: "Just because you're stronger/ And you hold it over me/I'll put the pedal to the floor/And prove to you I'm free" It's a strong song, strongly delivered. Simon's voice has by now lost all traces of outside influences, and her recordings have an immediately identifiable sound that belongs only

to her. (She's one of the few singers of either sex who's been able to do that lately.)

Memorial Day shows courage of another kind, for instead of taking the role of a car hop, a bar girl, or some other of the not-so-beautiful losers who are the typical protagonists of most pop songs, Carly portrays herself as the relatively secure and immune person she really is, insulated by her wealth and celebrity from most of the rough and tumble of ordinary life. A man and his wife fight each other on the street and Carly watches ". . . safe and clean/From the frosted windows of the limousine."

But it's not all social realism. "Spy" includes plenty of simple entertainment, such as *Pure Sin*, about a girl posing chastely for her portrait while planning something a good bit livelier for later, the unsticky but romantic *Love You by Heart*, and the very funny and touching *Coming to Get You*, about a country mother talking on the phone with her runaway child. Arif Mardin's production is faultless, and on several tracks James Taylor turns up to sing background for the Mrs.

IDON'T know, and really couldn't care less, whether "Spy" will pull any fat out of the fire for the sweating execs at Elektra. What I do know is that it is one of the best albums of the year and that Carly Simon is carving out a unique place for herself in American pop as a sort of Sister Courage. No, not "Mother"; we still don't want anyone who knows us *that* well, do we?
—Peter Reilly

CARLY SIMON: *Spy*. Carly Simon (vocals); vocal and instrumental accompaniment. *Pure Sin*; *Love You by Heart*; *Spy*; *Memorial Day*; *We're So Close*; *Vengeance*; *Just Like You Do*; *Coming to Get You*; *Never Been Gone*. ELEKTRA SE-506 \$7.98, © 5T5-506 \$7.98, © 5C5-506 \$7.98.

lent, condensed-milk style, and Gary Graffman plays as if his home and career depended on it. The usually amiably laid-back Dick Hyman is goosed through his paces in many of the Gershwin songs as if Liszt were sharing the piano bench with him and breathing down his neck. Overall, sound takes first place here, Mehta comes in second, and Gershwin is third. Still, it recalled the really joyous lift I got from the superb opening sequence of the film, in which Allen and his cameraman, Gordon Willis, so masterfully matched images of Manhattan with the sounds of Gershwin. Later, when the narcissists started to writhe through their manipulative game-playing, the background music could have been Hindemith for all I cared. In fact, I still think variations on *Is That All There Is?* would have been more appropriate for Allen's grim, solipsistic tale than the buoyant, life-celebrating work of George Gershwin. P.R.

COLLECTION

COMMAND PERFORMANCE: *Night of 100 Stars at the London Palladium, June 28, 1956*. Dame Edith Evans, Peter Ustinov, Paul Scofield, Jack Benny, Laurence Olivier, Tyrone Power, Bob Hope, Noël Coward, Beatrice Lillie, Tallulah Bankhead, Mabel Mercer, Maurice Chevalier, and others. DRG ARCHIVE DARC-1-1106 \$7.98.

Performance: **Hilarious hodgepodge**
Recording: **Fair**

Back in 1956, some of the greatest names in British and American show business got together at the London Palladium in a benefit performance for an organization aiding underprivileged children. Peter Ustinov, Laurence Harvey, and Paul Scofield brought down the house when they appeared in drag to do Noël Coward's *Three Theatrical Dames*. Next, Jack Benny engaged in a violin duel with a precocious young lady named Yvonne Larvin, and Laurence Olivier joined his wife, Vivian Leigh, and John Mills in their own weirdly funny version of *Top Hat, White Tie and Tails*. Then eight English actresses sang *Chicago*. Tyrone Power led a corps of underclad chorus girls singing (more or less) *Chatanooga Choo Choo*, and Bob Hope did a monologue. The program ended with a "sign-off" by Olivier (not yet Sir Laurence).

To round out the disc, DRG has supplied, evidently from other recorded sources at its disposal, Noël Coward singing *Let's Do It* with some unusual interpolations, such as "T. S. Eliot and Fry do it/They do it in verse/Priestley and I do it/But we have to rehearse" and "McCarthy once did it/But it took a long time." They have also added two more Coward songs supremely interpreted by Beatrice Lillie (this is the only available recording of her version of *Thank You So Much, Missus Lowsborough-Goodbye*), an intriguing, husky treatment of *What Do I Care?* by Tallulah Bankhead, and, from the soundtrack of the movie *Everything Is Rhythm*, Mabel Mercer being devastating in *Black Minnie's Got the Blues*. Then there's Maurice Chevalier singing (what else?) *Louise*, Gracie Fields doing *Sally*, and a finale in which Fields is joined by the Coldstream Guards Band—all these from a Royal Variety performance in 1952. The whole thing doesn't really add up to a program, but there are marvelous moments. P.K.

(Continued on page 122)

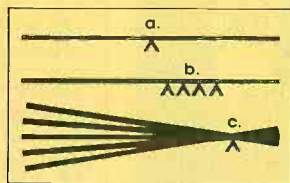
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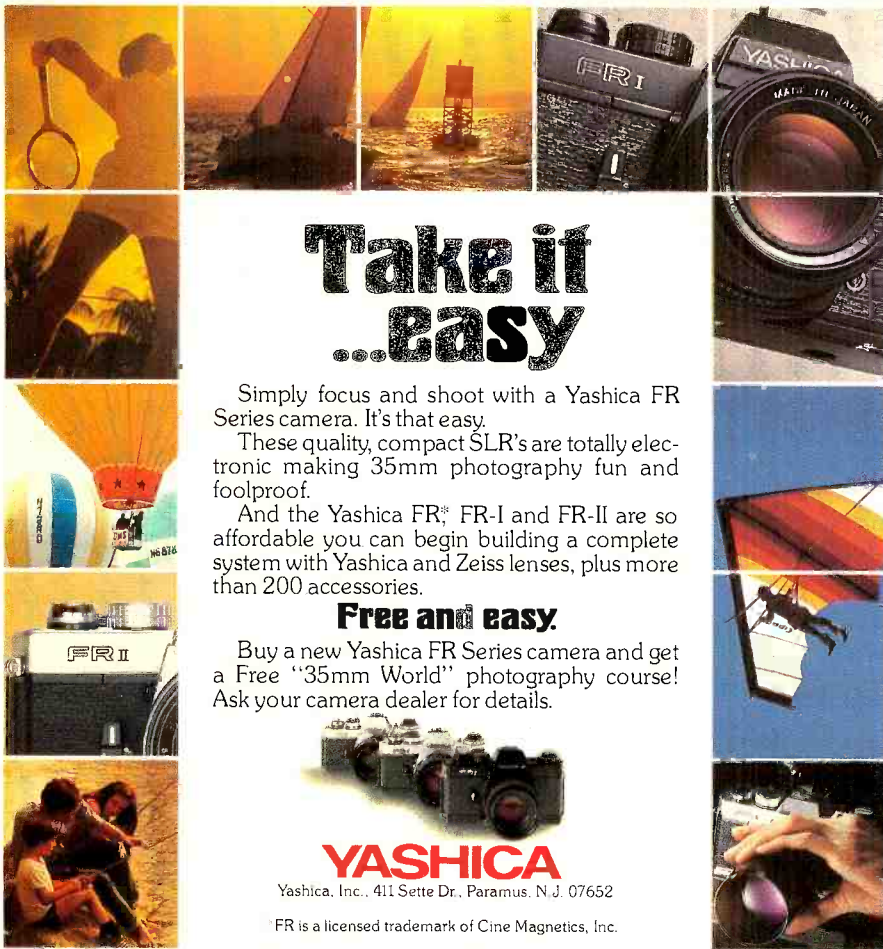
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THE ORIGINAL CARTER FAMILY. Maybelle Carter (vocals, guitar); Sara Carter (vocals, autoharp); A. P. Carter (vocals). *Keep on the Sunny Side; Engine One Forty-Three; Diamonds in the Rough; Single Girl, Married Girl; The Homestead on the Farm; Wildwood Flower;* and five others. RCA ® CPM1-2763 \$8.98, ® CPS1-2763 \$8.98, © CPK1-2763 \$8.98.

Performance: **Legendary**
Recording: **Variable**

The Carter Family started recording in 1927, the year of Lindbergh, of Babe Ruth's greatest hits, and within twenty-four hours of when Jimmie Rodgers started recording (at the same place, Bristol, on the Virginia-Tennessee line). Between them the Carters and Rodgers just about created what came to be known as country music. The Carters were A. P., who wrote the songs (although some say the women helped write some of those credited to him) and sang bass; his wife Sara, who sang lead; and his sister-in-law Maybelle, who sang tenor and was one of the first musicians to use the guitar as a lead instrument. Maybelle's style, thumb-picking the melody on the bass strings, was invaluable to the trio's sound and is still widely imitated by flat-pick as well as finger-pick players (Woody Guthrie named her down-up rhythm stroke on the treble strings "the church lick"). So this is legendary stuff, all right, pre-Bluegrass and more—practically every song in this package is itself a legend. RCA has got the sound reasonably clean and augmented the record with a booklet of many pictures and some text by Maybelle's son-in-law, Johnny Cash. If you're at all serious about American music and where it came from, you can't be without this. N.C.

MARY McCASLIN AND JIM RINGER: *The Bramble & the Rose.* Mary McCaslin (vocals, guitar, banjo); Jim Ringer (vocals, guitar); instrumental accompaniment. *Mama Love; Strawberry Roan; Canaan's Land; Oh Death; Stages of My Life;* and seven others. PHILIP PH 1055 \$7.98.

Performance: **Suburban "folk"**
Recording: **Good**

Most of Mary McCaslin and Jim Ringer's songs are either based on traditional tunes or are new pieces that carefully observe all the established rules for "folk" music. Their performances are meticulous, precise, and "pure" (whatever the hell *that* means), but they also sound tailored to please the kind of suburban folkie who loves the great outdoors so much that he feels impelled to buy a new leather-upholstered Jeep just so he can go out and explore it—on weekends. P.R.

(Continued on page 124)

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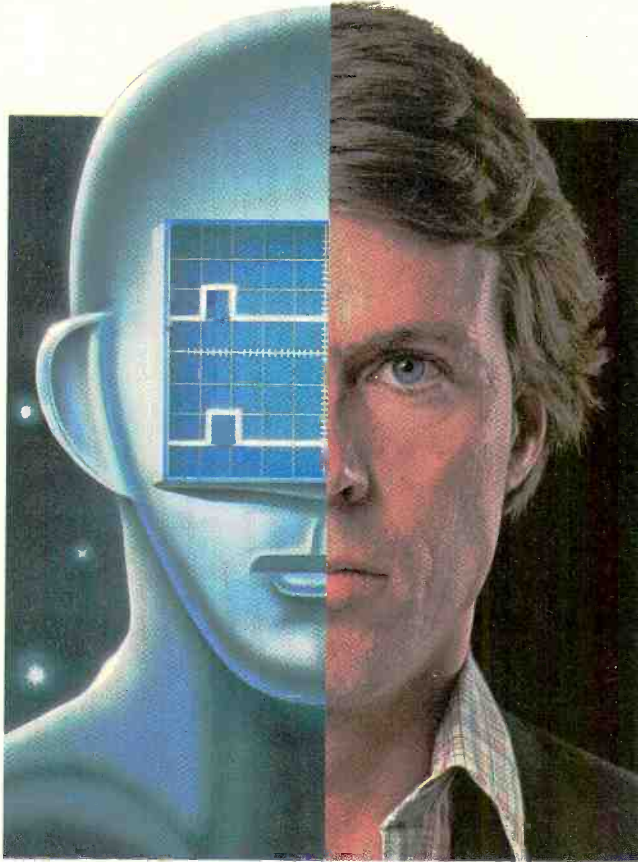
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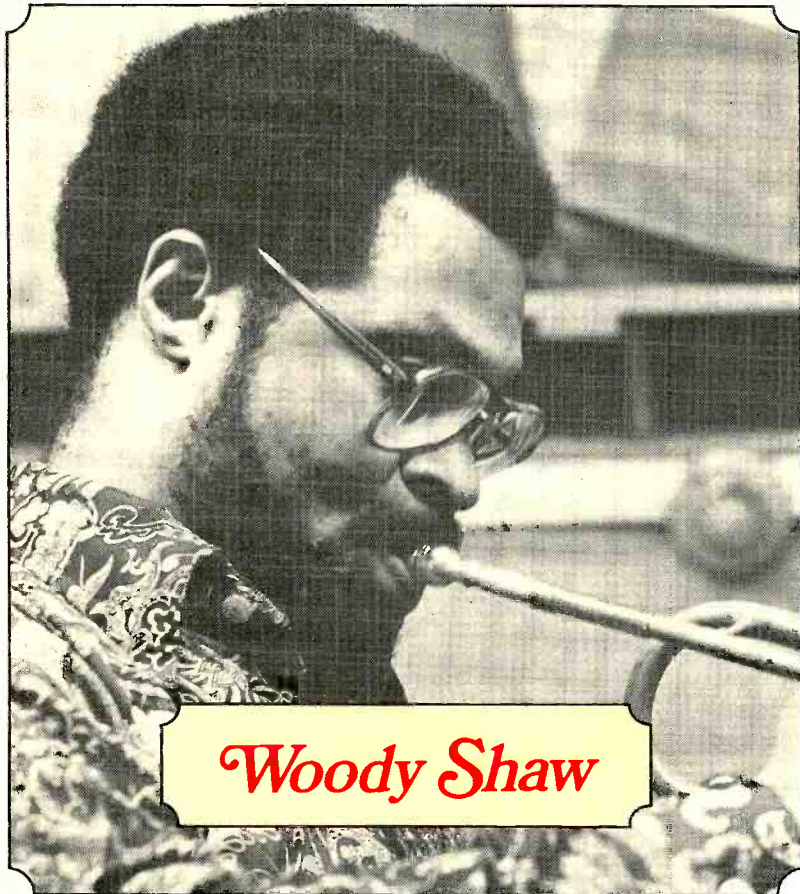
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CIRCLE NO. 53 ON READER SERVICE CARD





Raymond Ross Photography

Woody Shaw

It says something for trumpeter Woody Shaw's artistic integrity that in his third Columbia album he *still* has not introduced so much as a hint of artificial flavoring. To make matters even better, Woody Shaw has not only kept his music honest, he has developed and improved it with each new album.

This new one is entitled "Woody III" not only because it is his third Columbia set but also because its preparation roughly coincided with the birth of Woody Louis Armstrong Shaw, the third Woody Shaw (a family photo of all three is the album's cover illustration). As it happens, "Woody III" also presents the thirty-five-year-old musician in three different surroundings: with a twelve-piece band on the three cuts that make up side one; with small groups in a studio setting; and with his working quintet at the Village Vanguard during the same 1978 engagement that yielded Shaw's second Columbia album, "Stepping Stones" (JC 35560).

Side one can be regarded either as three separate pieces or as a loosely connected whole, but whichever way one chooses to describe them, these three selections, composed and arranged by Shaw, constitute his most interesting work to date. It is here that he employs the larger ensemble, which includes three saxophonists, three brass players besides Shaw himself, and three percussionists. The whole side moves very nicely, accelerating to a madly swinging rush at one point in the second piece, and all the time Shaw's score caresses and nudges the solos, not once breaking the flow of the music. And flow it

does, with Shaw's cornet alternately flying and diving into the thick of things on *Woody I: On the New Ark* and Shaw, alto man James Spaulding, and trombonist Steve Turre riding the swinging, swelling rapids created by bassist Buster Williams and the percussionists on *Woody II: Other Paths*. The side ends with all the serenity of a mirror-calm lake, gently rippling as Shaw's flugelhorn dips into the lovely melody of *Woody III: New Offerings*, a beautiful ballad that also makes room for individual statements from pianist Onaje Allan Gumbs and trombonist Curtis Fuller.

THE second side of "Woody III" has a different but no less appealing character. We hear a sextet, quartet, and quintet, in that order, playing three sizzling numbers that capture the spirit of jazz two decades past. I devote less space to this side not because it deserves less than the other, but because it is more typical of Shaw's past efforts. In short, "Woody III" is a very fine album of jazz, that endangered idiom that so stubbornly refuses to die. Thank you, Woody Shaw.

—Chris Albertson

WOODY SHAW: *Woody III*. Woody Shaw (cornet, flugelhorn); James Spaulding (alto saxophone); Steve Turre, Curtis Fuller (trombone); Onaje Allan Gumbs (piano); other musicians. *Woody I: On the New Ark*. *Woody II: Other Paths*. *Woody III: New Offerings*. *To Kill a Brick*; *Organ Grinder*; *Escape Velocity*. COLUMBIA JC 35977 \$7.98, ® JCA 35977 \$7.98, © JCT 35977 \$7.98.

JAZZ



RECORDING OF SPECIAL MERIT

TED CURSON: *The Trio*. Ted Curson (trumpet, flugelhorn, piccolo trumpet, percussion); Ray Drummond (bass); Roy Haynes (drums). *Snake Johnson: 'Round About Midnight; Quicksand*; and two others. INTERPLAY IP-7722 \$7.98 (from Interplay Records, P.O. Box 93, Calabasas, Calif. 91302).

Performance: **Hot**
Recording: **Good**

I don't care if Ted Curson's horn lets out a few thin notes here and there; I wouldn't even care if it missed a few (and I believe it does). What I do care about is honesty and spirit, and this trio session recorded last January is overflowing with both. Add in a fertile musical imagination, three-way rapport, and a well-balanced program of original compositions and jazz standards, and you have a grand total indeed.

Curson had barely arrived in New York (from Philadelphia) before he was swept into the mainstream of mid-Fifties jazz. Jimmy Heath gave him lessons, Miles Davis gave him encouragement, and Charles Mingus gave him work. But in the latter half of the Sixties, when Ringo and Lennon replaced Rollins and Lateef as names bandied about in campus conversations, Curson, like so many of his colleagues, was forced to shift his arena of activity to Europe, becoming a fixture at jazz festivals and getting the kind of attention he should have had in his own country.

Drummer Roy Haynes came of age during the early Fifties, a transitional period in jazz. His wonderful flexibility made him one of the most versatile drummers of the post-bop era, and he fits well into this trio, performing with even greater enthusiasm than he has shown on his own Galaxy albums recently. I must confess that I have not previously heard of bassist Ray Drummond, but I strongly suspect we will all be hearing a great deal more from him.

The trio gets off to a flying start with *Snake Johnson*, a Curson composition taken at a breakneck tempo that carries over into the next track, Sonny Rollins' *Pent Up House*. The two tunes produce virtuoso performances from all concerned, with Curson's horn searing as it soars above his two cohorts' steaming, bubbling rhythm. Both tempo and mood change for the side's last seven minutes. Curson's *Quicksand*, in which the tempo shifts to 6/8 time and the mood becomes decidedly Spanish. Curson wrote this tune some fifteen years ago, and he originally recorded it for the "Tears for Dolphy" album (Arista AL 1021). *Straight Ice*, another Curson tune, which he recorded on Atlantic during the same period, has a relaxed, bluesy feel to it and contains some very sensitive playing by

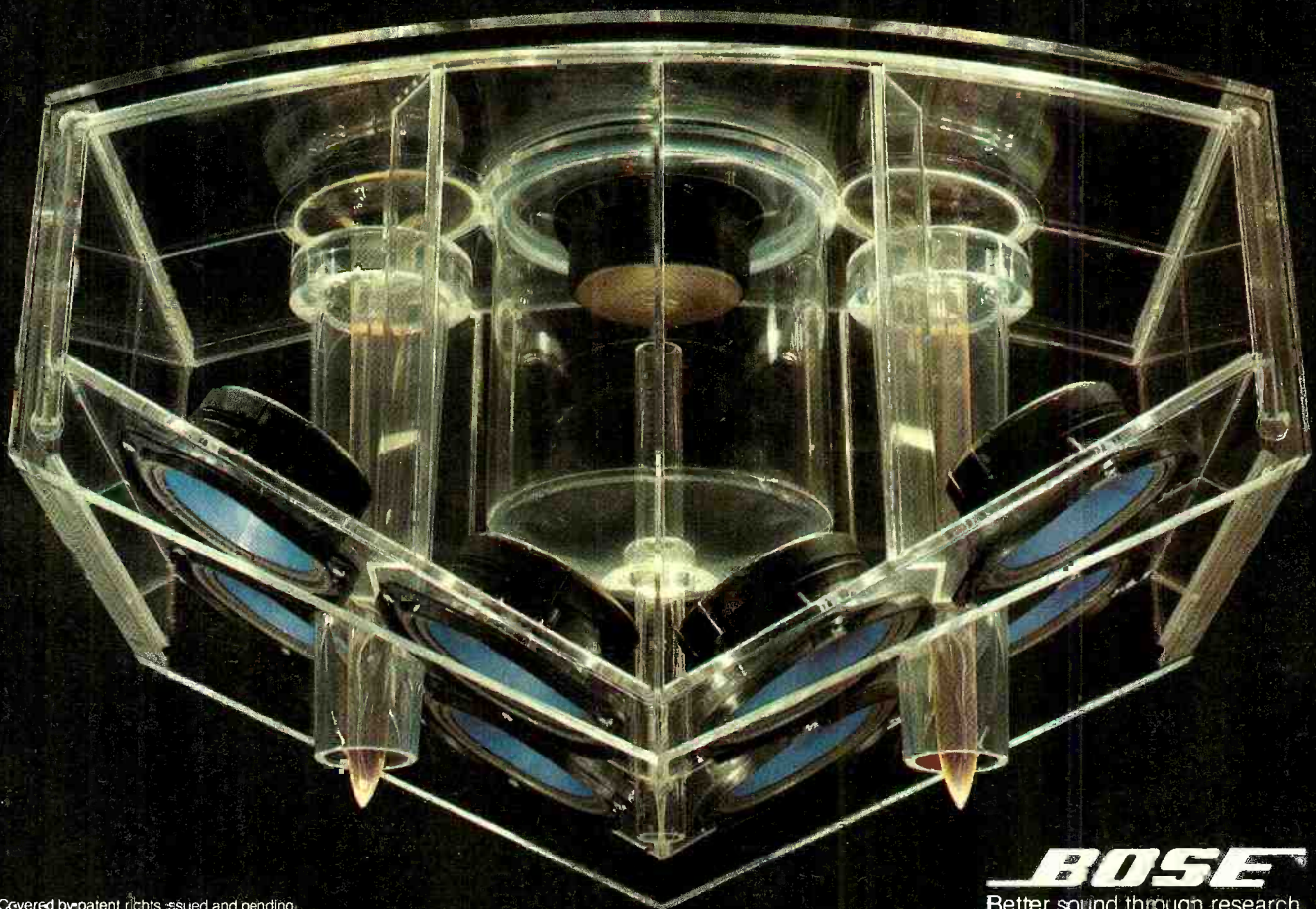
(Continued on page 126)

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Future At Bose we have decided that “901” will continue to be the designation of the product that represents the state-of-the-art of our technology — whatever size, shape or form that product may take. In our research we continue to look at any and all technologies and product concepts that might hold possibilities for better sound reproduction. Consistent with the past, we will introduce new technology into the 901 speaker as it is developed — often without announcement. This is our dedication to the goal that whenever you invest in the Bose® 901® system you will receive the latest technology and the best in music reproduction.



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Curson himself. And, speaking of moods blue, the album—programmed to reflect gradually decelerating tempos—ends with a soulful ten-minute reading of Thelonious Monk's 'Round About Midnight, which shows bassist Drummond off to particular advantage.

Albums like this one enrich our lives and help to offset the candy-bar fare that others pass off as jazz these days. C.A.

RECORDING OF SPECIAL MERIT

JAY McSHANN: The Big Apple Bash. Jay McShann (piano, vocals); Herbie Mann (flute, tenor saxophone, clarinet); Gerry Mulligan (baritone and soprano saxophones); John Scofield (guitar); Jack Six, Eddie Gomez, Milt Hinton (bass); Joe Morello, Connie Kay (drums); Dicky Wells (trombone); Doc Cheatham (trumpet); other musicians. *Crazy Legs & Friday Strut; Georgia on My Mind; Dickie's Dream;* and four others. ATLANTIC SD 8804 \$7.98. © TP 8804 \$7.98. © CS 8804 \$7.98.

Performance: **Terrific**
Recording: **Very good**

Jay McShann, the great Kansas City pianist, singer, and arranger, here presents a delightful album of tasty, straight-ahead jazz with a fine cast of players including Gerry Mulligan, Milt Hinton, Doc Cheatham, Dicky Wells, and—believe it or not, folks—Herbie Mann playing like he really means it. All seven selections are done with carefree verve; hearing all these pros enjoying themselves is half the fun of the album. My favorite cuts are McShann's *Crazy Legs & Friday Strut* and *Jumpin' the Blues* (the latter written with Charlie Parker) and Duke Ellington's *Blue Feelings*, with Doc Cheatham conjuring up the spirit of Cootie Williams.

McShann's vocals are a special treat; he's a home-cooking singer—nothing fancy but all mighty satisfying. Any time he wants to step into my parlor and play piano he's more than welcome; I'll even buy a piano. Hell, I'll even buy a parlor! J.V.

RECORDING OF SPECIAL MERIT

ART PEPPER: Art Pepper Today. Art Pepper (alto saxophone); Stanley Cowell (piano); Cecil McBee (bass); Roy Haynes (drums); Kenneth Nash (congas, percussion). *Miss Who?; Lover Come Back to Me; Chris's Blues;* and three others. GALAXY GXY-5119 \$7.98.

Performance: **Ever-modern Art**
Recording: **Very good**

From all reports, Art Pepper's long-awaited autobiography—seven years in the making, due out around this time—is going to shock the literary jazz establishment, and if Pepper's frank account of life behind bars (he served several years in prison on narcotics charges) can shake the living pomposity out of some of these writers, he will have done jazz a great service. As it is, Art Pepper continues to earn our highest praise for his musical performances, for he is as forthright when expressing himself through his alto saxophone as they say he is when committing his past to paper.

Pepper's latest album, "Art Pepper Today," teams him up with a superb rhythm section (make that *trio*, for rhythm is but a part of their business) and an extra percussionist on one track, *Mambo Koyama*, the only selec-

tion I found to be less than excellent. The quartet kicks things off with *Miss Who?*, a lively and very thinly veiled *Sweet Georgia Brown* on which everybody gets a chance up front. Unfortunately, *Mambo Koyama* follows, breaking the spell and slapping our ears as a particularly annoying example of bad programming, but it's all uphill from there as the quartet returns for two standards, an urgent *Lover Come Back to Me* and a tender *These Foolish Things*, a peppery *Chris's Blues*, and a lovely original ballad, *Patricia*. The last couple of minutes of *Patricia* are as fine a slice of today's Art as I have ever heard, and if you happen to have caught my previous reviews of Art Pepper here, you'll know that that's saying something. C.A.

DELLA REESE: One of a Kind (see Best of the Month, page 94)

COLLECTION

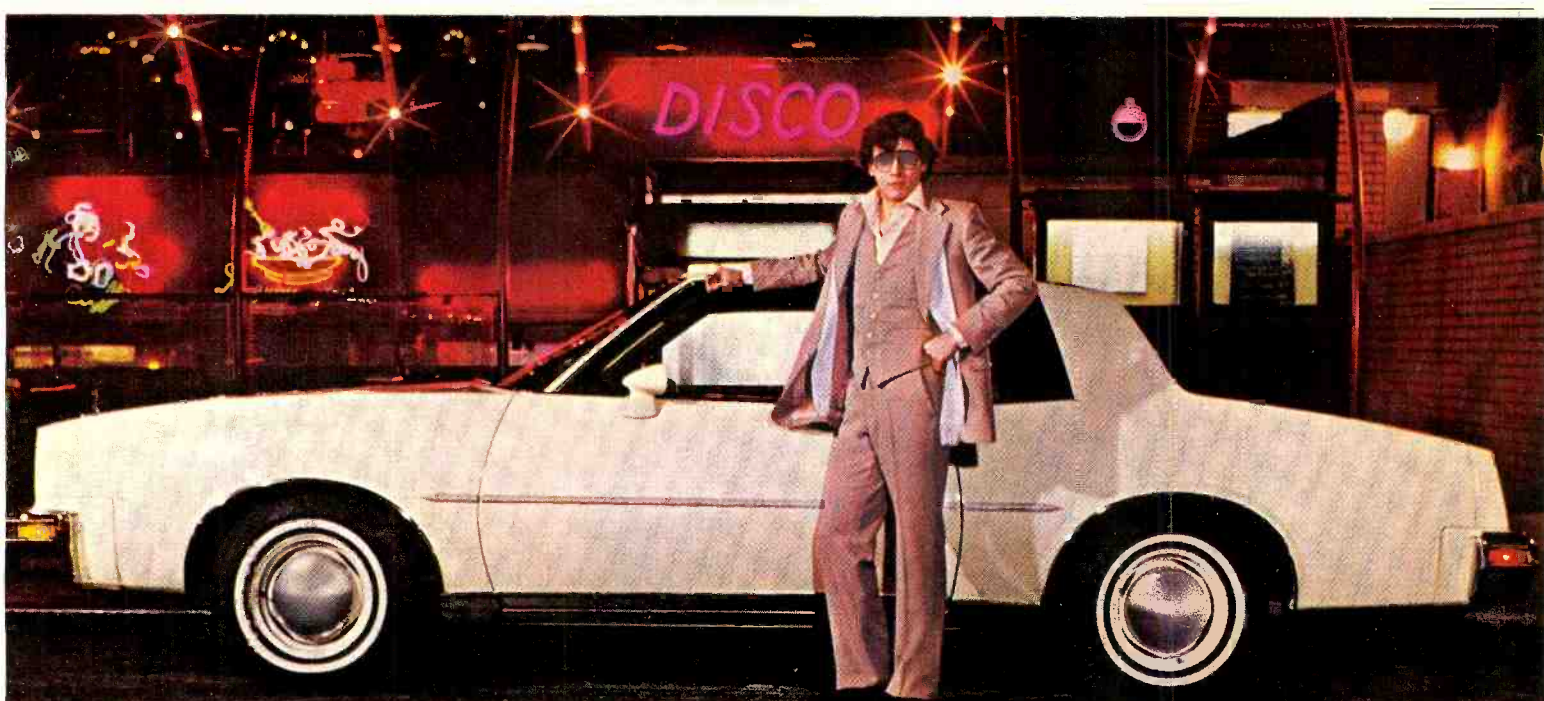
NEW ORLEANS JAZZ & HERITAGE FESTIVAL. Clifton Chenier: *Caledonia*. Irving McLean: *Brown Skin Girl*. Roosevelt Sykes: *Ice Cream Freezer*. Henry Butler: *The Breaks*. Onward Brass Band: *Paul Barbarin's Second Line*. Mamou Hour Cajun Band: *Jolie Blonde*. And six others. FLYING FISH 099 \$7.98.

Performance: **Variable**
Recording: **Good**

This anthology of selections from ten years of performances at the New Orleans Jazz and Heritage Festival is a mixed blessing, although the overall effect is warming. The standout performance is by the remarkable Eubie Blake, now in his nineties, playing as though he were fifty years younger as he rips through his own sassy and flirtatious *Charleston Rag*. Roosevelt Sykes has been making records since the Twenties and, after a prolonged sojourn in France, has returned to the United States. His performance of *Ice Cream Freezer*, a double-entendre blues, is a bawdy chuckle, even though he is a hit-and-miss pianist. The late Charles Mingus and young Henry Butler both seem out of place in this celebration. Ironing Board Sam is given only two minutes for the Jimmy Reed blues *Baby What You Want Me to Do*, while Irving McLean, who plays steel drums, has only forty-five seconds on *Brown Skin Girl*. It seems unfair to include these artists without giving them enough time to show what they can do. On the other hand, accordionist Clifton Chenier is a persuasive artist best taken in small doses, else the charm wears thin.

Robert Pete Williams' attempt at *Rock Me Baby* (here titled *Rock Me Mama* and credited to Williams, although as *Rock Me Baby* it is credited to B. B. King and definitively sung by Muddy Waters) is tired and lame. The song celebrates the act of love, but Williams' version sounds like he was remembering his better days. The New Orleans Ragtime Orchestra, normally an on-target group, spoils their *Darktown Strutters Ball* with an amateur vocal chorus. And the Youth Inspirational Choir is a fine but not particularly distinctive gospel group. From the applause and cheers on these live recordings, it's evident that the folks in the paying seats were feeling swell. But as a testament to the polyglot musical culture of New Orleans or a vindication of its artists the album is less than it might have been. J.V.

(Continued on page 128)



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CHARLES MINGUS was a man of wildly vacillating temperament; he could shift his mood from hot to cold and back to hot before you could play a twelve-bar chorus at a moderate tempo. I recall a night, some twenty years ago, when Mingus startled a dedicated Philadelphia club audience with an emotional eruption that in one swoop landed a fist on his trombone player's mouth and slammed the

Times Square." in Columbia's very inconsistent Contemporary Masters series, oversteps the bounds of good taste and ethical conduct to land somewhere in the area of exploitation. Not counting side one, which is all new (to us, that is), this two-record set contains 1 hour, 3 minutes, and 14 seconds of music, 42 minutes and 38 seconds of which have previously been released (on "Mingus Ah Um," CS 8171, and

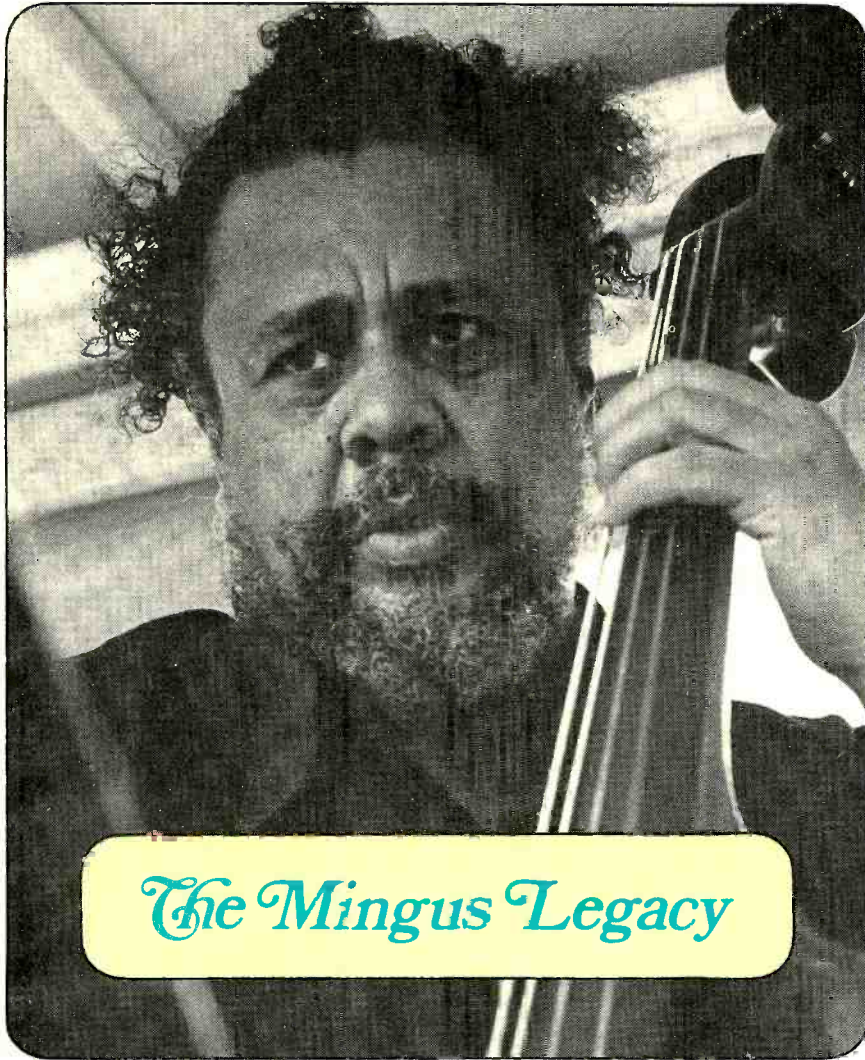
of them is considerably hampered by the insensitive production of the whole.

Atlantic's "Me, Myself an Eye" was Mingus' last recording, the result of two sessions held in January 1978, about a year before he died of a disease that had confined him to a wheelchair for some time. For the first time in his more than thirty years as a leader, Mingus led a recording session without playing the bass himself. Bass players are often content with a low profile, but Mingus made sure we always heard him, and his work on the instrument was a vital part of the performances he led. The rotund, assertive sound of his bass is sorely missed on this album, a loss even such fine players as Eddie Gomez and George Mraz barely begin to compensate for. Unable to move his hands, Mingus also had to delegate the job of conducting to a colleague, his long-time associate saxophonist Paul Jeffrey; but he was able to supervise and call the shots himself.

Three Worlds of Drums, a thirty-minute work that takes up all of side one, was later given its public premiere at the 1978 Newport Jazz Festival. Somewhat fragmented and undisciplined, it is marred rather than enhanced by the drum solos it features, but there are plenty of good moments, including fine solos by tenor saxophonist George Coleman (excellently framed by the two bass players), the Brecker brothers, and guitarist Larry Coryell. If the ensemble sounds uncoordinated—and it does—it is probably deliberate, a quaint Mingus hallmark that in lesser hands would have sounded like fumbling musicianship. Also endearing is the touch of Spain—or "Spanish tinge," as Jelly Roll Morton used to call it—that is evident early on in the ceremonial-sounding orchestral punctuation with which Mingus bridges some of the solos.

SIDE TWO contains three selections, two of which have appeared on earlier Mingus recordings: *Wednesday Night Prayer Meeting* and *Devil Woman*. The latter is a deep-rooted blues that sprouts solos by Coryell and the Brecker brothers. *Prayer Meeting*, first held by Mingus on another Atlantic album almost twenty-one years ago, moves at a fast, swinging clip once the obligatory, somewhat stogy singing/hand-clapping introduction is out of the way. Only one bass player, Eddie Gomez, is heard on this side, and he does a fine job of walking this meeting through a series of statements by the Breckers, tenor saxophonist Ricky Ford (who came to Mingus from Ellington and is excellent), trumpeter Jack Walrath (whose association with Mingus dated back to 1974), and Coryell before stepping up front himself. Last, but far from least, there is a lovely Mingus ballad, *Carolyn "Keki" Mingus*, with Lee Konitz, Michael Brecker, and Coryell bouncing imaginative inventions off a lush, multicolored orchestral background. The arrangements and orchestrations for this date were done by Jack Walrath under Mingus' supervision and with the help of tape recordings and piano sketches. "Me, Myself an Eye" will not rank high in the Mingus discography, but that is only because some of his previous efforts—particularly on Atlantic—are such fiendishly tough acts to follow.

Fortunately, Atlantic has also released the obligatory memorial album, but unlike the Co-



Raymond Ross Photography

The Mingus Legacy

keyboard lid down within a hair's breadth of his fast-reacting pianist's fingers. (To make matters all the more painful and awkward, the incident occurred during a memorial benefit performance for a recently deceased musician whose family was present.) At the opposite end of the Mingus mood spectrum was the jovial, witty man who entertained his fellow railroad passengers between Trenton and New York as we headed home from the taping of a program in my 1972 *Jazz Set* television series. Now Mingus is gone and the obligatory legacy albums have begun to appear. Three recent releases—one on Columbia, the others on Atlantic—would undoubtedly have evoked comparably opposite reactions from Mingus.

Taking worst things first, "Nostalgia in

"Mingus Dynasty," CL 1440); the remainder was supposed to go into the old trash can. To put it plainly, what producer Teo Macero ten years ago edited from these Mingus performances, reissue producers Jim Fishel and Frank Abbey have now restored.

And so all the dull and weak solos Mingus so wisely removed are back (the bulk of them by alto saxophonist John Handy, who has improved in the twenty years since these recordings were made). There is no need to go into details on the cuts, but I should point out that side one is not worthy of Mingus; recorded at the same 1959 sessions, the selections were not left unissued due to any oversight. One of the tunes, *Strollin'*, is even repugnant, with its listless vocal by Honey Gordon. There are some fine moments in this set, but enjoyment

lumbia set. "Passions of a Man" has been assembled with taste and reverence by Ilhan Mimaroglu, who produced nearly half of the material. The three-record set contains some of the high points of Mingus' recording career from 1956 to 1977, starting with the outstanding *Pithecanthropus Erectus* and ending with his moving tribute to Lester Young, *Goodbye, Porkpie Hat*. Following the final music track there is a 3½-minute bonus, excerpts from a conversation Mingus had with Mimaroglu in 1975. Mingus talks about his days as a West Coast session musician, how his father wanted him to become a postal worker, his likes and dislikes in music. "I feel when I have a new record coming out," he says, "maybe this time they'll hear it." If all the posthumous Mingus publicity has aroused your curiosity and you find yourself wondering what the fuss is about, "Passions of a Man" will give you a very good idea. "Me, Myself an Eye" will serve well to round out an already existing Mingus collection. "Nostalgia in Times Square—The Immortal 1959 Sessions" should be avoided, though the original releases of these sessions are worth searching for.

—Chris Albertson

CHARLES MINGUS: *Nostalgia in Times Square—The Immortal 1959 Sessions*. Charles Mingus (bass); Richard Williams (trumpet); Jimmy Knepper (trombone); John Handy, Shafi Hadi, Booker Ervin, Benny Golson, Jerome Richardson (saxophones); Roland Hanna, Horace Parlan (piano); Teddy Charles (vibraphone); Dannie Richmond (drums). *Pedal Point Blues; GG Train; Girl of My Dreams; Strollin'; Jelly Roll; Boogie Stop Shuffle; Open Letter to Duke; New Now Know How; Bird-calls; Slop; Things Ain't What They Used to Be; Pussy Cat Dues; Song with Orange; Gunslinging Bird*. COLUMBIA JG 35717 two discs \$9.98.

CHARLES MINGUS: *Me, Myself an Eye*. Randy Brecker, Jack Walrath (trumpet); Lee Konitz (alto saxophone); George Coleman, Michael Brecker, Ricky Ford (tenor saxophones); Larry Coryell (guitar); Eddie Gomez, George Mraz (bass); Steve Gadd, Joe Chambers, Dannie Richmond (drums); Paul Jeffrey cond. *Three Worlds of Drums; Devil Woman; Wednesday Night Prayer Meeting; Carolyn "Keki" Mingus*. ATLANTIC SD 8803 \$7.98, © TP 8803 \$7.98, © CS 8803 \$7.98.

CHARLES MINGUS: *Passions of a Man*. Charles Mingus (bass, piano, vocals); Willie Dennis, Jimmy Knepper (trombone); Pepper Adams, Jackie McLean, J. R. Monterose, Shafti Hadi, John Handy, Booker Ervin, Rahsaan Roland Kirk (saxophones); Mal Waldron, Wade Legge, Horace Parlan, Don Pullen (piano); Dannie Richmond (drums). *Pithecanthropus Erectus; Profile of Jackie; Reincarnation of a Lovebird; Haitian Fight Song; Wednesday Night Prayer Meeting; Cryin' Blues; Devil Woman; Wham Bam Thank You Ma'am; Passions of a Man; Tonight at Noon; Passions of a Woman Loved; Duke Ellington's Sound of Love; Better Git Hit in Your Soul; Sue's Changes; Canon; Free Cell Block F; 'Tis Nazi U.S.A.; Goodbye, Porkpie Hat*. ATLANTIC SD 3-600 three discs \$15.98, © TP 3-600 \$15.98, © CS 3-600 \$15.98.



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CLASSICAL DISCS AND TAPES

Reviewed by RICHARD FREED • DAVID HALL • GEORGE JELLINEK • PAUL KRESH
STODDARD LINCOLN • ERIC SALZMAN

J. S. BACH: Cantata, Meine Seele rühmt und preist (BWV 189); Cantata, Ich weiss, dass mein Erlöser lebt (BWV 160); Aria, Ach windet Euch nicht so, geplagte Seelen (BWV 245c). Peter Schreier (tenor); Lucerne Festival Strings, Peter Schreier cond. VANGUARD VSD 71226 \$7.98.

Performance: **Very good**
Recording: **Very good**

Contemporary scholars doubt the authenticity of these two cantatas, but the unsigned jacket notes here assure us that they were, at the very least, revised by the Master's hand. Both are of moderate length and moderate musical interest. There's a nice violin obbligato in BWV 160, and the concluding words heralding a happy after-life are set to appropriately joyous and uplifting music. The aria is authentic Bach, originally part of the *St. John Passion*—removed, according to the notes, because Bach regarded it as too difficult for most singers. Its tessitura is high indeed, and at times awkward, but the instrumental writing, with its lively bassoon counterpoint, is endlessly inventive.

Vocal difficulties do not faze Peter Schreier, who is probably the best tenor interpreter of this repertoire today. He sings purely, with clear articulation and pronunciation, comfortable in all registers, relaxed in fioritura. Since he is singing nearly all the time I don't quite see how he can conduct as well. But that's

what the label says. In any case, the ensemble is small and the results are excellent. *G.J.*

J. S. BACH: Cantata No. 50, Nun Ist das Heil . . . (see CHARPENTIER)

J. S. BACH: St. John Passion (BWV 247). Heiner Hopfner (tenor), Evangelist; Nikolaus Hillebrand (bass), Jesus; Frank Sahesch-Pur (boy soprano); Roman Hankeln (boy alto); Aldo Baldin (tenor); Hans Georg Ahrens (bass); Regensburger Domspatzen; Collegium St. Emmeram, Hanns-Martin Schneidt cond. DEUTSCHE GRAMMOPHON ARCHIV 2710 027 three discs \$26.94, © 3376 015 \$26.94.

Performance: **Dramatic**
Recording: **Fine**

Unlike the *St. Matthew Passion*, the *St. John Passion* was subjected to four revisions over a period of some twenty years. The most radical substitutions were made in the second revision, and the third and fourth gradually returned it to a version very much like the first. This recording presents a combination of the first and fourth versions together with a supplementary side of different arias and choruses from the second version. Thus the set contains all the music Bach wrote for the *St. John Passion*.

Hanns-Martin Schneidt paces his dramatic reading so as to hurl the listener headlong to the Judgment and Crucifixion. No time is wasted between the set numbers, and the arias and chorales fit into the flow of the action rather than being set apart as supplementary contemplation. The twenty-five male singers of the Regensburg Domspatzen, combined with the authentic instruments of the Collegium St. Emmeram, produce a clear, well-defined sound that sets forth the contrapuntal aspects of the music beautifully. Nothing is forced, clarity and lightness prevail, and the inherent drive of the music speaks for itself. The *turba* choruses with their plethora of imitation and jagged instrumental figuration are particularly pithy and bring out the ugliness and greed of the mob. "*Lasset uns den nicht zerteilen*" is a real tour de force. The sonority of the chorales, in

which the voices are doubled by the instruments, is in complete contrast and offers voluptuous repose. The individual sounds of the old instruments are best heard in the obbligato arias, which make use of such obsolete curiosities as the oboe da caccia, early flauto traverso, viola d'amore, and the orbo. The playing is natural-sounding and eschews those over-exaggerated mannerisms of articulation that can be so unsettling.

Heiner Hopfner and Nikolaus Hillebrand, as the Evangelist and Jesus respectively, are perfectly cast and catch the delicate balance between dramatic narrative and liturgical dignity, but perhaps the finest singing here is by tenor Aldo Baldin. His powerful interpretation of "*Ach, mein Sinn*" is outstanding. The only thing that prevents this performance from being ideal is the use of a boy soprano and boy alto as soloists. Rather than producing the pure head tones of their English counterparts, they use a chest tone. Both have pitch problems and sound like old women. Authentic or not, their arias cry for better-developed voices and mature musicianship.

Be sure not to regard the supplementary choruses of side six as mere vocal curiosities. "*Himmelreise, Welterbebe*" and "*Zerschmettert mich, ihr Felsen und ihr Hügel*" are two of the most thrilling arias Bach ever wrote, and he probably omitted them from the final version only because they were too operatic for a *Passion*. They are impressive enough to stand on their own and make a welcome addition to any record collection. *S.L.*

J. S. BACH: Suite No. 1, in G Major, for Unaccompanied Cello (BWV 1007). CARTER: *Sonata for Cello and Piano.* Michael Rudiakov (cello); Ursula Oppens (piano, in Carter). GOLDEN CREST RE 7081 \$6.98.

Performance: **Carter notable**
Recording: **Dry and close**

Michael Rudiakov has a long association with the music of Elliott Carter, having performed and recorded Carter's string quartets with the Composers String Quartet, of which he was formerly a member. Carter composed the strong and attractive cello sonata for Rudiakov.

Explanation of symbols:

- Ⓜ = open-reel stereo tape
- Ⓢ = eight-track stereo cartridge
- ⓐ = stereo cassette
- Ⓛ = quadraphonic disc
- Ⓣ = digital-master recording
- Ⓛ = direct-to-disc recording

Monophonic recordings are indicated by the symbol Ⓜ

The first listing is the one reviewed; other formats, if available, follow it.

kov's teacher, Bernard Greenhouse, who performed and recorded it many years ago. The sonata, although difficult, is more varied and accessible than Carter's later work, particularly in this fine performance by first-class musicians with an affinity for new music. The Bach suite, although well played, suffers from a dry, close-up, warts-and-all recording that would flatter no music or performer. The sonata sound is more grateful. E.S.

RECORDINGS OF SPECIAL MERIT

J. S. BACH: Suites for Orchestra: No. 1, in C Major (BWV 1066); No. 3, in D Major (BWV 1068). English Concert, Trevor Pinnock cond. ARCHIV 2533 411 \$8.98, © 3310 411 \$8.98.

Performance: **Brilliant**
Recording: **Tops**

J. S. BACH: Concerto for Flute, Violin, and Harpsichord in A Minor (BWV 1044); Suite for Orchestra No. 2, in B Minor (BWV 1067). Simon Standage (violin); Stephen Preston (flute); English Concert, Trevor Pinnock cond. ARCHIV 2533 410 \$8.98, © 3310 410 \$8.98.

Performance: **Authentic**
Recording: **Tops**

The English Concert is a splendid Baroque chamber orchestra consisting of some of London's finest young performers on early instruments (or modern reproductions thereof). Governed rigorously by the latest research on Baroque performance practices, the group plays at the "old" pitch (A equals 415) and makes use of rhythmic alterations and sharply defined articulations. It is not, of course, the only group in existence to use such devices, but it is one of the few able to use them and make music at the same time. The sound they produce is clear as a bell, with each inner part audible, and their tempos are, for the most part, well chosen. The fast dances in the works here at first seem a little on the slow side, but the clarity of articulation allows one to hear more; the result is more exciting than hearing less at a quicker tempo. Besides, the group has a natural bounce that is contagious. Similarly, the slow tempos seem a bit fast, but this approach sustains a longer line, which permits one to hear large musical units. Only occasionally—in the opening of the B Minor Suite, for example—does the combination of a quick tempo and double dotting result in a skittishness unbecoming to the music.

The ornamentation is precise and accurate. Leader Trevor Pinnock really understands the use of appoggiaturas and the elegance of long ones. Rhythmic alterations are kept to a minimum, as is added ornamentation. When it is added, however, the result is striking, as in the celebrated "Air on the G String" (from the Suite No. 3), a movement that almost nobody else has had the courage to ornament.

Of the two discs, that with the C Major and D Major Suites comes off better. The trumpets in the D Major Suite are splendid and really stand out against the small body of strings and oboes. The other disc offers the rarely heard triple concerto, a sort of companion piece to the Fifth *Brandenburg*. It is an austere work filled with intricate writing and a monolithic web of triplets. The performance is almost too fast for its own good, and one wishes that the harpsichord were more prominent so that it could be heard as the soloist it is. Stephen Preston's contribution to the

B Minor Suite is elegant, and, unlike many flutists around today, he stresses the solo part's brooding nature rather than its brilliance. All in all, these discs are a firm step forward in the recorded use of early instruments and Baroque performance practice. We still lack one suite in the series, and I wonder what Pinnock will couple it with. S.L.

BEETHOVEN: Sonata in F Major, Op. 17; Mozart Variations (see WOELFL)

BERG: Lulu. Anja Silja (soprano), Lulu; Brigitte Fassbaender (mezzo-soprano), Countess Geschwitz; Trudliese Schmidt (mezzo-soprano), School Boy; Harald Pröglhöf (speaker), Dr. Goll; Horst Laubenthal (tenor), Painter; Walter Berry (baritone), Dr. Schön; Josef Hopferwieser (tenor), Alwa; Kurt Moll (bass), Animal Trainer; Manfred Schenk (bass), Acrobat; Hans Hotter (bass), Schigolch; others. Vienna Philharmonic Orchestra, Christoph Dohnányi cond. LONDON OSA 13120 three discs \$26.94, © 5 13120 \$26.94.

Performance: **Impressive but incomplete**
Recording: **Excellent**

In a way, this is a rather unfortunate time to release a new recording of the old, incomplete *Lulu*. The three-act opera as Alban Berg conceived it has finally reached the light of the theater at the Paris Opera under Pierre Boulez, and a recording of that version is surely not far off. The old version suffers in every way—musically, dramatically, moral-

ly—from its incompleteness, but even in this form the work has had a tremendous impact on modern opera. It has been surprisingly well served on records, too. This London release, which may be the best yet, is the fourth recorded version of what is after all a twelve-tone opera of no small difficulty.

The figure of the liberated *femme fatale* is a leitmotiv in turn-of-the-century German literary and cultural life. Such women really existed. Lou Andreas-Salome and Alma Mahler were two of the best-known of the more cultured sort; the unintellectual Lulu types are of course now forgotten. The freedom such women permitted themselves would not now be considered extraordinary, but they must have set male-dominated German bourgeois society on its ear. Even such intellectuals as Frank Wedekind (who wrote the original plays about Lulu) and Berg were at once enthralled and horrified. It seems to me that the opera is not so much about Lulu—she is something of a blank, a Child of Nature as much as an Earth Spirit—as about the reactions of men and a male society to her simple-minded sexuality (is it society—represented by Jack the Ripper—that punishes Lulu in the end, or is it Wedekind and Berg?). Far from being a piece of expressionist or surrealist art, *Lulu* is a black comedy set to psychological-numerical post-Romantic music.

This recording stirs up these reflections in part because of the ease and almost Romantic normalcy of the performance. Berg, who was

(Continued on page 134)



Fiedler Finale

THE late Arthur Fiedler's pre-war recordings of Tchaikovsky's *Capriccio Italien* and Rimsky-Korsakov's *Capriccio Espagnol* were the choice versions on 78s, and I clung to his early LP of the Tchaikovsky until only last year. These new performances, recorded direct-to-disc toward the end of 1977, may lack some of the sparkle that distinguished those earlier ones, but they are exceptionally handsome by any standards and make a worthy final entry in the discography of this amazingly productive conductor. The recording itself is breathtaking in its clean realism. Transients are incredibly impressive (the drums make their points without artificial focusing), as are the body and depth of the brasses and the sheen on the strings. The shimmer of the cymbals makes every other

recorded cymbal clash sound like—well, just a recording. While I feel, for numerous reasons, that the future lies with the digital process (which allows for editing), there is no denying the stunning impact direct-to-disc can make, and this is just about the finest example thereof I have heard. Absolutely no gimmicks, just a superbly engineered, impeccably balanced presentation of what a real orchestra sounds like. If your playback system is good enough to show you the difference, you *must* have this record. —Richard Freed

TCHAIKOVSKY: Capriccio Italien, Op. 45. RIMSKY-KORSAKOV: Capriccio Espagnol, Op. 34. Boston Pops Orchestra, Arthur Fiedler cond. CRYSTAL CLEAR Ⓛ CCS-7003 \$14.95.

OLDER, pre-Schwann record collectors will undoubtedly recall the first gramophone "bible," the 1936 *Gramophone Shop Encyclopedia of Recorded Music* compiled with loving care by R. D. Darrell. I was glancing at the book the other day and wondered idly which of the many works of Franz Joseph Haydn might have been available to the 78-rpm record buyer some forty-three years ago. The symphonies were in pretty good shape: ten out of a hundred and four, with a couple of the more popular ones, the *Surprise* and the *Clock*, available in more than one version. Only one complete trio was listed then, the famous G Major one with the gypsy-rondo finale, played by Thibaud, Casals, and Cortot. The quartets were rather better off, for a sub-

last volume, recently issued, happens to be the first I have heard by this ensemble, which includes violinists Emanuel Hurwitz and Raymond Keenlyside, violist Margaret Major, and cellist Derek Simpson. The six-record set contains thirteen quartets (six in Op. 33, the singleton Op. 42, and six in Op. 50), all written between 1778 and 1787. One might think that listening to that many quartets composed in a nine-year span would be an ordeal. Rather surprisingly, the experience was quite the opposite of tedious, and I suspect this is owing both to the quality of Haydn's writing and to the level of the performances.

Not one of these quartets sounds or acts like any of the others. Haydn appears to have pulled virtually every trick from his sleeve to

accidentally, has also recorded Haydn's Opp. 17, 20, and 77, so I suspect that Hungaroton too will eventually offer a complete set of the quartets.) In contrast to their interpretation of Op. 76, I found the Tátrai's approach to Op. 64 rather low-key. The best one could say is that these are relaxed, lyrical, warm, and gracious—in short, *gemütlich*—readings, the sort one might rather enjoy hearing played in one's living room by an extremely capable group got together for an evening's music making.

But these six mature quartets are among Haydn's greatest, and though they are, to be sure, Haydn and not Beethoven, there is more depth to them than the Tátrai manages to suggest. Hungaroton has provided well-blended, well-balanced sonics, fairly close-up but with about the same amount of room tone as in the London set; the string sound is, however, less silky, and there is a slight edginess to that of the first violin, which (coupled with a few intonation problems) tends to distract one's attention from the music.

THE fifth and final volume of John McCabe's mammoth project of recording the complete Haydn keyboard sonatas is now available on London, and, as with the previous twelve discs in the series, the performance level is exceptionally high. The forty-year-old British pianist, known equally well in his country as a composer (and also as a writer and critic), has an usually sympathetic feel for this music. His tempos, first of all, are invariably logical, and his attention to stylistic matters, such as ornaments and even repeats, is second to none. His overall approach is a warm one (abetted here by a particularly warm-sounding instrument and what is for me an overreverberant ambience), and it is, he admits, very much predicated on the sound of the modern piano rather than the keyboard instruments of Haydn's own time; one might, therefore, object at times to an overuse of the pedal. Nonetheless, McCabe distinguishes particularly well stylistically between the various periods of Haydn's writing; an early sonata sounds quite different under his fingers from one of the late pieces. The recording plan of the series has made the most of this feature, for the sonatas (and the other keyboard pieces used to fill out each album) have not been presented in the accustomed chronological order but rather mixed in sequence to provide a more variegated listening experience—and who could object to such a sensible plan?

This last volume is especially attractive because it includes several pieces not, strictly speaking, part of the Haydn sonata canon: two sonatas and a set of variations once attributed to Haydn but now considered spurious or at least doubtful; seven charming keyboard minuets; the fragmentary Sonata No. 28, with McCabe's own expert completion of the first movement, of which only the first two and the last twenty-one bars have come down to us; and, to my mind, the most unusual and appealing part of the album, a surprisingly effective anonymous keyboard arrangement (made under Haydn's supervision from his 1787 quartet version) of the *Seven Last Words*. This last work, consisting of seven movements (described as "sonatas") plus an

Haydn's Riches

JOHN MCCABE:
his Haydn keyboard
series is now complete



London Records

scription society had been formed and five seven-disc albums had been issued of performances by the Pro Arte Quartet—seventeen works for \$87.50. And you could supplement that extravagance with another half-dozen additional quartets played by such groups as the Budapest, Léner, and Elman Quartets. The situation of the keyboard sonatas was less promising, with only four recordings, though one of them was the famous 1934 Horowitz rendition of Haydn's last sonata, in E-flat Major. Complete operas? Masses? Forget it!

And today? Well, there are two complete sets of the symphonies, Dorati's on London and Maerzendorfer's on Musical Heritage Society (forty-eight and forty-nine LP discs, respectively), as well as rather substantial collections by such conductors as Goberman, Jones, Marriner, Szell, and Bernstein. The trios are being recorded complete by the Beaux Arts Trio, with twelve LPs out so far, and even the operas are gradually finding their way to discs, thanks to Dorati and Hungaroton Records. Only two of the Masses are not currently available, and both the string quartets and the keyboard sonatas are available in complete sets, with newer, competitive versions of various groupings coming out nearly every month from one source or another. The Haydn collector has never had it so good.

What will in time be thoroughly competitive to the integral recording of the quartets by the Dekany and Fine Arts Quartets on Vox (ten three-disc albums) is the still-unfinished London set by the England-based Aeolian Quartet, which so far has recorded thirty-three LPs of these works in seven volumes. The

make these works anything but textbook examples of the typical forms of the day: there are such contrapuntal interjections as fugues and canons, the use of only one theme instead of two in many sonata-form movements, forays into far-out keys, plenty of examples of Haydn's favorite device of writing movements with variations on two different themes, textural tricks with the four stringed instruments, and, not least, a most appealing wittiness as the composer surprises the ear again and again with a variety of in-jokes. This wittiness is particularly well brought out by the Aeolian Quartet, which plays everything with suitably high spirits, infectious rhythms, and plenty of dynamic contrast, lightness, and bounce. If it doesn't strike you that a Haydn quartet could be *funny*, I can only advise that you listen to the last movement of Op. 33, No. 2, whose nickname happens to be *The Joke*. It must also be said, however, that Haydn does not neglect the expressive depths, especially in the many slow movements, nor does the Aeolian Quartet fail to convey the composer's more serious moods. Overall, the ensemble is quite brilliant, polished, and precise. The recording, close-up but with a fair amount of room tone, is good, if not ideally transparent at the fullest moments. A nod must also be given to the exceptional annotation by Reginald Barrett-Ayres.

Some years ago I reviewed the Tátrai Quartet's 1964 recording of Haydn's Op. 76 set, and I looked forward to hearing the group's more recent recording of the six quartets of Op. 64, all written in 1790. (This ensemble, in-

introduction and the concluding "earthquake," is difficult to bring off in any of Haydn's own settings—oratorio, orchestra alone, or string quartet—because of the pre-vaillingly slow tempos required. McCabe absolutely distinguishes himself in this performance, which is ravishing in its sensitivity, simplicity, and affection.

McCabe's sixteen-disc set of the sonatas and miscellaneous keyboard pieces is one of the most ambitious as well as most consistently enjoyable of the various Haydn "completes," though the competition in this area is remarkably plentiful. There are fifteen discs of Haydn keyboard works played by Arthur Balsam on Musical Heritage Society, the same number played by two harpsichordists and five pianists on Hungaroton, twelve on Telefunken featuring Rudolf Buchbinder, and another dozen on Vox with Fritz Neumeier playing clavichord, harpsichord, and forte-piano and Elena Kyriakou, Walter Klien, and Martin Galling playing a modern piano.

THE question of whether Gilbert Kalish, whose fourth single-disc volume of Haydn piano music (a fifth is in progress) has now been issued by Nonesuch, is likewise engaged in an integral recording cannot be answered at the moment. Regardless, the results so far have been felicitous indeed. His playing, as in the present three sonatas and E-flat Major Variations, is marvelously controlled and refined, with a lovely, limpid tonal quality that reminds me very much of the British pianist Solomon. Kalish appears to eschew to some extent the gutsy temperamental approach, and these are intimate, at times even introverted, performances. The reproduction is superbly clear, and I hope that many more such volumes will be forthcoming under the same auspices. The cause of Haydn's keyboard music can only benefit. —Igor Kipnis

HAYDN: String Quartets: Op. 33, Nos. 1-6; Op. 42; Op. 50, Nos. 1-6. Aeolian String Quartet. LONDON STS 15453/8 six discs \$29.88.

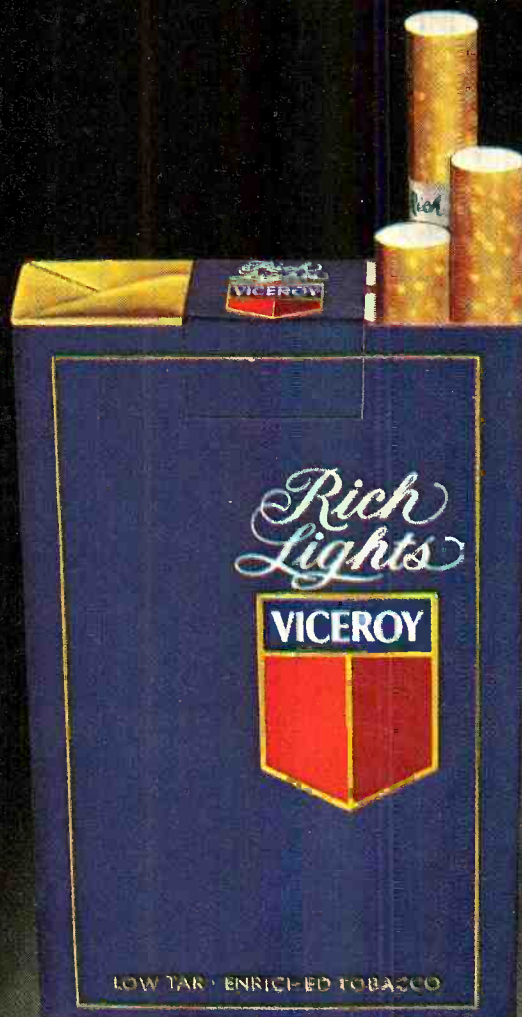
HAYDN: String Quartets, Op. 64, Nos. 1-6. Tátrai Quartet. HUNGAROTON SLPX 11838/40 three discs \$26.94 (from Qualiton Records, Ltd., 39-28 Crescent Street, Long Island City, N.Y. 11101).

HAYDN: Piano Sonatas: No. 8, in A Major (Hob. 5); No. 12, in A Major (Hob. 12); No. 14, in C Major (Hob. 3); No. 15, in E Major (Hob. 13); No. 28, in D Major; No. 29, in E-flat Major (Hob. 45); No. 37, in E Major (Hob. 22); No. 61, in D Major (Hob. 51); No. 62, in E-flat Major (Hob. 52). Variations in E-flat Major (Hob. XVII/3); Seven Minuets (Hob. IX/8, Nos. 1, 2, 5, 7, 9, 10, 11); The Seven Last Words of Christ. HAYDN (attrib.): *Variations in D Major (Hob. XVII/7).* SCHWANENBERG (formerly attrib. Haydn): *Sonata in B-flat Major (Hob. 17).* ANON. (formerly attrib. Haydn): *Sonata in E-flat Major (Hob. 16).* John McCabe (piano). LONDON STS 15428/31 four discs \$19.92.

HAYDN: Piano Sonatas: No. 33, in C Minor (Hob. 20); No. 38, in F Major (Hob. 23); No. 54, in G Major (Hob. 40). Variations in E-flat Major (Hob. XVII/3). Gilbert Kalish (piano). NONESUCH H-71362 \$4.96.

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Viennese through and through, certainly had the Vienna Philharmonic sound in mind, and Christoph von Dohnányi is very much at home in this basically lush psychological idiom. It has taken Vienna many decades to own up to its own modern musical heritage, but apparently a real measure of acceptance has finally taken place.

The reason for this recording is undoubtedly the Lulu of Anja Silja, a very highly regarded singer in Europe but little-known here. Frankly, she has an ugly voice, but she is a fine musician and a major dramatic presence on the stage, and certainly a great deal of musico-dramatic power comes through her singing on this recording. There is a strong supporting cast, too—Brigitte Fassbaender, Wal-

ter Berry, and Hans Hotter in particular. Still, unless you *must* have *Lulu* now, I'd recommend waiting for a recording of the complete version. *E.S.*

BERLIOZ (trans. Liszt): *Symphonie Fantastique, Op. 14.* Idil Biret (piano). FINNADAR SR 9023 \$7.98.

Performance: **Impressive**
Recording: **Very good**

Humphrey Searle's fascinating notes for this recording of Liszt's bravura transcription of the *Symphonie Fantastique* might lead one to expect too much from it. We are told, for example, that Sir Charles Hallé recalled hearing Liszt himself play the fourth movement (the

"March to the Scaffold") directly after a complete orchestral performance conducted by Berlioz—and that the solo performance made the greater effect. Idil Biret gives a strong, knowing account of the work, but for me it in no wise surpasses, or even matches, an orchestral performance. Perhaps only Liszt himself could do that. Biret does, however, carry off at least one feat that Liszt said could not be done. At one point in the first movement Liszt added a third staff but noted that it "is not performable on the piano at the same time as the other two, but simply acts as an indication of the context of the original score." According to a note on the jacket, Biret "plays this third line together with the two other ones (without resorting to tape overdubs)." In another part of the same movement she rejects Liszt's pianistic elaboration in favor of something closer to Berlioz's original writing for orchestra. The entire performance has considerable brilliance, but I think this sort of thing is for a rather limited audience of pianophiles and others interested in documentation of Liszt's resourcefulness.

R.F.

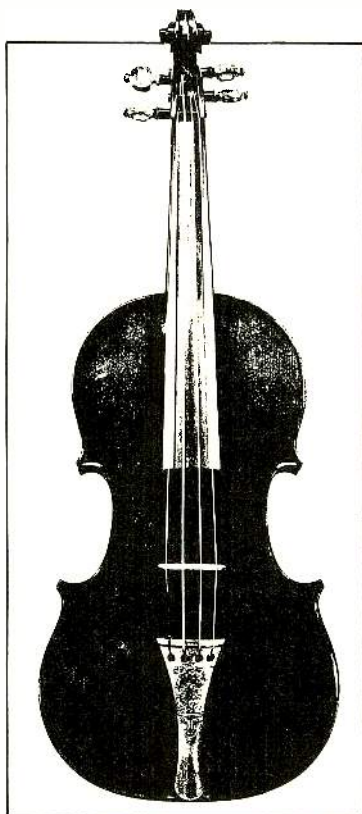
BRUCH: *Concerto for Two Pianos and Orchestra, Op. 88a; Fantasy for Two Pianos, Op. 11; Swedish Dances for Piano Duet, Op. 63.* Martin Berkofsky, David Hagan (piano); Berlin Symphony Orchestra, Lutz Herbig cond. TURNABOUT TV 34732 \$4.98.

Performance: **Pianistically bright**
Recording: **Crisp pianos, dim orchestra**

Max Bruch composed his two-piano concerto for Rose and Otilie Sutro, who were active as a piano duo in the first quarter of this century. When the Sutro sisters received the manuscript in 1915 and rehearsed the piece, Bruch, who conducted the rehearsal, was so distressed that he forbade them to perform the work outside the United States. In the two performances they did give, under Stokowski in Philadelphia and Stransky in New York, they played their own greatly simplified version of the solo parts. And then the score simply disappeared—until pianist Nathan Twining came across it in a grab-bag purchase he made at a Baltimore auction of Sutro family effects in 1971. He and Martin Berkofsky managed to reassemble Bruch's original version from various sources for their own use, and they recorded it in 1973 with Antal Dorati and the London Symphony Orchestra (Angel S-36997). Shortly after that Berkofsky and Twining parted company, and there were some involved proceedings to determine who had the right to perform the concerto. A few years ago Berkofsky undertook performances with Justin Blasdale, and in October 1977 he gave the European première of the work with David Hagan in Hamburg; later that month he and Hagan taped this second recording of the concerto in Berlin.

There has been, then, much ado about this rediscovered concerto, heralded on the Turnabout liner as "A Masterpiece Restored." Even in this age of "good, better, great," that's a bit of an overstatement on behalf of an amiable but not especially memorable work whose dramatic gestures carry little conviction. Berkofsky and Hagan bring as much conviction to the performance, however, as Berkofsky and Twining did earlier, and their pianos benefit from crisper sound on Turnabout—but at the expense of orchestral

(Continued on page 136)



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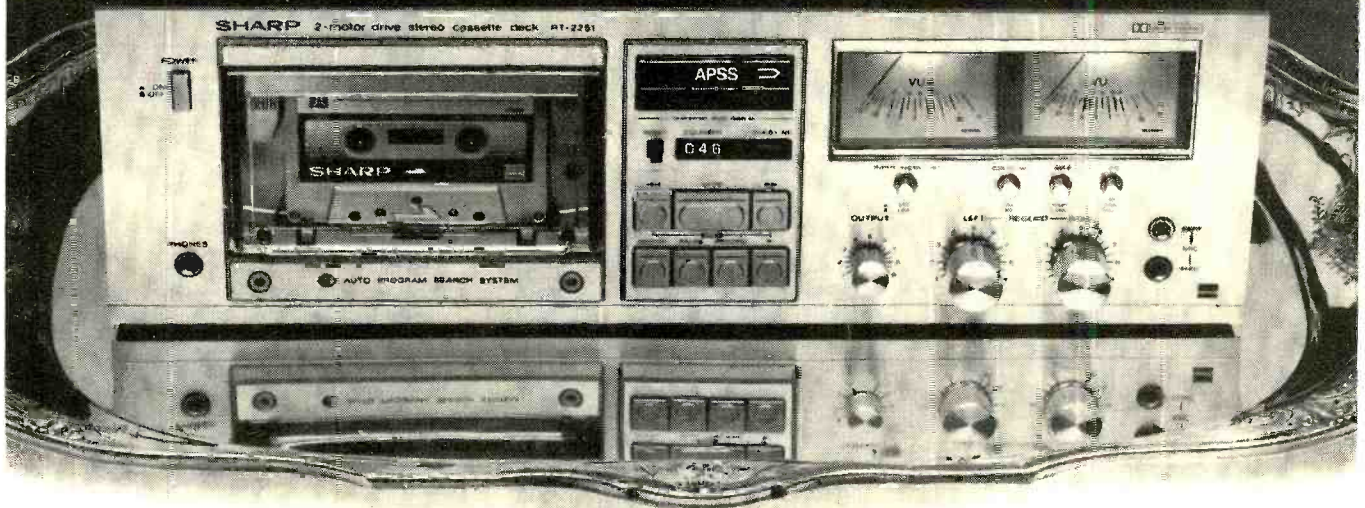
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presence. The Berlin Symphony is much less fully in the picture here than the London Symphony is on Angel, and the orchestral playing itself is clearly superior in the earlier recording. The overside material on Turnabout, to complicate matters, is far more attractive than the Bruch solo pieces played by Berkofsky on Angel. Indeed, the *Swedish Dances* may represent a more substantial "rediscovery" than the concerto; they are charmers all, and the fantasy (which the Sutro sisters played for Bruch to persuade him to write a concerto for them) also has a good deal of straightforward appeal. Both are played most persuasively and are very well recorded. R.F.

CARTER: Sonata for Cello and Piano (see J. S. BACH)

CHARPENTIER: Te Deum. J. S. BACH: *Cantata No. 50, Nun Ist das Heil und die Kraft.* Magda Kalmár, Ilona Tokody (sopranos); Klára Takács, Lívia Budai (contraltos); Attila Fülöp, Boldizsár Keönc (tenors); Kolos Kováts, Ferenc Begányi (basses); Veszprém Choir; Budapest Philharmonic Orchestra, István Zámbo cond. HUNGAROTON SLPX 11907 \$7.98 (from Qualiton Records, Ltd., 39-28

Crescent Street, Long Island City, N.Y. 11101).

Performance: **Enthusiastic**
Recording: **Reverberant**

Those of you who remember the splendors of the Marc-Antoine Charpentier *Te Deum* recorded some years ago by the Haydn Society (HS-9012), and later by others, will welcome another setting of this text by the same composer (he wrote six in all). Scored for eight soloists, double chorus, and double orchestra, it is a grand blast in the colossal Baroque tradition, and the performance here is full of life and enthusiasm. Each of the soloists has a powerful voice and sings out boldly with large gestures. The sound of the chorus is perfect for Charpentier's massive choral effects, and the long reverberation time of the concert hall where it was recorded tremendously enhances the result. Forget about subtleties of French vocal ornamentation and rhythmic alterations and simply revel in the voluptuous sounds.

Unfortunately, the very factors that make the Charpentier so wonderful ruin the Bach cantata fragment, which is a disaster here. But it's only a filler, and the disc is well worthwhile for the *Te Deum* alone. S.L.

COWELL: Hymn and Fuguing Tune No. 2 (see KOUSSEVITSKY)

DEBUSSY: La Mer; Nocturnes. Choeur de l'Orchestre de Paris (in *Nocturnes*); Orchestre de Paris, Daniel Barenboim cond. DEUTSCHE GRAMMOPHON 2531 056 \$8.98. © 3301 056 \$8.98.

Performance: **Voluptuous**
Recording: **Very good**

DEBUSSY: Nocturnes; Ibéria; Jeux. Cleveland Orchestra Chorus (in *Nocturnes*); Cleveland Orchestra, Lorin Maazel cond. LONDON CS 7128 \$8.98.

Performance: **Detached**
Recording: **Very good**

RECORDING OF SPECIAL MERIT

DEBUSSY: Images pour Orchestre; Danse Sacrée et Danse Profane. Karel Patras (harp, in *Dances*); Czech Philharmonic Orchestra, Serge Baudo cond. SUPRAPHON □ 4 10 2429 \$8.98 (from Qualiton Records, Ltd., 39-28 Crescent Street, Long Island City, N.Y. 11101).

Performance: **Stunning**
Recording: **Excellent**

RECORDING OF SPECIAL MERIT

DEBUSSY: Images pour Orchestre; Danse Sacrée et Danse Profane. Vera Badings (harp, in *Dances*); Amsterdam Concertgebouw Orchestra, Bernard Haitink cond. PHILIPS 9500 509 \$8.98. © 7300 669 \$8.98.

Performance: **Evocative**
Recording: **First-rate**

Daniel Barenboim's Debussy is exceptionally voluptuous, and his orchestra is in great form. The middle movement of *La Mer* and the two outer *Nocturnes* come off most impressively, but I felt a certain lack of momentum elsewhere, and Deutsche Grammophon has not provided the sonic sumptuousness I would have expected (though the recording is certainly a very good one, with fine definition). In common with Toscanini, Martinon, Boulez, and Ormandy, Barenboim does not include the trumpet part in the final section of *La Mer* (heard in the Ansermet, Karajan, Monteux, and Reiner versions). For the same coupling, I feel Ormandy (in Columbia MG 30950) or Martinon (Angel S-37067) will wear better.

Lorin Maazel's record is a classic illustration of the principle "More Is Less." It astounds me that a major company, having made the investment necessary to record a major conductor and orchestra in this music, would give us one of those frustrating "sandwiches" in which a twenty-minute work is interrupted for turnover. In this case the sandwich is *Ibéria*, and, aside from having its own mood broken, who wants to hear its exuberant opening burst in on the dying-away of *Sirènes*? The performances struck me as very efficient and somewhat detached rather than in any way compelling. The sound itself is quite good, but the disc I received is marred by one of those invisible pressing flaws that cause a thud with each revolution.

Another sort of frustration, but a far happier one, comes with the two last discs, which duplicate each other's repertoire but are both so outstandingly attractive that I wouldn't want to do without either. Both accounts of

(Continued on page 138)

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the *Images* are splendid—neither Baudo nor Bernard Haitink has given us anything finer. Baudo's stunning *Ibèria* surpasses any other known to me in its revelation of detail, yet it is no dry X-ray but a performance of great sweep and urgency (and wit!). The Czech Philharmonic plays with a brilliance and assurance that suggest lifelong intimacy with the material, and Supraphon's engineers have come through with the finest sound I've heard on this label. Philips has done nobly by Haitink and his associates, too, who are perhaps a shade more evocative than Baudo and the Czech orchestra in the two lesser-known *Images*. Both Philips and Supraphon give *Ibèria* a side to itself, with *Gigues* and *Rondes de Printemps* preceding the *Danses* (equally well played on each disc) on side two. I'd prefer to have the triptych-within-a-triptych layout Debussy indicated, but the layout doesn't matter all that much in the face of these glorious performances. R.F.

FAURÉ: Requiem, Op. 48; Pavane, Op. 50. Lucia Popp (soprano, in Requiem); Siegmund Nimsgern (baritone, in Requiem); Ambrosian Singers; Philharmonia Orchestra, Andrew Davis cond. COLUMBIA M 35153 \$7.98.

Performance: **Sumptuous**
Recording: **Likewise**

I was not prepared to enjoy this record as much as I did. The Fauré Requiem has always appealed to me as an exquisitely intimate work, and the recordings I have favored have been those in which it is presented in that way. But this new Andrew Davis version persuades me of the equal validity of an utterly different view of the work in which intimacy gives way to larger dimensions and devotionism to a more sumptuous but still more compassionate context. The tasteful voluptuousness one associates with Fauré is felt everywhere in this glowing performance—in the gorgeous playing of the orchestra, the angelic singing of the chorus, and, most pointedly, in Lucia Popp's luminous projection of the "Pie Jésus." Siegmund Nimsgern gives a good, musicianly account of himself and does not let the team down. Like Daniel Barenboim (Angel S-37077), Davis offers as filler the original version of Fauré's *Pavane*, with its nonessential but fragrantly ornamental choral part, and it is delectable. Peter Eliot Stone's notes give us some fresh information on the familiar music, and the sound is as sumptuous as the performance. But Columbia has not provided texts, and side two of my review copy was marred by pops and crackles. R.F.

GINASTERA: Estancia Suite (see Best of the Month, page 91)

GLAZOUNOV: Violin Concerto in A Minor, Op. 82 (see KHATCHATURIAN)

RECORDING OF SPECIAL MERIT

HANDEL: Ode for St. Cecilia's Day. Felicity Palmer (soprano); Anthony Rolfe Johnson (tenor); Bachchor Stockholm; Concentus Musicus Wien, Nikolaus Harnoncourt cond. TELEFUNKEN 6.42349 AW \$8.98.

Performance: **Stirring**
Recording: **Excellent**

Saint Cecilia has been regarded as the patron saint of music—and, by extension, of the harp. (Continued on page 141)

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mony or natural order of the universe—since the late middle ages. London's St. Cecilia Society was founded in 1683, and the production of Cecilian Odes was a favorite occupation of the day. Probably the greatest of these, Dryden's *Ode for St. Cecilia's Day*, written in 1687, was still well known fifty-two years later when Handel set it to music. Handel was influenced by English texts to break out of some of the more oppressive formal continental traditions, and Dryden's remarkably powerful lines on music elicited some of the composer's most ingenious work. The *Ode* is charming, witty, and eventually, inspirational, without any sacrifice of expressiveness.

Handel has always been relatively neglected in the German-speaking world, and the Handelian performing tradition has been almost exclusively English. Nikolaus Harnoncourt is doing his best to change this situation. For this recording he brought his own excellent old-instrument group from Vienna, a chorus from Stockholm, and English soloists to Hamburg, that old North German merchant's town and most Handelian of German cities (the composer worked there from 1703 to 1706). While this recording does not exhibit some of the more extreme performance practices of Harnoncourt's recent version of the *Water Music*, it has plenty of character. I fully believe that, as with current popular music, most of what people actually did in eighteenth-century performance is not even hinted at in the scores. Except for the suggestions in a few surviving manuals, there is little historical evidence to go on, so there is no assurance at all that Harnoncourt's approach is "right." But what he does is alive and expressive and always worth listening to—nowhere more so than here. E.S.

KHACHATURIAN: Violin Concerto in D Minor. GLAZOUNOV: Violin Concerto in A Minor, Op. 82. Eugene Fodor (violin); London Symphony Orchestra, Eduardo Mata cond. RCA ARL1-2954 \$7.98.

Performance: **Competent to excellent**
Recording: **Generally good**

Though this is not a universally held opinion, the late Aram Khachaturian's violin concerto seems to me to be several notches down, in both substance and staying power, from his Borodin-like piano concerto or the best of his *Gayne* ballet music. The unique team of David Oistrakh (the dedicatee) and the composer himself as conductor make the music relatively bearable (*Odyssey/Melodiya Y 34608*), but Eugene Fodor and Eduardo Mata fail to bring that kind of commitment and enthusiasm to the score. The performance here is prevailingly bland, and only the soloist's dazzling virtuoso acrobatics in the finale held my undivided attention.

The lyrical Glazounov concerto is quite another matter. The thin, almost wiry tone exhibited by Fodor in the Khachaturian here becomes one of soulful richness wholly appropriate to the music, most notably in the slow movement (the real heart of the piece). The festive finale, spiritually akin to some of Glazounov's more brilliant ballet scores, is also very enjoyable. Then too, this music provides superb opportunity for violinistic display, and Fodor exploits it to brilliant effect.

The orchestral collaboration is vital throughout. The recording places the soloist well up front, with the orchestra in relatively deep stereo perspective, and it seems to me

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Marriner: An Inspired Coupling

It was a happy inspiration on the part of EMI's artist-and-repertoire people to pair the unjustly neglected *Petite Symphonie Concertante* by the late Swiss master Frank Martin with Ernest Bloch's *Concerto Grosso No. 1*, generally regarded as the finest of that

that the orchestral violins could use more presence in the first movement of the Khachaturian concerto. D.H.

KOUSSEVITZKY: *Concerto for Double Bass and Orchestra*. Gary Karr (bass); Oslo Philharmonic Orchestra, Alfredo Antonini cond. **PISTON: *Concerto for String Quartet, Wind Instruments, and Percussion*.** Emerson Quartet; Juilliard Orchestra, Sixten Ehrling cond. **COWELL: *Hymn and Fuguing Tune No. 2*.** Boston Symphony Orchestra, Serge Koussevitzky cond. CRI SK 248(78) \$7.95.

Performance: **Handsome**
Recording: **Very good**

CRI put this record together as a memorial tribute to Olga Koussevitzky, who died in 1978 at the age of seventy-seven. Her late husband Serge, long before he became the celebrated conductor of the Boston Symphony, was a double-bass player in Moscow. There were so few solo works for the instrument that in 1902 he composed his own *Concerto for Double Bass and Orchestra* to play at concerts. The manuscript was rediscovered many years later by Alfredo Antonini, who made this recording of it in Oslo in 1969. It is a melodic, likable work firmly in the romantic Russian tradition, with not a startling note in the entire score. The performance here is bland but lovely.

Walter Piston's *Concerto for String Quartet, Wind Instruments, and Percussion*, writ-

Swiss-born composer's non-Hebraic works. In its very different way, Neville Marriner's reading of the latter is the first I would consider a worthy successor to the Kubelik/Chicago Symphony recording I had the honor of producing for Mercury 'way back in the spring of 1951. Marriner's tempos are swift and the textures are lean without seeming too thin. The balance between the string body and the obligato piano is excellent.

The Frank Martin piece involves a fascinating interplay of sonorities and textures between the harp-harpsichord-piano soloists and the Bartókian double-string-orchestra layout, as well as a quite successful attempt to move twelve-tone writing away from the doctrinaire methods of the Viennese School and more into the musical mainstream of the middle Forties. The end result, cast in a *sonata da chiesa* (slow-fast-slow-fast) mold, is highly eclectic—rather like twelve-tone Ravel, if you can imagine such a thing—but no less entertaining for that. The most impressive music is the *passacaglia* episode that comes midway in the first movement. Marriner brings to the music just the combination of elegance and verve it needs. The recording is appropriately transparent and vital in sound. Most highly recommended. —David Hall

BLOCH: *Concerto Grosso No. 1*. Francis Griener (piano); Academy of St. Martin-in-the-Fields, Neville Marriner cond. **MARTIN: *Petite Symphonie Concertante*.** Osian Ellis (harp); Simon Preston (harpsichord); Philip Ledger (piano); Academy of St. Martin-in-the-Fields, Neville Marriner cond. ANGEL S-37577 \$7.98.

ten only weeks before his death in 1976, is a witty, diverting composition, thoroughly ingratiating and easy to take despite the complexity of its texture. The Emerson Quartet does it full justice with alert backing from the Juilliard Orchestra under Sixten Ehrling. The memorial concert concludes with the second of Henry Cowell's eighteen *Hymn and Fuguing Tune* compositions. These are among the most accessible and absorbing of his works, and this one receives a sparkling performance from the Boston Symphony under Koussevitzky himself, recorded in 1946 but never before released. P.K.

LEHÁR: *The Merry Widow (highlights)*. Joan Sutherland (soprano), Anna Glawari; Werner Krenn (tenor), Count Danilo Danilovitch; Valerie Masterson (soprano), Valencienne; John Brecknock (tenor), Camille de Rosillion; Regina Resnik (soprano), Zo-Zo; others. Ambrosian Singers; National Philharmonic Orchestra, Richard Bonyngé cond. LONDON OSA 1172 \$8.98, © OSA5 1172 \$8.98.

Performance: **Larger than life**
Recording: **Excellent**

One of the reasons Joan Sutherland is not singing at the Met this year, I am told, is that they refused to let her appear in her husband Richard Bonyngé's "performing version" of *The Merry Widow*, on the grounds that this lightweight work wouldn't mean much on the nights when she wasn't in it. Whether or not

other suitable Merry Widows are available at the Met (Beverly Sills has waltzed through many a performance across the street at the New York State Theater), this album of highlights gives a good idea of the production the Bonyngés had in mind.

The Sutherland approach to Anna (originally Hanna) Glawari is less skittish and more operatic than those audiences have grown accustomed to in recent years. Her Anna is a less alluring creature than Elisabeth Schwarzkopf used to make of her, but she is certainly full-blooded vocally. Sutherland is well mated here with Werner Krenn as Count Danilo, and Valerie Masterson and John Brecknock are so good in the parts of the subplot lovers, Valencienne and Camille de Rosillion, that they threaten at times to outsize the principals. No less a star than Regina Resnik turns up as the head dancing girl at Maxim's. Bonyngé conducts at his usual expansive pace, the chorus sings bracingly, and the whole production fizzles the way it should, though perhaps not as headily as with the New York City Opera forces under Julius Rudel on Angel. The recorded sound is excellent, if not quite a match for Angel's quadraphony. The weakest element here is the uncredited English translation of the libretto. Its archaic and awkward rhymes compare unfavorably with the adroitly idiomatic (at times, indeed, *too* idiomatic) lyrics Sheldon Harnick supplied for the NYCO production. Nonetheless, Sutherland, in excellent voice and, as it were, full sail, carries all before her. P.K.

RECORDINGS OF SPECIAL MERIT

MAHLER: *Symphony No. 4, in G Major*. Barbara Hendricks (soprano); Israel Philharmonic Orchestra, Zubin Mehta cond. LONDON LDR 10004 \$9.98.

Performance: **Good to excellent**
Recording: **A joy to the ear**

MENDELSSOHN: *Hebrides Overture, Op. 26; Calm Sea and Prosperous Voyage Overture, Op. 27; Symphony No. 4, in A Major, Op. 90* ("Italian"). Vienna Philharmonic Orchestra, Christoph von Dohnányi cond. LONDON LDR 10003 \$9.98.

Performance: **Elegant**
Recording: **The very best!**

As I have indicated in past reviews, the pleasure I take in records derived from digital tapes is less in what this technological advance does for the "blockbuster" aspect of sound recording than in what it does for fine details of timbre, nuance, and dynamics. Certainly such is the outstanding quality of the first London digital recordings to come my way.

Never have I heard so clearly and so justly the fine points of Mahler's orchestral coloration, particularly in the first and last movements. The Szell/Cleveland performance remains my favorite Mahler Fourth *musically*, but the elimination of tape hiss and a flawless pressing help make London's new one the best-sounding recording of the work. Zubin Mehta's performance is sure-handed, with no grandstanding even in the blazing outburst toward the end of the slow movement. I would like more rhythmic pulse in the second movement, with its spooky violin solo; Szell's somewhat faster tempo gives him an edge here. Mehta emulates Szell's slow, controlled

(Continued on page 144)

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...pacing of the adagio, which is all to the good. But the best part of this reading is the delectable finale, with its soprano solo sung with great sweetness by Barbara Hendricks. I regret, though, that London did not see fit to include the text.

London's Mendelssohn disc, processed from a digital tape master, has turned out even better than its Mahler Fourth, thanks to the acoustic superiority of Vienna's Sofiensaal over Tel Aviv's somewhat harder and more brilliant Mann Auditorium. And the playing of the Vienna Philharmonic certainly has something to do with it as well.

What was most striking to me in listening to the disc was the sense of depth perspective between the various instrumental bodies of the orchestra—violins, cellos, woodwinds, brass, and timpani. Mendelssohn's scoring is just the kind to bring this to the fore, far better as a sonic demonstration than the blockbuster repertoire usually adopted to tout new audio technology. An instance that struck me particularly was the lyrical entrance of the cellos in *The Hebrides*. The timpani perspective in *Calm Sea and Prosperous Voyage* is the nearest this disc comes to grand display, but it is not a matter of mere noise but of rightness and sound quality. The same quality of rightness and felicity of detail in the horn and trumpet overtones is extraordinarily impressive in both the overtures.

The *Italian Symphony*, with its wealth of interwoven textures through the first- and last-movement development episodes, is another fine vehicle for demonstrating what digital-master tape processing has to offer when combined with painstaking disc mastering, plating, and pressing. I was struck again by the impressive sense of acoustic perspective that emerged in the horn calls midway in the third movement. Though the omission of the first-movement repeat in the symphony deprives us of some delectable transition material, Christoph von Dohnányi has given a performance that is otherwise musically impeccable. Everything is poised, elegant, and infused with Romantic warmth. The opening movement is taken at a moderate but not too slow pace, and the two middle movements show the Vienna players off to perfection in terms of subtlety of tonal light and shade. In the finale, Dohnányi does go all-out for a brilliant result, and, possibly because he has held his fire until then, the aural-visceral impact is that much more effective. Altogether, a lovely Mendelssohnian travelogue.

D.H.

MOZART: Piano Concerto No. 11, in F Major (K. 413); Piano Concerto No. 20, in D Minor (K. 466). Murray Perahia (piano); English Chamber Orchestra, Murray Perahia cond. COLUMBIA M 35134 \$7.98, © MT 35134 \$7.98.

Performance: **Half good**
Recording: **Good**

This third volume of Murray Perahia's Mozart concerto series continues the odd pattern set up by its predecessors; that is, one side thoroughly delights the ear and the spirit, and the other fails to meet expectations. Perahia's elegant and precise pianism is perfect for K. 413, a lightweight piece from Mozart's first years in Vienna as a "free artist." Everything is gossamer light and innocent from start to finish, reaching an acme of delight in the minuet-finale with its fade-out end. The well-sea-

pered English Chamber Orchestra is here in perfect tune with Perahia's approach.

The great D Minor Concerto is quite another matter. The lack of rhythmic urgency in the dark-hued orchestral exposition of the first movement at once bespeaks Perahia's relative inexperience as an orchestral conductor, and matters do not improve very greatly through the course of the concerto. The result is embarrassingly bland.

D.H.

RECORDING OF SPECIAL MERIT

MOZART: Songs. *An Chloe* (K. 524); *Das Traumbild* (K. 530); *Der Frühling* (K. 597); *Wie Unglücklich Bin Ich Nüt* (K. 147); *Das Lied der Trennung* (K. 519); *Die Zufriedenheit* (K. 369); *Komm, Liebe Zither, Komm* (K. 351); *Die Betrogene Welt* (K. 474); *Lied der Freiheit* (K. 506); *Abendempfindung an Laura* (K. 523); *Ich Würd' auf Meinem Pfad* (K. 390); *Sei Du Mein Trost* (K. 391); *Das Veilchen* (K. 476); *Sehnsucht nach dem Frühling* (K. 596); *Des Kleinen Friedrichs Geburtstag* (K. 529); *Das Kinderspiel* (K. 598). Peter Schreier (tenor); Jorg Demus (piano); Erhard Fietz (mandolin in K. 349, 351). VANGUARD VSD-71246 \$7.98.

Performance: **Very good**
Recording: **Very good**

Mozart's songs have been rather generously represented on records. Elly Ameling's two-disc set (Philips 6747 483) gives us the whole output, and though a substantial collection with Edith Mathis (Deutsche Grammophon 2530 319) has been deleted, several are still available in recitals by Janet Baker and Benita Valente. These are all very good, but all by female interpreters. This very fine new Vanguard release reminds us that many of Mozart's song lyrics call for male singers.

Peter Schreier, an outstanding interpreter of songs by Beethoven and Mendelssohn, serves Mozart with equal distinction. He does not overpower these simple expressions with nineteenth-century sentimentality; his singing is intimate and tender, and, when required, he spins a gracefully embroidered musical line. The collection includes three of Mozart's best songs (*Abendempfindung*, *An Chloe*, and *Das Veilchen*) as well as the most charming (*Sehnsucht nach dem Frühling*) and the most elaborate (*Das Lied der Trennung*) of his strophic songs. The others are of minor interest. Except for a slight dynamic overstress in the conclusion of *An Chloe*, I find Schreier's interpretations a model of taste, clarity, and sensitivity. The accompaniments provide a worthy setting for them.

G.J.

PISTON: Concerto for String Quartet, Wind Instruments, and Percussion (see KOUSSEVITSKY)

RECORDING OF SPECIAL MERIT

PURCELL: Music for Don Quixote. Judith Nelson, Emma Kirby (sopranos); James Bowman (countertenor); Martyn Hill (tenor); David Thomas (bass); Academy of Ancient Music, Christopher Hogwood cond. L'OISEAULYRE DSLO 534 \$7.98.

Performance: **Almost too beautiful**
Recording: **Very good**

I think I've finally figured out what happened to English music after Purcell. It was a victim
(Continued on page 146)

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J.C. Bach: Six Spirited Symphonies

of class warfare. No kidding. In Restoration days, as in Elizabethan times, music was an integral part of theater, and both had strong popular elements. Later, when Italian opera and Handel came along, a serious split developed between the "class" act (opera, fancy singing, a snobby sound) and popular entertainments (music hall, pantomime, etc.). Since the theater was always the incubator of new talents and styles, gifted young composers were relegated to writing choral anthems for the Church of England, with the well-known consequences.

Listen to the vividly popular and dramatic style of the music that Purcell contributed to three *Don Quixote* plays by the irrepressible Tom D'Urfey, a kind of seventeenth-century Max Reinhardt. (The last number recorded here, Altisidora's Mad Scene, is said to be the last thing Purcell ever wrote.) This record offers beautiful and effective performances using ancient instruments. Even so, I question why—since the instrumental sound is so vivid—no one has attempted to re-create a more realistic singing and verbal sound. Actually, one of the singers, David Thomas, has some of the qualities—melodiousness, humor, popular style, vigor, verbal clarity—that all of the singers must have had then. There have been reconstructions of Shakespearian English; why not of the Purcellian rough-and-ready singing style before it was buried by *bel canto*? But aside from some excessively "pure" and rather too beautiful singing, this is a sterling performance of some most enchanting and affecting music. The album is the third volume in L'Oiseau-Lyre's project of recording all of Purcell's incomparable the-

PUBLISHED in 1765, the six symphonies of Johann Christian Bach's Opus 3 reveal him to have been a pioneer of the Classical style. By that date Haydn had made a good start in forging the new musical language with his first twenty-five symphonies, and Mozart had chalked up five.

The "London Bach's" first six, now recorded on a new Philips release, are equal in stature to, if not better than, those early efforts of his more famous contemporaries. The Classical gesture is fully developed in them, the music vigorous, full of contrast, and brilliantly orchestrated, the essence of wit and elegance. The hushed lyricism of the slow movements is particularly remarkable, with the serenity of the new *galant* style of melody. Whoever said that J. C. Bach was "Mozart without a soul" should be shot; Mozart would have been the *last* to agree.

Neville Marriner's reading of these spirited works, with the Academy of St. Martin-in-the-Fields, is superb. All the clarity of textures, exquisitely molded phrases, rhythmic control, and beautiful sound that we have come to expect of the Academy's performances are present here, only more so. Both Philips and Marriner have outdone themselves with this release. —Stoddard Lincoln

J. C. BACH: *Symphonies, Op. 3, Nos. 1-6*. Simon Preston (harpsichord); Academy of St. Martin-in-the-Fields, Neville Marriner cond. PHILIPS 9502 001 \$8.98, © 7313 001 \$8.98.

ater music, so I advise you to check out volumes one and two as well. E.S.

RAVEL: *Boléro* (see *Best of the Month*, page 91)

ROSENBOOM: *And Out Come the Night Ears; How Much Better If Plymouth Rock Had Landed on the Pilgrims, Section V*. David Rosenboom (piano, synthesizer); Donald Buchla (synthesizers). 1750 ARCH S-1774 \$7.98.

Performance: **Startling**
Recording: **Excellent**

Donald Buchla is not only one of the pioneer builders of synthesizers, he has also become an active participant in the creation and reproduction of electronic music. His specialty is the use of synthesizers as live instruments (before Buchla, most synthesizers were bulky and useful only for studio work). Here he collaborates with composer David Rosenboom in two major performance pieces recorded live at a studio in Berkeley. *And Out Come the Night Ears*, by far the more catchy of the two works, is a big, tense, sloppy, nervous, improvisational piano piece whose invigorating sounds are extended through a kind of electronic de-washing machine that puts the grit back in the sound. *How Much Better etc.*, a partly improvised electronic duet for Rosenboom and Buchla in the fashionable pretty-pattern pulse-music style, is charming if not very consequential. E.S.

SCHUMANN: *Duets. Unterm Fenster; So Wahr die Sonne Scheinet; Tanzlied; In der Nacht; Er und Sie; Familien-Gemälde; Die*

Tausend Grüsse; Ich Bin Dein Baum; Liebhabers Ständchen; Ich Denke Dein; Schön Ist das Fest des Lenzes; Wiegenlied. Four Songs from Op. 98a. Wer Nie Sein Brot mit Tränen Ass; Singet Nicht in Trauertönen; Heiss Mich Nicht Reden; An die Türen Will Ich Schleichen. Jan DeGaetani (mezzo-soprano); Leslie Guinn (baritone); Gilbert Kalish (piano). NONESUCH H-71364 \$4.96.

Performance: **Very good**

Recording: **Questionably balanced**

This is an interesting and thoroughly enjoyable program embracing a considerable portion of Schumann's vocal duets and four of the nine songs that make up the *Wilhelm Meister* collection (Op. 98a). Some of the duets are topnotch Schumann and not easy to come by on records, though five of those listed here are performed by Janet Baker and Dietrich Fischer-Dieskau on Angel S-36712.

Jan DeGaetani is one of the most satisfying vocalists on records today. She sings Schumann with the same unmannered naturalness and absolute tonal security she brought to her interpretations of Schubert, Wolf, Ives, and Stephen Foster. Leslie Guinn, though a bit self-effacing, is her worthy partner. Together they range through the changing moods of these duets—from exuberant dances through ardent love vows to mellow contemplation—with unfailing responsiveness and musicality. Even when the tempo choices are questionable (such as the breakneck pace in *Die Tausend Grüsse*), they manage the music with uncanny precision.

What keeps me from registering unreserved enthusiasm is the recording balance. It is true that Schumann's piano writing is noteworthy and demanding. It is also true that Gilbert Kalish, an extraordinary pianist, is a valued collaborator who is always equal to his task. But it is not right to reward his accomplishment by according him equal presence with the singers. These are *duets* with piano accompaniments, not trios, which is what they sound like here. Such a distorted perspective is particularly damaging to the baritone, whose vocal projection is, in any case, not forward enough. But both singers suffer: their diction, though excellent, is still not that of native German speakers, so they need all the clarity and prominence they can get. That reservation aside, the album is an admirable achievement enhanced by smooth technical processing, complete texts, and good translations and annotations. G.J.

SCHUMANN: *Piano Sonata in G Minor, Op. 22; Fantasiestücke, Op. 12*. Susan Starr (piano). ORION ORS 77284 \$7.98, © OC 825 \$7.98.

Performance: **Eminently satisfying**
Recording: **Good**

Everything I have heard from Susan Starr has been uncommonly satisfying, and I have often wondered why she has not been more active in the recording studio. As far as I know, this is only her second release, the first being an impressive coupling of Ravel's *Le Tombeau de Couperin* with the Griffes sonata and *Three Tone-Pictures* (Orion ORS 77270). Her Schumann disc is distinguished by the same qualities that made its predecessor so pleasing: sure technique, a fine sense of style and proportion, the sort of strength that does not overwhelm but suggests vast power judiciously held in reserve. There is also, particularly

in the sonata, a delicate balance that realizes the music's full intensity without tumbling over into hypertext excess. Other pianists may have evoked an airier sense of mystery and poetry in some of the *Fantasiestücke*, but Starr's straightforward, extremely well-balanced statement of the familiar sequence wears very well. Her view of the cycle is one of artful simplicity, which strikes me as just what Schumann had in mind. The sound is warm and realistic, and the layout conveniently gives each work a side to itself. In short, anyone attracted by this particular combination of titles should find this recording a very safe investment. R.F.

SHOSTAKOVICH: Festive Overture, Op. 96 (see Best of the Month, page 91); *Lady Macbeth of Mtsensk* (see Best of the Month, page 93)

RECORDING OF SPECIAL MERIT

SHOSTAKOVICH: Symphony No. 15, in A Major, Op. 141. London Philharmonic Orchestra, Bernard Haitink cond. LONDON CS 7130 \$8.98.

Performance: **Very fine**
Recording: **Very good**

The composer's son Maksim Shostakovich gave the world premiere of this symphony and conducted the first recording (on Melodiya/Angel). His is a hard act to follow, but Bernard Haitink's new reading differs markedly in approach. There is less raw drama here and considerably more emphasis on lyrical elements, both in interpretation and in the style of orchestral playing—even in the recording. The sound on that first recording is raw, almost to the point of harshness, and the very large recording space emphasized this; the British playing is elegant to a turn—not precious, mind you—and so is the recorded sound, except for somewhat too much timpani presence from time to time.

This recorded performance illuminates other facets of the score than those we have come to know. It is a tribute to Shostakovich's genius that his work can undergo varied readings. When these are well considered, as this new one is, the music retains its integrity and becomes richer in the process. D.H.

SINDING: Piano Concerto in D-flat Major, Op. 6 (see STAVENHAGEN)

STAVENHAGEN: Piano Concerto in B Minor, Op. 4. SINDING: Piano Concerto in D-flat Major, Op. 6. Roland Keller (piano); Berlin Symphony Orchestra, Jörg Faerber cond. CANDIDE QCE 31110 \$4.98.

Performance: **Pianist strong**
Recording: **Very good**

Well, here are two more Romantic-revival monsters, post-Wagnerian piano concertos by two talented but minor luminaries of the late nineteenth century. Christian Sinding is generally remembered for a single piece of music, *Rustle of Spring*, an item that ranks very high on any all-time kitsch hit list. His pompous concerto tries to rival that of his countryman Grieg by combining Lisztian heroics with touches of folk. There is much more of interest in the concerto of Bernhard Stavenhagen, a Liszt pupil and once a well-known conductor. This appealing work, composed in the glow of Bayreuth and Weimar, is ingenious in

its structure; the slow movement comes after the first-movement development, and the finale is the recapitulation. The craftsmanship is on the highest level; the invention and imagination never flag, the formal continuity only slightly. Roland Keller is a strong but not overwhelmingly impressive interpreter, and the orchestra is adequate. Good sound. E.S.

TIPPETT: Choral Music. Dance, Clarion Air; The Source; The Windhover; Lullaby; Bonny at Morn; Four Songs from the British Isles; Magnificat; Nunc Dimittis; Plebs Angelica; The Weeping Babe; Music; Five Negro Spirituals. Schola Cantorum of Oxford; John Turner, David Pugsley, Alan Lumsden (recorders); Stephen Cleobury (organ, piano); Nicholas Cleobury cond. L'OISEAU-LYRE DSLO 25 \$8.98.

Performance: **Committed**
Recording: **Perfectly adequate**

Sir Michael Tippett himself wrote the brief but informative annotation for this collection of his choral pieces, which he groups under four general headings: pieces for unaccompanied voices, the first four in the listing above; liturgical pieces; "unassuming 'pieces for the occasion'"; and popular songs for unaccompanied choir. Included in the last category are the five Negro spirituals Tippett used in his oratorio *A Child of Our Time*, composed in 1939-1940; these rearrangements, from 1958, do not strike me as being especially successful, having neither the impact of the symbolic settings in the oratorio nor the authenticity of the simple versions American listeners are accustomed to hearing. But they are not entirely without interest, and the set is only eleven minutes' worth of a full hour of otherwise intriguing material, most of it new to the U.S. catalog. The settings are as imaginative and varied as the respective texts—by Yeats, Christopher Fry, Shelley, Gerard Manley Hopkins, et al.—might suggest. Those of Yeats' *Lullaby*, composed for the Deller Consort in 1960, and of the Scottish folk song *Poortith Caudl* are especially touching—and deceptively simple-sounding—while the Irish *Lilliburlero* makes, as the composer suggests, "a rollicking and vigorous scherzo."

Nicholas Cleobury gets very sensitive, committed singing from his young chorus. These are performances to gladden a composer's heart, I would think, and the listener curious about this segment of Tippett's output can only be grateful for the opportunity to investigate so much of it in so attractive a presentation. R.F.

RECORDING OF SPECIAL MERIT

WAGNER: Twilight of the Gods: Act III, Scenes 2 and 3. Rita Hunter (soprano), Brünnhilde; Alberto Remedios (tenor), Siegfried; Clifford Grant (bass), Hagen; Norman Bailey (baritone), Gunther; Margaret Curphey (soprano), Gutrune. Sadler's Wells Opera Chorus and Orchestra, Reginald Goodall cond. UNICORN UN2-75020X two discs \$11.98.

Performance: **Very good**
Recording: **Excellent**

This set, released in England in 1973, was the first recorded documentation of Sadler's Wells' (now called the English National Opera) much-praised English-language *Ring* cy-

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Anton Webern (1883-1945)

The Complete Webern: Defining the End of an Era

COLUMBIA's new four-disc set of the complete music of Anton Webern recorded under the direction of Pierre Boulez is labeled "Volume 1." It contains Opp. 1-31, everything from the Passacaglia for Orchestra to the Second Cantata, so what more can there be? Well, there are some early works preceding the official Opus 1, as well as a few unfinished and unpublished works of the composer's maturity (the new album has an elaborate program note on one of these even though the music is not included). Classical composers dead for two hundred years have not had their musical bones picked over as lovingly as Webern's. Even as this set appears, an 800-page biographical study has been published—an astonishing tribute to a composer whose entire output is shorter than a single opera of Wagner.

Make no mistake: Opp. 1-31 are the essential Webern, the works that changed the face of modern music. When Robert Craft first recorded them complete for Columbia in 1957 he was ahead of his time; these rerecordings virtually define the end of an era.

The era is, of course, that of Webernism. During his lifetime Webern always took third place, after Schoenberg and Berg, in the original twelve-tone triumvirate. He was the oddball, a rather scholarly radical whose music was abstract almost to the vanishing point. Webern is best known as a miniaturist (and he certainly was that, although there are really only a few, relatively early works of truly minuscule dimensions), but what is more important is that he carried the notion of pure abstraction in music (which Schoenberg seems to have invented) to its highest peak. It was Webern's thoroughgoing purity of style and form that appealed to young composers after World War II and which—with the unexpected blessing of Igor Stravinsky—made him the official father of the New Music.

When Craft recorded these works in Hollywood in the Fifties, the music was still new and highly challenging. Certainly it strained the capacities of some very fine studio musicians, particularly in the dribbles of left-over studio time Craft was able to scrounge from Stravinsky sessions. That set was a hobo-

style trip through the Webern repertoire; the new one is luxury-class all the way. It is a measure of how far we have come that such superstars as Isaac Stern and Gregor Piatigorsky were willing to make what can only be called "cameo" appearances (in Opp. 7 and 11, respectively)—and, more, that this expressionist music fits so perfectly into their regular line of Romantic music-making. But the outstanding instrumentalist here is certainly Charles Rosen, who plays all of the piano music, including the song accompaniments and the ensemble chamber works, and is practically the assistant director of the project. Another heavy burden (lots of atonal songs) is well borne by the two sopranos—one English, one Polish, neither thrilling but both extremely musical. The excellent Juilliard Quartet, the excellent John Alldis Choir, the excellent London Symphony Orchestra, and the excellent Pierre Boulez pretty much complete the cast.

THE new set also includes Webern's own orchestral version of his Five Movements for String Quartet, Op. 5 (in that form probably his most-played work), his gorgeously idiosyncratic orchestration of the six-part *ricercare* from Bach's *Musical Offering*, and his orchestrations of a set of Schubert dances in a transcription from a 1932 German radio performance with Webern himself conducting. This last item gives a wonderful insight into the remarkably traditional and Romantic qualities of Webern the musician. In fact, Webern, the father of the avant-garde, always thought of himself as being right in the mainstream of the great Western European tradition. As "Webernism" recedes ever more distantly, an album like this seems only to confirm that truth.

—Eric Salzman

WEBERN: Complete Works, Volume 1 (Opp. 1-31). Heather Harper, Halina Lukomska (sopranos); Barry McDaniel (baritone); Gregor Piatigorsky (cello); Isaac Stern (violin); Charles Rosen (piano); John Alldis Choir; Juilliard Quartet; London Symphony Orchestra, Pierre Boulez cond. COLUMBIA M4 35193 four discs \$31.98.

cle. The complete *Rhinegold*, *The Valkyrie*, and *Siegfried* were released subsequently, the first two in the United States as well. All use the Andrew Porter translation commissioned by Sadler's Wells in 1968. It is a truly singable translation that charts a sensible course between stilted archaism and colloquial anachronism. I cannot say that every word is clearly pronounced here; that would be asking the impossible in a Wagner opera, whatever the language. But using the text as a guide will permit the listener to become rewardingly involved in this, the most human drama of Wagner's great cycle.

The performance is absolutely first-rate. Reginald Goodall is a Wagnerian in the Furtwängler/Knappertsbusch mold; in his hands the music unfolds at a leisurely pace, in a grandiose manner, moving steadily forward in mighty waves. No episodes are allowed to break the conductor's unifying concept, and the orchestra sounds like a major ensemble under his direction. It is this ensemble feeling that lends most distinction to the vocal contributions, but individually, too, the singers excel. Rita Hunter's powerful yet warm-sounding Brünnhilde is paired with the appealingly youthful and lyrical Siegfried of Alberto Remedios, for whom Wagner and legato are not incompatible. Clifford Grant imposingly disposes of Hagen's high-lying phrases, and Margaret Curphey and Norman Bailey carry out their relatively small assignments with distinction.

This is an ideal set for beginning Wagnerians, but it should impress all but diehard traditionalists too. It is, furthermore, recorded with remarkable richness and clarity. G.J.

WEINBERGER: Polka and Fugue from Schwanda (see Best of the Month, page 91)

WOELFL: Grand Duo in D Minor, Op. 31. BEETHOVEN: Sonata in F Major, Op. 17; Variations on a Theme of Mozart. Bonnie Hampton (cello); Nathan Schwartz (piano). ORION ORS 78325 \$7.98.

Performance: **Hearty**
Recording: **Dull**

The music of Joseph Woelfl (1773-1812) reminds us that Beethoven was not the only composer to write in a "Beethovenian" style. In fact, Woelfl's *Grand Duo* of 1805, or at least its first movement, sounds more like Beethoven than that composer's own Op. 17 sonata written five years earlier for horn and piano (the cello was an option). As a pianist, Woelfl was considered at the time to rival Beethoven, and he had enough going for him as a composer to create a striking first movement; the second and third movements, in turn lyrical and jolly, are milder stuff. Woelfl's piece and Beethoven's sonata and well-known Mozart Variations (on "Bei Männern" from *The Magic Flute*) are all played here in an open, hearty, and good-humored manner. The performances can be recommended, but the recorded sound, unfortunately, is dull. E.S.

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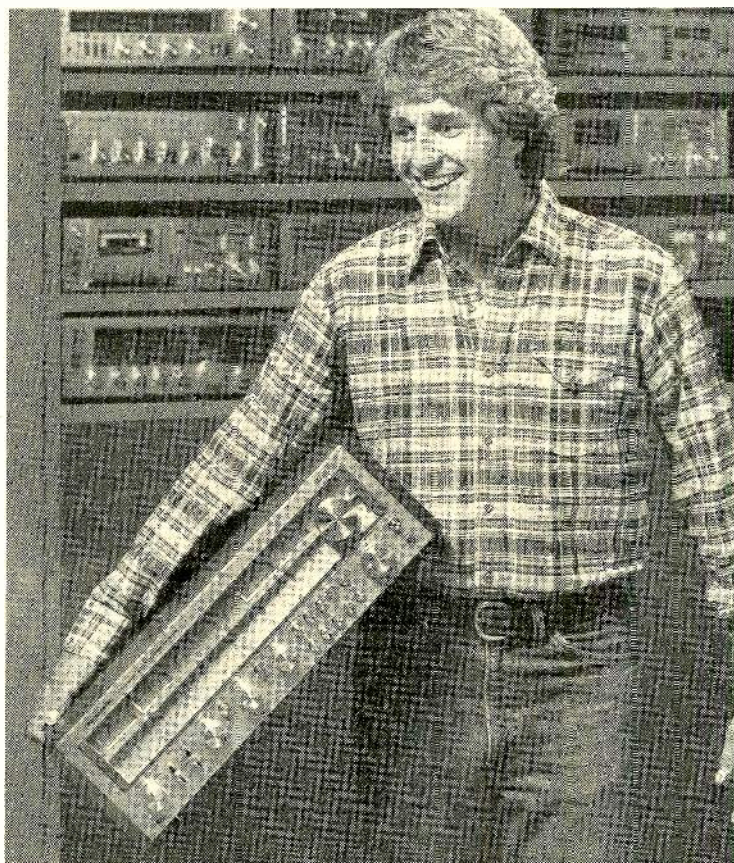
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zeghem: *De Tous Biens Playne* (two versions). Anon.: *La Gamba; Paduana del Re; Saltarello; La Cornetta; El Tutu* (two versions); *Weit Guy; Le Serviteur; De Tous Biens Playne* (two versions); *Mon Ami; Sur le Pont d'Avignon*. Calliope Renaissance Band. CALLIOPE CAL 101 \$5.98 (plus \$1 for postage and handling from Hemlen Management, 125 West 85th Street, New York, N.Y. 10024).

Performance: **Lively**
Recording: **Very good**

The four vigorous young members of Calliope (Lucy Bardo, Lawrence Benz, Allan Dean, and Ben Harms) play viols, sackbuts, cornetts, trumpet, recorders, crumhorns, and percussion. The repertoire on their debut recording includes (the title notwithstanding) Franco-Flemish music of before 1500, charming mid-sixteenth-century dances written (or arranged) by Tielman Susato and some anonymous Italians, and a group of late-Renaissance Italian works, including one by Adriano Banchieri, two by Vincenzo Ruffo, and a sensational piece by Don Carlo Gesualdo. Most of this music has not been previously recorded, and, in fact, the enterprising members of this ensemble do a lot of their own transcribing from ancient manuscripts. They also do a lot of editing and arranging, topping it all off with skillful playing in a lively but authentic style. The proper description for their album is "most enjoyable." E.S.

CARLO CURLEY GOES DIGITAL (see *Best of the Month*, page 91)

DANZAS FANTÁSTICAS (see *Best of the Month*, page 91)

EVELYN LEAR AND THOMAS STEWART: *Live in Recital*. Haydn: *Nisa et Tirsi; Guardaquí*. Mozart: *Le Nozze di Figaro; Crudel, perché finora*. Schubert: *Wiegenlied*. Brahms: *Feinsliebchen; Dein Blaues Auge; Vergebliches Ständchen*. Ives: *The Side Show; The Circus Band; Serenity*. Mendelssohn: *Abendlied*. Dvořák: *Der Kleine Acker; Moznost*. Grechaninov: *Ai-du-du*. Lehár: *The Merry Widow; Maxim's; Vilja; Waltz*. Dougherty: *Uncle Joe's Reel*. Britten: *Oliver Cromwell*. Evelyn Lear (mezzo-soprano); Thomas Stewart (baritone); Martin Katz (piano). PELICAN LP 2012 \$7.98.

Performance: **Lively**
Recording: **Fair**

Taped on location at a Pasadena, California, recital on January 17, 1978, this is a varied, rewardingly unhackneyed, and consistently entertaining program by a winning pair of expert recitalists. Aside from being thoroughly familiar with their material, both artists are at ease, fully relaxed, and radiate a sense of fun evidently shared by their audience. In the songs, Evelyn Lear seems to be in better vocal form than Thomas Stewart. And she renders Lehár's Vilja Song touchingly, whereas Stewart's approach to Danilo's music in *The Merry Widow* is a bit too hammy for me.

Technically, however, this is not a very satisfactory release. The microphone placement is not always favorable to the singers, though it successfully highlights Martin Katz's pianistic excellence. There is a bad splice in *Feinsliebchen*, and there are far too many surface clicks. Texts are provided for all the songs but the English ones—we could use those too.

G.J.

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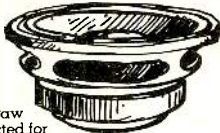
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KOSS CM 1010

Here's the ultimate 2-bandpass system. The Koss CM 1010 has a unique passive radiator to enhance the lower two octaves of bass. As well as a special 8-inch woofer to increase the midrange frequency response up to 3500Hz.

And with the CM 1010's 1-inch dome tweeter, you get the highest energy output, and lowest distortion, of any tweeter on the market.

KOSS CM 1020

No three bandpass loudspeaker system currently available offers the benefits of the Koss CM 1020. Its dual ports improve cabinet tuning and structural stability. And its 10-inch woofer provides a 3db gain in efficiency, as well as flat response over the lower bandpass. In addition, the CM 1020 uses a 4½-inch midrange driver to

capture all the energy and presence of this critical bandpass. And the CM 1020's unique 1-inch dome tweeter produces the highest energy output and lowest distortion of any tweeter currently available. Indeed, the Koss CM 1020 is the 3-bandpass loudspeaker system you really have to hear to believe.

KOSS CM 1030

The Koss CM 1030 represents the ultimate in 4-bandpass loudspeaker systems. It includes a 10-inch woofer, mass aligned

dual port system, a parallel midrange system with two 4½-inch drivers, and both a tweeter and a 1-inch treble tweeter that feature a unique acoustic transformer. Each has been carefully and specifically designed to produce the optimum spectral characteristics of their respective bandpass.

Uniting the CM 1030 into a total system that represents the ultimate in loudspeaker technology, is a unique, quasi-second-order crossover network. In all,

the CM 1030 is so amazing, no other 4-bandpass system even comes close in bass, midrange or high bandpass performance.

KOSS CM 530

Setting entirely new standards for bookshelf speakers is the Koss CM 530. Whether you place them horizontally or vertically, they deliver perfect mirror imaging, an incredible degree of dispersion, and the breathtaking Sound of Koss.

KOSS PRO 4/TRIPLE A

Write us, c/o Virginia Lamm for a free copy of our full-color loudspeaker catalog. And when you visit your audio dealer to hear the incredible Sound of Koss loudspeakers, take an extra moment for a private listening experience with the



world famous Koss Pro/4 Triple A. Once you've heard the Sound of Koss for yourself, you'll know why hearing is believing.

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