

Exploring the  
Digital Recording Frontier

DECEMBER 1978 • \$1.25

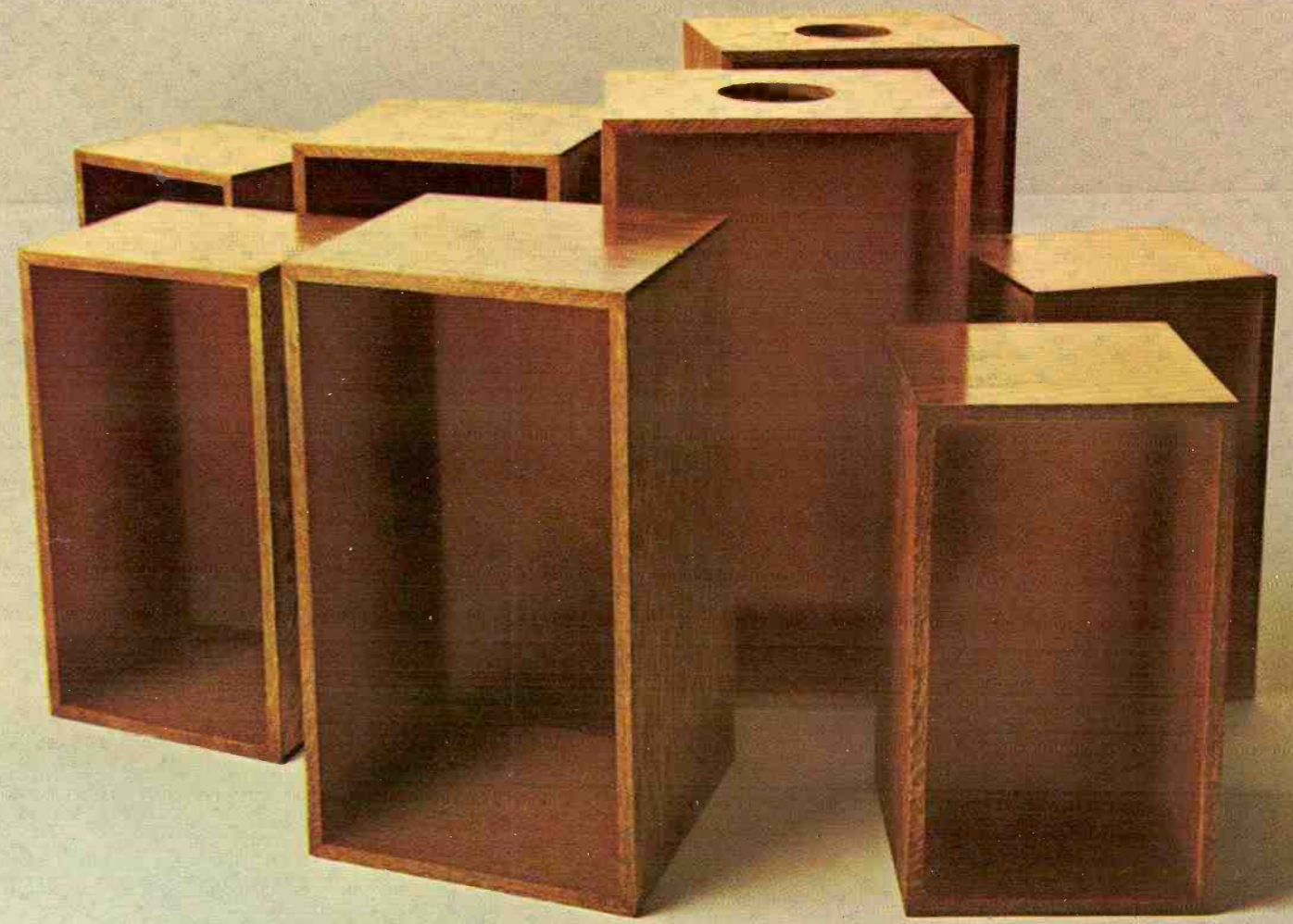
# Stereo Review®

**Beginner's Guide to Hi-Fi: What To Do After You Unpack It**

**Marshall Chapman: Is She What Lies Beyond Women's Lib?**

EQUIPMENT TEST REPORTS: Crown DL-2 Controller Preamplifier • Dual 819 Stereo Cassette Deck  
Nagatron HV-9100 Phono Cartridge and HA-9000 Head Amplifier  
Pioneer SX-1980 AM/FM Stereo Receiver • Synergistics S-92 Speaker System

**The Installation Problem Meets Its Match: the Equipment Rack**



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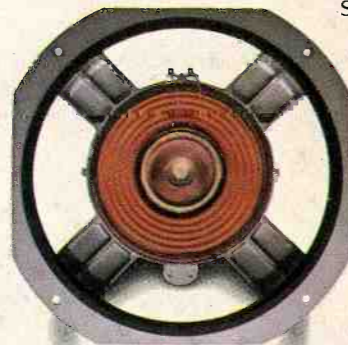
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**AND IT'S WHAT GOES  
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MAKES THEM SOUND GREAT ON  
EVERY PART OF THE MUSIC.**



The High Polymer Molecular Supertweeter. So incredible, we named a whole line of speakers after it.



You'll never hear a sound out of these die cast aluminum speaker frames.



Level controls that let you adjust the sound to your listening area.



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HPM 100

HPM 150

HPM 40



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OF A SPEAKER IS ONLY  
AS IMPRESSIVE AS  
WHAT GOES INTO IT.**



## No matter what system you own there's an Empire Phono Cartridge designed to attain optimum performance.

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| Molded Four-Pole Magnetic Assembly                            | Every Empire cartridge employs a four-pole magnetic assembly that is precisely aligned and locked in place by a high pressure injection molding process... providing a uniform and orthogonal magnetic field.   | Improved crosstalk and reduced distortion that is insensitive to tracking force.  |
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# EMPIRE



FORMERLY HI FI/STEREO REVIEW

# Stereo Review®

DECEMBER 1978 • VOLUME 41 • NUMBER 6

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COVER: Design by Borys Patchowsky; photo by Bruce Pendleton. See page 82.

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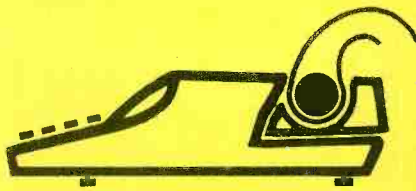
(Walnut tray and dust cover are available separately as

the Discorganizer, \$12.50.)

All from Discwasher, Inc., 1407 N. Providence Rd., Columbia, Missouri 65201.







## Stereo Review

# BULLETIN

Edited by William Livingstone

● AN ELECTRONIC DIGITAL EDITING SYSTEM designed to complement 3M's digital mastering system was demonstrated at the Audio Engineering Society convention in New York in November. The new 3M editing system does not join pieces of tape together physically, but copies the electronic digital signals to create a master. This makes possible a precise definition of the edit point (down to the fifty-thousandth of a second sampling interval of the digital mastering system) so that electronic splices can be previewed and revised before being inserted in the master with no degradation of the original signal. First units of the mastering system are scheduled to be delivered to customers this year, and the editing system will be available before the end of 1979. 3M will supply both systems on lease.

● SOUNDTRACK RECORD COLLECTORS' GUIDE by Edward Rose has been published by Dored. The fifty-two-page paperbound guide gives tips on building a library of movie-soundtrack albums and original-cast show albums, including prices and information on buying, selling, and trading records. Price: \$6.95, from Dored Company, 1508 West Broadway, Minneapolis, Minn. 55411.

● PIANIST RUTH LAREDO has just completed recording all of Rachmaninoff's solo piano works for Columbia Records. She is thought to be the first pianist to achieve this feat. Four albums in Laredo's Rachmaninoff series are now available, and three more awaiting release by Columbia will complete the cycle.

● A NOVEL VIDEO CASSETTE SYSTEM perfected by BASF is scheduled for introduction late next year. The machine will be unusually light in weight (about 10 pounds) and compact. The tape, approximately 3/8 inch in width, will be recorded longitudinally with forty-eight side-by-side tracks at 160 ips. Every 2½ minutes an instantaneous tape reversal and head shift will bring a new track into play. BASF has announced plans to build its own plant in the U.S. to produce the system's hardware.

● BUDDY HOLLY COVERS are popping up all over the place. Hot on the heels of Blondie's remodel of I'm Gonna Love You Too (Chrysalis) and the Beach Boys' Peggy Sue (Warner Bros.) come two new entries from Columbia, a Stephen Stills version of Not Fade Away (from his "Thoroughfare Gap" album) and a thoroughly unlikely Well All Right by Santana. The financial beneficiary of Holly's belated comeback, by the way, is none other than ex-Beatle Paul McCartney, whose publishing company presciently bought out the entire Holly catalog two years ago.

● DIGITAL SOUND PRODUCTS' FIRST RELEASE ON ITS NEW LEGENDE LABEL will be devoted to the music of Morton Gould: Latin-American Symphonette, Cotillion from Fall River Legend, Festive Music (a first recording), Philharmonic Waltzes, and Quickstep from Symphony on Marching Tunes. Composer/conductor Gould, who is sixty-five this month, recorded these and other works using the PCM (digital-master recording) process in England in October (see page 44 for details).





# Stereo Review BULLETIN

Edited by William Livingstone

● THE METAL-ALLOY TAPE RACE seems to be speeding up even more rapidly than industry observers had predicted. More than a dozen manufacturers at the recent Tokyo Hi-Fi Show exhibited prototype metal-alloy-compatible cassette decks. Also, at least three major tape manufacturers besides 3M are in the process of tooling up for metal-alloy tape manufacture. In addition, the metal-tape standards controversy has been largely resolved, most tape manufacturers agreeing to aim for a coercivity of about 1,000 oersteds. This high figure is expected to limit the use of metal-alloy cassettes to appropriately designed three-head decks which can use wide-gap record heads.

● WAYLON JENNINGS' "I'VE ALWAYS BEEN CRAZY" is the first country album to be certified gold upon release. An RCA artist, Jennings got RIAA certification for six gold and three platinum albums in a two-year period beginning in 1976. His "Wanted: The Outlaws" (1976) was the first country album ever certified platinum.

● MEASUREMENT STANDARDS FOR TURNTABLES, CASSETTE DECKS, AND LOUDSPEAKERS will be established by three new committees activated by the Institute of High Fidelity. Although the IHF has previously established standards for FM tuners and amplifiers, as well as preliminary standards for stereo headphones, specifications for other components have usually been couched in a variety of nonconvertible American, European, and Japanese test standards.

● SNUFF ROCK BECAME A GRIM REALITY when Sid Vicious, former bassist with the notorious Sex Pistols, was arrested on October 12 and charged with the fatal stabbing of his manager/girlfriend in New York's bohemian Chelsea Hotel. Vicious (real name John Simon Richie) was not, however, the first musical celebrity to run afoul of the Sixth Commandment. R-&-B crooner Johnny Ace (Pledging My Love) blew his mind during a backstage game of Russian roulette in 1954; the popular country swing bandleader of the Forties, Spade Cooley, did time for shuffling off his wife's mortal coil; and back in 1590, Don Carlo Gesualdo, the well-known composer of madrigals and an all-around fun guy, successfully offed both his unfaithful wife and her unlucky lover. Vicious, meanwhile, is awaiting trial and contemplating the chart success of his current single, the Sinatra/Anka chestnut (I Did It) My Way (Virgin VS 220).

● A TV TRIBUTE TO MARIA CALLAS will be broadcast nationally over the Public Broadcast Service on December 2 at 8:00 p.m. The ninety-minute special will include videotaped conversations with the late soprano and rare performance footage that has never been shown in the U.S. Opera designer/director Franco Zeffirelli will be host of the program, which features interviews with many of Callas' friends and colleagues, among them Sir Rudolf Bing, Montserrat Caballé, Carlo Maria Giulini, Gian Carlo Menotti, Renata Scotto, and Renata Tebaldi. Now is the time for all good fans to get a home video tape recorder.



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Finally there's Technics SE-9060 amp. It's DC like our pre-amp. Has a frequency response of 0-100 kHz (+0, -1 dB). And a "strapped" circuit for more than double the power in a multi-amp system. Compare

specifications and prices. And you'll realize there's no comparison for Technics waveform fidelity.

**ST-9030.** THD (stereo, 1 kHz): Wide—0.08%. Narrow—0.3%. S/N (stereo): 73 dB. FREQUENCY RESPONSE: 20 Hz—8 kHz  $\pm$  0.1, -0.5 dB. SELECTIVITY: Narrow—90 dB. CAPTURE RATIO: Wide—0.8 dB. IF, IMAGE and SPURIOUS RESPONSE REJECTIONS (98 MHz): 13.5 dB. STEREO SEPARATION (1 kHz): Wide—50 dB.

**SU-9070.** PHONO MAX. INPUT VOLTAGE (1 kHz RMS): MM—380 mV. MC—9 mV. S/N (IHF A): MM—100 dB (10 mV input, MC—72 dB (60  $\mu$ V). FREQUENCY RESPONSE: Phono 20 Hz—20 kHz (RIAA  $\pm$  0.2 dB).

**SE-9060.** POWER OUTPUT 70 watts per channel (stereo), 180 watts (mono) min. RMS into 8 ohms from 20 Hz to 20 kHz with no more than 0.02% total harmonic distortion. S/N: 70 dB (IHF A).

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Professional Series



# Editorially Speaking

By William Anderson



## DELICIOUS VISTAS, LIMITLESS BOUNTY

It's a little too soon to lay in a supply of paper hats and noisemakers just yet, but it begins to look as if we will be celebrating the return of quality sound to American turntables before the decade is out. In short, Somebody seems at last to have heard the rising chorus of listener complaints, and the recording industry is about to be embraced by the Next Big Thing whether it is ready (and/or willing) or not.

Every ten years or so a really significant new recording technology muscles its way into the stadium and declares a whole new ball game. In the late Forties it was the long-playing record; in the late Fifties it was stereo; in the late Sixties it was quad (regrettably, stupidly, a casualty of intransigent competition); and in the late Seventies it is—*digital mastering*. The audio application of what is essentially computer science might have been a little slower in reaching the mar-

ket had it not been for the stalking horse known as direct-to-disc. The limitations of the direct-to-disc process notwithstanding (principal among them being its inability, partly because of "limited edition" press runs, to attract or afford world-class performers), the undeniable quality of most of its productions (alas, there are some fast-buck wolves among the lambs) has not only been an undeniable rebuke to the majors but has provided proof that an impressive number of record buyers will pay up to \$15 for a quality recording even of indifferently performed music. From this marketing experience the digital method may well profit.

Digital techniques are only half the answer to the problem of sound quality, however. They are capable of producing an editable master recording with unheard-of signal-to-noise ratios plus perfectly stunning frequency and dynamic ranges—eliminating the sonical-

ly restrictive compressions and rolloffs that are standard (and unavoidable) in ordinary recording. But the moment the master tape is converted into the analog state, the sound is at the usual mercies of the pressing plant, potential target of the same snaps, ticks, pops, and warps that afflict conventionally produced discs. Why bother, then? Because a \$14 or \$15 price tag will allow for higher-quality vinyl, less hurried pressing and cooling cycles, and stricter quality control all along the line. And should even this prove to be insufficient guarantee of an essentially perfect disc, there is an ace in the hole: the *all-digital* disc, recorded and *played back* in encoded form, the music signal preserved from the perils of analog processing until it reaches the relative safety of the amplification stages.

The technology—several varieties, indeed—needed for digital playback is already available (some kind of special pickup, a turntable, and a decoder would be involved), but there will be no economic justification for its implementation until the digital recording process itself becomes the rule. When it does, we will be privileged to witness the unfolding of a whole new era in sound recording. The challenge and responsibility of working with a sound signal of almost unimaginable accuracy and purity is bound to force a radical rethinking of the whole reproduction chain from microphone to speaker—and beyond: even our listening rooms will have to adjust to a brilliance, a clarity, a power they have never before experienced. Perhaps most gratifying of all, however, will be the veritable explosion of recording activity these technological changes will set off, in the classical area particularly. Within living memory there have already been two such wholesale replacements of the entire disc catalog (from acoustic to electrical and from mono to stereo), but though the prospect of a third may daunt record reviewers and retailers somewhat, think for a moment what delicious vistas it opens for young musicians, what limitless bounty for us listeners!

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P.O. Box 2771, Boulder, Colorado 80323

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Molded port tubes enable more exacting quality control of the tuned enclosure, ensuring total speaker-to-speaker duplication of the lab standard.

Deep, long-throw woofer features high-technology sintered ceramic magnet structure.



The quickest way to improve your shelf is with the new Series II from Altec Lansing. Each speaker in the Series II line combines the best of everything we've learned during the past 40 years of making professional speakers for studios, concerts and theaters.

As you can see, we've given the Series II a lot of features you'd expect only in Altec's most expensive speakers. Items like long-travel woofers with non-degaussing ceramic magnets; equalizing controls; molded port tubes; and real wood finishes.

What you can't see (but you can most assuredly hear) is the Series II's high-efficiency design delivering the fullest sound possible, even with a receiver or amp as small as 10 watts. Also, there's the confidence you'll have in knowing that we make every major component and cabinet ourselves. Then we back it all up with a full, 5-year warranty.

For the full course, send for our free, full-line catalog and the name of your nearest Altec Lansing dealer. Write: Altec Lansing International, 1515 S. Manchester Ave., Anaheim, CA 92803.

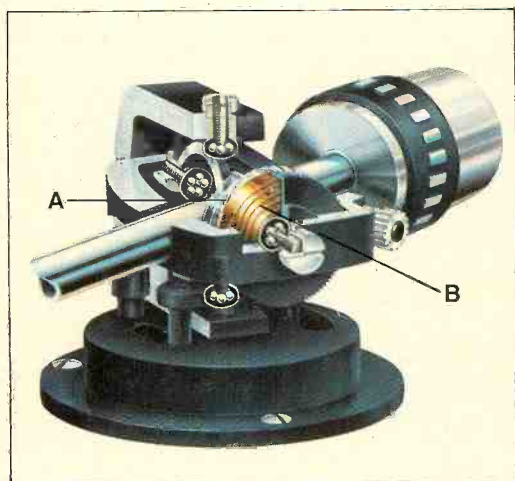


*Altec Lansing. The #1 name in professional speakers is coming home.*

CIRCLE NO. 5 ON READER SERVICE CARD



# We'll match the tonearm on against the tonearm on their



We'd like to be very clear about what we have in mind. By "their" we mean everyone else's. And, our lowest-priced turntable is the new CS1237.

The CS1237's tonearm is mounted in a four-point gyroscopic gimbal—widely acknowledged as the finest suspension system available. The tonearm is centered, balanced and pivoted exactly where the vertical and horizontal axes intersect. (A)

From pivot to tonearm head, the shape is a straight line, the shortest distance between those two important points. (Curved tonearms may look sexier, but at the cost of extra mass, less rigidity and lateral imbalance—none of which is consistent with good engineering practice.)

Tracking force is applied by a flat-wound spring coiled around the vertical pivot (B), and this force is maintained equally on each groove wall whether or not the turntable is level. The tonearm's perfect balance is maintained throughout play.

By contrast, tonearms which apply tracking force by shifting the counterweight forward are actually unbalanced during play and prone to mistracking. For example, on warped records the stylus tends to dig in on the uphill side of the warp and to lose contact on the way down.

Vertical-bearing friction in the CS1237 tonearm is astonishingly low—less than 8 milligrams. It can track as low as 0.25 gram—which means it will allow *any* cartridge to operate at its own optimum tracking force.

There's still more. The counterweight is carefully damped to attenuate tonearm resonances. Anti-skating is separately calibrated for all stylus types. Cueing is damped in both directions to prevent bounce. And because the CS1237 can play up to six records in sequence, the stylus angle can be set for optimum vertical tracking in either single-play or multiple-play.

To find any other tonearm that seriously matches the CS1237's, you have two choices.

You can consider one of the more exotic separates. But you'll find they cost as much as the entire CS1237. (Price: less than \$180, complete with base and cover.)

Or you might compare it with one of the higher-priced Dual turntables. You'll find a few additional refinements, but no difference in design integrity or manufacturing quality. Which is why no other turntable quite matches a Dual.

Any Dual.



For the life of your records

**Dual**<sup>®</sup>

United Audio, 120 So. Columbus Ave., Mt. Vernon, NY 10553

CIRCLE NO. 50 ON READER SERVICE CARD



**our lowest-priced turntable  
highest-priced turntable.**





# THE JVC QUARTZ-LOCKED TURNTABLE.

First we invented it. Now we've made it more precise than ever.

The turntable evolution comes full swing with the introduction of the new Quartz turntable series. We introduced the first quartz-controlled turntable in 1974, and we've been improving our designs ever since. Including:

## Super Servo Frequency Generator

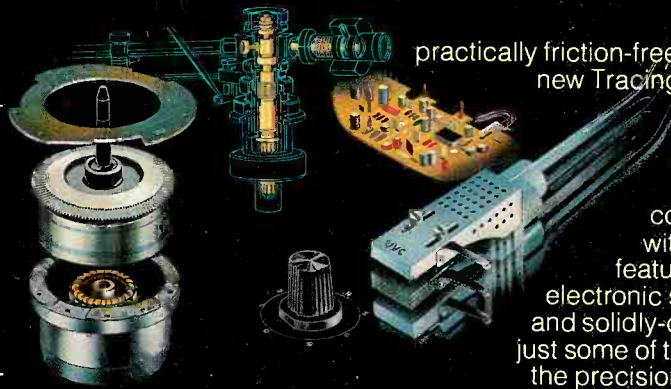
To detect minute variations in platter speed, and send corrective information to the electronic circuit controlling turntable rotation, it provides near-perfect speed accuracy. And, our Super Servo is factory-set for years of accurate, dependable use.

## Direct Drive DC Servomotor

For quick-start/stop and high-torque operation. Our powerful motor drive system and its companion speed-monitoring circuits reduce wow-and-flutter and speed drift nearly to the vanishing point.

## Gimbal Support and TH Tone Arm

Our exclusive unipivot gimbal support holds the tone arm firmly, yet is



practically friction-free. We also developed a new Tracing Hold (TH) tone arm to provide stability and tracing accuracy needed for a cartridge to follow even the most complex record grooves without error. These, plus features like digital readout, electronic switching mechanisms and solidly-constructed bases, are just some of the reasons to consider the precision of JVC's Quartz-Lock series for your music system. And you can choose from manual, semi-automatic or totally-automatic models—JVC's most comprehensive turntable line ever.

See them at your JVC dealer soon. JVC America Company, Div. of US JVC Corp., 58-75 Queens Midtown Expwy., Maspeth, N.Y. 11378. Canada: JVC Electronics of Canada, Ltd., Ont.

# JVC



QL-A7



QL-F4

CIRCLE NO. 45 ON READER SERVICE CARD





## LETTERS TO THE EDITOR

### Women in Jazz

● Bitch, bitch, bitch. Chris Albertson's "Women in Jazz" (October) should have been printed in *Ms.* magazine, not STEREO REVIEW. Yep, it's all there—"gross discrimination," "male-dominated," "denied their rightful equal status"—the whole greasy trendy shtick about how the 51 per cent minority has been so oppressed by the 49 per cent majority. I weep.

Look, jazz has been dominated by blacks for as long as it's been around; does this mean that blacks deliberately kept whites out? Pro basketball is currently dominated by blacks; does this spell oppression to anyone but a paranoid? And—dig it, Chrissie baby—the nursing field has been dominated by women for centuries; does this mean that men should sit around and moan about all that terrible, *terrible* female oppression? Has it occurred to Miss Albertson that maybe, just maybe, there weren't many women in the jazz field (or in any outside-the-home endeavor for that matter) simply because women, unlike men, were at that time still unselfish enough to put the care of their children before their own hedonistic "self-fulfillment" and kept the kids at home instead of farming them out to the local day-care center so they could go off and stroke their massive egos? Does the lack of one sex (or color, or whatever) automatically mean discrimination?

RICHARD F. OLES  
Baltimore, Md.

*Mr. Albertson replies: This is the first time that my writing has caused me to be Miss-identified, but under the circumstances I'll consider it a compliment.*

● I share the enthusiasm Chris Albertson expresses for Valaida Snow in his October "Women in Jazz" review, and I agree that EMI should reissue the best of the more than thirty sides she made for Parlophone in the Thirties. The most astonishing example of her ability, however, is on another Stash set (109), where she plays *St. Louis Blues* with Fletcher Henderson. In my opinion, except for some of Mary Lou Williams' solos, no instrumental jazz performance by a woman rivals this. It is unfortunate, by the way, that

the new Stash sets omit anything by Julia Lee, the very rewarding Kansas City pianist and singer, and a better example of violinist Ginger Smock's power would have been the Federal recording by Cecil Count Carter of *Ginger Bread*, on which she plays with something of Stuff Smith's demonic fury.

"Can you name," Mr. Albertson asks rashly, "a female jazz critic?" Under the name Helen Oakley, my wife was writing criticism for *Down Beat*, *Tempo*, and *Jazz Hot* as early as 1937, besides producing records by small Ellington units and other groups for the Variety label. She still writes critically from time to time and is at present working on a book about T-Bone Walker, the blues singer. Other respected female critics Mr. Albertson should remember are Madeleine Gautier in France, Valerie Wilmer in England, and Harriet Choice in Chicago.

STANLEY DANCE  
Rowayton, Conn.

● The photo accompanying "Women in Jazz" in the October issue shows two transvestites—Tony Curtis and Jack Lemmon—to Marilyn Monroe's left.

ERIC BECKUS  
St. Petersburg, Fla.

*Saxophonist "Toni" Curtis and bassist "Jackie" Lemmon were on the lam from the mob at the time the photo was taken. In order to effect their escape, they donned drag—more politely, travesty or disguise—but that does not qualify them as transvestites. For the curious, it is doubtful that they made any recordings in that garb.*

### Time-delay Systems

● I would like to compliment STEREO REVIEW and Peter W. Mitchell for the excellent, though long-overdue, article on synthesized-ambience systems in the October issue. Having been involved in the design of the first Bozak Model 900 as well as the second-generation Models 901 and 902, I would also like to clear up a minor discrepancy in the technical comparisons. While the 900 did use "bucket-brigade" devices to generate audio delays, the new 901 and 902 series take advantage of a

new analog technology: "charge-transfer devices," which are capable of longer delays but with signal-to-noise performance far superior to the bucket-brigades.

JOHN H. ROBERTS  
President, Phoenix Systems  
Monroe, Conn.

### Peter Gabriel

● For Noel Coppage to dismiss Peter Gabriel as a "mediocre, run-of-the-mill rock singer" (October) is simply to admit that he has little or no acquaintance with Gabriel's work with Genesis and has not scrutinized either of his two superb solo albums. Look at what a pathetic state "Genesis" is in without Gabriel (for many Genesis fans the band died when he left). And as for Gabriel's deserving "more blame than most for such trash as Kiss," doesn't the blame really belong with Alice Cooper, the New York Dolls, and other Kiss-like predecessors?

Peter Gabriel is an artist whose style is not in constant flux to the vicissitudes of the money-grabbing pop-music world that Mr. Coppage seems to cater to so generously. Yet Gabriel realizes the need for change and expansion of musical boundaries better than most, unlike such "artists" as Tammy Wynette, about whom Mr. Coppage raved so reverently in the same issue. Who are you kidding, Noel? To pan Peter Gabriel and exalt Tammy Wynette is surely a sign of oncoming senility. How old are you?

FRANK KENNAMER  
Palos Verdes, Calif.

*Noel Coppage replies: Old enough to know better.*

### Irrelevant Opinions

● I am writing in response to all the criticism bestowed upon STEREO REVIEW's record reviewers. The letter writers seem to assume that the reviewers are totally deaf and subject to musical mood changes hourly. Seldom do they stop and consider how many new groups and individual artists the magazine brings to our attention each month.

I personally could not care less what anybody else thinks of a particular album so long as I like it. I have bought hundreds of albums as a result of reviews and have never held the reviewer responsible for my initial shock whether good or bad. How a record sounds to a reviewer is irrelevant. I weigh the information in a review with my own beliefs and musical preferences, and if I want the album I buy it. I would rather have heard an album and not liked it than never have heard it at all. Hell, it's only money. What better way to spend it?

LARRY WINTER  
Tullahoma, Tenn.

### Hamlisch vs. Williams

● Calling Marvin Hamlisch "Hollywood's first real superstar composer," as Eric Salzman did in his October article, can be nothing more than an insult to the premier Hollywood composer today, John Williams. Hamlisch may have written some popular songs and

(Continued on page 14)



tunes à la Carly Simon and Barbra Streisand, but for original film music (and when you say "Hollywood composer" I assume you mean film music) John Williams is in a class by himself, having scored *Star Wars*, *Jaws*, and *Close Encounters of the Third Kind*, to name only three. It is a testament to Williams' success that his music blends in so well and becomes such a part of the movie that it is often overlooked by the casually listening movie audience.

JOHN J. PLUTA  
Lombard, Ill.

*The Editor replies: Reader Pluta has a point—movie music should, ideally, become so successfully subordinate to the whole of which it is a part that it does not call attention to itself. But Marvin Hamlisch's ambition is, as he says, to write standards, and the writer of standards does call attention to himself and becomes a superstar. Is anyone going around humming the music from Jaws?*

## RFI Pollution

As a professional engineer, seasoned audiophile, and active ham-radio operator, I ask that STEREO REVIEW stop resisting and take a strong stand for voluntary establishment of RFI-suppression standards in modern high-fidelity equipment. Because RFI suppression costs money, and given the erroneous idea that it would not help sales, hi-fi manufacturers have apparently been reluctant to see the seriousness of the situation until threatened

by government intervention. But who is government? It is not only the angry voices of hams and CB'ers, but also of audiophiles who discover that their new equipment was inadequately designed for today's environment. Think of the money that manufacturers spend each year for purely cosmetic changes. Some of this money could be used for RFI suppression. As Harry Dannels of the American Radio Relay League clearly illustrated at a recent RFI hearing [reported on in September "Audio News" by Jack Hannold], only a handful of parts are really necessary to provide RFI shielding for a hi-fi component.

The hi-fi industry should adopt a two-part plan for RFI suppression. Part I would be equivalent to putting locks on the doors of a house: that is, simple RFI shielding of the a.c. power cord and the output or speaker leads. Part II would involve the application of more extensive RFI suppression, including the development of test and shielding standards. The effectiveness of Part I would be evaluated before Part II is undertaken. Most likely only Part I would be needed. Pressure for RFI legislation would cease, the industry would be marketing equipment that is better designed for today's environment, and the cost would be far less than for the extensive RFI-suppression measures being considered by our government.

RUSSELL S. HAMILTON  
Wayne, Pa.

*Technical Director Larry Klein replies: Mr. Hamilton's letter is typical of several we've received responding to Jack Hannold's article.*

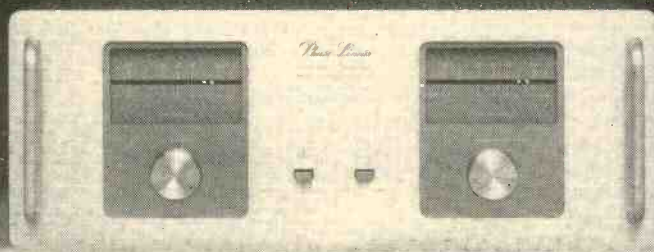
STEREO REVIEW has never "resisted" the use of anti-RFI filters and circuits. In fact, we published a full-length article describing how to use them as recently as May 1977. What we have resisted is the establishment of a legal anti-RFI standard because of the technical morass such an inherently unworkable standard would create. It seems self-evident to me that if any of the very clever audio engineers in the industry knew how to reduce RFI substantially without reducing fidelity and using only a "handful" of inexpensive parts, they would have done so long since.

However, radio hams prefer to believe that any audio equipment that picks up their transmissions is either poorly designed or cheaply constructed. Some of it, indeed, may be, but despite my own installation of ferrite beads and the use of other preventive devices and techniques, a nearby ham continues to broadcast code (he has a dandy "fist") and single-sideband voice through my power amp and preamp, my video tape recorder, my open-reel and cassette decks, my telephone-answering machine, my TV, and even my electronic doorbell! Some people, other than hams, might be puzzled that I find myself owning so much expensive equipment all of which is so "poorly designed" as to be RFI-sensitive!

As far as I'm concerned, RFI can be thought of as a special form of noise pollution. And, as with other cases of pollution, the responsible parties—in this case the CB'ers and hams—are strenuously defending their right to go on polluting and expect the rest of us to

(Continued on page 16)

# ONE OF THE WORLD'S GREAT POWERS.



## THE PHASE LINEAR 700 SERIES TWO.

Over seven years ago, Phase Linear took the audio world by storm when it introduced the first truly high-power, high-fidelity amplifier: the Phase 700. Everyone was stunned at the incredible 350 watts per channel, with ultra low distortion. (In those days, popular mythology held that amps would never need more than 50 watts to a side. In fact, who had even heard of clipping?)

Naturally, the skeptics scoffed. But audio critics and music-lovers worldwide listened. And for the first time, they heard recorded music reproduced in the home accurately. No muddy rumble at the low end. No harsh, distorted clipping of the highs. The era of great power amps had begun!

Today, it's generally accepted that you need an amplifier with a massive reserve power to drive inefficient high-technology speakers and reproduce all the musical transient peaks without clipping. The amplifier with unquestioned ability to meet this criteria is the Phase Linear 700 Series Two.

### GREATER POWER RESERVES MEAN GREATER HEADROOM

The Phase 700 Series Two is rated at 360 watts per channel, with distortion virtually inaudible at 0.09%\*. With this tremendous power, the Phase 700 can reproduce musical transients with ease, giving you almost unlimited headroom. As a result, your music sounds lively, with incredible realism.

### INCREASED ACCURACY AND PROVEN RELIABILITY

The original Phase 700 was designed for home use, but it rapidly won the approval of the pros. Its proven dependability on the road

made the 700 a favorite touring amp for super groups and sound reinforcement companies.

The Phase 700 Series Two retains this legendary reliability, and improves sonic accuracy by utilizing an advanced BI-FET input stage. This integrated circuit keeps the output virtually identical to the input.

The 700's instantaneous LED output meters move at lightning speed, accurately monitoring the output voltage, with calibrations for 8 and 4-ohm applications. If you're listening at quiet levels, you can activate a Meter Range Switch to upscale the meter by 20dB. You have a visual indication of output activity, in addition to the Electronic Energy Limiters that prevent damage from accidental overloads.

If you demand great performance, don't settle for less than a great amplifier.  
\*OUTPUT POWER: 360 WATTS, MIN RMS PER CHANNEL, 20Hz-20kHz INTO 8 OHMS, WITH NO MORE THAN 0.09% TOTAL HARMONIC DISTORTION.

*Phase Linear*  
THE POWERFUL DIFFERENCE



# OUR NEW CASSETTE DECK WOULD BE DAZZLING EVEN WITHOUT THE COMPUTER.



The first cassette deck controlled by computer—a micro-processor with no fewer than five memories—would be enough to dazzle anybody.

You merely program the computer: tell it how and when you want to listen to which song.

It controls Sharp's exclusive Auto Program Locate Device. This unique feature skips ahead or back to any song you select (up to 19 songs) and plays it automatically.

The Direct Memory Function automatically replays any section.

Zero Rewind™ allows you to set any point on the tape as the "beginning."

The computer also controls Electronic Tape Counting and Second Counting, so you always know how much tape or time you have left.

A Liquid Crystal Display shows you current mode and function.

The built-in digital quartz clock acts as a timing device; it displays time-programming operations, so you can actually program your RT-3388 to record automatically from a radio or TV at any pre-selected time and then switch itself off.

But what really makes the RT-3388 so special is that the musical performance of the deck is

every bit as dazzling as the electronic performance of the computer.

Just a few specs tell the story: S/N ratio; 64dB with Dolby.\* Wow and flutter, a minimal 0.06% Frequency response, 30-16,000 Hz ( $\pm 3$ dB) for FeCr.

Without the computer, the RT-3388 would merely be one of the best engineered cassette decks you could find.

But how nice that you can have the deck with your own private computer to run it. (The RT-3388 is just one of a complete line of Sharp® cassette decks with the unique ability to find and play your music for you.)

When your Sharp dealer shows you the RT-3388, we suggest that you ask to hear some music first.

Then go ahead and let the computer dazzle you.

Sharp Electronics Corp.

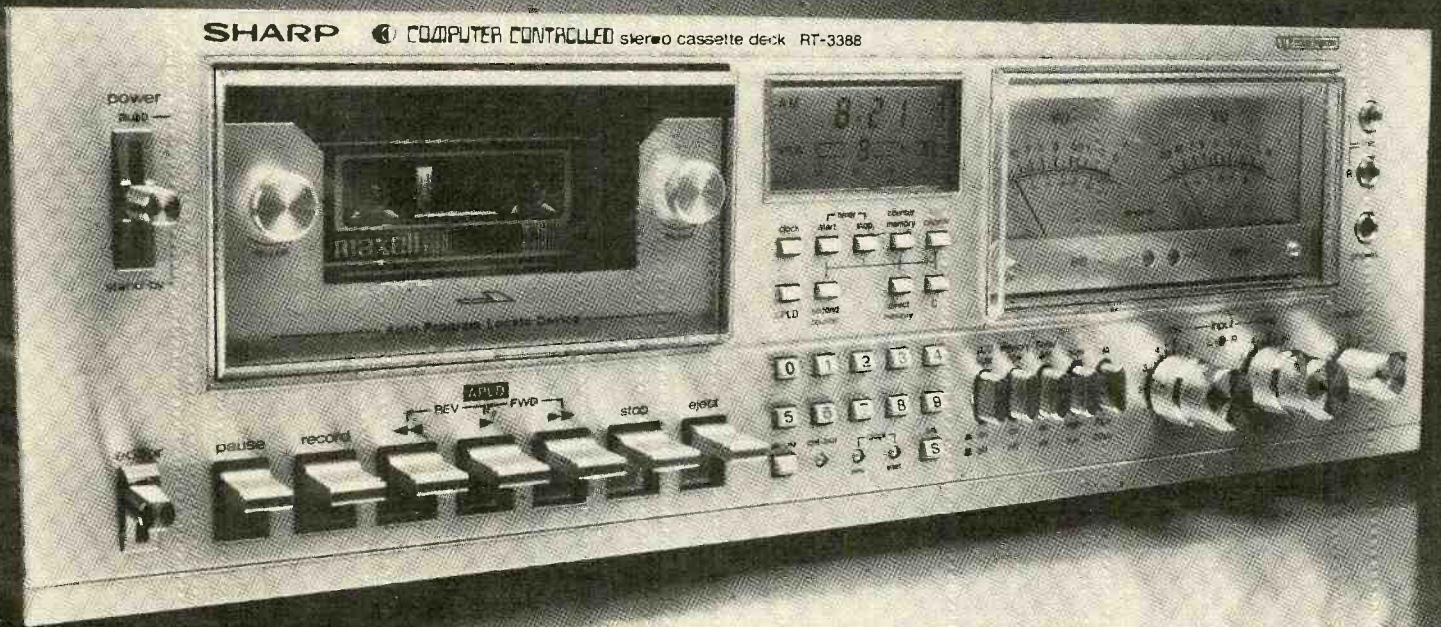
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**SHARP'S RT-3388.**  
**THE FIRST COMPUTER THAT PLAYS MUSIC.**



CIRCLE NO. 65 ON READER SERVICE CARD

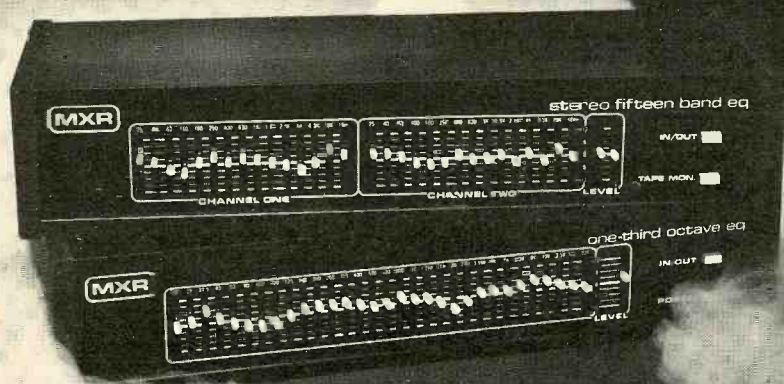


\*Dolby is a registered trademark of Dolby Laboratories



# Most components just provide recreation

## MXR provides Creation



Create with MXR's two newest equalizers, the Stereo Fifteen Band Eq and the One-Third Octave Eq. Two great new eqs that not only put you in complete control of your acoustic environment but provide even more creative contour of your music as well.

The Stereo Fifteen Band Eq is an expanded version of our popular ten band Stereo Graphic Eq. With two channels each having fifteen bands spaced 2/3 of an octave apart, you have even more creative power for bending, shaping, enhancing the sound. No matter how fine your home component system is, problems such as poor room acoustics or program quality may occur. The Stereo Fifteen Band Eq gives you the control to create the exact sound you desire.

The One-Third Octave Eq goes even further in providing precision control over your system's sound. A single channel unit, its thirty-one frequency bands are spaced 1/3 of an octave apart to give you the most creative power available at any price.

Both units feature a range of -12 to +2 decibels on each band, high slew rate (7V/microsecond) and incredibly wide dynamic range (better than 100 dB). The eqs feature walnut side panels (rack mounting hardware also included) and are built with rugged, reliable MXR quality.

Hear them perform at a fine audio dealer near you, or write MXR Innovations, Inc., 247 N. Goodman St., Rochester, N.Y. 14607.

In all of creation, MXR keeps providing.

Also distributed in Canada by White Electronic Development Corporation, Ontario.



**Consumer  
Products Group**

adapt to them, through a whole host of special protective procedures involving extra costs, instead of the other way around.

It might be said that as an avocation hi-fi has no special properties that make it superior to hamming or CB'ing. However, the relative virtues of these various pursuits aside, when was the last time you heard of an audiophile's pursuit of his hobby interfering with a ham or CB transmission? It seems to me that it ultimately comes down to the greater good for the greater number.

### Nyiregyházi

● Congratulations to James Goodfriend for his review of Ervin Nyiregyházi's most recent recording (September). This is by far the most perceptive and well-written analysis of any performance—or performer—that I have ever read.

WILLIAM L. SWEET  
Laurel, Md.

### Generation Gap

● The August STEREO REVIEW contains a "Best of the Month" review of the Quintessence rerelease of the Dohnányi *Variations on a Nursery Theme* in which Eric Salzman cites "the participation of Dohnányi's son, the gifted conductor Christoph von Dohnányi." Mr. Salzman has the relationship wrong by one generation. Christoph is the grandson of Ernst von Dohnányi.

S. DALE LOOMIS  
Chicago, Ill.

### George Szell

● I was a bit astounded to read in the July issue that it was James Goodfriend's opinion that George Szell's musical genius rarely made it onto records. Many of his recordings provide ample evidence that he was one of the outstanding conductors of this century. His recordings of the Brahms symphonies, overtures, and *Haydn Variations*, the Wagner orchestral excerpts, the Beethoven piano concertos (with Leon Fleisher), the late symphonies of Dvořák and his *Slavonic Dances*, Beethoven's overtures and *Egmont* music (with the Vienna Philharmonic), Smetana's *Moldau*, Janáček's *Sinfonietta*, and Prokofiev's *Lt. Kijé* are but a few that most "experts" consider truly great music making.

DAVID MICHAELS  
Boston, Mass.

*James Goodfriend replies: If Mr. Michaels had heard enough of Szell's live performances to be able to compare them with the recorded ones, he would know exactly what I meant.*

### Quad Newsletter

● I would like to inform STEREO REVIEW readers of a society devoted to four-channel sound which has a monthly newsletter containing information on four-channel equipment, recordings, and developments. The address is: 4-Quad, 23757 Canzonet Street, Woodland Hills, Calif. 91367.

GARY L. HENDERSHOT  
Sealy, Texas

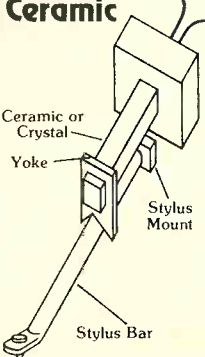
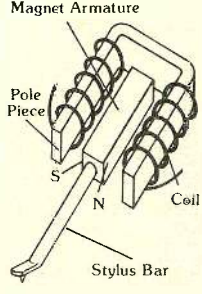
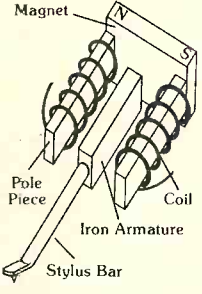
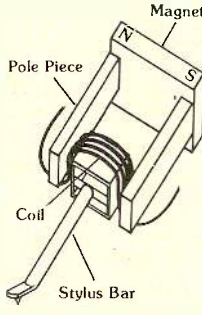
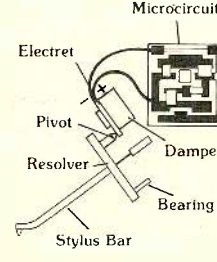


# Phono Cartridges

## A Buyer's Guide from Micro-Acoustics

The phonograph record is a mechanical replica of musical performance. The job of the phono cartridge is to convert complex undulations of the record groove into an electrical signal. Here's how the different kinds of phono cartridges compare in function, performance and manufacture. This chart has been

prepared to help you make the appropriate choice for your budget and music system. The information encompasses the range of performance characteristics for each type of cartridge. Data\* is compiled from manufacturers' literature and the results obtained at Micro-Acoustics cartridge clinics held throughout the U.S.A.

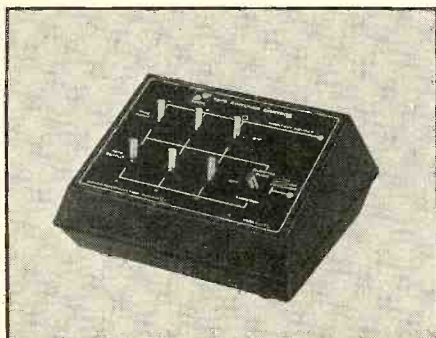
| Performance Categories                                    | Crystal, Ceramic<br>                                  | Moving Magnet<br>   | Moving Iron<br>(Similar to Induced Magnet Type)<br>                     | Moving Coil<br>  | Electret<br>(Micro-Acoustics Direct-Coupled)<br>          |
|---|--|--|--|--|--|
| Operation Principle                                       | Stylus bar moved by record groove under heavy tracking pressure (3-8 grams). Bar's motion bends crystal element causing output signal. | Stylus bar moved by record groove. Magnet armature vibrates between pole pieces, causing change in flux, and inducing signal in output coil. | Stylus bar moved by record groove. Iron armature vibrates between pole pieces, changing reluctance of magnetic path, and inducing signal in output coil. | Stylus bar moved by record groove. As coil vibrates through magnetic field, signal is induced in coil and fed to step-up transformer or pre-amp. | Stylus bar moved by record groove. Stylus bar vibrates electrets through resolver and pivots, producing signal which is fed to microcircuit. |
| Tracking Ability  | Poor to Fair   | Good to Excellent  | Good to Excellent  | Good to Very Good  | Very Good to Excellent   |
| Transient Ability<br><i>(rise time in microseconds)</i>   | 60 to 100  | 30 to 60   | 25 to 50   | 20 to 30   | 17 to 20   |
| Freq. Resp. Variation Due to Loading with Pre-Amp, Cables | $\pm 4$ dB below 1000Hz<br><i>(plugs directly into amp input)</i>  | -10dB to +6 above 3kHz   | -12dB to +4 above 3kHz   | $\pm 1/2$ dB over entire range   | $\pm 1/2$ dB over entire range   |
| Ability to Perform In Variety of Tonearms                 | Works in low-cost units only   | Good to Very Good  | Fair to Very Good  | Fair to Very Good  | Very Good to Excellent   |
| Ability to Track Warped Records                           | Poor to Good   | Fair to Good   | Fair to Good   | Fair to Good   | Very Good to Excellent   |
| Cartridge Body Weight                                     | 5 to 10 grams  | 6 to 8 grams   | 5.5 to 7 grams   | 7 to 11 grams  | 4 to 5.25 grams  |
| User Replaceable Stylus                                   | Yes  | Yes  | Yes  | Usually Not  | Yes  |
| Method of Manufacture                                     | Mass Production  | Mass Production  | Mass Production  | Precision Handmade   | Precision Handmade   |
| Cost Range  | Least Expensive  | Inexpensive to Moderate  | Inexpensive to Moderate  | Expensive to Very Expensive  | Moderate to Expensive  |
| Warranty  | 90 days <i>(limited)</i>   | 90 days to 1 year <i>(limited)</i>   | 90 days to 1 year <i>(limited)</i>   | 90 days to 1 year <i>(limited)</i>   | 2 years <i>(full)</i>  |

\*All cartridges show single channel only

© 1977 Micro-Acoustics Corp.



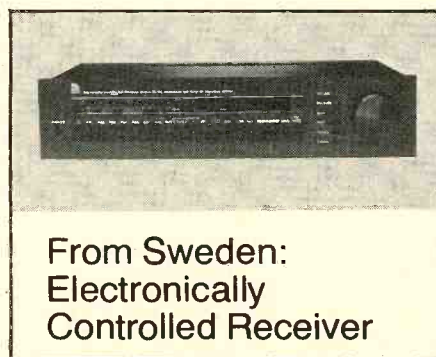
# New Products latest audio equipment and accessories



## Three-deck Tape-switching Unit from Superex

□ Designed to operate with up to three tape decks, the Superex TSB-3 permits recording onto any combination of the decks connected to it from any of the other decks connected or, alternatively, from the main amplifier or other signal source. In addition, while dubbing from one deck to another, it is possible to record on a third deck from an external source. Other possible switching schemes are described in a comprehensive instruction booklet. Measuring  $6\frac{1}{4} \times 4\frac{3}{4} \times 2\frac{3}{4}$  inches, the TSB-3 weighs approximately 2 pounds. Price: \$49.95.

Circle 120 on reader service card

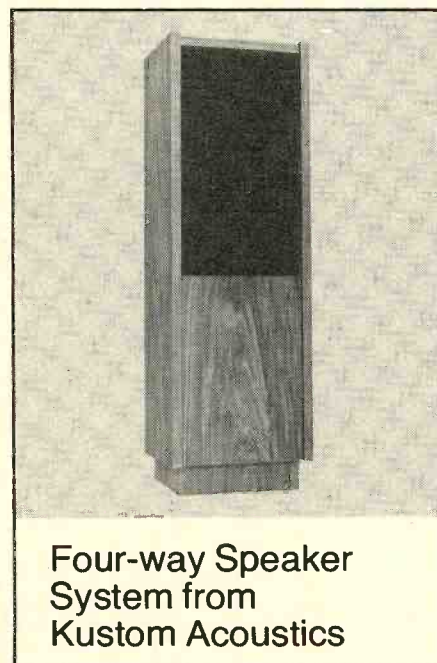


## From Sweden: Electronically Controlled Receiver

□ The Audio Pro TA-150 is a fully electronically controlled receiver containing no moving parts within the unit. One control knob covers all adjustable functions—volume, balance, treble, mid-range, bass, and tuning—and selector buttons determine which function the knob controls at any given time. The receiver is made up of plug-in printed-circuit modules, with no interconnecting wires as such. Repairs, when required, are accomplished by replacement of circuit cards; no tuning or adjustment is needed. Power output is rated at 70 watts per channel into 8 ohms, both channels driven, with less than 0.1 per cent total harmonic distortion. Signal-to-noise ratios are 100 dB for the high-level inputs, 75 dB for the phono inputs. Power bandwidth is 10 to 100,000 Hz. The TA-150's tuner section

has a usable sensitivity of 2 microvolts and a capture ratio of better than 2 dB. AM suppression is better than 55 dB, and stereo separation exceeds 40 dB at 1,000 Hz, with distortion rated at 0.4 per cent for an input of 100 microvolts at 1,000 Hz, mono and stereo. Dimensions are  $19\frac{1}{2} \times 10\frac{1}{4} \times 4\frac{1}{2}$  inches, and the unit weighs 25 pounds. Price: \$995. The Audio Pro line is imported by Intersearch, Inc., 1800 Old Wood Road, P.O. Box 5424, Rockford, Ill. 61125.

Circle 121 on reader service card



## Four-way Speaker System from Kustom Acoustics

□ The "Labyrinth" by Kustom Acoustics is a four-way speaker system employing unusual internal cabinet construction said to provide usable response to about 16 Hz. The four speakers consist of a 12-inch woofer, 5-inch mid-range, 1 $\frac{3}{4}$ -inch mid-tweeter, and 1-inch tweeter; crossover points are 175, 2,500, and 7,500 Hz, with slopes designed for minimum phase shift. The three controls to adjust the relative levels of the higher-frequency drivers are front-mounted, as are two fuse holders. The Labyrinth can be used in conventionally equipped stereo systems or with bi- or tri-amplification. Impedance, nominally 8 ohms, ranges from 5 to 11 ohms. Harmonic and intermodulation distortion are both less than 0.3 per cent from 50 Hz up to a 1-watt drive level, and frequency response is better than 19 to 33,000 Hz  $\pm 2.5$  dB. Power-handling capacity is 200 watts, with a recommended minimum amplifier power of 15 watts; a sound-pressure level of 91 dB measured at 1 meter on axis will be produced for an input of 1 watt. The system measures 51 x 16 x 16 inches, weighs 165 pounds, and is finished in walnut veneers. Price: \$899. Matching bases with casters are optional.

Circle 122 on reader service card



## New High-output ESS Moving-coil Phono Cartridge

□ ESS Special Products has recently added to its Dynavector line of phono cartridges the Model 10X, a moving-coil unit whose output (1.8 millivolts for a recorded velocity of 5 centimeters per second) is high enough for it to be used without a pre-preamplifier or step-up transformer. Frequency response is 20 to 20,000 Hz  $\pm 2$  dB, and separation at 1,000 Hz is more than 20 dB. The stylus is elliptical on a tapered aluminum cantilever; compliance is  $10 \times 10^{-6}$  cm/dyne, and the recommended tracking force is approximately 1 $\frac{1}{2}$  grams. The 10X weighs 9 $\frac{1}{2}$  grams and mounts on  $\frac{1}{2}$ -inch centers. At \$120, it is the least expensive moving-coil phono cartridge in the Dynavector series.

Circle 123 on reader service card.



## New Sansui Amplifier Accepts Moving-coil Phono Cartridges

□ The AU-919, latest in Sansui's line of integrated amplifiers, is a "DC" design throughout its output section and the major circuits of its preamplifier section. A switch is provided to permit response down to 0 Hz from the high-level inputs to the speaker terminals, although excessive direct-current power output is limited by the speaker-protection circuits. The AU-919 also has a built-in pre-preamplifier for moving-coil cartridges, a choice of bass and treble tone-control turnover frequencies, switchable subsonic filter, loudness-contour

(Continued on page 20)



# The new high in automotive high fidelity!

The Super Separates by Altus. Here's power, low distortion, and total flexibility in a music system that will take your head places it's never been before. Sound so real, you'll think you can touch it. A clean, powerful 40 Watt Pre-Amp/Amp 5 Band Graphic Equalizer; Auto Reverse Dolby® Cassette Deck; and a super sensitive AM/FM Stereo Tuner. In dash or under dash.

And there are also high performance Altus custom loudspeakers to round out the most exciting stereo system on wheels. Visit your Altus dealer soon. Come listen and get a new kind of high from the Super Separates by Altus.

For more information, write to Altus, 6 Main Street, Melrose, Mass. 02176.



Automatic Radio by  
**ALTUS**  
 Six Main Street,  
 Melrose, Massachusetts 02176



# New Products

## latest audio equipment and accessories

circuits, and provision for two tape decks and two pairs of speaker systems. It is rated at 100 watts per channel continuous into 8 ohms from 20 to 20,000 Hz, with no more than 0.008 per cent total-harmonic or intermodulation distortion. The slew rate is 200 volts per microsecond and the rise time 0.5 microsecond. Frequency response from the main amplifier input jacks extends from 0 to 500,000 Hz, +0, -3 dB. RIAA phono equalization accuracy is  $\pm 0.2$  dB from 20 to 20,000 Hz, and the phono signal-to-noise ratio (S/N), referred to the rated 2.5-millivolt sensitivity, is rated at 90 dB. The high-level inputs' S/N is rated at 100 dB. The AU-919 comes with adapters for height-adjustable rack mounting. Dimensions are approximately 19 x 6 $\frac{3}{4}$  x 17 $\frac{1}{2}$  inches. Approximate price: \$800.

Circle 124 on reader service card



Tangential-tracking  
Turntable from Revox

□ Revox has introduced the B790 turntable, a tangential-tracking design that maintains lateral tracking-angle error within less than 0.5 degree and requires no antiskating compensation. The B790 replaces the usual pivoted tone arm with an overhead carrier mechanism; the cartridge is mounted on a small, lightweight plate that moves over the face of the record on precision steel rails. Lateral movement of the cartridge is controlled by an optical system employing a LED and servo electronics to activate the d.c. drive motor. For removing or replacing the records, the carrier mechanism pivots through a 90-degree arc to a rest position; when returned to the play position it locks in place. Control of cartridge cueing and position on the record is by means of pushbuttons at the front of the turntable mounting plate; these remain accessible when the plastic dust cover is closed. To facilitate cueing, the cartridge is illuminated. The cartridge is automatically lifted off the record and its output muted whenever the carrier mechanism is touched.

The 33 $\frac{1}{3}$ - and 45-rpm speeds of the quartz-controlled, direct-drive turntable are accurate to within  $\pm 0.01$  per cent and are manually

variable by  $\pm 7$  per cent; the exact playing speed is shown on a four-digit LED readout. Wow and flutter (DIN weighted) are less than 0.05 per cent; rumble is lower than 68 dB. The factory-preset tracking force of the Ortofon VMS-20E Mk II cartridge provided with the turntable is approximately 0.8 gram; other cartridges may be substituted if desired. The B790 turntable assembly measures approximately 17 $\frac{3}{4}$  x 5 $\frac{1}{2}$  x 15 inches (the supplied dust cover is included in the measurement) and weighs 24 $\frac{1}{4}$  pounds. Price \$899.

Circle 125 on reader service card



Audio Pro Subwoofer  
Has Built-in Amplifier

□ The Model B2-50 subwoofer incorporates its own amplifier, which is said to have special impedance characteristics providing a resonance of 20 Hz in a relatively small enclosure. The woofer operates in the 20- to 200-Hz range with crossover to the main speaker systems adjustable from 50 to 200 Hz. Because it is limited to very low frequencies, at which sound is presumably not directional, only one unit is used for each stereo system. The special amplifier can be connected into a speaker line or between a preamp and amplifier and can be left in an "automatic" setting in which it is signal-activated, switching itself on and off as required. An indicator lamp shows when the device is on. Two long-excursion 7-inch woofers mounted facing forward and back make up the subwoofer speaker complement. Distortion is less than 3 per cent from 20 to 200 Hz at a 100-dB sound-pressure level (SPL); the fully adjustable sensitivity is 50 millivolts for a 96-dB SPL. Measuring 19 x 18 x 17 inches, the subwoofer weighs approximately 100 pounds. Price: \$695. Swedish-built, the B2-50 is imported by Intersearch, Inc., 1800 Old Wood Road, P.O. Box 5424, Rockford, Ill. 61125.

Circle 126 on reader service card

(Continued on page 22)

# Mitsubishi Car Audio Dealers

|  |  |
|--|--|
| <b>CALIFORNIA</b><br>DOW SOUND CITY CAR STEREO<br>San Diego<br>THE FEDERATED GROUP<br>West Los Angeles<br>Hollywood<br>Westminster<br>Canoga Park<br>La Puente<br>SAN JOSE STEREO TAPE<br>San Jose<br>SOUND COMPANY<br>San Diego | <b>KENTUCKY</b><br>AUDIO WAREHOUSE INC.<br>Louisville<br><b>MASSACHUSETTS</b><br>K & L SOUND SERVICE CO.<br>Watertown<br><b>MINNESOTA</b><br>DAYTON'S<br>Minneapolis<br>MR. MUSIC MAN<br>Moorhead<br><b>MISSOURI</b><br>INDEPENDENCE AUDIO<br>Independence |
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| <b>INDIANA</b><br>HI FI BUYS<br>Indianapolis<br>HIGH FIDELITY<br>Indianapolis  | <b>UTAH</b><br>INKLEYS<br>Salt Lake City<br>ZOMI<br>Salt Lake City   |
| <b>IOWA</b><br>AUDIO ODYSSEY<br>Davenport<br>ZUBER'S SOUND AROUND<br>Cedar Rapids  | <b>WISCONSIN</b><br>AUTO RADIO STATION<br>Madison<br>SOUND GALLERY<br>Racine   |
| <b>KANSAS</b><br>AUDIO SYSTEMS<br>Wichita<br>CUSTOM SOUND, INC.<br>Wichita<br>HAYES SIGHT & SOUND<br>Hutchinson  |  |

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**CAR AUDIO**  
SOUND US OUT





# Miles Ahead in Car Audio Components

You're aware of Mitsubishi audio component systems for your home as well as the superior quality, performance and design that goes into them.

Now Mitsubishi engineers have followed through with that same "separate components" premise, and we now want you to be fully aware of our new component systems for your car.

Start with the CV-21 Power Amplifier and the CJ-20 FM Tuner. Then choose the CX-21 Auto-Reverse Cassette Deck or the CX-20 Cassette Deck. Add up to six speakers including a pair of SX-30 two-way Alumi-Die Cast Enclosed

speakers for a total car audio system worthy of the name Mitsubishi.

Now a word about "specs"...we have always believed in rating our equipment's performance conservatively. Only you benefit from this caution. "Sound us out" before you buy any other car stereo system. You'll be miles ahead with Mitsubishi.



A complete line of components, in-dash/under-dash units and speakers await you at select audio and car audio dealers. Check the list adjacent to this ad for the Mitsubishi Car Audio dealer nearest you.

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Dealer inquiries invited: Contact Melco Sales, Inc., 7045 N. Ridgeway Ave., Lincolnwood, Ill. 60645, 800-323-4216 (Outside Ill.), 312-973-2000 (Within Ill.)



GRT Presents:

## Robert Angus on the importance of record care.

"No matter how much you've spent on hi-fi equipment, chances are that your biggest single investment is in records. That alone is a very good reason for taking as much care of them as you would a new stereo turntable or receiver. Another is the rising price of records, which means that in many cases it costs more to replace a worn or damaged record than it did to buy it in the first place. Record care is a simple matter of good housekeeping and economics.

For the fact is that simply by keeping your records free of dust, grease and dirt, putting them back in their jackets—preferably in protective liners or proper storage racks to prevent warping—when you're not actually playing them, and handling gently, you can increase the life expectancy of every one of the records you own by 50 to 100 percent. If yours is an average-sized collection, that's enough over the course of a couple of years to buy yourself a really good pair of headphones, or even a stereo tape deck."

*Robert Angus is a noted high fidelity writer and critic.*

The tape and record experts at GRT now bring you a complete line of recording care products. Ask for GRT accessories at your favorite music or stereo store.



### Dustbuster

The economical way to the finest in record care.



**We Make It Sound Better**

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## New Products

### latest audio equipment and accessories



### Kenwood Expands Its Cassette-deck Line

□ Featured among the new Kenwood cassette decks is the KX-630, a two-head, front-loading unit incorporating Dolby noise-reduction circuitry as well as a two-position bias and a three-position equalization switch for matching to various tape types. Separate input- and output-level controls are provided, concentrically mounted for the two channels. There is also a front-panel headphone jack. Frequency response is 40 to 13,000 Hz  $\pm$  3 dB, extending to 15,000 Hz with ferrichrome and chromium-dioxide tapes. Signal-to-noise ratio without Dolby is 54 dB with CrO<sub>2</sub> tape; using the Dolby circuits reduces the noise level by as much as 10 dB above 5,000 Hz. Wow and flutter are 0.07 per cent rms. Weighing just over 14¼ pounds, the KX-630 measures 16¾ x 16¼ x 13¾ inches. Price: \$275.

Circle 127 on reader service card

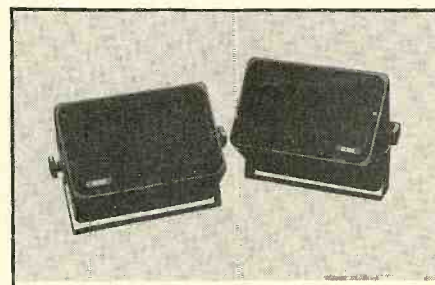


### Sony Microcassettes Newly Packaged

□ The Magnetic Tape Division of Sony Industries has introduced a new packaging format for its 60-minute microcassettes. Each unit is in its own plastic case, which can be left separate or easily interlocked with other cases. These will be sold in packs of three. Not to be confused with standard tape cassettes, the microcassette is a miniaturized unit, only slightly more than 2 inches square on a side and about ¼-inch thick, intended for use

mainly in small pocket recorders. (The microcassettes can also be played on a standard cassette machine by using the Sony MA-40 adapter.) Price: \$3.69 each.

Circle 128 on reader service card



### Big Brute Speaker Systems For the Road

□ From COMM Industries comes the Big Brute HF 4200 loudspeaker system for automobile use. The speaker enclosures are all metal, and each contains a 4-inch woofer and 2-inch tweeter. Frequency response is rated at 55 to 22,000 Hz. Impedance is 4 ohms, and power-handling capacity is 50 watts, with 30 watts suggested as an appropriate amplifier power. Each system measures 8 x 5 x 3 inches and weighs about 5 pounds. Mounting brackets and hook-up wire are supplied. Approximate price: \$150 per pair.

Circle 129 on reader service card



### SAE Preamplifier For Tape Recordists

□ The SAE Model 3000 preamplifier features three pairs of tone-control "sliders" covering the high-, middle-, and low-frequency ranges, all of which are located in the circuit before the tape-recorder outputs so that desired frequency-balance adjustments can be made on tapes as they are being recorded. Also switchable into the tape-recording path are 30-Hz, 12-dB-per-octave and 100-Hz, 6-dB-per-octave filters. Both intermodulation and total harmonic distortion at all levels up to rated output are 0.02 per cent. Phono signal-to-noise ratio is 72 dB referred to a 10-millivolt

(Continued on page 24)



Up to now you had to choose between the turntable you wanted and the turntable you could afford.



**Technics MKII Series.** The SL-1300 MKII automatic, the SL-1400 MKI semi-automatic and the SL-1500 MKII manual.

You expect a quartz turntable to give unparalleled speed accuracy. And these do. What you didn't expect were all the other advantages Technics totally quartz-controlled direct-drive system gives you.

Like torque that cuts buildup time to an incredible 0.7 seconds. And at the same time maintains 0% speed fluctuations with loads up to 300 gms. That's equivalent to 150 tonearms tracking at 2 gms. each.

And that's not all. Technics MKII Series adds quartz accuracy to whatever pitch variation you desire. In exact 0.1% increments. At the touch of a button. And instantaneously

displayed by the front-panel LEDs.

And to take advantage of all that accuracy, Technics has a low-mass S-shaped universal tonearm that's so accurate, friction is down to 7 mg. (vertical and horizontal).

Technics MKII Series. Compare specifications. Compare quartz. And you'll realize there's really no comparison.

**MOTOR:** Brushless DC motor, quartz-controlled phase-locked servo circuit. **SPEED:** 33 $\frac{1}{3}$  and 45 RPM. **STARTING TORQUE:** 1.5 kg · cm. **BUILDUP TIME:** 0.7 seconds (= 90° rotation) to 33 $\frac{1}{3}$  RPM. **SPEED DRIFT:** Within  $\pm 0.002\%$ . **WOW & FLUTTER:** 0.025% WRMS. **RJMBLE:** -78 dB. **PITCH VARIATION:**  $\pm 9.9\%$ .

Technics MKII Series. A rare combination of audio technology. A new standard of audio excellence.

**Technics**  
Professional Series



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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:

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

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

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

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

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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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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.

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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.

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## New Products

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input. From 20 to 20,000 Hz the Model 3000's frequency response is flat within  $\pm 0.25$  dB. Dimensions are  $5\frac{1}{4} \times 19 \times 3\frac{1}{2}$  inches, and the unit weighs 10 pounds. Price: \$350. Solid walnut side panels are available as an option.

Circle 130 on reader service card



### Record-cleaning Equipment from GRT

As part of its new line of record and tape accessories, GRT Design has introduced the ARCP-402 Record Maintenance Kit. Included are a record-cleaning solution and a special spray applicator with brush, a stylus mirror, stylus cleaner, and a booklet on record care. The kit price is \$15.95; the various items included are also available separately.

Circle 131 on reader service card



### High-power Integrated Amp From Rotel

At the head of Rotel's new line of integrated stereo amplifiers is its RA-2040, rated at 120 watts per channel from 20 to 20,000 Hz with both channels driven into 8 ohms. Depending upon output level, the amplifier operates in either a class-B or class-A mode, with switching between modes governed by internal circuits. Other features include LED power indicators in a bar-chart arrangement and a built-in head amplifier for use with low-output moving-coil cartridges. Also incorporated are split power supplies and front-panel controls

to adjust phono-cartridge loading. Total harmonic distortion is no more than 0.01 per cent at rated power from 20 to 20,000 Hz, and intermodulation distortion is also no more than 0.01 per cent. The tone controls provide 10 dB boost or cut at 100 and 10,000 Hz. Dimensions are approximately  $19\frac{1}{4} \times 6 \times 16\frac{1}{2}$  inches; weight is 48 $\frac{1}{2}$  pounds. Price: \$830.

Circle 132 on reader service card



### Three-way Zenith Speaker System

As part of its new line of stereo components, Zenith has introduced the MC4000 "Allegro," a three-way tuned-port system employing a 12-inch woofer, a 5-inch cone mid-range mounted in a sub-enclosure, and a horn tweeter with a  $3\frac{1}{2}$ -inch mouth. Crossover frequencies are 600 and 2,000 Hz, and front-mounted continuously variable controls are provided for both the mid-range and tweeter. Frequency response is 35 to 20,000 Hz; impedance is a nominal 8 ohms. Maximum power-handling capacity is rated at 100 watts continuous, and the system will produce a sound-pressure level of 90.5 dB at 1 meter when driven with 1 watt. The MC4000 measures  $27\frac{1}{8} \times 16\frac{1}{8} \times 12$  inches and weighs just over 45 pounds. Price: \$499 per pair.

Circle 133 on reader service card

### Lafayette's 1979 Product Catalog

Lafayette Radio-Electronics has published a 1979 product catalog, the first new listing of its complete line in two years. The 172-page catalog has photos and descriptions of over 5,000 hi-fi, CB, and other consumer-electronics products. It is available at Lafayette stores or free on request from Lafayette Radio Electronics Corporation, 111 Jericho Turnpike, Syosset, N.Y. 11791.

(Continued on page 28)



# Soundcraftsmen

EQUALIZERS...  
PREAMP-EQUALIZERS...  
CLASS "H" AMPLIFIERS...

"THE PERFECT PREAMPS" - OCTAVE-WIDE TONAL CONTROLS, PLUS PUSH-BUTTON SIGNAL-PROCESSING PATCH-PANEL, FOR OPTIMUM FLEXIBILITY IN PROGRAMMING, SWITCHING, PLAYBACK...

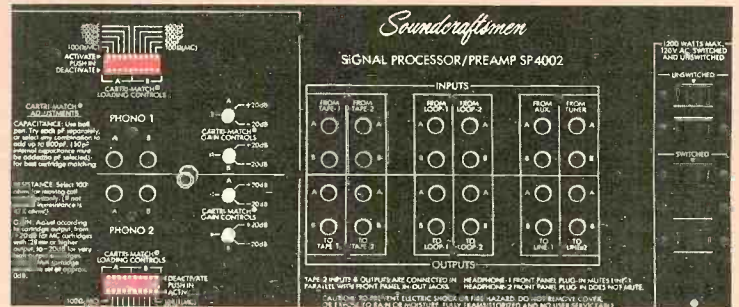


MADE  
IN U.S.A.

## SP4002 FEATURES:

- Dual 10-band  $\pm 15$  dB Equalization
- Zero-Gain/LED Level Balancing
- Sub-Sonic Filtering—15 Hz
- Variable Cartridge Loading
- Variable 47K/100 Ohm Phono Impedance
- $\pm 20$  dB Phono Level Adjustment
- Moving Coil Cartridge Inputs
- Four Mono Phono Preamplifiers
- Three-way Tape Dubbing
- Two Amplified Headphone Outputs
- Two External Processing Loops
- Stepped Level-Control
- Zero-Detent Slide Potentiometers
- 19" Rack Mount Brushed Aluminum Black & Silver Overlay Panels
- Front Panel Tape Inputs & Outputs
- Includes Environmental Test Record
- Computone Charts for "EQ" setting

The new SP4002 SIGNAL PROCESSING Preamplifier is the most flexible preamplifier available. Its PUSH-BUTTON PATCHING capabilities are endless. The SP4002 was designed for those audiophiles who take a "HANDS ON" approach to their equipment. For tonal flexibility, we have included TWO TEN OCTAVE GRAPHIC EQUALIZERS. For the tape enthusiast, the SP4002 is capable of handling up to three tape recorders with THREE WAY dubbing control. Along with this are TWO SIGNAL PROCESSING LOOPS for added accessories, a subsonic filter and stereo/mono mode switching. Our unique CARTRIMATCH<sup>®</sup> phono preamplifier design allows the use of two moving coil cartridges without head amplifiers and ADJUSTABLE CARTRIDGE LOADING on phono 1 and phono 2 from 50 to 800 picofarads. Again the Soundcraftsmen tradition of "affordable separates" is continued.



## NEW CLASS "H" 250 w. Amps ...



The new CLASS "H" ANALOG logic Vari-Portional<sup>®</sup> circuit with AUTO-CROWBAR protection circuit, input level controls, adjustable range meters, main and remote speaker selection, clipping indicators, VARI-POROTIONAL<sup>®</sup> indicators and speaker protection. 250 watts RMS minimum p/c 20-20KHz @ 8 ohms, less than 0.1% THD, T.I.M. better than 0.02%. NON-LIMITED output assures crisp clean peaks. 3 models, From \$649.

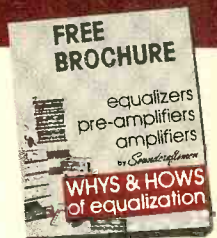
## PE2217-R Preamp-Equalizer ...



Now the PE2217, rated "STATE-OF-THE-ART" and "BEST-BUY" in magazine Test Reports is available as the PE2217-R in rack silver-black form as a matching mate for our new amplifier. With the control flexibility of pushbutton-patching for tape monitoring and tape dubbing between two or three machines together with tape and program discrete-octave equalization, the PE2217-R is the MOST POWERFUL and FLEXIBLE Preamp available at \$549.00

CIRCLE NO. 70 ON READER SERVICE CARD

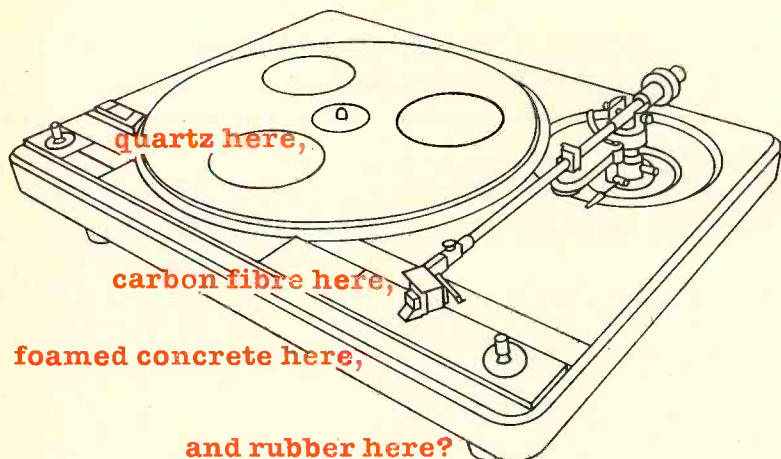
## FREE BROCHURE



Includes TEST REPORTS, complete specifications, Class "H" amplifier ENGINEERING REPORT, EQ COMPARISON CHART, and the "WHYS & HOWS" of equalization—an easy-to-understand explanation of the relationship of acoustics to your environment. Also contains many unique IDEAS on "How the Soundcraftsmen Equalizer can measurably enhance your listening pleasures"; "How typical room problems can be eliminated by Equalization"; and a 10-POINT "DO-IT-YOURSELF" EQ evaluation checklist so you can FIND OUT FOR YOURSELF WHAT EQ CAN DO FOR YOU!



What do you get when you put



# ADC THE FIRST LOW-MASS, TURNTABLE.

ADC is in the business of building breakthroughs.

First, we brought you the innovation of the low mass cartridge. Then the remarkable computerized Accutrac® turntables. Next, the State-of-the-Art Low Mass tonearms.

And now, our engineers have combined the latest advancements of tonearm technology and turntable construction to reduce mass and resonance to new lows.

Result: new benchmarks of high performance.

Finally, the integration of a carbon fibre design tonearm. The famous ADC LMF Carbon Fibre tonearm was the model for the sleek black anodized aluminum

tonearm found on the ADC 1700DD. In fact, until now you had to make a separate investment in an ADC tonearm to achieve this level of performance.

A level of performance never before available on an integrated turntable.

It is statically balanced with a lead-filled decoupled counterweight, and the headshell is molded carbon fibre, long known for its low mass to high tensile strength ratio.

Furthermore, the headshell is connected to the arm with gold plated computer terminal pins. And the main bearing cradle is made of sintered aluminum. The pivot system utilizes micron polished instrument bearings which are hand picked and matched perfectly to both the inner and outer races, for virtually frictionless movement.

The viscous cueing is a gentle 4mm/sec., and the tempered spring anti-skate adjustment is infinitely variable to 3.5 grams.

The design, the materials and the details interact to provide incomparable performance for a tonearm on an integrated turntable system.

In fact, the tonearm alone is worth the price of an ADC 1700DD.

Finally, resonance conquered. The technical know-how that conquered the problems of the tonearm mass, also conquered the problems of turntable resonance.

The ADC 1700DD reduces resonance to levels so negligible they are virtually nonexistent.

The achievement lies in the innovative construction formula for the turntable base that incorporates the latest advancements from European engineers.

The base is constructed with two dissimilar materials that are resonance-cancelling. First, the outer frame of the base is molded, and then a composition of foamed concrete is injected to absorb and neutralize resonance and feedback.



# LOW RESONANCE

Beyond even this foamed concrete anti-resonance breakthrough, the base is isolated by energy absorbing, resonance-tuned, rubber suspension feet.

This is as close as technology has ever come to defying the physical laws of resonance.

The motor in the ADC 1700DD is also present standard of excellence: Direct Drive Quartz Phase-Locked Loop. The quartz is used in the reference oscillator of the motor.

An electronic phase comparator constantly monitors any variance in the speed, making instantaneous corrections. Even when out of the Quartz-Locked mode, the optical scanning system keeps drift at below 0.2%.

In fact, to check the speed at a glance, we've engineered the 1700DD with a pulsed LED strobe display for your convenience.

Low-mass. Low-resonance. High performance.

What is the result of all these breakthroughs? Pure pleasure.

The pleasure of enjoying your favorite music with less distortion and coloration than you may have ever experienced before. Now you can truly appreciate the integrity of the original recording.

Our engineers have reduced record wear and music distortion to a point where rumble is -70dB Din B, and Wow and flutter less than .03% WRMS.

In the history of audio technology, significant breakthroughs have been made over the past four years with the development of Quartz Lock Direct Drive, carbon fibre tonearm design, foamed concrete anti-resonance construction. And now, ADC is the first to bring them all together in the 1700DD. We invite you to a demonstration of this and the other remarkable ADC turntables at your nearest franchised ADC dealer.

Or, if you'd like, write for further information to: ADC Professional Products, a division of BSR Consumer Products Group, Route 303, Blauvelt, N.Y. 10913.

Low-mass. Low-resonance. We think you'll be highly interested.

Distributed in Canada by BSR (Canada) Ltd., Rexdale, Ont.  
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# A tape offer that sounds as good as the tape.



**Buy 3 and get one free.**

A lot of tape companies can make you an offer that sounds like this.

But not tape that sounds like this.

Because our new Maxell UD cassette should be considered among the world's finest recording tape.

You see, Maxell cassettes are built to higher standards than necessary. They're designed to give you recordings free of noise, dropouts and trouble.

So buy three Maxell UD 90's, and get a UD 60. Free.

If you think our offer sounds great, wait till you hear our tape.



\*Available at participating Maxell dealers. Offer expires December 22, 1978.

## New Products

### latest audio equipment and accessories



**Roadstar Receiver For Autos**

Among an extensive new Roadstar line of audio equipment for automobiles is the ARS-2200U, an in-dash cassette player and AM/stereo-FM radio combination. The deck features an automatic end-of-tape stop mechanism with indicator lamp and automatic radio cutout on insertion of a cassette. The tuner section incorporates an FM muting switch and a local/distant (DX) sensitivity switch. Tape speed is accurate to +2, -1 per cent, and wow and flutter are less than 0.25 per cent. Signal-to-noise ratio is better than 45 dB, and distortion is less than 2 per cent. Usable sensitivity of the FM tuner is less than 2  $\mu$ V for 30 dB quieting, and stereo separation is better than 30 dB. The amplifier power output is 5 watts per channel continuous, rated at a distortion of 10 per cent, and frequency response is 50 to 13,000 Hz. Dimensions are 7 x 1 $\frac{3}{4}$  x 5 $\frac{1}{4}$  inches; the unit will fit most American-made cars. Weight is just over 4 $\frac{1}{2}$  pounds. Price: \$199.95.

Circle 134 on reader service card



**Akai's New Portable Video Recorder System**

The VC-300 black-and-white camera, the VT-350 recorder, and a three-inch monitor comprise a new portable  $\frac{1}{2}$ -inch video-cassette system from Akai. The camera features a C-mount, 8:1 zoom lens, detachable electronic viewfinder, and built-in omnidirectional microphone. The recorder incorporates a speed-control knob that permits tape play-

back to be slowed to any speed or frozen on a single frame. The detachable monitor includes a speaker so that tapes can be seen and heard in the field; they can also be viewed on any standard TV monitor via an optional r.f. converter. The system operates on rechargeable lead-acid gel batteries or with an a.c. adapter, both of which are included, as is a shoulder strap for the recorder. The VT-300 videocassette tape recorder uses special Akai cassettes, measures 5 x 9 $\frac{3}{4}$  x 11 $\frac{1}{2}$  inches, and weighs 11 $\frac{1}{2}$  pounds without batteries; the 8 x 2 $\frac{1}{2}$  x 6 $\frac{1}{2}$ -inch VC-300 video camera weighs 1 $\frac{3}{4}$  pounds. System price: \$1,795.

Circle 135 on reader service card



**Osawa Introduces Phono Cartridges**

Osawa's OS-100MP, OS-200MP (shown), and OS-300MP are induced-magnet stereo phono cartridges that use moving permalloy yokes and cobalt magnetic structures as their generating elements. All employ a synthetic Butyl-rubber damping system for the stylus assembly, and all models in the series also have polished nude diamond tips. The OS-100MP has a 0.6-mil conical tip with an aluminum cantilever, while the OS-200MP uses a 0.3 x 0.7-mil elliptical stylus. The elliptical stylus of the OS-300MP is mounted on a carbon-fiber cantilever said to provide greater rigidity and lower mass. Frequency response for all three models is rated at 20 to 20,000 Hz, channel separation is 25 dB at 1,000 Hz, and recommended tracking forces are between 1.5 and 2 grams. The OS-100MP is priced at \$35, the OS-200MP at \$65, and the OS-300MP at \$100.

Circle 136 on reader service card

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

Recent fluctuations in the value of the dollar will have an effect on the price of merchandise imported into this country. Please be aware that the prices quoted in this issue may be subject to change.



# Our theory sounds fantastic.



©1977 Koss Corp.

In an industry where trial and error methods are common, the Koss Theory of loudspeaker design may seem out of place. But once you hear the unmatched Sound of Koss in the new CM 1020 loudspeaker, you'll know our computerized theory helped make the optimum 3 bandpass speaker a reality.

The Koss Theory eliminates the guesswork in speaker design by selecting parameters for the best possible performance. That's why every part of the CM 1020 works superbly both alone and as part of the whole.

The dual ports, for example, enhance the woofer's front sound waves and dampen excessive woofer movement. There are two ports instead of one because two allow for improved cabinet tuning and greater structural stability. This added stability keeps the cabinet walls from beginning to flex causing unwanted sound-waves.

The port-augmented 10-inch woofer is a special de-

sign that provides a 3 dB gain in electrical efficiency and a 3 dB down point of 31 Hz while offering maximally flat response over the low bandpass. To capture all the presence and musical energy from 300 Hz to 3.5 kHz, the CM 1020 features a performance synthesized 4½-inch midrange driver. Handling the high bandpass is a 1-inch dome tweeter linked to a unique acoustic transformer. This Koss tweeter produces the highest energy output and lowest distortion of any 1-inch direct radiator tweeter on the market. Finally, to unite all these outstanding elements, Koss developed a unique, seamless crossover network.

Though we've tried to describe the superiority of the Koss CM 1020, nothing can match the thrill of a live performance. Ask your Audio Dealer for a demonstration, or write to Fred Forbes c/o the Koss Corporation for a free brochure of Koss CM loudspeakers. After experiencing the CM 1020, you'll agree: hearing is believing.

## **KOSS**® CM 1020 SPEAKER SYSTEM hearing is believing™

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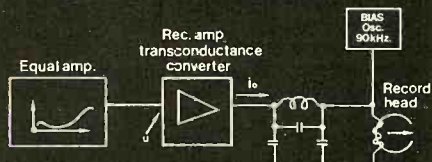
CIRCLE NO. 47 ON READER SERVICE CARD



# Tandberg Presents ACTILINEAR Recording

Open reel & cassette recorders can no longer be looked upon as add-on units in today's extremely sophisticated high fidelity sound systems, but rather as components within a total system with performance capability as technically advanced as all other components of that system.

In order to achieve this, Tandberg has developed a completely new tape recording technology known as the ACTILINEAR (Patent pending) System, the only recording technology available on the market today that can fully exploit the new high coercivity metal particle recording tape being developed.



More pertinent right now is the fact that Tandberg's new ACTILINEAR System, when used with the soon-to-be-available metal particle tape, offers performance parameters approaching those of experimental PCM technology, yet is compatible for playback on all existing tape recorders.

In conventional recording systems, the summation of record & bias current in the record head is done through passive components, leading to compromise solutions which have their distinct and pronounced weaknesses.

Tandberg engineers have developed a new recording technology without compromises. In the new ACTILINEAR System, the passive components have been replaced with an active Transconductance amplifier. Among the benefits of this new approach are:

- Up to 20 dB more headroom
- Less intermodulation due to Slew Rate limitation
- Improved electrical separation and less interference between the bias oscillator and record amplifier
- No obsolescence factor — useable with any type of tape, available now or in years to come

With its unequalled 30 year tradition in tape recorder technology, Tandberg has always been recognized worldwide for its quality products. And now, with the superior performance advantages of the ACTILINEAR System in Tandberg's new TD 20 A open reel deck, as well as the TCD 340 A and TCD 340 AM cassette decks, you will for the first time be able to achieve tape recorder performance capability equal to or better than all other components in a sophisticated sound system.

Tandberg of America, Inc., Labriola Court, Armonk, N.Y. 10504

## TANDBERG

CIRCLE NO. 75 ON READER SERVICE CARD

# Audio Q. and A.

By Larry Klein



Technical Director Klein wrestles with the knob of an oversize mock-up of Jensen's new car receiver.

## Speaker Specs

**Q.** Why is it that systems ranging in price from \$40 up to about \$400 all seem to have pretty much the same specifications? And why do so many manufacturers try for or claim a flat frequency response for their speaker systems when we all know that today's recordings don't even come close to having a flat response? Specifically, if the engineers are using a particular brand of speaker to monitor the recording process, why should the manufacturer of another speaker expect it to reproduce the program accurately?

HENRY A. FAEROE  
Carmel, Calif.

**A.** Although the impedance, crossover points, and power requirements are also usually specified in speaker ads, I assume that frequency response is the "same specification" being referred to. A manufacturer's claim that a speaker has, for example, a response from 30 to 15,000 Hz might mean only that an audio signal between 30 and 15,000 Hz will cause the speaker to "respond" in some way. It might twitch inaudibly at low frequencies and distort terribly at the highs—but it would "respond." For a speaker's frequency-response specification to be meaningful, it must not only be given in terms of  $\pm x$  dB but must also include both on- and off-axis outputs. And even if such a "family of curves" were available for a given speaker system, it would not provide all the information needed to judge the overall reproducing quality of the system.

The premise of the second question is that recording companies produce discs that are in some way frequency equalized to sound best over their specific monitor speakers. Assuming that this is true, it would then follow that the home listener would hear the "flattest" response when the discs are played back through speakers that are the equivalent of those monitors. However, this is pursuing a will-o'-the-wisp, because we have no way of knowing what the engineer(s) involved heard as "flat." nor can we know what other frequency-response aberrations are added elsewhere in the recording/playback process. Logically, therefore, what is required of a home speaker system is as flat a frequency response as possible—which, by and large, also implies a good transient response. To some degree, the sound of such a speaker can be

adjusted—by amplifier tone controls—during playback to compensate for any frequency-balance peculiarities injected by the recording engineer. Although, in truth, the tone controls on most amplifiers do not have the flexibility required to make precise frequency adjustments, the multiband equalizers now available (as individual components or built into receivers, preamps, or amplifiers) certainly can provide any compensation a disc might require.

In any case, a recording engineer who adjusts the frequency balance of a disc using a non-flat or otherwise oddball monitor speaker is running the risk of ending up with a disc that won't have the right balance on most loudspeaker systems.

## Advertising Gimmicks

**Q.** I think STEREO REVIEW should protect the consumer against advertising gimmicks. For example, why do receivers have a loudness switch? It seems ridiculous that we see advertisements for super-sophisticated PLL, FET, and MOSFET circuits and yet have to put up with gimmicks that color our music. Don't you agree?

ROBERT GRAHAM  
Gaylord, Minn.

**A.** I agree with your premise, but not with the specific example you use to illustrate it. An amplifier's loudness-control function, in my view, is a trivial feature that for many technical reasons, both electrical and psychoacoustic, seldom achieves its avowed purpose: compensation for the ear's natural low-frequency response loss at low volume levels. But if it is well designed (they seldom are), a loudness control is certainly not a "gimmick."

As far as protecting the consumer is concerned, I don't see how I could decide for anyone else whether a particular function or feature is a useless "gimmick" or a useful convenience. It obviously depends on the attitude of the owner of the equipment whether, say, multiband tone controls, an assortment of tone-control turnovers, complex tape-input switching, LED readouts, power meters, or what not else are useful, fun, or merely sales gimmicks. On the other hand, I do have strong opinions about a few features found in

(Continued on page 36)



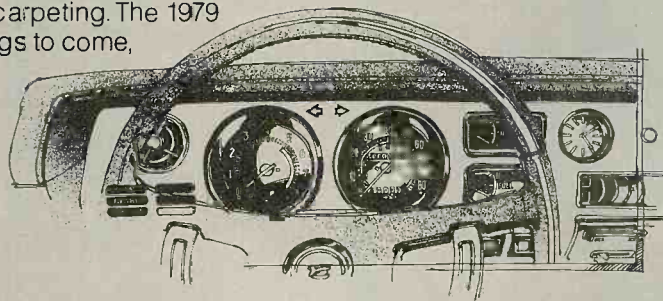
# THE CAR OF THE 80'S IS STILL THE CAR OF THE 80'S.

The Toyota Celica. We introduced it last year as the car of the 80's. Since then the Celica has been praised, bought and, it seems, even copied. If you want your money's worth and more in a Grand Touring machine, see the car of the 80's. The Toyota Celica. It's a car you can live with for a long time.



**A GT for the years to come.** Not only is the Celica designed to carry you into tomorrow, it's built to last the trip. Welded unitized body construction helps keep it tight and practically rattle free. Extensive rust inhibiting processes help preserve body integrity. And the MacPherson strut front suspension, power assisted front disc brakes, and 5-speed overdrive transmission will make the trip to the future fun.

**A car for today.** The Celica is comfortable, dependable and very well equipped. The driver is cradled in a fully reclining bucket seat with an adjustable lumbar support. The Celica GT wows your ears with AM/FM MPX Stereo radio sound—all standard. And your feet are cushioned with wall-to-wall carpeting. The 1979 Toyota Celica. The excitement of things to come, a better standard of driving today. That's Toyota value.



# YOU GOT IT.



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**Just released!**



# Now hear Louis & Bessie, Benny & Bix, the Hawk, the Duke... flawlessly reproduced in sound so clear, you've got to hear it to believe it!

Now, TIME-LIFE RECORDS introduces a spectacular recording project: GIANTS OF JAZZ—featuring such legendary artists as Louis Armstrong, Billie Holiday, Coleman Hawkins, Duke Ellington, Bix Beiderbecke, Earl Hines, plus the great guitarists, clarinetists and pianists in a collection that virtually nobody in the world could duplicate.

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Drawing on vintage material from such labels as Vocalion, Bluebird, OKeh, Brunswick, Gennett, Victor and Columbia, these albums present the greatest *original* recordings of those legendary performers—including many that are virtually unobtainable, and some that were never issued.

## In brilliantly restored monaural sound

Each of these recordings has been reproduced in the original monaural sound...no electronic gimmickry, no rechanneling. (To eliminate distortion and let the authentic sound shine through, engineers at Columbia Records developed a system of restoration unparalleled in the industry. And that's the system we've used to restore the hundreds of classic recordings in GIANTS OF JAZZ.)

## America's most original music

As a result, you'll hear what makes jazz the sweetest, saddest, happiest, most original and important music America ever created. And from Duke Ellington's evocative *Caravan* to Coleman Hawkins' matchless *Body and Soul*, Bix Beiderbecke's brilliant *Riverboat Shuffle* to Billie Holiday's sassy *Miss Brown to You*, you'll hear jazz the way it must have sounded to the immortal men and women who originally created it during the Golden Age.

## Hear the immortal Louis Armstrong in 40 of his greatest original recordings FREE FOR 10 DAYS!

*Dipper Mouth Blues* (1923); *Copenhagen* (1924); *Cake Walking Babies from Home*, *Gut Bucket Blues*, *Cold in Hand Blues*, *My Heart* (1925); *Heebie Jeebies*, *Georgia Bo Bo*, *Cornet Chop Suey*, *Static Strut* (1926); *Wild Man Blues*, *Potato Head Blues*, *Ory's Creole Trombone*, *I'm Not Rough*, *Savoy Blues*, *Willie the Weeper* (1927); *West End Blues*, *Tight Like This*, *Muggles* (1928); *Knockin' a Jug*, *Dallas Blues*, *Ain't Misbehavin'*, *That Rhythm Man*, *Mahogany Hall Stomp*, *(What Did I Do to Be So) Black and Blue*, *Some of These Days* (1929); *My Sweet*, *Sweethearts on Parade* (1930); *When It's Sleepy-Time Down South*, *Star Dust*, *Blue Again* (1931); *Some Sweet Day* (1933); *Song of the Vipers*, *On the Sunny Side of the Street* (1934); *When the Saints Go Marching In*, *Jubilee* (1938); *2:19 Blues*, *Marie* (1940); *Pennies from Heaven* (1947); *That's for Me* (1950).

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# Sonic Exuberance and Musical History in a Digital Disc!



TELARC DIGITAL No. 5038 \$14.95

The place: Severance Hall in Cleveland, Ohio, highly respected for its superb acoustics. The date: April 4 and 5, 1978. Fifty nine musicians, including the entire reed, brass, and percussion sections of the Cleveland Orchestra, gathered to participate in a unique and significant first symphonic ensemble recording using a sophisticated new method of digital recording.

The music, by Bach, Handel, and Holst, was symphonic band music at its most exciting. The Cleveland Symphonic Winds were conducted by the leading figure in wind music today, Frederick Fennell. His early recordings on Mercury with the Eastman Symphonic Wind Ensemble helped launch the hi-fi era, and are still treasured by collectors. But the consummate artistry of the Cleveland Symphonic Winds under Fennell's direction in this session must be heard to be believed.

From the gleaming sound of the piccolo to the solid impact of the concert bass drum... from *pianissimo* to *triple forte*... this recording is a major milestone for both music and recording. The reaction by the musicians themselves, on hearing the playback, was best summed up by Frederick Fennell himself (as quoted in *High Fidelity*): "I'm glad to have lived long enough to have recorded that kind of sound!"

No matter what type of system you own, this record will sound impressive, both sonically and musically. And the better the system the better the sound... and the more complete the musical experience. A new era in digital recording is waiting for you today at your Audio-Technica dealer or wherever the very finest records are sold.



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## Audio Q. and A. . . .

some equipment simply because, aside from providing sales features, they just don't work very well. For example: those "scratch" or high-frequency filters that have an ineffective 6-dB-per-octave rolloff; power-level indicators with 50 per cent error; headphone jacks that won't drive any commonly available headphone; AM-tuner sections that have unnecessarily limited frequency response; and speaker systems that employ oversize woofers for sales appeal when smaller ones would work better in the size of cabinet used. These (and I'm sure my readers could name others) are the true sales "gimmicks," and the only truly workable defense against being taken in by them is a genuine understanding of the whys, wherefores, and especially the technology of hi-fi equipment.

## Record Regrind

**Q.** I've heard that "regrind" is used in making some records. What is it, and does it hurt fidelity?

SUSAN FORREST  
Woodstock, N.Y.

**A.** Not too long ago, a vinyl shortage resulted from the oil shortage, and it became public knowledge that the situation was forcing record-pressing plants to use increasing amounts of "regrind" in their new discs. Regrind is recycled vinyl that has already been through the pressing process and existed as part of a record for at least a short time. Among record producers, regrind is a dirty word. For them to acknowledge the use of regrind is akin to admitting to practicing at least four of the available seven deadly sins. Despite the frequency of the practice, no one cares to confess to it publicly.

The not-so-raw material for regrind comes from two major sources: (1) vinyl waste and defective discs from the pressing line, and (2) returns, defective or otherwise, from record distributors. Late in January several years ago, I visited an enormous record-pressing plant located on the New Jersey-Pennsylvania border. At one point in my guided tour we went by a storeroom with thousands of Christmas-oriented records crammed into barrels and cartons and overflowing in loose heaps on the floor. The scattered discs bore titles with every tie-in to Christmas and music that a corps of inspired merchandisers could come up with. (If such performers had been around at the time, I'm sure I could have found several dozen copies of "Alice Cooper Sings the Best Loved Christmas Hymns" or "Have a Punk-Rock Xmas" amidst the mess.) It seems that company policy was to saturate the shops with Christmas one-shots and take back the unsold discs when the Christmas buying season ended. The vinyl content of these returned discs was destined to become regrind and to be thus recycled for a less-seasonal sales effort.

How do regrind additives affect the sound quality of virgin vinyl? I'm told the result is an increase in noise level due to contamination by whatever nonvinyl elements find their way into the mix. The contaminants can be anything from pieces of label that survived the removal process to a salami sandwich that fell

into a vinyl scrap barrel during a lunch break. Although the characteristics of the vinyl compound itself are supposed to be unaffected by the recycling (assuming that the temperatures don't get too high), some record plants are very careful to keep other manufacturers' discs out of the regrind mix. It seems that the special additives that one company uses in its discs could interact badly with some other company's proprietary compound. But no matter what the degree of care exercised, there is apparently some inevitable increase in disc surface noise resulting from the use of regrind. As to which companies are using regrind, and for which category of discs, that is understandably difficult to find out.

## Flat Lead

**Q.** I use 300-ohm TV twin-lead for my speakers since it lies flat under the rug. I'm aware that the 300-ohm rating refers to the cable's nominal impedance at TV frequencies, but is it equivalent to your preferred 16-gauge lamp cord? Say the word and out goes the TV twin lead!

FRANKLYN C. WEISS  
Palos Verdes, Calif.

**A.** Longer lead lengths and lower speaker impedances are two factors that make it necessary to use speaker wire heavier than the normal 18-gauge "zip" cord. If the wire gauge is too thin for a given speaker installation, then there will be some loss of signal and effective reduction in the amplifier's damping factor, both caused by the higher electrical resistance of the thin speaker leads. The loss of damping will to some degree "loosen up" the bass around a speaker's resonance frequency, and some listeners may actually prefer the more undamped bass response.

Given these variables, I can't really tell to what degree your TV twin-lead speaker wire may be affecting your sound. In any case, twin-lead is *not* the equivalent of 16-gauge wire; in fact, it more closely resembles the thin commercial "speaker wire." I often warn readers about. The best way to determine whether the flat line is having a deleterious effect on your speakers' performance is to temporarily substitute a heavier lead from your amplifier or receiver to one of the speakers (the other one should be turned off) and compare the sound with what you've been used to. (If your equipment has a speaker-selector switch, you can make a more immediate A-B comparison by connecting both wires to the speaker at the same time and terminating them in different outputs.) You want to use the same speaker for the comparison because the bass response, which is what you are concerned with here, is highly affected by variables of room placement.

Incidentally, if only 5 to 10 feet of speaker wire (out of, say, a total of 20 to 30 feet) must be run under your rug, there's no reason you can't leave the flat line under the carpeted area and splice in heavier wire at the ends where it emerges.

*Because the number of questions we receive each month is greater than we can reply to individually, only those letters selected for use in this column can be answered. Sorry!*



# NOW THERE ARE THREE TRIAXIALS® FROM THE PEOPLE WHO INVENTED THE 3-WAY SPEAKER.

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This is the speaker that revolutionized car stereo sound. It features a separate woofer for the low tones, a tweeter for the highs, and a midrange for the middle tones... just like the better home stereo speakers.

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CIRCLE NO. 8 ON READER SERVICE CARD



# Audio Basics

By Ralph Hodges



## PSEUDO TIME DELAY

SEVERAL years ago a new audio development was introduced. It was variously referred to as quadrasonic (or quadraphonic) reproduction, as four-channel stereo, or simply as "quad." It was an interesting attempt to create in the home listening room a sense of an auditorium, theater, or club surrounding the listener as it would in an actual performing environment. It required that a pair of "rear" speakers be used in addition to the front speakers in order to surround the listener with sound sources. Recordings had to be specially made for the medium, since the whole performing environment had to be miked, not just the business on stage. And, of course, an additional amplifier was needed to drive the rear speakers, plus whatever special playback accessory was needed to unscramble (or decode) the information from the recording in the appropriate way.

Eventually, four-channel sound ran into difficulties with its public image, its seriousness of intent, and the realities of the marketplace. Though it is now generally considered to be a dead issue, it is probably too early to put a date on the tombstone just yet. Nonetheless, interest has now shifted to another phenomenon called time delay, which was ably described in an article by Peter Mitchell in the October issue of this magazine. Like four-channel recording and playback, time delay is an attempt to create a sense of the performing environment and surround the lis-

tener with it at home. Unlike four-channel, however, time delay does not need a special recording of reverberations set up in the concert hall. Instead, using ordinary stereo records, time delay aims at *simulating* those reverberations through sophisticated means based on what we know about auditoriums and how they affect sound. The object is to arrive at the same goal that four-channel—or at least one aspect of it—was striving for. And from a consumer's point of view the implementation is the same: two more speakers, another amplifier to drive them, and a signal-processing unit to sort out or create the information to be reproduced by the extra pair of speakers.

Back in four-channel's infancy, David Hafler, then of Dynaco and now in charge of a new company bearing his name, proposed a simple and comparatively inexpensive method of obtaining a four-channel effect from ordinary stereo records. Technically, the method was quite legitimate. According to its theory, much of the "hall" reverberance that is inevitably captured even in a stereo recording is embodied in it as a phase difference between the two stereo channels. If this out-of-phase information can be extracted from the content of the recording and amplified on its own, it should contain a high proportion of reverberation—which is exactly what we want to reproduce through the rear speakers.

Extracting these out-of-phase signals turns

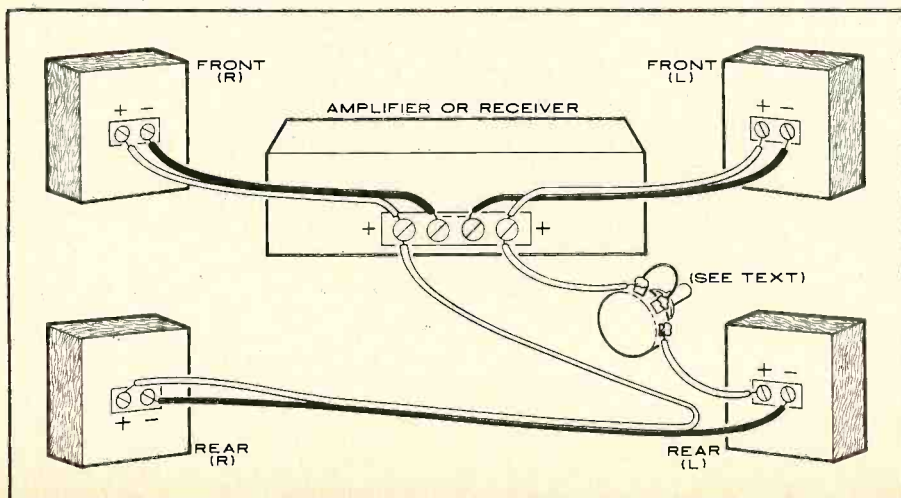
out to be a relatively simple matter. You can do it by connecting a speaker (or a pair of speakers) to your amplifier or receiver *differentially*. The accompanying illustration diagrams one way in which this can be done, but the essence of the technique is simply to connect one terminal of the new speaker(s) to the positive (+) terminal of the amplifier or receiver's left channel and the other to the positive terminal of the right channel. When so connected, the speaker(s) will emit sound only when there is a *difference* between the contents of the two channels. If that difference is purely a phase difference, there's an excellent chance that what comes out of the differentially connected speaker(s) will be—presto!—reverberation.

This technique proved to be so effective (with some records, at least) that Hafler presented it as an alternative to the several competing four-channel systems then battling it out in the market, even though it was much simpler in theory and execution. When I wrote an article on it in April of 1971 and invited reader reaction, the response was exceptionally heavy and almost all positive. In fact, I know a number of people who have retained their "Hafler hookups" and never considered venturing into the more elaborate forms of four-channel reproduction. To me, one of the greatest advantages of the Hafler system was that it gave a hi-fi enthusiast a chance to preview—or *prehear*—the experience of four-channel for the barest minimum expenditure of time and money so that he could decide for himself whether the whole business was worth pursuing further.

It has been suggested that the Hafler system can today offer a similar preview of the new time-delay devices, which tend to be more expensive than four-channel hardware but aim for more or less the same result in the listening room. If you like the one (Hafler's system), which will provide something along the lines of a "pseudo time delay," you're almost certain to like the other even more, if only because it offers more flexibility and a substantially greater effect.

A major drawback of the bare-bones Hafler hookup shown in the diagram is that the control over the level of the rear speakers (actually they work better as *side* speakers positioned just a little to the rear of the listener) is quite limited. If you wish, you can install a level control (50 ohms, 2 watts is about right—see diagram) to enable you to turn the rear speakers *down*. But if they need to be turned *up*, there is little you can do but acquire rear speakers of greater efficiency (since they are being driven by the same amplifier/receiver as the front speakers, the volume control will affect all four speakers together).

The Hafler hookup also increases the variation of impedance the speakers (all four of them) present to the amplifier or receiver. Most modern equipment can handle this, but there is the possibility of upsetting and perhaps damaging some older units. The manufacturer of your equipment is the best source of guidance in this matter, and if he thinks the impedance swings will be excessive, you should take his advice. But my experience indicates that the risk is not too great, especially if you approach the Hafler hookup as a short-term experiment and do not get overly enthusiastic with the volume control. The effect is quite dramatic at low levels, so there really is little need to crank things up. □







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# Tape Talk

By Craig Stark



## Upgrading Tape Heads

**Q.** *Since phono performance can often be improved by installing a new, better cartridge, does the same hold true for tape heads? My deck is several years old, and despite my cleaning and demagnetizing the heads, the playback response is no longer as brilliant as it was.*

KARY LOVETTE  
Detroit, Mich.

**A.** There are actually two questions here: first, do you need a new head, and second, can you get a better one than was originally supplied with your deck?

Tape heads can wear out, of course, though in my experience it is very rare with cassette decks. As head wear becomes a problem, two things happen to cause high-frequency losses. For one thing, the playback head gap widens somewhat, increasing "gap losses" in the treble register. For another, slight ridges develop on the head face where the edges of the tape pass across it. Using an angled mirror and a high-intensity light, you can usually see a developing wear groove, or, if you have a sensitive thumbnail, you can feel it. A serious wear groove can damage the edges of the tape, and, in any case, it tends to prevent the tape from making the proper contact with the head gap, creating "separation losses"—again, at the high frequencies. On the other hand, tape heads aren't cheap, especially when you must add the cost of the highly skilled labor necessary to make the replacement. (Unless you have access to calibrated test tapes, test equipment, and a lot of experience, you should leave ticklish tape-head replacement to a professional.)

There are other possible explanations for treble losses in playback. The resistors and capacitors used for playback equalization can change value as they age, and a technician may be able to correct this. It is possible, too, that your tapes may have lost just a bit of the treble edge they had when newly recorded. (Playing them just once with a magnetized head will bring this about, but even under the best of circumstances repeated playing can cause at least slight losses at the highest frequencies). Before deciding on head replacement, then, get your deck checked out by a good technician and get an estimate of the cost involved. With an older deck, you may well decide that, as with an older car, other

things are likely to start breaking down in the near future and getting a new deck might make more economic sense.

As for finding a better head than the one that came with the machine originally, the odds are very much against it, for the performance of the head is directly tied in with your recorder's electronics. Phono cartridges are, by and large, designed to work into a standard impedance (47,000 ohms), so you can substitute a new model for an old one. This is not true with tape heads, and only the manufacturer of the deck is likely to be able to recommend an improved replacement.

## Erasing Tapes

**Q.** *I've been told that erasing previously recorded tapes with a bulk eraser rather than relying on my deck's own erase head will improve the signal-to-noise ratio of a fresh recording by 3 to 6 dB. Is this true? If so, why?*

MARVIN MIRSKY  
New York, N.Y.

**A.** Bulk erasing does offer definite advantages in many cases, but whether it will materially improve the S/N in your own case depends on the efficiency of your recorder's erase circuitry, the noise level of your deck's electronics, the linearity of the bias oscillator used in your recorder, the coercivity "spread" among the particles in the tapes you're using, track-alignment tolerances . . . in short, on so many unknown variables that no hard and fast answer is possible. Understanding how tape erasing works—and why it sometimes doesn't—will put some of these factors into proper perspective.

First of all, "erasing" a tape (whether with a bulk eraser or with your deck's erase head) does not remove magnetism from the tape (the way using a pencil eraser removes graphite from a piece of paper). Apart from its film base and inert binder, a tape consists of billions upon billions of magnetic particles, each of which (in the ideal case) has a single "magnetic domain." Every magnetic domain, like the needle of a compass, has a north pole and a south pole. If you supply enough magnetic force you can cause the north and south (or "plus and minus," as they're often called) to reverse positions (magnetically, not physically); the force necessary to achieve this rever-

(Continued on page 42)





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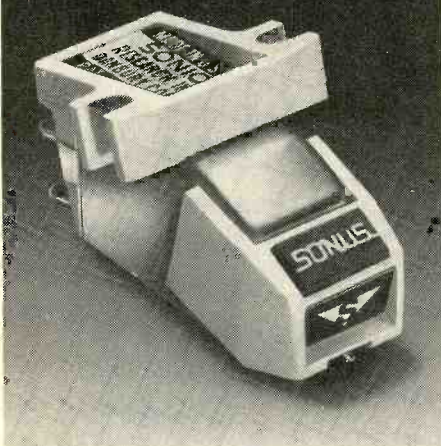
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# SONUS

High Definition Phono Cartridges

## Tape Talk . . .

sal is known as the "switching field." So long as the oxide particles are magnetic at all, they will have opposing poles, and while you can reverse the poles, you can't get rid of them. Thus the total magnetism "in" a tape, so to speak, is constant whether it is recorded or erased.

What the recording process "adds" and what the erasing process "subtracts" is a pattern in the orientation of the magnetic domains of the individual oxide particles. If all the particle fields on a tape are oriented in the same direction, so that all the pluses and all the minuses pull together the same way, the tape is said (somewhat misleadingly) to be "fully magnetized," and it will produce a maximum signal on playback. In the opposite case, when the poles of the particles are randomly oriented so that the individual magnetic fields all cancel each other out, the tape is said (again, somewhat misleadingly) to be "demagnetized," and it will produce no signal on playback. Bulk erasers (and tape-deck erase heads) "demagnetize" a tape by subjecting it to rapidly alternating, extremely high-power magnetic fields, strong enough (ideally) to pull all the poles first in one direction and then in the other. As a result, when any given particle leaves the influence of the eraser field its poles are just as likely to end up oriented in one direction as in the other, which obviously removes any pattern of orientation imposed by a previous recording.

Of course, it is an idealization to speak of all the magnetic poles on a tape being lined up in the same direction or, alternatively, being so randomized that they completely cancel each other out. In the real world, a tape with a rated "coercivity" (the force necessary to erase it fully) of, say, 500 oersteds will in fact contain a number of particles whose switching-field requirements are either above or below this figure. In addition, neither the dispersion nor the physical alignment of particles within the tape coating can be quite perfect, nor is the coating itself perfectly smooth.

Other variables are introduced at the erase-head end. For instance, the field strength generated by the erase head of a tape deck will vary somewhat through the thickness of the oxide coating on a tape. And any even-harmonic distortion in the waveform of the bias or erase current creates a nonsymmetrical waveshape that affects the particles in the tape just like a small direct current flowing through the head, which "de-randomizes" the erased tape and lays down a pattern of hiss instead. Moreover, it is always possible that the tracks of the record and playback heads will not completely coincide with that of the erase head, allowing a tiny "sliver" of previously recorded signal on a tape to escape the erase field altogether. If the level of the old signal is low enough, when you record new material you won't hear it as a distinctly different program but just as unidentifiable noise. (For that matter, a poorly designed tape deck may have playback circuitry whose own noise level is high enough to mask the noise that comes from incomplete erasure or bias/erase waveform distortion.)

Bulk erasing can certainly do a faster, and often more thorough, job of removing unwanted magnetic patterns from a tape. But whether there will be a noticeable improve-

ment in S/N over erase-head erasing for the home recordist must be left to individual experiment with any given machine.

## High-frequency Distortion

**Q.** How can treble distortion be a problem in cassette recording when the chief harmonics of all tones above approximately 7,000 Hz are not only beyond the audible frequency range, but also exceed the frequency response of the recorder?

BOB YOUNGER  
Boston, Mass.

**A.** Your choice of 7,000 Hz (7 kHz) suggests you are aware that the principal harmonic-distortion product generated in tape recording is third-harmonic distortion. In the case of a 7-kHz tone, the third harmonic is 21 kHz, and certainly above this point very few cassette decks have any useful response. When we record music and speech, however, we are not recording a succession of single tones (plus their third-harmonic products), but rather a complex, constantly changing signal that contains many simultaneous tones. And the same nonlinearity that creates a spurious 21-kHz third-harmonic distortion product from a pure 7-kHz input signal also results in "sum and difference" distortion products (intermodulation distortion) when two or more input signals are present together. To oversimplify, when you record a tenor and alto duet, intermodulation distortion is going to present you with some very low-level soprano and bass tones as well.

More accurately, if you have any two frequencies,  $f_1$  and  $f_2$ , present simultaneously during recording, you will get two principal harmonic-distortion products ( $3f_1$  and  $3f_2$ ), but you will also get principal intermodulation products at four frequencies, namely  $2f_1 + f_2$ ,  $2f_1 - f_2$ ,  $2f_2 + f_1$ , and  $2f_2 - f_1$ . Thus, for example, a 7- and 8-kHz simultaneous input, in addition to creating harmonic distortion at 21 and 24 kHz (which are presumably inaudible), produces intermodulation products at 22, 6, 23, and 9 kHz, two of which can be distinctly audible.

The use of two-tone intermodulation tests, especially for the determination of high-frequency distortion and maximum output levels, is becoming increasingly common today in tape recording, and I suspect that it will not be too long before it becomes officially a part of at least two tape and recorder standards presently in preparation.

## Three-head Monitoring

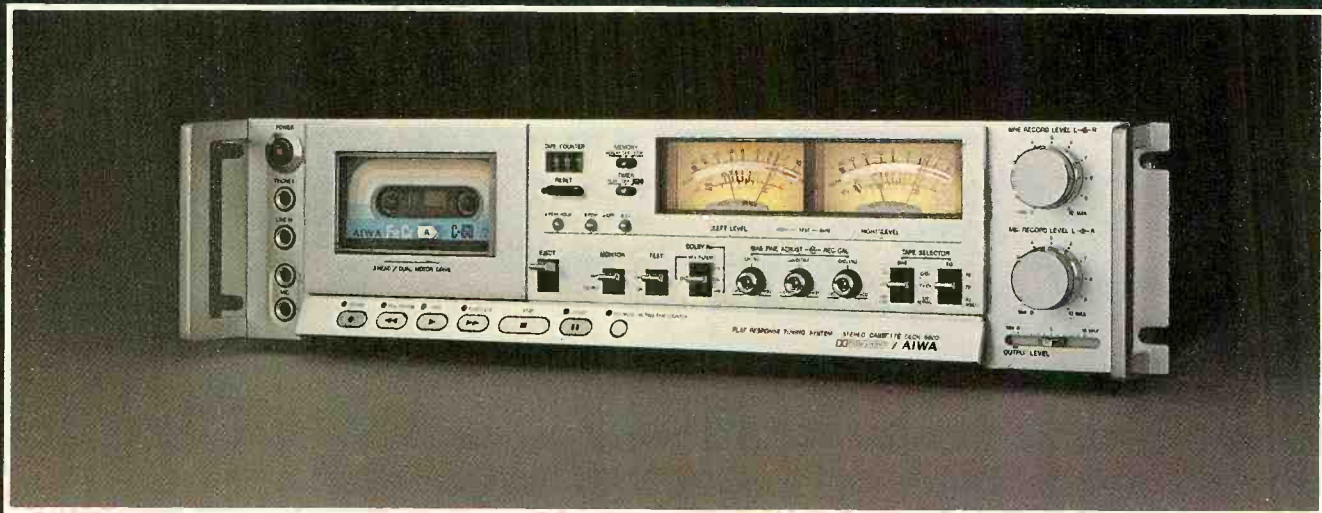
**Q.** Do all three-head cassette decks have instantaneous monitoring so that you can check the quality of a recording while you're making it?

L. S. KORDEN  
Sandusky, Ohio

**A.** Almost all decks that advertise three heads offer full facilities for monitoring off the tape, but there are some models on the market whose third head is either restricted in its frequency response or is used only in making bias adjustments. In other words, don't assume a deck has full monitoring provisions unless it is accompanied by the manufacturer's positive statement to that effect.



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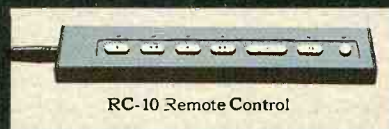
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CIRCLE NO. 3 ON READER SERVICE CARD



# Exploring **THE DIGITAL FRONTIER** in Watford and Tooting



Tom Britton

Some idea of what it takes these days to launch a new company on the perimeter of recording technology

By Henry Pleasants

**T**HE London suburbs of Watford and Tooting are hardly communities where you would expect to find the future of recording taking shape—unless you happen to know that almost all orchestral recording in London is done, logistically and technologically inconveniently, in suburban town halls and churches not only in Watford and Tooting, but also in Richmond, Barking, Walthamstow, Wembley, and so on.

Thus it was that for ten days in September the Watford Town Hall and Tooting's All Saints Church provided the unlikely setting for the most ambitious program yet undertaken in the still-developing new field of digital recording: eight sides by the London Symphony Orchestra, conducted by Morton Gould, and two sides by organist Carlo Curley, the latter recorded on Curley's own digital-electronic organ in the Great Hall of Alexandra Palace. A highly technological audio enterprise, of course, so much so that those involved began to refer to Watford and Tooting as Wooford and Tweeting.

A dramatic enterprise, too, as can readily be grasped from the fact that it was all done on very short notice by a brand-new recording company, so new, indeed, that as of the time of recording it didn't have a label, and so small that its headquarters were still in the basement of the Wayland, Massachusetts, home of its president and general manager, Jerry Ruzicka.

Dramatic also in the manner in which it represented the explosion of a modestly conceived high-fidelity demonstration project

into the concentration and fruition of Jerry Ruzicka's lifelong preoccupation with such diverse but complementary concerns as acoustics, research and development, organization, management, marketing—and music.

There had been earlier drama in the selection, recruitment, and assembly of a small and compact production team consisting of Tom Britton, of Chalfont Records, Montgomery, Alabama, the new firm's associate producer and manufacturing coordinator; Dr. Thomas G. Stockham, Jr., whose Soundstream Computer Process was used in the digital recording; his associate, Bruce Rothaar, as digital design engineer; and Brian Culverhouse, formerly of EMI and now head of his own Brian Culverhouse Productions, Northwood, Middlesex, as production engineer. But of all that, more later.

**A**s of last spring, Jerry Ruzicka was—and continues to be until the end of this year—vice president and director of marketing and sales for Bose Corporation, loudspeaker manufacturers. It was his belief in the importance of selecting the best possible records for the demonstration of speakers that led ultimately to Watford and Tooting.

He had been greatly impressed by the quality of a record produced by Tom Britton's Chalfont label (Chalfont C77.005, reviewed by Richard Freed in the October issue of *STEREO REVIEW*) in terms of production, manufacturing, engineering, and programming (Elgar and Vaughan Williams, for whose music Ruzicka has had a lifelong affection).

Indeed, he was so impressed that he betook himself to Montgomery on May 24, where he learned, among many other things, of the role played by engineer Brian Culverhouse in the Chalfont recording of the Bournemouth Sinfonietta under George Hurst.

The outcome of that meeting was the concept of a new company, Digital Sound Products, Inc., and a telephone call to Dr. Stockham at the University of Utah in Salt Lake City. Ruzicka had known Dr. Stockham through the latter's friendship with Dr. Amar Bose and through attendance at lectures and demonstrations given by Dr. Stockham at M.I.T. and elsewhere. He was also familiar, of course, with what Dr. Stockham had done with his Soundstream digital processing of old records (several by Enrico Caruso and John McCormack were released earlier this year by RCA). Dr. Stockham, like Britton, was receptive to what was now emerging as not merely a new look at high-quality recording, but as a plunge into the sonic future.

And so to music. Neither Ruzicka nor Britton had previous professional musical experience, although both are intensely musical, and Ruzicka was—and is—a more than competent amateur pianist. Their backgrounds were in science and engineering. Jerry Ruzicka began preparing for a career in science at the Polytechnic Institute of his native Baltimore and went on to a bachelor of engineering science degree at Johns Hopkins. During sixteen subsequent years in the aerospace industry, he managed to work in a master's degree from M.I.T.



But on the side there was always music. His family was musical—his father, now retired from a career as a comptroller, plays violin in the Goucher-Hopkins Orchestra in Baltimore and his sister, Mary Ruzicka, is a professional singer. Young Jerry learned to play on the piano, both from notes and by ear, the music he liked best. And the music he liked best was to have a decisive bearing on what was recorded at Watford and Tooting. It was film music, primarily the rich orchestral variety of the mid-century: Alfred Newman, Max Steiner, Franz Waxman, Hugo Friedhofer, Bronislav Kaper, Erich Korngold, Miklós Rózsa, David Raksin, and—above all—Victor Young.

Tom Britton put in two years at Georgia Tech, then nine years at the University of Alabama, majoring in geology and helping to foot the bill by teaching astronomy at Huntingdon College in Montgomery. As far as music was concerned, he was a record buff rather than a musician, but so serious was he about his records that he got an A in music history at the University of Alabama without cracking a book. He simply applied what he had picked up from liner notes.

Ruzicka's taste for film music is not confined to American composers. He was similarly drawn to the scores of William Walton, Arthur Bliss, Charles Williams, Richard Addinsell, and, of course, Ralph Vaughan Williams. Britton's choice of Elgar and Vaughan Williams for his Chalfont recording suggested a congenial musical spirit, and during the six-hour meeting in Montgomery this was confirmed, along with Ruzicka's admiration for the skills of Brian Culverhouse.

**G**IVEN such musical predilections, there was never any doubt in Ruzicka's mind about who should take charge of the musical end. He wanted Morton Gould both as conductor and composer. And so, when he returned to Framingham from Montgomery, he phoned Gould at the latter's home in Great Neck, Long Island. Gould was initially reluctant, but the next thing he knew Ruzicka was present in person on his doorstep. When he departed three days later, Gould was on the team, a draft repertoire had been selected, and Ruzicka was ready to swing into production. He is a persuasive fellow.

"What I had in mind," he told me during a recording break in Tooting, "was a combination of repertoire, artistry, recording tech-

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... digital recording as it exists today represents a breakthrough comparable to those of electrical recording, the LP, and stereo."

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nology, and manufacturing expertise to achieve the highest-quality records ever produced. For this we needed a repertoire that would demonstrate and exploit that high quality as vividly as possible. I had long been a Morton Gould admirer (it turned out during our long sessions in Great Neck that I could recall music of his that *he* had forgotten), and I knew that much of his music would fit that purpose.

"So we are devoting two sides to Morton Gould, including the first recording ever of an eleven-minute suite called *Festive Music*. Another substantial work will be his more familiar *Latin American Symphonette*. All of his music will be heard not for the first time on record, but for the first time on record with the composer himself conducting. We plan to get that disc out in time to coincide as closely as possible with Morton's sixty-fifth birthday on December 10.

"For the rest, we looked for music that invited use of the new wider dynamic range and clarity provided by digital recording—what I like to think of as sonic spectaculars: Ravel's *Boléro*, of course, and the Sailors' Dance from Glière's *The Red Poppy*, the Polka and Fugue from Weinberger's *Schwanda*, and so on, along with a wide selection of Spanish music (De Falla, Turina, Albéniz, and Granados) and film music (Gould, Newman, Bliss, Vaughan Williams, Copland, Moross, Addinsell, Rózsa, and Korngold). We also included music from John Williams' *Star Wars* score, a score that I welcome, by the way, as possibly heralding a return to a more symphonic type of film music."

And so to the recording studio. How, one wonders immediately, does the fact of digital recording affect a recording session? The answer is not at all, except in relieving the performers, and especially the percussionists, of certain dynamic inhibitions inherent in conventional analog recording. The LSO percus-

sionist responsible for the big drum couldn't believe his ears when told to whack away as hard as he could, and he could hardly believe what he heard on the playback of the digital tape.

Even the control room is unchanged, with the engineer manipulating the levers of a conventional sixteen-track console and an analog tape rolling along in the usual way (to be used as a future point of reference in editing). But in an adjacent room at both Watford and Tooting, Tom Stockham and Bruce Rothaar presided over the formidable array of electronic apparatus that constitutes the Stockham Soundstream computer process, converting sound into binary numbers on a digital tape specially made by Ampex for digital recording, and operating at 35 ips (as opposed to the usual 15 ips for analog taping). This master tape will be transferred to a master disc at the JVC Cutting Center in Hollywood.

The technical details of digital recording have been discussed in depth in *STEREO REVIEW* by Robert Berkovitz (July 1977) and Craig Stark (March 1978). Suffice it to say here that the Soundstream digital process involves a sixteen-bit system sampling the music signal at a rate of 50,000 Hz.

The advantages of digital recording, as expounded by the team at Watford and Tooting, are various and significant for the future. It offers, to begin with, a wide dynamic range limited only by what is tolerable to your loudspeakers and your neighbors. As with the LSO's percussionist, analog recording has always subjected orchestras and other performers to dynamic inhibitions not felt in live performance. Conventional equipment can be easily overloaded. Properly designed digital recording systems can take the whole bit, and players can play just as they would in the concert hall or opera house.

In editing, too, there is an important advance. You don't cut and splice digital tape. You *talk* to it—through the computer, of course, and in computer language. Dr. Stockham estimates that editing can be done within ten microseconds of absolute accuracy. The noise or bad breaks that can result from the fallibilities of cutting and splicing are thus eliminated. A further—and related—advantage is that a digital tape can be copied, and the copies copied, any number of times without the slightest degradation of sonic fidelity.

**T**HERE are, to be sure, still conventional (analog) factors that can bear upon what you will hear from your record player: microphones, loudspeakers, discs, and the various components of the record player itself. For commercial distribution, the digital tapes must still be "translated" back into the analog language so that they can be pressed on disc, and what you hear will be influenced by the quality of the material, the quality of the pressing. And such discs will, for the time being at least, be relatively expensive—about \$15, according to Britton's present reckoning. In the future lies the digital disc that will be read by a very special digital-playback stylus/cartridge or, possibly, by a laser beam.

But if the future is not quite at hand in all its awesome technological wonder, the evolving present is exciting enough. In Dr. Stockham's view, digital recording as it exists today represents a breakthrough comparable to those of electrical recording, the LP, and stereo. It would appear that sound recording's second hundred years is off to a very good start. □

Listening to playback are, left to right, engineer Brian Culverhouse, analog tape operator Gary Moore, conductor Morton Gould, and DSP president Jerry Ruzicka





# Technical Talk

By Julian D. Hirsch



## • Is Perfect Audio Already Here? •

No, the millenium has not arrived, not by a long shot! Nevertheless, we have reached a state of refinement in the performance of some electronic components that prompts me to wonder whether further improvements in several specific performance areas such as distortion and noise are really needed.

Mountain climbers are driven to scale Mount Everest "because it is there," and no doubt some engineers strive for further reductions in distortion and noise levels simply because the absolute theoretical limits have not yet been reached. This is a commendable ambition, and I would be the last to oppose it. However, audio is a consumer-oriented industry, and economic restraints cannot be ignored completely. A degree of performance and reliability that is indispensable in space-exploration devices, for example, would be ludicrous and totally unaffordable in a consumer high-fidelity product.

Very well. If we do not need absolute mechanical and electrical perfection and 99.999+ per cent reliability, how much do we really need? There is no clear consensus among audiophiles and engineers on tolerable distortion levels, for example. In fact, lumping all unwanted signal components and other departures from the original waveform under the single term "distortion" (according to the accepted definition of the term) makes the whole problem simply insoluble. The audible effects of the many types of nonlinearities differ so widely that trying to express distortion as a simple number is a clear case of mixing apples, oranges, and gooseberries.

For a number of reasons, amplifier-distortion levels have decreased steadily over the years. Improved semiconductors and circuit designs have made possible amplifiers with distortion ratings of 0.001 per cent and even less.

Does this vanishingly low distortion make an amplifier sound better in any way? If it did, the effort that goes into achieving it could be considered worthwhile. Even most proponents of "zero-distortion" designs hesitate to make such claims. On the contrary, there are some manufacturers (Sherwood, for example) who have openly and bravely stated what most professionals have known for a long

time: that there is no audible advantage in making amplifier distortion arbitrarily low *so long as the distortion in all program sources exceeds it by many times*. Sherwood has boldly put their philosophy into practice by introducing new receivers and amplifiers carrying realistic distortion ratings of 0.2 per cent.

Ultra-low distortion represents little more than an engineering tour de force because every program source has, by comparison, a relatively huge distortion. Most of what we hear, whether from our own discs or broadcast via FM radio, comes from phonograph records. Everyone who has tried to measure the distortion in the output of a phono cartridge realizes that, under the most ideal conditions, the distortion will rarely get as low as 0.1 per cent. More likely, at normal recorded levels (and using the finest cartridges and tone arms) it will be in the range of 1 to 3 per cent. With average equipment—or if mistracking occurs—it will be far higher. Yet some phono preamplifiers boast distortion levels of 0.01 or even 0.001 per cent!

Perhaps your local "good music" FM station broadcasts live concerts or uses good master tapes. These should be better than records, but I would still expect the actual program distortions, at the point where they enter the transmitter, to exceed 0.1 per cent under ideal conditions, and a more realistic figure would be considerably higher than that. Since we are fantasizing, let us assume that the station has a perfectly distortionless transmitter. What about your FM tuner?

Under laboratory conditions, with critical tuning aided by a low-distortion signal generator and a distortion analyzer, some of the best tuners can achieve stereo distortions as low as 0.07 per cent. Under "real-world" conditions, 0.2 per cent or so would be a more realistic estimate, although a good frequency-synthesizing tuner might do a little better. All of this assumes zero multipath distortion, which is a condition to be found probably only in the land of Oz. Here on earth, multipath can produce distortions many times those inherent in the tuner and program material.

THE situation with respect to noise is somewhat similar. Assuming that you are not one of the fortunate few who listen only to 15-ips Dolby-A master tapes (and there are such favored ones among us!), I would be surprised if your program noise "floor" is more than 65 to 70 dB below peak program level. Even this estimate is probably optimistic, since very few records have such a low background noise level, and it is a rare FM tuner that will deliver more than a 70-dB signal-to-noise ratio (S/N) in actual off-the-air listening (and even rarer for an FM station to transmit such a low noise level). If your listening is done under less-than-ideal conditions, as may happen from time to time (in my case, less-than-ideal sometimes appears to be the "norm"), a 50-dB S/N would be about all that could be expected. I am considering the effect of ambient room noise, outside traffic sounds, the hum of a refrigerator or furnace motor, and so on, as part of the noise background. (I'm ignoring the frequency spectrum of such noise, for it would complicate this discussion.)

On the reasonable assumption that equipment noise should be at least 10 dB lower than the program noise if it is not to affect the final sound, an 80-dB S/N rating would be quite sufficient for a home hi-fi amplifier. Nevertheless, new amplifiers frequently claim noise levels of -95 to -100 dB relative to rated power. Usually this is achieved by using expensive low-noise transistors and other components. What is the benefit to the user? I have not been able to answer this to my satisfaction. Lower noise obviously cannot hurt, but higher prices cannot help either.

(Continued on page 51)

## Tested This Month

Nagatron HV-9100 Phono Cartridge  
and HA-9000 Head Amplifier  
Dual 819 Stereo Cassette Deck  
Pioneer SX-1980 AM/FM Receiver  
Crown DL-2 Controller Preamplifier  
Synergistics S-92 Speaker System



# B-I-C introduces four speaker systems good enough to match our remarkable new turntables and cassette decks.



**We've combined linearity with efficiency in a way to maximize both... and bring you the most accurate and satisfying music at prices less than you'd expect.**

Why linearity?

Because it makes for sound reproduction accuracy.

Why efficiency?

Because it provides a wide dynamic range.

When you combine the two, you have life-like sound that will satisfy even the most discriminating listener.

How did we do it?

The patented Venturi enclosure, which actually launched the high-efficiency era in speakers, has been significantly improved. The duct has been lengthened, retuned and acoustically damped. The result is a highly efficient, clean and tight response over an extended bass range.

We improved the crossover network configuration through computer calculation, with circuitry and component values meticulously selected to avoid time and phase distortion.

We have chosen components

for their ability to withstand peak voltages and heavy current conditions.

We created our "transonic" grille to avoid edge reflections and diffraction.

We provided total protection to the speaker system by having a separate fuse for each driver in every speaker in the new B-I-C series.

We have done all of this, and a lot more, to attain what we believe the market needs:

Speaker systems good enough to complement the new B-I-C turntable line and the new B-I-C two-speed cassette deck — both of which received critical acclaim upon their introduc-

*The new Venturi II design (right) both acts as an acoustic transformer, to multiply bass energy, and as a low pass filter to enhance the quality of the deep bass signal. Damping material (pink) acts to improve transient response.*



tion. (Of course, any of our equipment can be combined with other people's high-fidelity components to the advantage of those components.)

We concentrated on getting these new B-I-C loudspeakers to be standouts among the 200 or so speaker brands now being offered. Not standouts by words. Not standouts because of unusual shapes or esoteric materials, which don't necessarily contribute to performance quality. But standouts because they combine design and componentry in such a manner as to maximize both linearity and efficiency — and therefore reproduce sound that the most discerning listener would want to hear.

We know that these are only claims, and even though it's B-I-C making them — B-I-C has been in the business for longer than just about any other company offering high-fidelity products — you must judge for yourself. The ultimate truth of a speaker is in the listening, not in what is written about it.

So please A-B the new B-I-C speakers against your other favorites. We are sure that you will be quite pleasantly surprised at both the sound and the price.

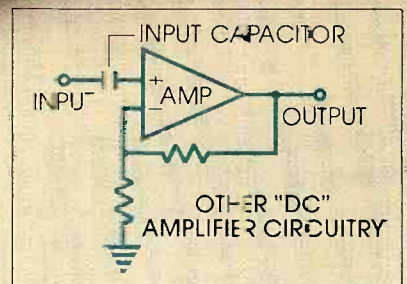
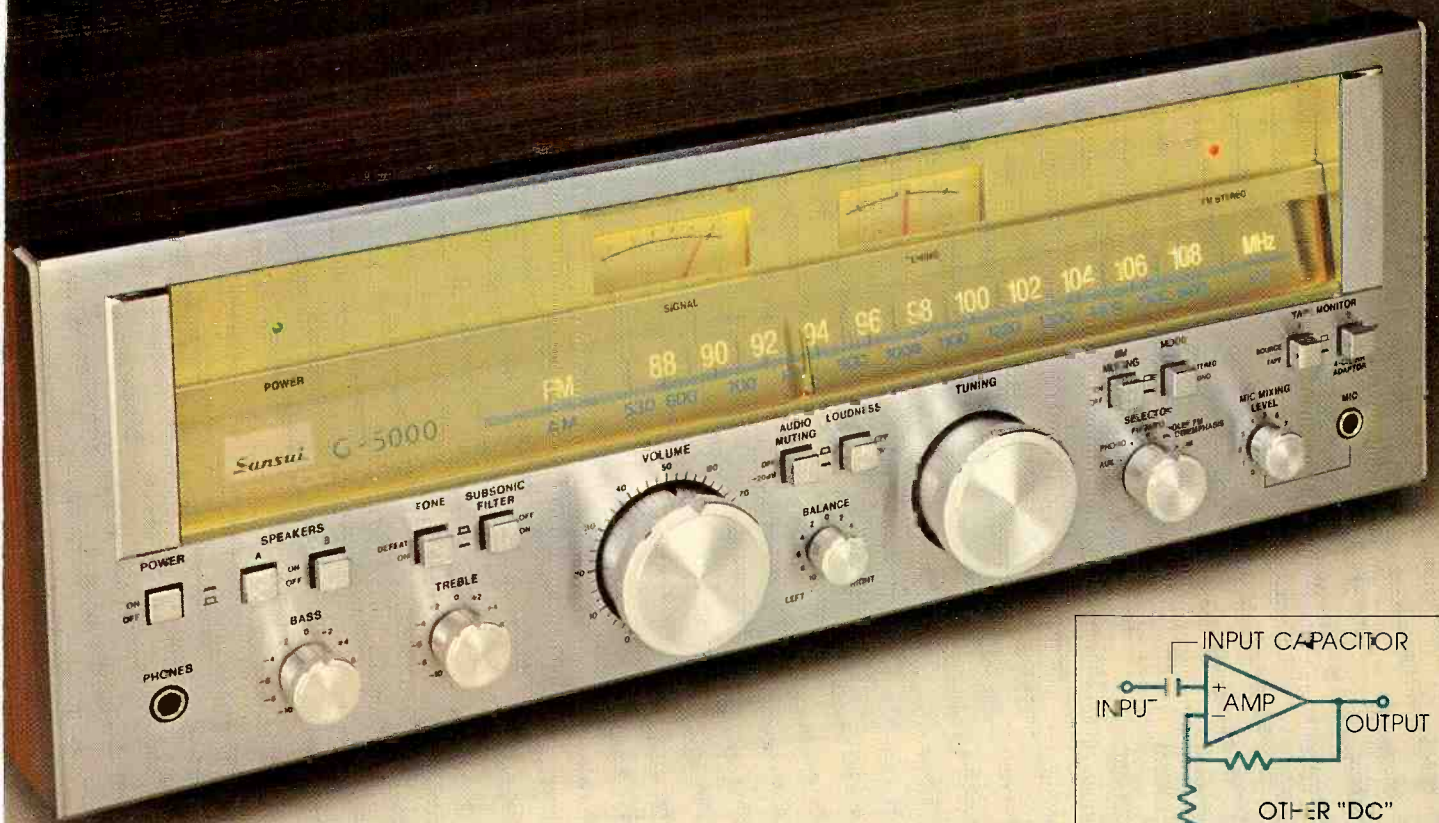
**B-I-C SPEAKER SYSTEMS**

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CIRCLE NO. 7 ON READER SERVICE CARD (FOR EARLIEST RESPONSE WRITE DIRECT)



# The world's finest all have one



## Sansui's unique DC

Sound quality is what your audio system is all about. So your new receiver or amplifier should, above all, offer you audibly better music reproduction than what you have now or might buy at a comparable price. That's why Sansui created its unique DC amplifier circuitry, which lets you actually hear and appreciate the difference.

Sansui's DC amplifier section (patent pending) is used in all Sansui DC integrated amplifiers and DC receivers, including the AU-717 and G-5000. Either way, your music reproduction will be cleaner, richer and more true-to-life than you have ever heard before.

### LOWEST POSSIBLE DISTORTION

Sansui receivers and amplifiers have long been recognized for their distortion-free sound reproduction, virtually eliminating harmonic and intermodulation distortion. Now, Sansui's new DC circuitry enables us to conquer even subtler imperfections, such as transient intermodulation distortion (TIM), caused by time delays or "phase shifts."

### FASTEST RESPONSE

Sansui's DC amplifier section is designed without input, output, or negative feedback loop capacitors to eliminate low frequency phase distortion. And our exclusive dual compensation circuitry gives the high-speed, high-frequency response to achieve most accurate reproduction of the most demanding musical transients.

The speed/response capabilities of an amplifier are measured by its rise time which, for both the G-5000 and AU-717, is a mere 1.4 microseconds, corresponding to a frequency response that extends from zero Hz (DC) to 200,000Hz.

Slew rate tells you how large a transient burst an amplifier can handle. The G-5000 is rated to swing a signal level by 56 volts per millionth of a second, and the AU-717 is just a trifle faster: 60V/ $\mu$ sec.

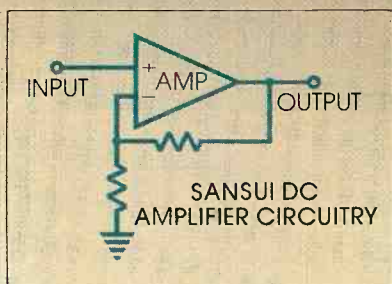
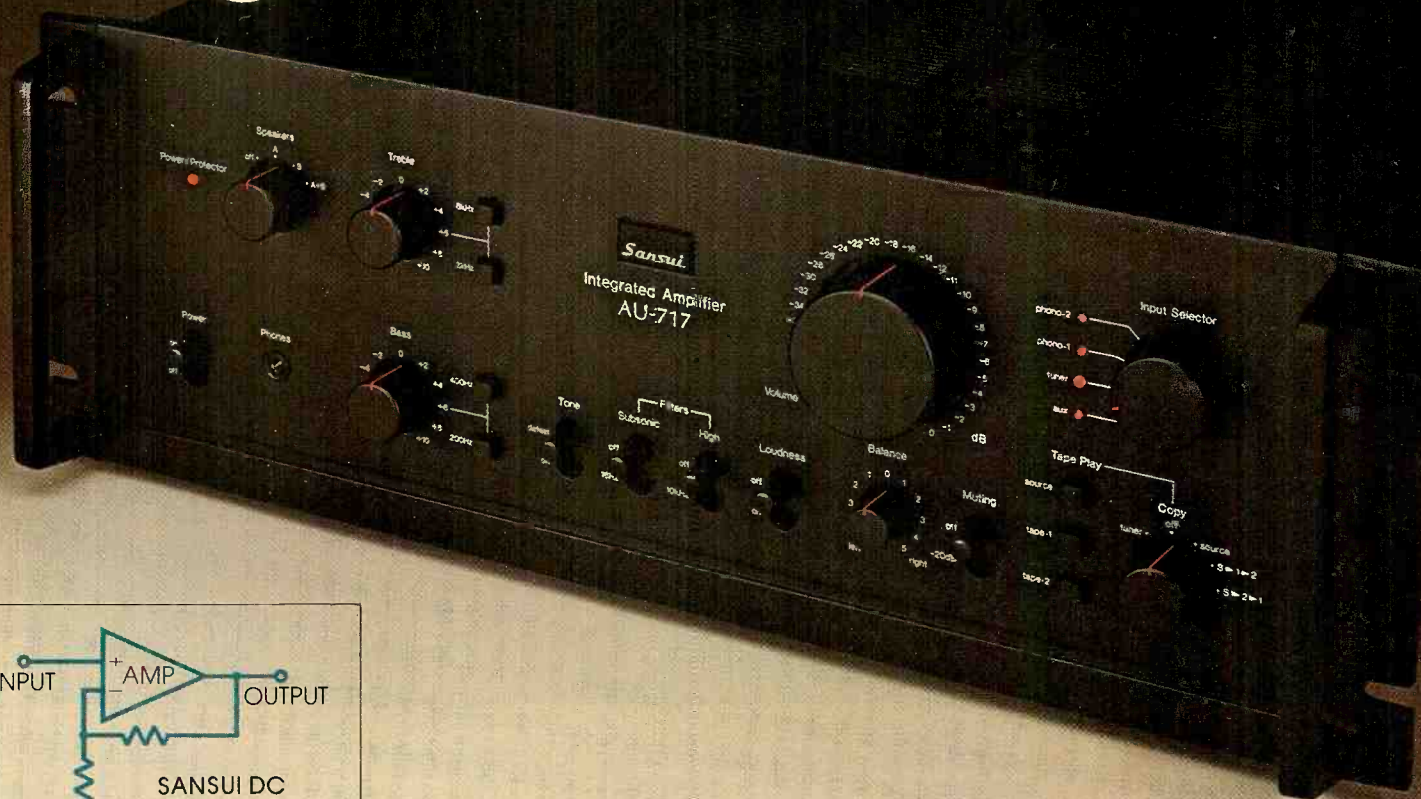
The result of Sansui's unique DC design is audibly cleaner sound.

### HUMAN ENGINEERING

In developing the most sophisticated ampli-



# receivers and amps thing in common:



## amplifier circuitry.

ation circuitry in the world, Sansui has not neglected the features that make components fun to run — for we believe that your audio components should provide not only superb music reproduction, but also great creative versatility. Both the AU- and the G-series feature a full complement of controls, logically arranged to make them a positive pleasure to operate.

### THE G-5000 DC RECEIVER

Sansui's popularly priced G-5000 uses the same DC amplifier power design as Sansui's other, more costly models. It also incorporates our special new protective circuit that safeguards both your speakers and the G-5000 against mishap. Output is a usefully-powerful 45 watts per channel, min RMS, both channels driven into 8 ohms, from 20 to 20,000Hz, with no more than 0.03% total harmonic distortion.

### THE AU-717 DC INTEGRATED AMPLIFIER

If your choice is for separates rather than a receiver, Sansui suggests the rack-mountable

AU-717 DC integrated amplifier. Our AU-717 has been acclaimed by the experts for its rare clarity of sound and for its superb versatility. Its DC power amplifier configuration means super-wide frequency response, with improved transient reproduction from the lowest lows to the highest highs. And the multitude of precise controls will meet your most sophisticated listening and recording needs. At 85 watts per channel, min RMS, both channels driven into 8 ohms, from 10 to 20,000Hz, with no more than 0.015% total harmonic distortion, the AU-717 is an unbeatable value for every music lover.

To hear the dramatically crisp and lifelike difference the AU-717 and G-5000 make, visit your franchised Sansui dealer today.

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# ASK ANY AUDIOPHILE ABOUT PHILIPS' REVOLUTIONARY PROJECT 7 SERIES.

## HE KNOWS.

|               | AF 877        | AF 867        | AF 777        |
|---------------|---------------|---------------|---------------|
| Wow & Flutter | 0.03% (WRMS)  | 0.05% (WRMS)  | 0.05% (WRMS)  |
| Rumble        | -70dB (DIN B) | -65dB (DIN B) | -65dB (DIN B) |
| Price         | Under \$240** | Under \$200** | Under \$180** |

\*\*Suggested retail prices optional with dealers.





I am certainly not opposed to progress in any component of a music system. My plea is for moderation. Costs will continue to rise, and to me it seems more desirable to give the consumer a realistically better, more reliable product for his money than to seek a questionable advantage in the marketplace by exceeding the competition's already lower than required distortion and noise ratings! If I seem to overstress *reliability* in my appraisal of hi-fi components, it is because nothing disturbs me more than to have a piece of equipment fail to perform properly, or, worse yet, to blow up catastrophically. I am pretty sure that neither I nor anyone else can *hear* the difference between 0.1 and 0.01 per cent distortion on program material, but I *surely* can hear the difference between a functioning amplifier and one that has self-destructed. I raise this point because sometimes the design parameters that result in more impressive "specs" also reduce reliability.

Only someone who measures the performance of modern high-fidelity components on a day-to-day basis can appreciate how far their performance and specifications outstrip any laboratory test instruments. The best available distortion-measuring equipment has a residual distortion of 0.001 to 0.002 per cent. (Ideally the distortion in the measuring equip-

"I am pretty sure that neither I nor anyone else can *hear* the difference between 0.1 and 0.01 per cent distortion . . ."

ment should be no more than one-fifth of the distortion level one is attempting to measure.) The best FM signal generators have a rated distortion of about 0.1 per cent, although they often have actual residual levels of about 0.06 per cent. Again, they cannot be depended on to measure the distortion of a tuner at levels under 0.3 per cent.

How do the manufacturers establish their amazingly low distortion ratings? At times, in the past, such wonders were created in advertising departments, but this practice in general no longer exists because there are so many independent testing laboratories that would speedily uncover the fraud. No, most of today's ratings are genuine, although they sometimes depend on non-standard test conditions and should be viewed with some skep-

ticism unless it is clearly stated that they conform to some generally recognized U.S. standard of measurement.

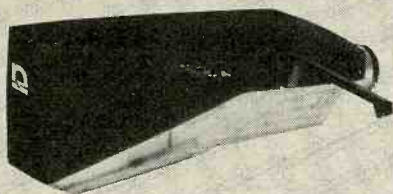
As a rule, however, some specially modified test instruments are required. It is often possible to open up and readjust a signal generator, for example, for extremely low distortion at one frequency, with one particular deviation and modulation frequency. Such a generator would not be useful for other tests in many cases, and one cannot expect an independent laboratory (such as Hirsch-Houck) to invest thousands of dollars in special instruments to verify the performance of only one or two manufacturers' products.

So independent reviewers such as myself have to content themselves with doing the best they can, although it is galling at times to realize that our thousands of dollars worth of new laboratory instruments are still unable to check the performance of even some of the moderately priced components used by thousands of audiophiles. I have reconciled myself to the march of progress, and I realize that I can catch up only fleetingly with the elusive "state of the art." But I take some comfort in the fact that, if a component's performance approaches the limits of my test equipment, any improvement beyond that point is unlikely to be audible.

## Equipment Test Reports

By Hirsch-Houck Laboratories

### Nagatron HV-9100 Phono Cartridge and HA-9000 Head Amplifier



**N**AGATRON phono cartridges, a recent arrival on the American hi-fi scene, are imported from Japan by Nagatronics Corporation of Baldwin, New York. The line is headed by the HV-9100, which is both expensive and unique in its construction.

The HV-9100 is a "ribbon cartridge." Although Nagatron's literature carefully distinguishes the ribbon transducer from all other types (including the moving-coil cartridges), it is, in effect, a moving-coil cartridge with a "half-turn" coil. Instead of a multiturn coil moving in a fixed magnetic field, the HV-9100 has a single tiny wire, or ribbon, for each channel.

Evidently the fixed magnetic field of the HV-9100 is very strong, since the cartridge's output is rated at 0.04 millivolt—not an un-

common figure for moving-coil cartridges having a *number* of turns in their windings. Like these, the Nagatron HV-9100 requires a head amplifier (or step-up transformer) to increase its very low voltage to a level suitable for driving standard amplifier phono inputs. Nagatron has designed such a pre-preamplifier specifically to complement the needs of the HV-9100. However, the HA-9000 head amplifier can also be used with many types of moving-coil cartridges, and the HV-9100 is likewise adaptable to head amplifiers of other manufacturers.

The generating elements, or ribbons, of the Nagatron HV-9100 are within the body of the cartridge and are actually moved by a Y-shaped yoke that extends slightly from its bottom. The forward end of the stylus cantilever,

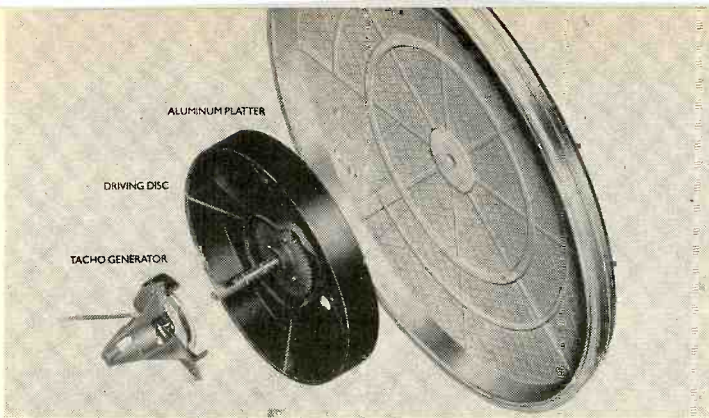
near the stylus, rests in a slight depression in the yoke, so that its motion is transferred to the ribbons without any direct contact between them. This arrangement makes for exceptionally easy stylus replacement with virtually no chance of damaging the stylus.

Nagatron has also departed from conventional practice by building the cartridge into a head shell that serves as its outer case. The lower portion of the unit is translucent plastic, permitting the inner workings of the cartridge to be seen quite clearly. A finger lift is permanently attached to the upper part of the cartridge housing, and the standard four-pin bayonet plug fits the majority of separate tone arms currently manufactured. The chief disadvantage of this otherwise very convenient arrangement is that with most tone arms no adjustment of stylus overhang is possible. A few, like the Shure SME, can be adjusted by moving the entire arm base, but most depend for this on the positioning of the cartridge within the head shell.

The Nagatron HV-9100 has a source impedance of only 3 ohms, essentially resistive. The recommended load is 10 to 30 ohms, but this is not critical. The nude diamond tip has elliptical radii of 0.4 and 0.8 mil and is meant to track at forces from 1.6 to 1.8 grams (the nominal rating is 1.7 grams). The nominal dynamic compliance of the stylus system is  $7 \times 10^{-6}$  centimeters per dyne. As with moving-coil cartridges, the high-frequency response of the HV-9100 is not limited by the induc-

(Continued on page 54)





### The World's First No-Compromise Turntables.

These are the turntables audiophiles have been waiting for. The world's first turntables to combine the specs and performance of direct drive with the proven advantages and value of belt drive. That's right – the Philips Project 7 Series turntables have wow & flutter and rumble specs as good as the most expensive direct drive systems. And the acoustic and mechanical isolation of a belt drive. Philips even designed two new tonearms to be perfectly compatible with the new drive system.

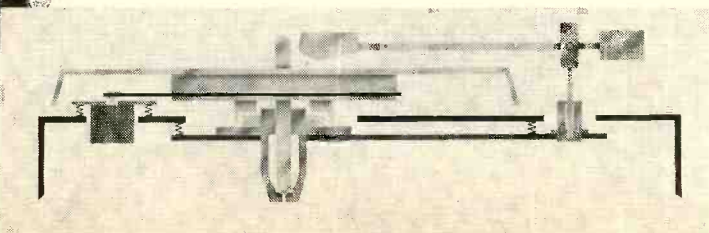
The Project 7 Series opens up a new era in turntable performance – the no-compromise era. Because Project 7 turntables compromise on nothing. And because of the incredible Project 7 prices, you won't have to compromise, either.

### Did Philips Compromise on Performance? No!

The heart of the Project 7 revolution is a 160 pole tachogenerator that electronically monitors and controls the speed of the platter at the driving disc. Actually putting the driving disc right into the electronic feedback loop. This unique electronic Direct Control system means that variations in line voltage and frequency, variations in pressure on the platter, variations in temperature, even belt slippage – all have virtually no effect on platter speed. All Project 7 turntables maintain constant, accurate speeds – automatically and electronically.

### Did Philips Compromise on Specs? No!

The wow and flutter on the Philips AF 877, for example, is a remarkable 0.05% (DIN) and 0.03% (WRMS). With a rumble figure of better than -70dB. No compromise there.

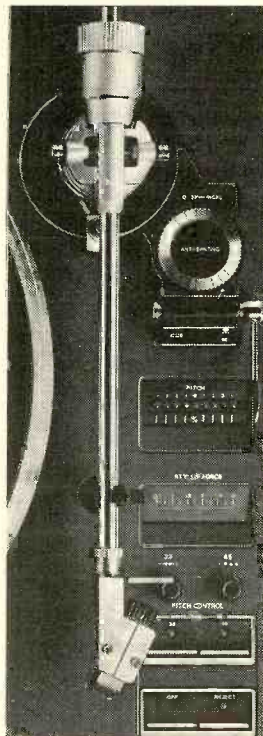


### Did Philips Compromise on Construction? No!

The aluminum platter and the specially designed straight, low-mass, tubular tonearm are mounted on a separate, shock-proof, free-floating sub-chassis – which is suspended from the main chassis by three nickel chromium leaf springs with butyl-rubber dampers. And that mouthful translates into superb acoustic and mechanical isolation, excellent tracking characteristics, and exceptional stylus and record protection.

### Did Philips Compromise on Controls? No!

Project 7 Series turntables are all-electronic, all the way. On the Philips AF 877, for example, four reliable electronic touch controls provide quiet, convenient, vibration-free operation. There are separate touch controls for starting, stopping, reject and speed selection – all with LED indicators. One touch is all it takes. And when the record is completed, you don't have to touch anything at all. Because electronic (not mechanical) controls lift the tonearm and return it to its rest.



Nine LED indicators also monitor platter speed – and help you vary pitch – with pinpoint electronic accuracy. No more cumbersome checking of the strobe rings on the platter. And a convenient, built-in, accurate direct read-out stylus gauge makes stylus force adjustment as easy as turning the de-coupled adjustable weight on the tonearm. No extra gauges, gadgets, or paraphernalia needed.

And a convenient, built-in, accurate direct read-out stylus gauge makes stylus force adjustment as easy as turning the de-coupled adjustable weight on the tonearm. No extra gauges, gadgets, or paraphernalia needed.

### Philips Won't Compromise. Neither Should You.

Four years ago Philips set out to build the best-performing, best-looking, best-priced turntables in the business. The Project 7 Series turntables more than meet all those goals. With no compromises.

And we don't want you to compromise, either. That's why we've prepared a new, fact-filled 36-page brochure "Ask Us About High Fidelity. We Know." It's filled with dozens of tough questions and honest answers about everything from turntables and tape decks to amps, preamps, tuners and speakers. And it's yours, free. Just call us, toll-free, at **800-243-5000\*** and we'll send you a copy. It can help you find the high fidelity equipment you're looking for. With no compromises. \*(In Conn.: 1-800-882-6500)

EVERYONE WHO KNOWS, KNOWS

# PHILIPS

High Fidelity Laboratories, Ltd.

CIRCLE NO. 58 ON READER SERVICE CARD



tance of its windings or by external load conditions. The frequency response of the HV-9100 is rated at 20 to 30,000 Hz, with no tolerance given.

The companion HA-9000 head amplifier is a long black box with four phono jacks at one end and a pushbutton power switch at the other. An orange "flag" is visible in the button when it is engaged. The preamplifier is battery powered, using four C cells per channel (the manual incorrectly refers to four D cells). A small meter at the connector end of the case monitors the battery voltage when a button next to it is pressed.

The specifications for the HA-9000 are limited to its basic performance, and no information is given on the internal circuitry. The gain is nominally 40 dB (a voltage gain of 100 times), with a frequency response of 10 to 200,000 Hz  $\pm 1$  dB and a total harmonic distortion of 0.01 per cent at 1,000 Hz (at an unspecified level). The amplifier noise level is rated at -155 dB referred to 1 volt (with RIAA playback equalization, A weighting, and a shorted input). The input impedance of 20 ohms matches the requirements of the HV-9100 cartridge, and the output is designed to drive the 47,000-ohm input of a standard phono preamplifier. The available data on the HA-9000 gives conflicting data on its maximum input (and output) capabilities, but it is easily able to handle any signal that it will receive from a Nagatron HV-9100 or most moving-coil cartridges. The Nagatron HA-9000 head amplifier is 2 3/8 inches wide, 3/4 inches high, and 10 inches deep (plus the connectors in the rear and the power switch in the front). With the batteries installed, it weighs a rather surprisingly hefty 4 pounds. Price: HV-9100 phono cartridge, \$220; HA-9000 head amplifier, \$275.

⊗ **Laboratory Measurements.** The Nagatron HV-9100 was plugged into a tone arm designed to accept the universal four-pin plug-in head shell. Although no overhang adjustment was possible, the 53.5-millimeter distance from the stylus to the mating surfaces of the HV-9100 plug and the tone-arm socket was sufficiently close to the arm's design parameters for an acceptably low tracking error



A pre-preamplifier is required with the Nagatron HV-9100 (and other moving-coil cartridges) to raise output sufficiently to drive standard phono inputs.

(most arms using this type of head shell are designed for spacing of 50 to 52 millimeters).

Before making any measurements on the cartridge, we tested the HA-9000 head amplifier to confirm that it would not affect the measurements (it did not). The gain of the HA-9000 at 1,000 Hz was 38.5 dB, and its response was down 1 dB at 20 Hz (3.4 dB at 10 Hz). At the high end, the response was down only 1 dB at our upper measurement limit of 500 kHz. The noise in the amplifier output (measured over a 6-MHz bandwidth and unweighted) was less than the minimum 100-microvolt capability of our meter. The output impedance of 80 ohms meant that the performance of the HA-9000 would not be affected at all by any external loading, either resistive or capacitive. It also should give a minimum noise level within the main preamplifier, being virtually a short circuit on its input. The distortion in the output of the HA-9000 was below its noise level until the output exceeded 3

millivolts (mV). It was 0.1 per cent at 10 mV, 0.63 per cent at 100 mV, and 2 per cent at 300 mV. It is clear that the HA-9000 will never limit the dynamic range of a music system in which it is used.

The tracking force of the cartridge was set to the recommended 1.7 grams. All cartridge measurements were made through the HA-9000 head amplifier. The output was 3.3 mV per channel at a velocity of 3.54 centimeters per second (cm/sec), which is comparable to that of most good moving-magnet cartridges. Both channels had exactly the same output level. For those planning to use the HV-9100 with another make of head amplifier, this output level corresponds to 0.039 mV at the cartridge.

The HV-9100 tracked our test records very well at its rated force, and often also at lower settings. At 1.3 grams it handled 30-cm/sec levels at 1,000 Hz from one record, while only 1 gram was needed to track very high level 32-Hz signals from another record. The 300-Hz tones of the German Hi Fi Institute record could be played to the 80-micron level at 1.7 grams.

The weight of the Nagatron HV-9100 cartridge is specified by the manufacturer as 19 grams. Although this seems high compared with the 5- to 7-gram weights quoted for most cartridges, it includes the equivalent of a head shell; the combination comes very close to the mass of a typical cartridge plus head shell. In the tone arm we used, the total mass referred to the stylus position was 30.5 grams, and this resonated with the compliance of the stylus system at 8 Hz with an amplitude of 6 dB. The vertical angle of the HV-9100's stylus was 20 degrees.

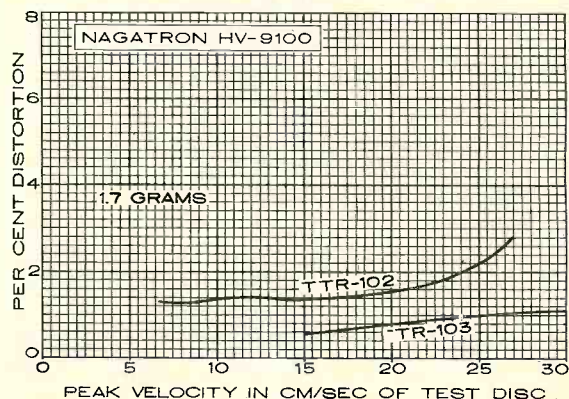
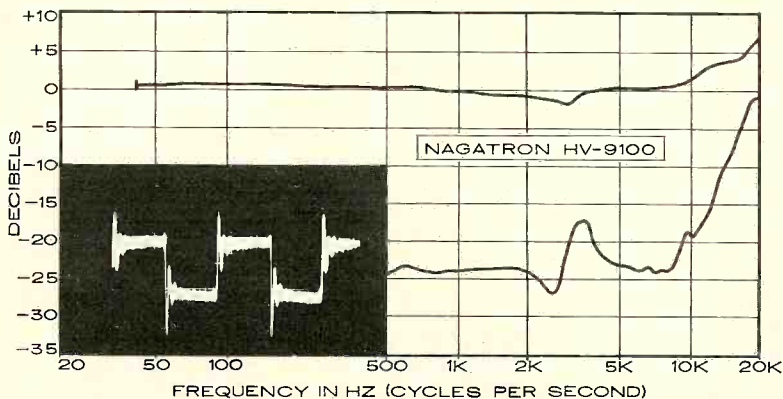
The frequency response, measured with a CBS STR 100 record, was quite flat up to about 7,000 Hz; it rose at higher frequencies. A check with a CD-4 test record showed that the actual peak was at 23,000 Hz, with an 8-dB amplitude, and that the cartridge response and separation were maintained all the way up to 50,000 Hz.

A small "glitch" in the frequency-response curve at 3,000 Hz coincided with an irregularity in the crosstalk curve at the same frequency.

(Continued on page 56)

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.





*(A Smaller, Less Expensive Version of  
The New Advent Loudspeaker.)*

# The Advent/1.

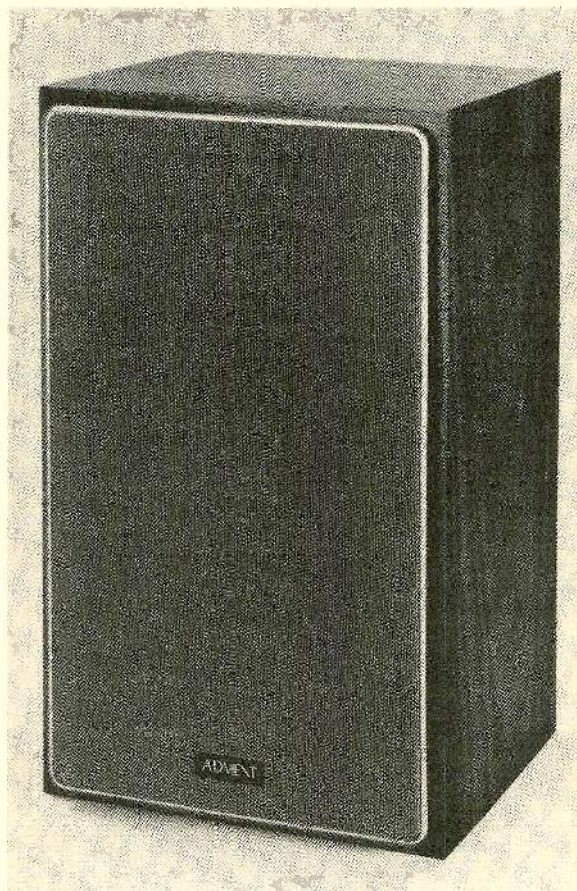
For the past several years, the most popular and most imitated speaker in this country has been the Advent Loudspeaker, which, including its newly redesigned format, is approaching the 750,000 mark in sales. Also on the best-seller list has been the Smaller Advent Loudspeaker, a system carefully designed to have the same frequency range and much the same overall performance for less money in a smaller cabinet.

The Advent/1 is a new two-way acoustic-suspension speaker system that replaces the Smaller Advent. It is a redefinition of just how close we can come to the performance of our flagship speaker in a smaller, less expensive system.

The Advent/1 is one very short step down in performance from the New Advent Loudspeaker. It uses the same low-frequency and high-frequency drivers, and the only performance difference worth quantifying is that it has 2½ dB less output at 32 Hz. Its overall sound is as close to the New Advent's as one speaker can come to another. Its power-handling capabilities are the same, and its efficiency is high enough to allow it to be well driven by low-power amplifiers and receivers.

We feel that the performance-per-dollar (and per-cubic-foot) of the Advent/1 is unsurpassed by anything we or anyone else can offer in a speaker.

Its price\* is \$110 to \$139 (depending on cabinet finish and how far we have shipped it).



If you would like full information on the Advent/1, please send us the coupon.  
Thank you.

To: Advent Corporation,  
195 Albany Street,  
Cambridge, Massachusetts 02139

Please send information on the Advent/1  
and a list of your dealers.

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_ Zip \_\_\_\_\_

\*Suggested prices, subject to change without notice.

**Advent Corporation, 195 Albany Street, Cambridge, Massachusetts 02139.**



cy, indicating a resonance in the moving system of the cartridge. The amplitude change in the cartridge response was only a couple of decibels, but the separation fell from a very good 25 dB to about 15 dB, which is nevertheless sufficient for good stereo effect. Aside from this anomaly, channel separation was good: 25 dB in the mid-range, 20 dB at 10,000 Hz, and 8 to 10 dB at 20,000 Hz. The response and crosstalk curves for both channels were nearly identical, a further indication of the cartridge's internal symmetry. (Most cartridges show distinctly different crosstalk characteristics on the two channels.)

The square-wave response, playing the CBS STR 112 test record, showed the 23,000-Hz resonance in the form of a 50 per cent overshoot followed by a few cycles of damped ringing that soon decayed to negligible levels. Tracking-distortion measurements, made with Shure's TTR-102 and TTR-103 records, revealed that the Nagatron HV-9100 was excellent, even when compared with other premium-grade cartridges. The IM distortion from the TTR-102 was almost constant at 1.3 per cent from 7 to 20 cm/sec and rose only to 3 per cent at the record's maximum level of 27 cm/sec. The repetition-rate distortion of the 10.8-kHz tone bursts on the TTR-103 was also very low, ranging from 0.57 per cent at 15 cm/sec to 1.1 per cent at 30 cm/sec.

Subjective tracking tests, using the Shure "Audio Obstacle Course" records, confirmed the fine tracking ability of the cartridge. With the older record (Era III), only a slight strain on the highest level of the violin section marred an otherwise perfect tracking perfor-

mance. With the new Era IV record we detected mild mistracking on level 4 of the orchestral bells and flute sections.

● **Comment.** Knowing about the 3,000-Hz internal resonance of the Nagatron HV-9100, we listened carefully to see if it could be heard. We did not detect its presence, which is perhaps not too surprising in view of the moderate amplitude of the dip (a drop in response is less audible than a peak) and the fact that, even at its worst, the channel separation was still 15 dB. We suspect that people who just listen to their cartridge and do not measure it will never be aware of its presence.

Otherwise, the sound of the cartridge was excellent—that is to say, it was equivalent to what we have heard from a number of top-ranking cartridges of all types of construction. We did not find the rising high end objectionable, and it did not appear as an obvious brightness or other coloration. It is evident from the total symmetry of its output, frequency response, and crosstalk characteristics that the design of the HV-9100 is fundamentally sound and that great care has been exercised in its construction and adjustment. We have encountered very few cartridges that are so symmetrical in any of these respects, let alone in all of them!

We also paid special attention to the noise and hum characteristics of the HA-9000 head amplifier, since it is in this area that many moving-coil cartridges and their step-up accessories fall by the wayside. The HA-9000 must be oriented critically for minimum hum pickup if it is located anywhere near a power

transformer (near any powered component of a music system, for instance). This requirement is spelled out plainly in the manual for the HA-9000. With a little care we were able to reduce the hum pickup to a lower subjective level than the internal noise of the amplifier. Although we could not measure the noise, we set the system gain so high that the sound from most records was intolerably loud. Lifting the cartridge from the record, we could hear nothing from the speakers until we came within about three feet of them, when a faint hiss could be heard. At any reasonable listening level there was absolutely no sound from the speakers when the cartridge was raised from the record. Apparently the designers of the HA-9000 did their job well.

We noted that—although it is not mentioned in the instruction booklet—when the HA-9000's power switch is off, the cartridge inputs are connected directly to the output jacks. Thus, if a standard high-output magnetic cartridge is plugged into the tone arm, there is no need to disconnect the HA-9000 from the system.

The bottom line—whether the HV-9100/HA-9000 combination is worth almost \$500—is one that must be determined by the individual audiophile. In truth, there are a number of moving-coil cartridges and head amplifiers on the market that, taken together, cost even more. We have not used or tested most of them, but it's certainly safe to say that the Nagatron HV-9100 ranks among the best of those with which we are familiar.

Circle 137 on reader service card



Dual 819 Stereo Cassette Deck

**T**HE Dual 819 is a front-loading, single-motor, two-head cassette deck featuring a Sen-Dust alloy record/playback head. The tape transport is driven by a d.c. servomotor with a heavy, dynamically balanced flywheel. A newly designed, gear-driven, fast-forward and rewind mechanism eliminates many of the intermediate rubber wheels and clutches used on other cassette transports, and it is claimed to be more reliable.

The cassette compartment is at the left of the panel, with a row of conventionally operated mechanical "piano-key" levers below it.

The transport controls can be operated in any sequence without going through stop (except when going into record, which can only be done with the tape stopped). When the EJECT lever is pressed, the cassette compartment door opens slowly, carrying with it the cassette tray. During operation the entire cassette can be seen.

Pushbuttons select bias and equalization for ferric-oxide (FE) or chromium-dioxide (CR) tapes. Engaging *both* buttons, logically enough, sets up the machine for ferrichrome tape. Similar buttons turn on the Dolby sys-

tem and the recording limiter, which goes into operation at levels above 0 dB to prevent distortion from unexpected high-level program peaks. Above these buttons are a headphone jack and two small knobs that adjust the headphone volume separately for each channel.

The two large, illuminated level meters are calibrated from -20 to +3 dB. The meters monitor the level at the output of the recording amplifier following equalization, and they therefore read the instantaneous peak level of the signal as it is being recorded on the tape. Because of their fast response time and the point in the circuit at which they monitor the program, Dual's meters eliminate any need for the LED's or other peak indicators that are often used to supplement conventional slow-responding meters.

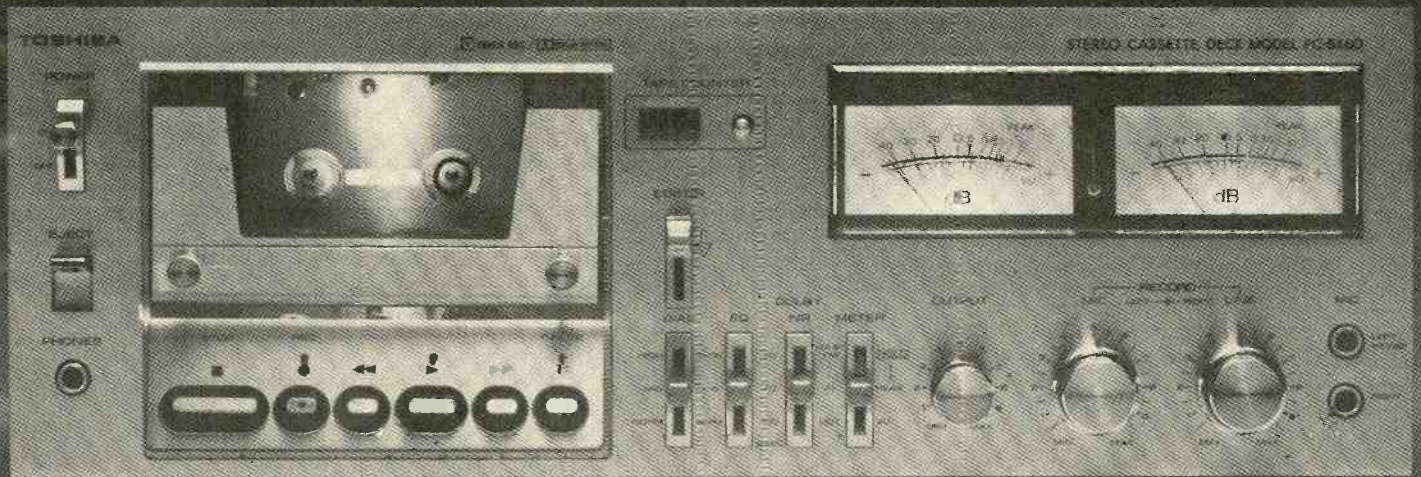
Below the meters are the two pairs of recording-level knobs. The line and microphone inputs are separately controlled and can be mixed. Separate controls for the two channels are concentrically mounted. There are two microphone jacks. Plugging one microphone into either of the jacks connects it to *both* recording channels in proportion to the settings of the level controls. When two microphones are plugged in, each feeds its indicated channel only.

Between the recording-level controls is one of the 819's special features, which was first introduced on Dual's top model, the 939.

(Continued on page 58)



# WHEN TOSHIBA BUILDS A CASSETTE DECK, SUPERIOR SPECS ARE NOT ENOUGH.



The Toshiba 5460 cassette deck. With an All-Sendust recording head, Dolby\* FM and Direct Access feather-touch controls.

When you buy any of Toshiba's cassette decks, you can take excellent sound for granted.

Our 5460, for example, has inaudible wow and flutter: just 0.05% wrms. A high signal-to-noise ratio: 69 dB ( $\pm 3$  dB, Dolby on, CrO<sub>2</sub>). And wide frequency response: 20-18,000 Hz (FeCr).

But Toshiba goes beyond specs, to professional features for continued superior performance.

Consider the 5460's All-Sendust recording head. It stands up to wear much better than hardened permalloy. And it's not susceptible to the "chipping" that can occur with ferrite heads.

Then, get your hands on

our Direct Access feather-touch controls. The merest touch allows you to switch from one function to another. Without pressing the stop button or jamming the tape.

And the Toshiba 5460's front-loading cassette compartment has an oil-damped soft-eject mechanism, for smooth and convenient operation.

Of course, almost every cassette deck has Dolby these days. But few have Dolby FM as well. Toshiba does, with a switchable MPX filter circuit. So you can feed Dolby FM broadcasts through the 5460 to get cleaner sound. Whether or not you're recording.

The 5460 tape transport is DC servomotor-controlled.

And you'll appreciate

the three-function meter plus LED peak indicator. And our new edit/fade control.

Naturally, the 5460 has all the standards as well. Like three-position bias and equalization switches. Mike/line mixing. And circuitry to accommodate an accessory timer.

Look at and listen to the Toshiba 5460 and the full line of Toshiba cassette decks at better audio dealers.

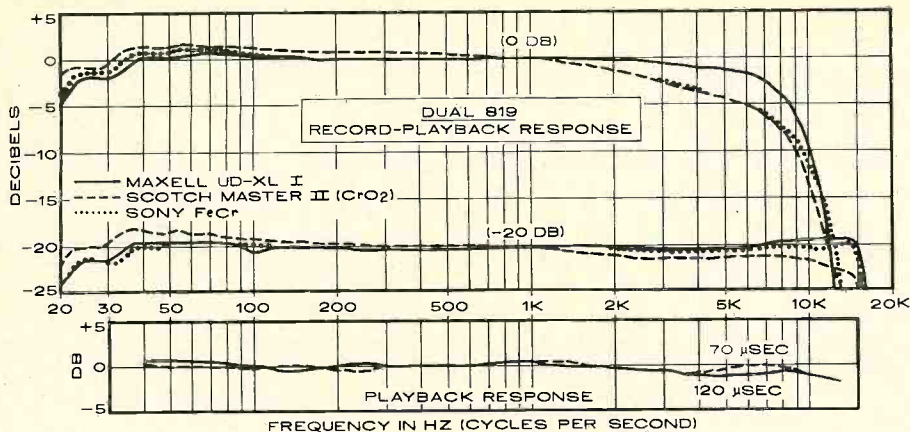
As you'd expect from Toshiba, their sound and features are very impressive. And even their prices will be music to your ears.

## TOSHIBA

Again, the first.

Toshiba America, Inc., 280 Park Ave., New York, NY 10017





Called the "fade/edit" system, it permits a smooth transition from one already recorded segment to the next without the abrupt changes and switching transients that often occur when a recorder is stopped and then restarted in the recording mode. It can also be used to edit out unwanted portions of a recorded tape smoothly with minimal risk of losing any desired material. This feature is used while the machine is in the playback mode. When a button is pressed and held, current is slowly applied to the erase head, increasing over a period of 3 to 5 seconds to the point where it fully erases the tape. When the button is released, the erase current is gradually removed over a similar period, smoothly restoring the program to the original level. Since this is done while listening to the tape, there is no uncertainty about when the erasure should begin (although one must first time the segment to be erased, so as to know when the button should be released). Since the fade/edit system will operate on any cassette, even when its recording safety tab has been removed, the button is located behind a plastic door that must be held open while the button is pressed. This prevents accidental erasure of a tape.

The Dual 819 has the "memory wind" feature that is becoming almost standard on high-quality cassette recorders. However, Dual goes beyond most others, since the automatic stop when the index counter reaches 000 is effective in fast-forward as well as in the usual rewind mode. Red and green LED indicators on the panel show when the Dolby system is on and when the machine is in the recording mode. The end-of-tape stop and disengagement of the transport is controlled by a photocell sensor that stops the machine within a quarter second of the time either tape hub stops turning. The input and output jacks are recessed into the rear of the cabinet, together with a DIN socket and two screwdriver-adjustable output-level controls. The Dual 819's case is finished in dark brown, contrasting with the bright metal knobs and the large, well-lit silver meter faces. It measures 17½ x 6 x 13¼ inches and weighs 17¾ pounds. Price: \$430.

● **Laboratory Measurements.** Although the instruction manual for the 819 lists the recommended bias/equalization settings for a number of tapes, we were informed by the importer (United Audio) that the machine had been adjusted for Maxell UD-XL I (Fe), Scotch Master II (CrO<sub>2</sub>), and BASF Professional III

(FeCr). Lacking a suitable sample of the BASF tape, we used Sony Ferrichrome.

The Maxell UD-XL I tape provided a very flat record-playback frequency response (at -20 dB), within ±0.75 dB from 30 to 15,500 Hz. We noted that the low-frequency "ripples" caused by the head contours were less prominent than those of many other decks. The Scotch Master II response sloped downward slightly from 35 to 15,000 Hz, although it varied only ±2.5 dB from the 1,000-Hz level between 20 and 14,500 Hz. The response with Sony Ferrichrome was flat within ±1 dB from 33 to 15,000 Hz.

The Dolby tracking of the 819 was among the best we have measured. Up to 12,000 Hz, there was less than 0.5 dB difference between response curves made with and without the Dolby circuits at levels from -20 to -40 dB. The playback frequency response was within +0.8, -1.7 dB from 40 to 12,500 Hz using the TDK AC-337 (120-microsecond) test tape. The 70-microsecond playback response, measured with the Teac 116SP tape, was within +0.5, -1 dB from 40 to 10,000 Hz.

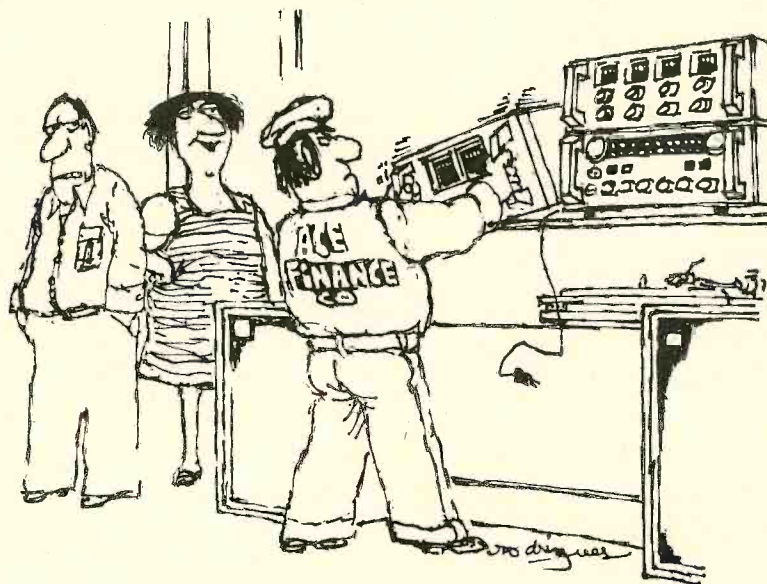
A 0-dB recording-level reading on the meters of the 819 required an input of 44 millivolts (mV) at the line jacks or 0.29 mV at the microphone jacks. The playback level from a

0-dB recording was in the 0.6- to 0.8-volt range, depending on the tape used. The microphone preamplifier overloaded at a 57-mV input. The overload was taken as the level that produced 3 per cent second-harmonic distortion, since the waveform rounded softly rather than clipping abruptly. The limiter came into action rapidly at 0 dB (it did not affect lower levels), reducing the recording gain and effectively preventing any distortion, even from severe overloads of 20 dB or more. However, following a severe overload, the gain returned to normal very slowly over periods as long as 30 seconds. This feature can be useful when recording voices, but it might produce some strange effects when recording music at too high a level.

At a 0-dB recording level, the playback distortion was lowest (0.63 per cent) with the Maxell UD-XL I tape and considerably higher (2 and 1.6 per cent, respectively) with the Scotch and Sony tapes. For a reference 3 per cent playback distortion, the recording inputs for the three tapes were +5, +2, and +3 dB, respectively. The A-weighted signal-to-noise ratios without Dolby, referred to the 3 per cent distortion level, were 59, 60.3, and 58 dB. With Dolby circuits in use and CCIR/ARM weighting, these ratios improved to 65.6, 70, and 67 dB. The noise increased by 10.5 dB through the microphone inputs at maximum gain. The headphone volume was gratifyingly high, even with 200-ohm phones.

The meters of the Dual 819 responded perfectly to the 0.3-second tone bursts used to check for conformity with VU-meter standards (although they are not equivalent to VU meters, being faster in their attack and slower in their decay). The reading on 0.3-second bursts, repeated once per second, was the same as on a steady-state signal of the same level. The meters were also calibrated very accurately, so that any given input-level change produced exactly the same amount of change on the meters. This is a rare occurrence with cassette-deck meters. The Dolby marks, set at 0 on the meters, were within 1 dB of the standard Dolby-level calibrating tones on our test tapes. The crosstalk from

(Continued on page 60)



"Oh, so that's what those big handles are for!"



# FOR ANYONE WHO CAN AFFORD PERFECTION THIS IS THE PERFECT SPEAKER. THE NEW AR9.

The search for perfection never ends. Maybe next year we'll be able to build something even more to your liking than the AR9.

But right now, by present standards, there simply isn't anything that looks better on paper or sounds better at home than an AR9.

The AR9 is a 4-way floor standing speaker, which incorporates a kind of electronic automatic transmission to improve bass response. From bass notes below the audible range, to over 20,000 Hz, its frequency response curve looks flat as a Kansas wheatfield.

Compare it with bigger speakers that cost even more and you'll be stunned at the difference you hear.

The AR9 is capable of painful sound pressure levels. You can pump 400 watts per channel through it (with the usual cautions — driven to clipping 10% of the time; normal source material).

But most of all, the sound of it is simply staggering. Beyond description really, with beautiful dispersion and precise stereo imagery. Words and notes emerge from your own records you may never have heard before.

At about \$750 each, the AR9 is an expensive speaker.

But, if you can afford perfection, it's the bargain of the century.



THIS IS THE AR9. LIKE ALL AR SPEAKERS IT IS COVERED BY A FULL 5-YEAR WARRANTY WHICH AN AR DEALER WILL SHOW YOU. FOR FULL COLOR BOOKLETS DESCRIBING THE AR9 AND OTHER AR SPEAKERS SEE YOUR DEALER OR WRITE TO US AT THE ADDRESS BELOW.



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the right to the left channel at 1,000 Hz, measured with a TDK AC-352 test tape, was  $-54.5$  dB.

Dual's tape transport, which has a rather impressive flutter rating of 0.05 per cent, lived up to its claimed performance. The weighted peak (DIN) flutter was a very low  $\pm 0.06$  per cent. With a weighted rms reading the flutter was an amazing 0.035 per cent! These measurements were made with a TDK AC-342 test tape, but the readings increased only 0.005 per cent in a combined record-playback measurement made using a conventional high-quality blank cassette. In its fast-forward and rewind speeds, the Model 819 moved a standard C-60 cassette from end to end in 60 to 65 seconds.

● **Comment.** In its price class, the Dual 819 has some formidable competitors, and one has the right to expect first-class performance from any cassette deck selling for more than \$400. Nevertheless, even in such distinguished company, the 819 stands out. To us, the extremely low flutter, flat frequency response, and low noise level of the 819, combined with its superbly accurate and useful meters (ordinarily one must pay a considerably higher price for a cassette deck with accurate, equalized, peak-reading meters), make this one of the more attractive values in a high-quality cassette deck. Such features as the fade/edit system and the bidirectional memory stop can be considered simply as bonuses.

Finally, although most recorder owners will never have the occasion to open up their machines and examine the internal construction, we can testify that the interior of the Dual 819 is as neat as the proverbial pin. There is a large circuit board with several smaller boards mounted on it and an absolute minimum of visible point-to-point wiring. Even the transport mechanism appears to be simpler and more compact than most we have seen. One would expect that this special attention to design details will pay dividends in long-term reliability. It is clear that in all aspects of its design and performance, the Dual 819 is a first-rate unit.

Circle 50 on reader service card



Pioneer SX-1980  
AM/FM Stereo Receiver

FOR a brief period, the Pioneer SX-1980 was the leader in the ongoing receiver power race. It has been edged out of the lead slightly since its introduction, but it is still one of the more formidable contenders. In one impressively bulky and heavy package, it contains a stereo power amplifier rated to deliver 270 watts per channel into 8-ohm loads from 20 to 20,000 Hz with no more than 0.03 per cent total harmonic distortion, a stereo control amplifier with inputs for two magnetic cartridges and a high-level source, an FM tuner whose specifications and features would do justice to some of the most advanced component tuners, plus an AM tuner and a host of special features.

Most of the FM-tuner specifications are in the very-good-to-excellent category, but at least one is nothing less than superb—the 120-dB image-rejection rating. The tuner's most unusual feature is probably its "quartz-locked" tuning system. It provides the tuning accuracy of a frequency synthesizer at a much lower cost by phase locking the local oscillator to one of a "comb" of reference frequencies, spaced at 100-kHz intervals, derived from a quartz-crystal oscillator. The tuner will lock to one of these reference signals only if a station is received on that chan-

nel, so the convenience of continuous tuning is not sacrificed. In fact, it is not necessary to operate the receiver in a locked mode if one wishes to tune in a station (for instance, in Europe) whose frequency is not a multiple of 100 kHz (all FM stations in the U.S. and Canada are at multiples of 100 kHz). According to the manual, shutting off the FM interstation-noise muting circuit also disables the quartz-lock tuning system.

In use, the receiver is hand tuned until the red FINE TUNE light on the dial face comes on. Releasing the tuning knob then lets the phase lock take over; the FINE TUNE light goes off and the green QUARTZ LOCK light below it comes on. The operation of the circuit is such that when the receiver is turned off and turned on at a later time, it will already be locked to the same station (assuming the tuning knob has not been disturbed). A red stereo-indicator light is located below the QUARTZ LOCK light.

The dial scales, tilted slightly backward for better visibility, are near the center of the front panel. Above them are two tuning meters (channel center and signal strength) and two large audio-power meters whose logarithmic scales cover the range from 0.01 to 540 watts. Colored lights above the tuning meters

show the selected program source and which of the three sets of speakers are being driven. The input and speaker selectors are pushbuttons located below the dial. The speaker selectors are electrically interlocked so that any two can be energized, but pressing the third will silence all outputs.

Other buttons, in line with the selectors, control the 15-Hz and 8-kHz audio filters and several FM-tuner functions. Pressing the MULTIPATH button gives an audible indication of multipath reception in the form of a weak and distorted audio output. With this button engaged, the antenna should be oriented for minimum or cleanest sound, which corresponds to lowest multipath distortion. Another button changes the FM de-emphasis time constant to 25 microseconds for use with an external Dolby decoder (which can be connected to the ADAPTOR input and output jacks in the rear of the receiver). A third button disables the FM interstation-noise muting.

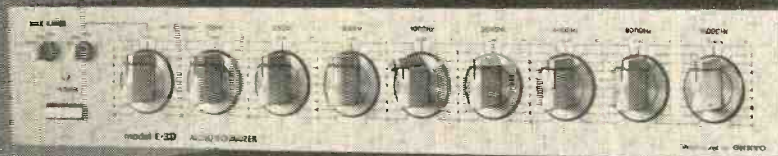
The large tuning knob is located to the right of the dial area, and directly below it are two small knobs marked PHONO 1 CARTRIDGE LOAD. They permit the cartridge termination at the Phono 1 inputs to be set for resistance values of 10,000, 50,000, or 100,000 ohms and for capacitance values of 100, 200, 300, or 400 picofarads (in addition to any wiring capacitance in the record-player and connecting cables, of course). The Phono 2/Mic input has a fixed termination of 50,000 ohms. When a microphone is plugged into a jack at the right of the panel, its output replaces the Phono-2 signals and the RIAA equalization is disabled. A headphone jack is located at the opposite (left) side of the panel.

The bottom of the receiver's panel contains a considerable number of controls (the SX-1980, as befits its size, power, and general complexity, has some thirty operating controls on its front panel). There are two sets of bass and treble tone controls, each with different turnover frequencies and response characteristics. The main bass control (marked 100 Hz) has eleven detented positions and provides a variable-turnover-frequency type of response. The main treble control (10 kHz), also with eleven positions, has a shelved response that is hinged at about 1,500 Hz. The sub-bass control, marked 50 Hz, has

(Continued on page 62)



# ONKYO QUALITY... OUR DESIGN BASE.



## We make it new. We make it right.

Onkyo as an innovator is constantly probing for new materials and methods for improved performance, high reliability and the best of advanced technology. Innovation is what gave you Quartz-Locked tuning, the system that's impossible to mistune. Available in our Models TX-4500MKII, TX-3500MKII and TX-8500MKII receivers and in the T-9 tuner. It also produced the Model TA-630D cassette deck with the exclusive 2-head Accu-Bias system for bias adjustment on a continuous rate rather than a fixed basis and Dolby NF\*.

Our search for pure and undistorted sound resulted in the bus feeder line system of absolute minimum impedance which approaches the theoretical zero point for Equivalent Series Resistance, available on all our amplifiers (Models A-5, A-7 and A-10 integrated amp), P-3 preamp and M-505 main amp. Add the U-30 System Selector and E-30 Audio Equalizer for an audio system that is second to none.

To give you the highest quality tuning, we developed the T-909, a true digital synthesized tuner including frequency readout for less than \$1,000.

Run these components through the Onkyo M-160 or M-240 speaker system with oversized woofers for superb sound reproduction.

Whatever Onkyo product you select, you'll find innovation, quality and reliability. They form the design base for Onkyo products. And if you're dreaming of something we don't have yet, chances are it's on the drawing board.

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

Artistry in Sound

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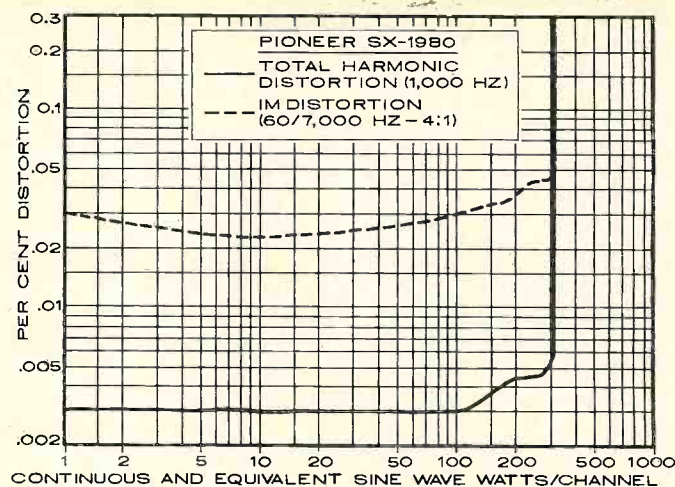
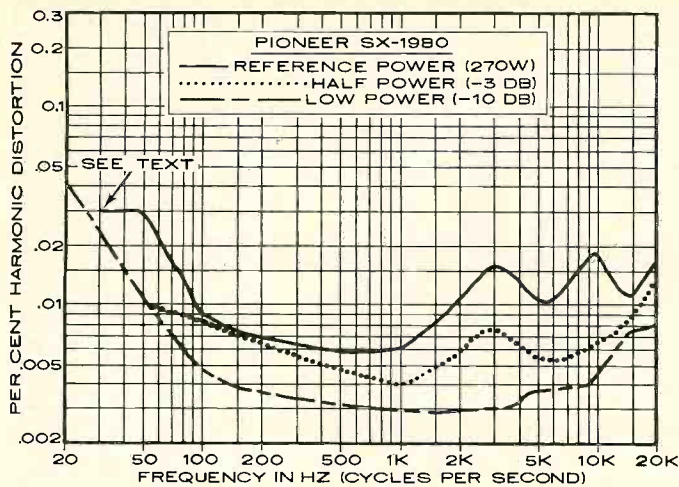
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five settings affecting only the frequencies below 100 Hz. The treble subcontrol (20 kHz) has a similar effect on frequencies above approximately 5,000 Hz. Used properly, these four controls can produce a wide range of response curves. A lever between them switches out all the tone-control circuits.

Four lever switches control the tape-duplicating functions (for dubbing from either of two tape decks to the other), tape-monitor functions for both decks, and insertion of an external signal-processing accessory into the signal path through the adaptor jacks. Similar switches control the receiver's stereo/mono mode and the loudness compensation. A rather small balance knob (center detented) is followed by a large volume control having thirty-two steps. Completing the front-panel controls are the power switch at the left and the audio-muting switch (a 20-dB volume reduction) at the right.

The entire rear half of the SX-1980 is devoted to the power-supply and output-transistor sections. Large finned heat sinks form the rear half of both side panels. In the center of the receiver is a huge toroidal power transformer flanked by four 22,000-microfarad filter capacitors. The other receiver elements occupy its front half, which is the only part covered by the walnut-finish wooden cabinet.

Except for its size, the rear of the SX-1980 looks much like that of any other stereo receiver. Insulated spring-loaded connectors are used for the three sets of speaker outputs. The usual 300- and 75-ohm FM antenna inputs, plus a binding post for a wire AM antenna, are supplemented by a hinged ferrite-rod AM antenna. There are separate preamplifier-output and power-amplifier-input jacks joined by jumper links. A slide switch below the phono inputs inserts an r.f. interference filter into the phono circuits. One of the three a.c. outlets is switched. The Pioneer SX-1980 measures approximately 22 x 8 1/4 x 19 1/2 inches and weighs 78 pounds. Price: \$1,250.

● **Laboratory Measurements.** Although the Pioneer SX-1980 has no cooling fan, it did not become excessively hot during the one-hour preconditioning period at one-third rated power. The heat sinks became very warm, but the rest of the receiver was quite comfortable to the touch.

With both channels driving 8-ohm loads at 1,000 Hz, the outputs clipped at 300 watts per channel (IHF clipping headroom equals 0.46

dB). The dynamic headroom was 0.63 dB. For a reference output of 1 watt, a high-level input of 8.7 millivolts or a phono input of 0.09 millivolt was required. The A-weighted signal-to-noise ratio (S/N), measured with IHF standard gain settings and referred to 1-watt output, was 80.1 dB (aux) and 76.6 dB (phono). At 1,000 Hz the phono preamplifier overloaded at a very high 350-millivolt input. At 20,000 Hz the overload occurred at 2.95 volts—equivalent to 309 millivolts at 1,000 Hz.

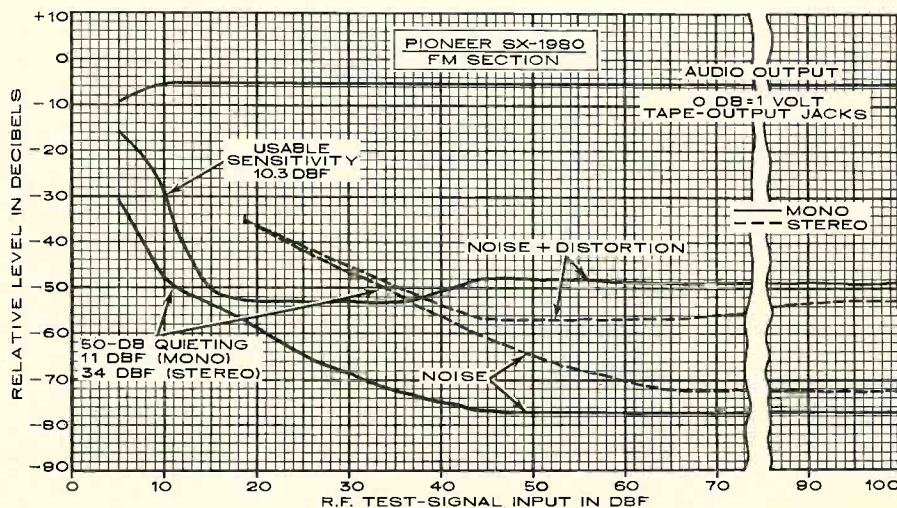
The distortion at 1,000 Hz was nearly unmeasurable at any power level. It was no more than 0.003 per cent from 0.1 to 100 watts output, rose to 0.0045 per cent between 200 and 290 watts, and reached its maximum of 0.008 per cent at 300 watts, just before clipping occurred. The intermodulation distortion (IM) was about 0.03 per cent at most power levels up to 100 watts and reached 0.045 per cent at 300 watts. The distortion across most of the audio-frequency range was between 0.006 and 0.015 per cent at rated power, increasing somewhat at the lowest frequencies. We could not make a full-power measurement at 20 Hz because the protective relay shut down the amplifier before a reading could be made. (In normal use, this would not occur.) At half power and one-tenth power the distortion was even lower at most frequencies, and at one-tenth rated output (27 watts), which is more power than will be used under most con-

ditions, the distortion was under 0.005 per cent from 100 to 11,000 Hz.

The tone-control characteristics were as specified, and the dual-control system gives the SX-1980 much of the flexibility of a multi-band graphic equalizer in a more familiar format. The filters, however, did not have the expected characteristics. The "8-kHz" filter had the rated 12-dB-per-octave slope, but the response was down 3 dB at 3,500 Hz instead of at 8,000 Hz as we would have expected. The "15-Hz" filter response was down 3 dB at 40 Hz and we could not verify its slope, although it appeared that this would reach the rated 12 dB per octave below 20 Hz.

The loudness compensation boosted both low and high frequencies, but it had little effect until the volume setting was at least 30 dB below maximum (this was fortunate, since in most cases the volume setting one will use at normal levels is well below the middle of its range). The RIAA phono equalization was accurate within  $\pm 1$  dB from 20 to 20,000 Hz. There was an increase of output of about 1 dB at 20,000 Hz when the response was measured through a phono-cartridge winding. This exactly compensated for the 1-dB drop we measured using a resistive source, so the net response of the phono circuit should be almost perfectly flat in normal use. The phono-input resistances were as indicated (although

(Continued on page 66)





# SONY IS ALL DECKED OUT.

You're looking at seven of Sony's greatest performances.

A big, bold line of cassette decks that's guaranteed to hold the audience spellbound.

After all, Sony's arresting combination of Year 2000 technology, and common-sense value, is hard to resist.

Our line extends from under \$200, to over \$500. So you won't have to settle for less than you want. Or be forced to pay for more than you need.

And Sony isn't a newcomer to cassette decks. We've been making tape and tape recorders, for 30 years. That gives us a reservoir of electronic know-how that allows us to be so technically advanced today.

For instance, Sony innovates with our liquid crystal peak program meters. We're the first to utilize this LCD display—a significant improvement in accurate record level setting, and in protection against overload distortion.

You'll also find an auto-reverse function. It automatically flips the head when your cassette is finished...so you can record or playback on the other side. So you don't have to fudge.

To offer you great flexibility, Sony builds in a 3-position tape bias and equalization switch. With it, you can accom-

modate any tape now available.

At Sony, we look at cassette decks as both mechanical and electrical device. So both our electronics and our transport system are designed to the most challenging specifications a manufacturer can set for itself.

## Simplicity is the toughest goal.

All Sony decks are designed with what we call Human Engineering.

It means that our controls are comfortable and convenient. Whether it's a sophisticated LCD display, or an air-cushioned eject system.

Whether it's an advanced auto-reverse function, or a remote control capability, or a considerate automatic shut-off, that disengages all mechanisms.

And there's more, as Human Engineering is the way we operate.

If this is your year to buy a deck, you can do a lot of tiresome shopping. And end up with Sony.

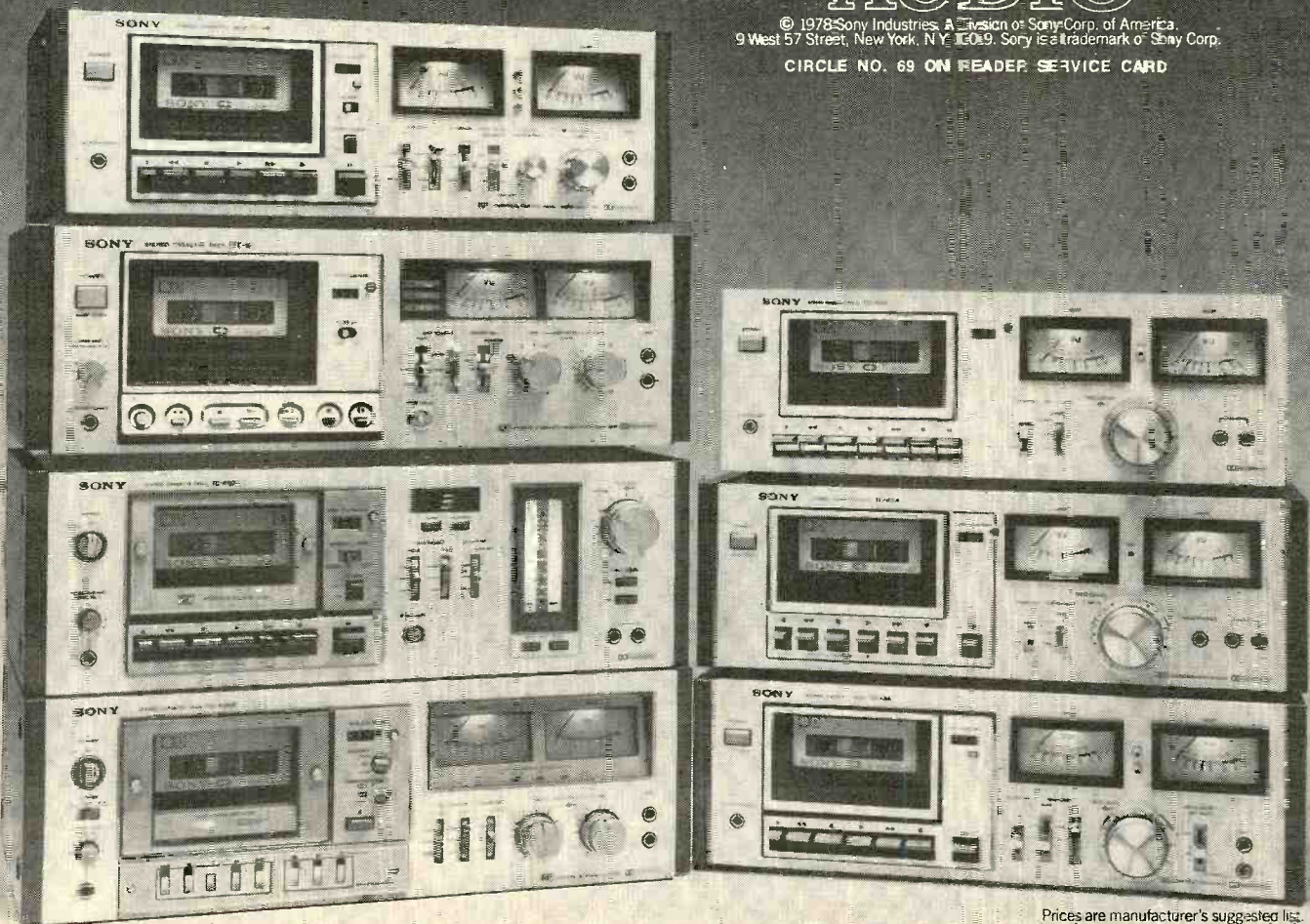
Or you can go directly to Sony.

And start at the place you'd end up anyway.

# SONY® AUDIO

© 1978 Sony Industries, A Division of Sony Corp. of America, 9 West 57 Street, New York, N.Y. 10019. Sony is a trademark of Sony Corp.

CIRCLE NO. 69 ON READER SERVICE CARD



Prices are manufacturer's suggested list.



# See why TDK

It's the little things you can't see  
that make a big difference in the way it sounds.

At first glance different brands of tape look pretty much alike. But if you look closely, you'll find there are many subtle differences. And it is these differences that make one tape stand out above all others.

Now you might not spend a lot of time looking closely at tape. But we have to—that's our business. At TDK we're committed to constantly improving our products. For years, our SA cassette has been the High bias reference standard for almost all quality cassette deck manufacturers. Yet we've incorporated improvement after improvement into SA's tape and mechanism since its introduction as the first non-chrome High bias cassette in 1975. These advances mean better quality sound for you. TDK makes this possible, by continuous attention to the little things you can't see.

## The Particles

The lifeblood of recording tape is microscopic magnetic particles that can be arranged in patterns to store and reproduce sound. At best, they are as small as possible, uniform in size and shape; they are long and narrow (the greater the ratio of length to width, the better); and they are tightly, uniformly packed together, with no gaps or clumps.

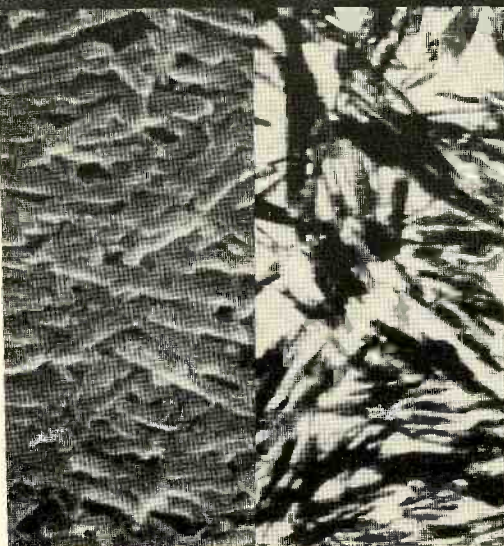
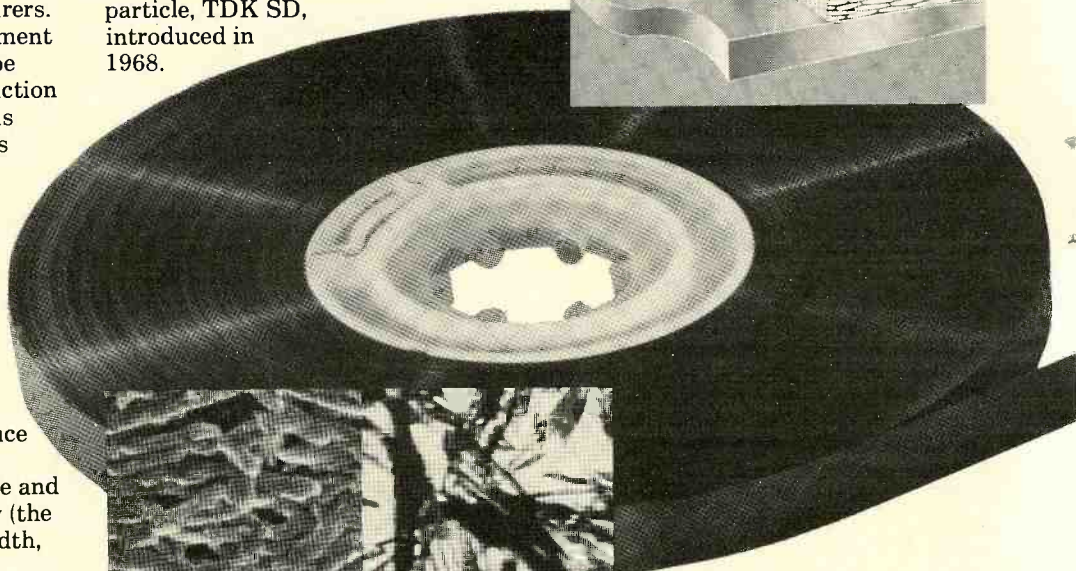
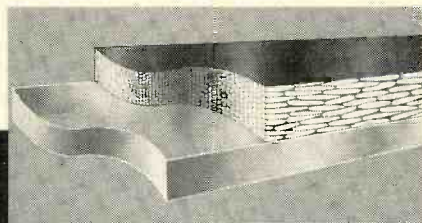
Over 40 years of experience in magnetic ferrite technology and 25 years in developing and manufacturing recording tape, bring the TDK SA and AD cassette particle formulations as close to these ideals as current technology will allow.

The TDK SA particle is a cobalt gamma ferric oxide compound made highly stable by our proprietary cobalt-ion adsorption process. The SA particle possesses one of the greatest length/width ratios of any particle used in audio cassette recording: an amazing 11:1. These little wonders are truly "state-of-the-art," and mean higher maximum output level (MOL), higher signal-to-noise and lower noise.

The particle in TDK AD is *pure* gamma ferric oxide; it has been developed specifically for use in Normal bias decks—in the home, car, in portables. With a length/width ratio of 10:1, the AD particle can deliver what most conventional cassettes lack: an extended, hot high end, to capture all the elusive highs in music, from classical crescendo to raging rock and roll. It is the logical successor to the world's first high fidelity cassette tape particle, TDK SD, introduced in 1968.

clumps nor gaps of oxide build-up. So we suspend our particles in a unique new binding, and we're fanatic about the way we do it. TDK engineers and craftsmen wear surgically clean robes and caps, and we vacuum the air to eliminate

Tape layers: coating (top); backing.



TDK SA tape surface (left) enlarged 30,000 times. TDK Super Avilyn particles (right) enlarged 20,000 times.

contaminating foreign matter and disruptive static charges. The high packing density that results means that the tape is prepared to handle high input level musical peaks gracefully, and without distortion.

## The Base Film

We coat our oxides on broad rolls of supremely flexible, but nearly stretch-proof polyester film, to make sure

TDK cassettes don't tangle or introduce wow and flutter.

## The Polishing

After each roll is coated, it goes through a polishing process called "calendering." Any oxide is removed,

## The Coating

To best attach the particles to the film used for backing, it's necessary to coat that film evenly, with neither



# sounds better.

and the surface is smoothed to reduce tape head wear and oxide shedding. Reduced friction across the tape heads means lower noise.

## The Edge

If you look closely at the edges of TDK's tape, you'll find that they are uniformly straight and parallel to a tolerance of one micron. That's because we slit our tape by pulling it across an array of precisely-positioned, surgically-sharp knives. That means the tape movement is unimpeded; and mis-tracking that could result in garbled stereo is eliminated.

## The Hub/Clamp Assembly

TDK has met a major challenge which has always faced cassette manufacturers:

anchoring the tape to the hub without causing mechanical problems. We use a unique double clamp system we pioneered. It practically eliminates wow and flutter, distortion, drop-outs and other problems related to poor winding. Some manufacturers use plastic pins jammed into notches on the edge of the hub. This system can lead to uneven winding, which causes the edges to feather, the tape to bulk unevenly, and occasionally, to snap at the anchor.

## The Cleaning

Like most leader tape, ours is designed to protect the recording surface from stress, and to provide a firm anchor to the hub. Unlike most leader tape, TDK's cleans your recorder heads as it passes by.

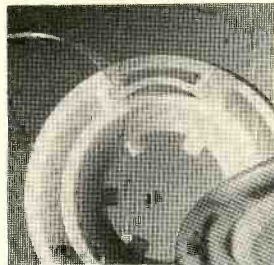
## The Splice

Our splices are firm, with leader and tape lined up exactly. Our splicing tape is specially designed not to bleed adhesive into the cassette mechanism, which could gum up the works.

© 1978 TDK Electronics Corp.

## The Inspection

Before any of our tape is loaded into cassette shells, it must pass a series of inspections to



The TDK double clamp system.



The TDK high tolerance tape/leader splice.

see if it matches up to our own rigorous standards. If it doesn't pass, it's discarded. We never compromise on quality.

## The Music and the Machine

We go to more trouble than most companies do, when we manufacture our cassettes. We see to all the little details, so you can hear more of your music. Our super precision cassette mechanism delivers the tape to your heads precisely, without introducing friction, wow and flutter and other problems in the process. And we back that mechanism, and the tape within it, with high fidelity's original full lifetime warranty\*, a measure of the value we have placed in our cassettes, for over 10 years.

So next time you buy cassettes, look closely at TDK, and think of all the little things you can't see that make our cassettes just that much better. TDK Electronics Corp., Garden City, NY 11530. In Canada: Superior Electronics Ind., Ltd.

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



# TDK®

The machine for your machine.®

CIRCLE NO. 77 ON READER SERVICE CARD



acteristics, as might be expected, were so diverse as to defy description. The filters were among the most effective we have used because of their steep slopes and choice of cutoff frequencies.

We used the loudness compensation during our listening tests and confirmed that it is one of the few really good ones on the market. Not only can the compensation be matched to the actual listening level, but it affects only the low-bass frequencies (principally under 100 Hz). The resulting sound is notably lacking in boominess or any unnaturally heavy quality even on male voices.

● **Comment.** As near to perfection in its electrical performance as the Crown DL-2 is (and perhaps *because* of that quality, which it shares with several other fine preamplifiers), it is difficult to imagine anyone's spending \$2,000 merely to use it as the control center of a home stereo system. We would judge that it

is aimed at the serious amateur tape recordist, and we can see it as part of the music system of someone equipped with several good open-reel tape recorders and the array of microphones and accessories that go into making high-quality tape recordings. Of course, such people often use conventional mixers for their recording, but these cannot do double duty as the control center of a high-fidelity home music system.

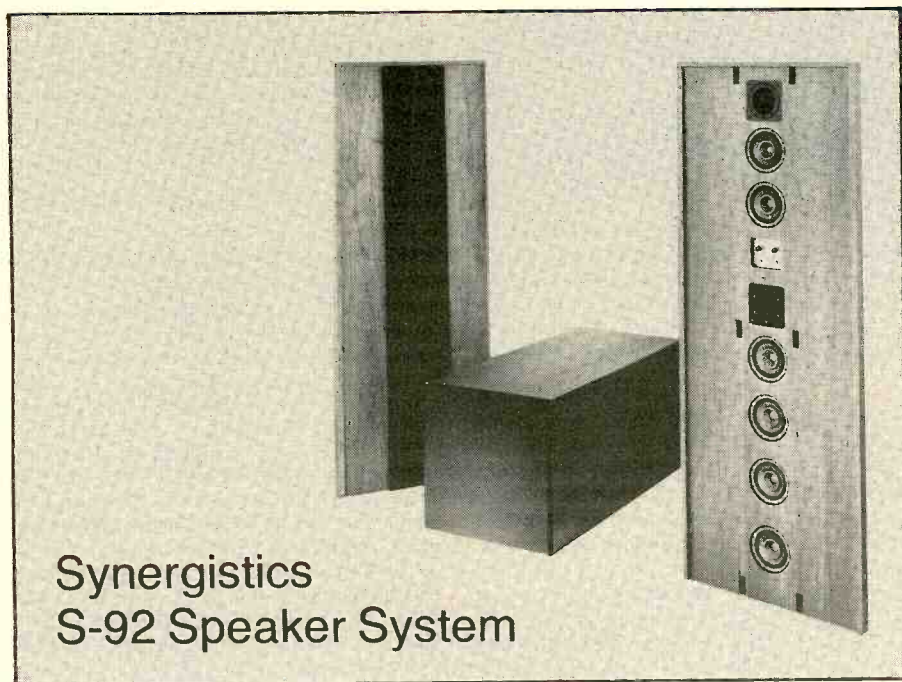
No doubt the computer-controlled features of the Crown DL-2 will appeal to the growing number of audiophiles who are also home computer hobbyists. The DL-2 is designed for direct interface with a computer, which can control most of its functions (it is actually tested at the factory with an IMSAI computer). There are surely those who will find this an appealing—if not actually irresistible—prospect, and for them the DL-2 is ideal.

From an audiophile standpoint, the DL-2 does to perfection everything it is designed to

do, but it is so different from conventional preamplifiers that it will obviously require far more getting used to than is usual with a new component. And while the noise and distortion levels of the DL-2 are far less than those of any conceivable program source, so are those of many other preamplifiers selling for a fraction of its price.

I don't mean to suggest, however, that we were anything less than overwhelmed by the Crown DL-2 control system. "Fantastic" is about the mildest adjective one could fairly apply to it. Those who require—and can afford—its special capabilities need look no further. We know of nothing else remotely like the DL-2. It was an intriguing unit to test and live with, although we knew from the first that we would be somewhat frustrated in having to "test" a product that is so much better than the available test equipment!

Circle 139 on reader service card



## Synergistics S-92 Speaker System

**T**HE Synergistics S-92 is a three-piece stereo speaker system consisting of two large dipolar radiating panels and a separate bass commode. According to the manufacturer, the major design goal for the S-92 system was a substantially higher dynamic range than is available in typical conventional speaker systems. The intent was to achieve a system combining high efficiency, high accuracy, and extraordinary power-handling ability.

Most of the audio-frequency spectrum, from 140 Hz upward, is radiated by the two vertical dipolar "screens." Each is a walnut-veneer panel approximately 61 inches high, 23 inches wide, and less than 4 inches deep (including the grilles on the front and rear surfaces). The drivers are aligned in a single ver-

tical row and radiate equally to front and rear.

The mid-range is reproduced by six 4½-inch cone drivers. These have a compliant-edge surround and a low enough resonant frequency (plus the capability for a large linear excursion) to be used successfully with a low crossover frequency. The spacing between these drivers decreases from 7½ inches near the bottom to 6 inches near the top, so as to reduce interference effects between them. The lowest mid-range driver is almost at the bottom of the panel. Between the fourth and fifth of these drivers is one of the two tweeters, approximately at chest height for a seated listener, and an identical second tweeter is at the top of the array. Near the middle of the panel are the continuously adjustable mid-

range and tweeter level controls and the push-button-reset circuit breakers that protect the drivers against excessive input levels. The black grilles form 9-inch-wide vertical stripes on the panel's front and rear sides.

The tweeters of the S-92 are similar to the "Iso-Dynamic" tweeter developed in England and are built in Japan under license from Rank. They consist of a thin polycarbonate film on which the "voice coil" conductors are deposited by an etching process. The diaphragm is suspended in a powerful magnetic field provided by samarium-cobalt magnets. The tweeter cases are open both front and rear for equal radiation in both directions. According to Synergistics, these units have about five times the power-handling capability of conventional dynamic tweeters. In the S-92, they operate above 2,000 Hz.

The range below 140 Hz is radiated by a pair of 12-inch acoustic-suspension woofers (one per channel) in separate acoustically isolated compartments of the bass commode. This is finished in walnut veneer with a black grille covering each end. It is 38 inches wide, 18 inches deep, and 19¾ inches high. The wires from the amplifier go to the two pairs of binding-post terminals underneath the bass commode, and from there additional wires are run to the panels. Each component of the system contains its own crossover-network components, and all crossovers have a 6-dB-per-octave slope. The woofer voice coils are wound with two layers on 3-inch diameter forms. They are designed to handle 125 watts of continuous power and have a 24-Hz cutoff in the bass enclosure.

The recommended installation for the Synergistics S-92 is with the bass commode placed against a wall between the dipolar screens, with its woofers facing to the sides. The screens should be at least 3 feet from the wall and any corners, preferably facing into the listening area. The manufacturer suggests that angling the panels slightly into the listening area may improve the stereo effect in

(Continued on page 70)



# WHO MURDERED THE TUBA PLAYER?



He disappeared right in the middle of Tchaikovsky's "1812 Overture." The victim of a low definition cartridge.

But he could have been saved by the audio engineering achievement in the ADC patented induced magnetic cartridge.

With today's sophisticated "direct to disc" records it takes a state of the art cartridge to accurately capture the sonic quality of the recordings.

ADC has developed a unique design that sets the new

standard of excellence.

The remarkable ZLM model features an ALIPTIC® stylus design that effects the optimum balance between the stereo reproduction advantages of the elliptical stylus' high frequency tracing shape and the longer, lower wearing vertical bearing radius typical of the Shibata shape.

The result: unparalleled definition and clarity of sound and unsurpassed record protection while tracking at 1/2 to 1 1/4 grams.

Because of its ultra linear

frequency response, flat  $\pm 1$ dB 10 Hz to 20 kHz and 1 1/2 dB 20 kHz to 26 kHz, every instrument sounds alive and natural.

If you'd like the complete facts about the ADC ZLM cartridge, simply circle our reader service number on the reader service card, and we'll send you the ADC brochure and a free record care gift.

Be nice to tuba players and other musicians. And invest in something that understands them, and protects them.

An ADC cartridge.



Audio Dynamics Corporation, Pickett District Road, New Milford, Connecticut 06776 • Distributed in Canada by BSR (Canada) Ltd., Rexdale, Ontario

CIRCLE NO. 10 ON READER SERVICE CARD



some cases. The S-92 specifications include a frequency response from 24 to beyond 20,000 Hz (with no tolerance given), an output sound-pressure level (SPL) of 91 dB at 1 meter with 1-watt input, and a power-handling ability of 600 watts continuous per channel on program material.

Synergistics did not list the weights of the components of the S-92 system in their advance literature, but we would estimate that the bass commode weighs about 130 pounds and the panels about 70 pounds each. Price of the system: \$2,000.

● **Laboratory Measurements.** The three units of the S-92 were installed in our laboratory in approximately the recommended configuration. The manufacturer's suggested settings of the level controls (7 for the mid-range and 5 for the tweeter, on a scale of 0 to 10) were used for our tests, and we also measured the effect of each control on the response as we varied it over its full range (the recommended settings proved to be optimum).

When we spliced the close-miked woofer response curve to the smoothed, averaged curve from the two panels, we obtained a frequency-response curve that spanned the 24- to 20,000-Hz range within  $\pm 4$  dB. From 1,000 Hz upward the variation was only  $\pm 2.5$  dB, with broad response peaks of about 5 dB centered in the 40- to 50-Hz and 350- to 400-Hz ranges. Each of the level controls had a 6-dB range, with the mid-range control affecting frequencies below about 4,000 Hz and the tweeter control affecting those above.

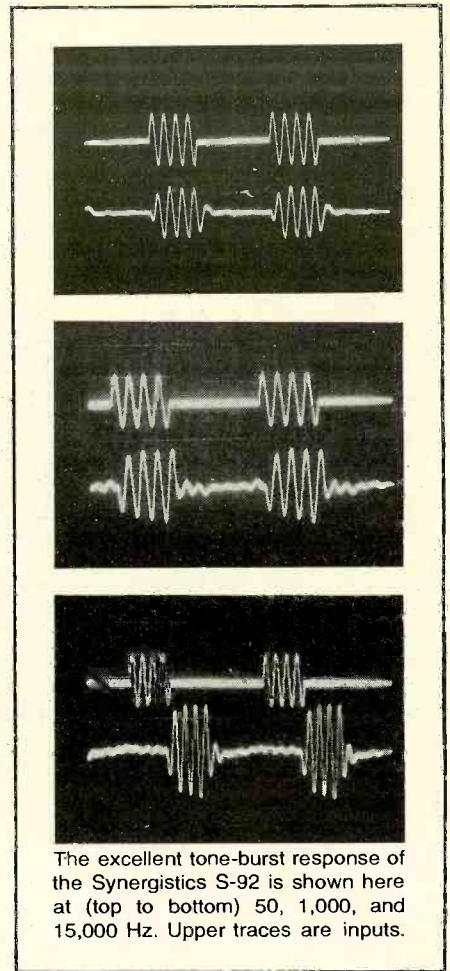
With the speaker panels facing directly into the room (which placed the microphone on the axis of one and about 30 degrees off the axis of the other), the frequency-response curves were identical up to 8,000 Hz but diverged sharply at higher frequencies. This indicated directional "beaming" from the tweeters in the highest audible octave. When the panels were "toed in" as suggested (about 20 degrees toward the center of the room), their high-frequency response curves were identical at the measuring location.

The bass distortion at 1 watt was extremely low down to 50 Hz (it was typically under 0.3 per cent from 100 to 60 Hz). It rose linearly at lower frequencies, to 5 per cent at 30 Hz and 13 per cent at 20 Hz. A power increase to 10 watts made very little difference in the distortion readings (which were then 0.6 per cent at 50 Hz and 6.3 per cent at 30 Hz), but at 20 Hz the sound was audibly distorted.

The sensitivity of the S-92 did not measure quite as high as its 91-dB rating. When we drove one dipole with 1 watt of random noise in an octave band centered at 1,000 Hz, the SPL at 1 meter from the center of the grille was 87 dB. This is a fairly high sensitivity for such a system, considering that it employs an acoustic-suspension woofer. The system impedance was an almost constant 8 ohms from 200 to 20,000 Hz. It dipped to about 5 ohms between 50 and 100 Hz and rose to its maximum of 13 ohms at 33 Hz.

Because of the normal interference effects from the multiple drivers, we could not make tone-burst measurements in our usual manner at a distance of several feet from the speaker. Instead, we placed the microphone close to a single driver and obtained excellent tone bursts at all frequencies from 50 to 15,000 Hz.

● **Comment.** We had the opportunity to listen to and live with the Synergistics S-92 for several weeks before making any measurements on it. For the most part, our measurements produced no surprises. The S-92 is a very smooth, slightly "warm" and soft-sounding speaker, in spite of an unquestionably strong high-end response. One is never sonically aware of the physical separation of the low-bass frequencies; to the listener, the bass commode appears to be nothing more than a solidly built piece of furniture. We always heard the sound of these speakers as a blended whole, with no sense that it was coming from a sizable array of drivers. It filled the front area of the room with the kind of broad sonic spread that to us sounds closest to the spatial distribution experienced at a live musical performance.



The excellent tone-burst response of the Synergistics S-92 is shown here at (top to bottom) 50, 1,000, and 15,000 Hz. Upper traces are inputs.

We welcomed the absence of the upper-bass emphasis that causes most loudspeakers to add an unnatural coloration to male voices. Nevertheless, the "mellow" quality of the sound suggested some emphasis in the lower part of the spectrum. The 350-Hz "bump" in the response curve presumably accounts for this quality.

As for the power-handling capacity of the S-92, most of the time we drove it from amplifiers rated at less than 100 watts per channel. They were more than adequate to play the system as loud as we would ever care to listen. Toward the end of the test, we received a Phase Linear 700 Series Two for testing, and we put its great power reserve to good use. When the power indicators of the amplifier peaked at 0 dB (presumably 350 watts per channel) on musical program material, the average SPL from the S-92's in the reverberant field of the room was 100 to 104 dB, with frequent peaks to 106 or 107 dB. The speakers were not distressed by this, and their circuit breakers never tripped. Those who like their music loud, and have a few hundred watts of amplifier power available, will find the Synergistics easily up to the challenge.

Overall, we found the S-92 to be a thoroughly listenable speaker system which we were never tempted to shut off in favor of any other speaker on hand. That, as much as anything, is an indication of how well Synergistics has met our standards of the way a fine speaker system should sound.



"... Okay, okay, so they're lousy car speakers! What are you going to do about my stolen car?"

Circle 140 on reader service card



# The evolution of the revolution.

## The new Bose® 901® Series IV Direct/Reflecting® speaker.

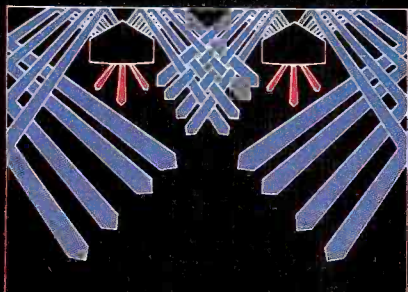
When Bose introduced the original 901® speaker, high-fidelity critics around the world hailed its revolutionary approach to sound reproduction.

"Bose has, in a single giant step, produced one of the finest speaker systems ever made."  
(USA)

"The orchestra is there in front and the atmosphere of the concert hall all around."  
(Belgium)

"Bose contains more technical innovations than any other speaker of the past 20 years."  
(Austria)

"... sets new standards for loud-speaker music reproduction."  
(France)



Now the 901® has evolved. Again. Introducing the Bose 901 Series IV Direct/Reflecting® speaker system. With new equalizer controls that consider your room as part of the speaker design. And a new answer to the problem of choosing an amplifier.

It is a known fact that moving a speaker just a few feet in a room will alter its performance. And that the variances in a speaker's performance from one living room to the next can be vast. This is a problem all speakers have regardless of design. Except one.

A new approach to the study of listening room acoustics and an ambitious survey of many actual listening rooms has resulted in new equalizer controls for the Bose 901 IV. These controls allow you to simultaneously adjust several bands of frequencies in a precise manner to match the per-

formance of the 901 IV to your room. In a way that cannot be duplicated even with an expensive graphic equalizer.

As a result, the 901 Series IV speakers perform as well in the living room as in the demonstration room.

Were our engineers to design a speaker specifically for your living room, you would not get better sound than you do when you properly adjust the equalizer controls on the Bose 901 Series IV.

And the 901 IV provides a simple answer to the problem of choosing the power rating of your amplifier or receiver. Choose any amplifier you wish. The 901 IV provides surprisingly loud sound with as little as 10 watts per channel. Yet it is durable enough for us to remove all power limitations on the 901 IV. There is no power limit. Period.\*

With these new improvements, the Bose 901 IV gives you a flexibility no other speaker can. You can place the 901 IV in almost any room and get the life-like, spacious sound for which the 901 IV

Direct/Reflecting® speaker is famous. And you can match it to virtually any amplifier.

We think that once you hear the new Bose 901 IV Direct/Reflecting® speaker, you'll agree. The revolution has evolved.





# The Pop Beat

By Paulette Weiss



## ALL I WANT FOR CHRISTMAS

DEAR SANTA:

You might think this letter strange, coming as it does from a hard-bitten woman-of-the-world type like me, since my last reported act of belief occurred years ago and consisted of clapping three times to save the life of a dying Tinkerbell. The annual Christmas TV broadcast of *Peter Pan* prompted this display of faith, and just how long ago *that* was can be measured by the fact that Mary Martin played Peter, long before Sandy Duncan was even a twinkle in Johnny Carson's eye.

So, why this letter? Well, I guess I've once again started believing in some things I thought I'd given up on, among them you, dear Santa—and rock-'n'-roll. Although 1978 had its share of the over-hyped, undernourished stuff we've come to expect of rock in the Seventies (*Meat Loaf* a rock star?), the year also produced a healthy crop of albums and performances touched by the same spirit that graced *Rock In The Beginning*. Without getting teary-eyed or mystical about it, I found that the best discs of 1978 rose above the shlock on the strength of the artist's ability to convey his *own* belief in the music he had created. Call it artistic sincerity, if you will, or putting on a convincing act, if you're feeling cynical. Either way, there's no denying that there's been an increasing amount of excellent, honest rock on the market, and the very best of it seems to be created as much for love as for money. I suggest you listen to Tom Petty's "You're Gonna Get It," Bob Seger's "Stranger in Town," Tom Robinson's "Power in the Darkness," Elvis Costello's "This Year's Model," or dependable Southside Johnny's "Hearts of Stone" if you've got any doubts.

In this group only Elvis Costello can be categorized as New Wave, but they all embody the spirit that made punk rock perhaps the most vital musical phenomenon of the decade. Forget the safety pins, the obscenities, the boring three-chord tirades against things you hold dear; punk was calculated to tear off the neat plastic wrappings the record industry had developed to guarantee hygienic musical "product." Punk reintroduced the grit and raunch that made rock so exciting in the first place, and beneath the poses its *heart* was honest.

This, Santa, will give you a fair idea of my slant on the past year's worth of music. The discs that most impressed me were more sophisticated than rock-bottom punk, but they were, above all, honest. I am in no way suggesting that these discs constitute a definitive "year's best," or that you and Mrs. Claus limit your listening to them. There have been a number of excellent slick commercial recordings I've found very entertaining this year, including some of your lovely Christmas tunes with sleighbells and all. It's just that 1978 has not been my year for light entertain-



ment. I've spent it lifting my lantern in search of an honest band. My test for honesty is simple: in the presence of the Holy Modal Twerps playing up a storm at Madison Square Garden or the latest disc featuring somebody crooning sincerely about preserving the peregrine falcon, I simply ask myself if I *believe* it. That's all. Ignoring the polish or raggedness of the performance, the number of smoke bombs set off, and the level of audience ecsta-

sy, I let an instinctive portion of my listening apparatus take over. The results are so subjective that they may seem arbitrary, and anyone else applying the same test will probably come up with different results. But I find that rock performers line up pretty neatly in the "yes" and "no" columns for me with very few falling in between. Here's a current sample to show you what I mean:

| YES, I BELIEVE    | NO, I DON'T        |
|-------------------|--------------------|
| Bruce Springsteen | Harry Chapin       |
| The Who           | Kiss               |
| Neil Young        | Shaun Cassidy      |
| The Band          | The Bee Gees       |
| Patti Smith       | Olivia Newton-John |
| Jackson Browne    | Barry Manilow      |

Remember that this is a winnowing of artists based on *perceived sincerity*, not on technical ability or popularity. Such TV stars as *Wonderwoman's* Lynda Carter and Cheryl Ladd of *Charlie's Angels*, who have expanded their careers into recording, are highly suspect and land in the "no" column until they prove themselves. There too, sadly, go a number of old-timers who, as a result of creative exhaustion, overexposure, or active selling out, have lost their credibility over the years. Elvis Presley comes to mind, as do Paul McCartney and even the Rolling Stones, despite the latter's "Some Girls" proving to be one of the surprise Old Rocker comeback discs of 1978. (Loved the record, but didn't for one minute believe in Mick's posturing throughout a massive tour pumped up by that incredible "secret concert" publicity scam.)

There were four discs whose arrival and supporting tours were, like the Stones', Real Events of 1978. They were by artists who have been enshrined at the top of my "yes" list. Bruce Springsteen's long-awaited album "Darkness on the Edge of Town" mirrors the high price he paid to remain honest, and though his concerts were meticulously (and brilliantly) choreographed, every move, every note came straight from a true rock-'n'-roll heart. Bob Dylan, Neil Young, and the Who (may Keith rest easy) also came through undiminished, though none, I think, with Bruce's panache.

A good number of rock-based artists acquitted themselves nicely in the honesty department, including Mink DeVille, Graham Parker and the Rumour (although "The Parkerilla" was a severe disappointment), the Shirts, Television, Joni Mitchell, the Good Rats, Billy Joel, Nick Lowe, and Dave Edmunds. (The last two gave us albums perilously close to "light entertainment," but their love of rock can't be denied.) Unfortunately, many, many more artists than these would have died horribly if they'd depended on my clapping three times to save them. I wouldn't lift a finger to save *anyone* connected with the exploitative mess that was the *Sgt. Pepper* remake. Yecch.

SUPPOSE what I'm trying to say, Santa, is that overall I'm quite pleased with the growing improvement rock has shown in the last few years, and that... well, you can forget the Maserati and Beluga caviar I requested in last week's letter. Just bring me more of that good old honest rock-'n'-roll.

Best wishes, and a Merry Christmas,

Paulette

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**MB-20 Meter Bridge**



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Limits of instruments, limits of the recording environment, limits of time.

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## CONTROL

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# Going on Record

By James Goodfriend



## MUSIC AND BRAINS

A CORRESPONDENT recently inquired if we at STEREO REVIEW had any statistics that showed a correlation between the intelligence and/or education a person had and whether or not he listened to classical music. We do not have the results of any such surveys, nor am I aware of the existence of any, and I think I would tend to distrust any I saw. It's not that I am worried about defining what "classical" music is; even if I can't define it verbally, I can still say that this piece is, that one isn't, and the other is a borderline case. No, what wrecks matters for me is trying to decide if someone is intelligent and/or educated. Intelligence, I find, often lurks in unexpected places, and I have seen far too much evidence of Ph.D.'s who cannot construct grammatical sentences to believe any longer that having a college degree means that one is "educated"—or that not having one means that one isn't. Hard and fast evidence is sorely lacking in this area, which means that it is ripe for speculation. I am delighted to speculate on it.

There is an old Irish saying that wine comes in at the mouth, and love comes in at the eye. Music, I say with equivalent firmness, comes in at the ear, which truism is only a way of pointing out that the music we *listen* to is the music that is around for us to hear. There are few people (there *are* a few) who make conscious decisions on what sort of music they like without having heard at least some of it. There are also, of course, *hordes* of people who decide what sort of music they *don't* like without having heard it, but that is a psychologically different matter.

Opera, in English-speaking countries (and many others), is considered to be an "elite" music, but many operas are not at all elite music in Italy or among Italian-speaking minorities in other countries. Opera is simply around to be heard in Italian society, and while there may be many Italians who ultimately reject it in favor of whatever comes out of the San Remo Festival, there are many others who have become familiar enough with its musical language that they listen to it with enjoyment. Now, all this may simply prove that Italians are more intelligent and educated than the rest of the world, but somehow I doubt it. What it does prove, I think, is that Italians are exposed to more Italian opera, and at an earlier

age, than anybody else, and therefore more of them get to like it and make a habit of listening to it.

In the United States, a part of the benign myth of equality is that every child (and adult) has an equal opportunity to do whatever it is he most desires, to read what he wants, to believe what he wants, to hear what he wants, to be what he wants. I am not about to tear down this myth, for if it is not true here, it is probably closer to being true than in any other place I have been. But it calls for more *navet * than I can muster to believe that the listening tastes of the American public are what they are out of free choice. Intelligent people



may not gravitate to classical music any more than unintelligent people do, but few of any sort of people will gravitate to it if they don't get to hear it, and most Americans don't—or don't until they have reached such an age that it is improbably difficult for classical music to

become an integral part of their psychological and emotional lives.

What of those who *do* get to hear it? Well, I am one who believes that there is such a thing as a talent for listening to music—largely distinct from, but parallel to, the talent for making it—and that this talent, present in varying degrees in different people, has no necessary correlation with basic intelligence. And so I believe that, given a cross-section of society, one can find people of enormous intellectual differences, as well as of distinctly different backgrounds, who will respond equally positively to classical music if they hear it, hear enough of it, hear it under the right circumstances, and have somebody else, who also responds to it, with whom they can talk about it. Mind you, I do not believe that *everybody* will respond to it, but it will not be brains that make the distinction.

Nor will it necessarily be education. The principal thing that education, especially higher education, does in building an audience for classical music is to put people into an environment where they are more likely than elsewhere to hear it and hear about it. (I wish I had a dime, as the old saw puts it, for every college student who went to his first classical concert through pure, unadulterated peer pressure.)

THE real roles that intelligence and education play in the appreciation of classical music are not in determining whether or not people will listen to it, but in determining *how* they listen to it. Music comes in at the ear, but where does it go from there? To the glands, to the feet, to the stomach, to the heart, and to the brain. It may go to all those places in all of us, but it does so unequally. More than a century ago, someone dismissed the typical English concert-goer as really wanting no more than a good tune he could tap his foot to. Insulting as the characterization might be (and it was *meant* to be insulting), that is one way of listening to classical music. There are other ways. Intelligence comes into the matter in allowing one to listen to music intellectually, as well as kinesthetically, emotionally, viscerally, erotically. Education gives us the *tools* to listen to it intellectually, not merely through our learning about music history or theory (maybe even in spite of it), but through the parallels it enables us to draw with other artistic, scientific, and mathematical experience, and through the greater perceptions we then have about what is really going on in music.

Intellectual listening enables us to understand some of the richness that creative artistic genius is capable of. It makes us more critical and it also, ultimately and paradoxically, makes us more tolerant of a broad range of music. But it does not preclude our listening to music on any other level. The *violin d'Einstein* might have become almost as useful a metaphor as the *violin d'Ingres*, the more recent case being used to signify the affinity between the mathematical mind and the musical one, but somehow I feel it was not the mathematical qualities of music that Einstein sought in his fiddling. True, there have been men of great intelligence, frequently adept in other fields, who have made an intellectual decision to "take up" classical music as a pastime without its having ever previously penetrated their hearts, stomachs, legs, or glands—perhaps not even their ears. But they are very much the exceptions. Some of them, I think, have become composers. □



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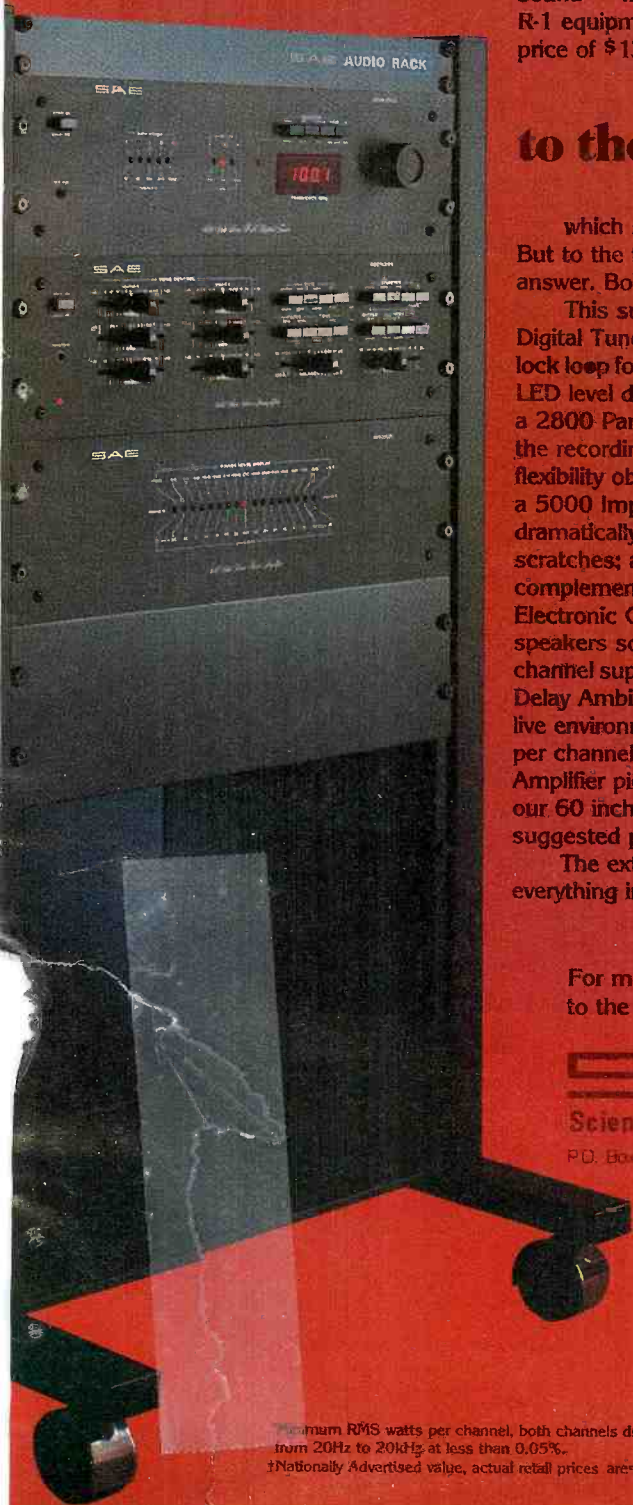
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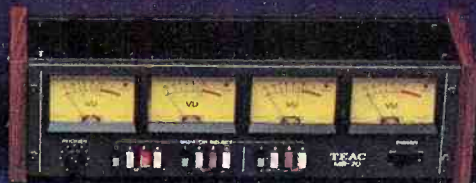
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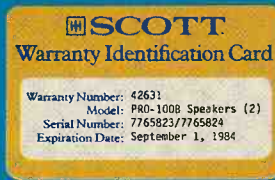
Intellectual listening enables us to understand some of the richness that creative artistic genius is capable of. It makes us more critical and it also, ultimately and paradoxically, makes us more tolerant of a broad range of music. But it does not preclude our listening to music on any other level. The *violon d'Einstein* might have become almost as useful a metaphor as the *violon d'Ingres*, the more recent case being used to signify the affinity between the mathematical mind and the musical one, but somehow I feel it was not the mathematical qualities of music that Einstein sought in his fiddling. True, there have been men of great intelligence, frequently adept in other fields, who have made an intellectual decision to "take up" classical music as a pastime without its having ever previously penetrated their hearts, stomachs, legs, or glands—perhaps not even their ears. But they are very much the exceptions. Some of them, I think, have become composers. □



# Scott puts out.



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Pictured: hk670-receiver 60/60 watts  
Not shown: hk340 20/20 watts, hk450 30/30 watts,  
hk560 40/40 watts



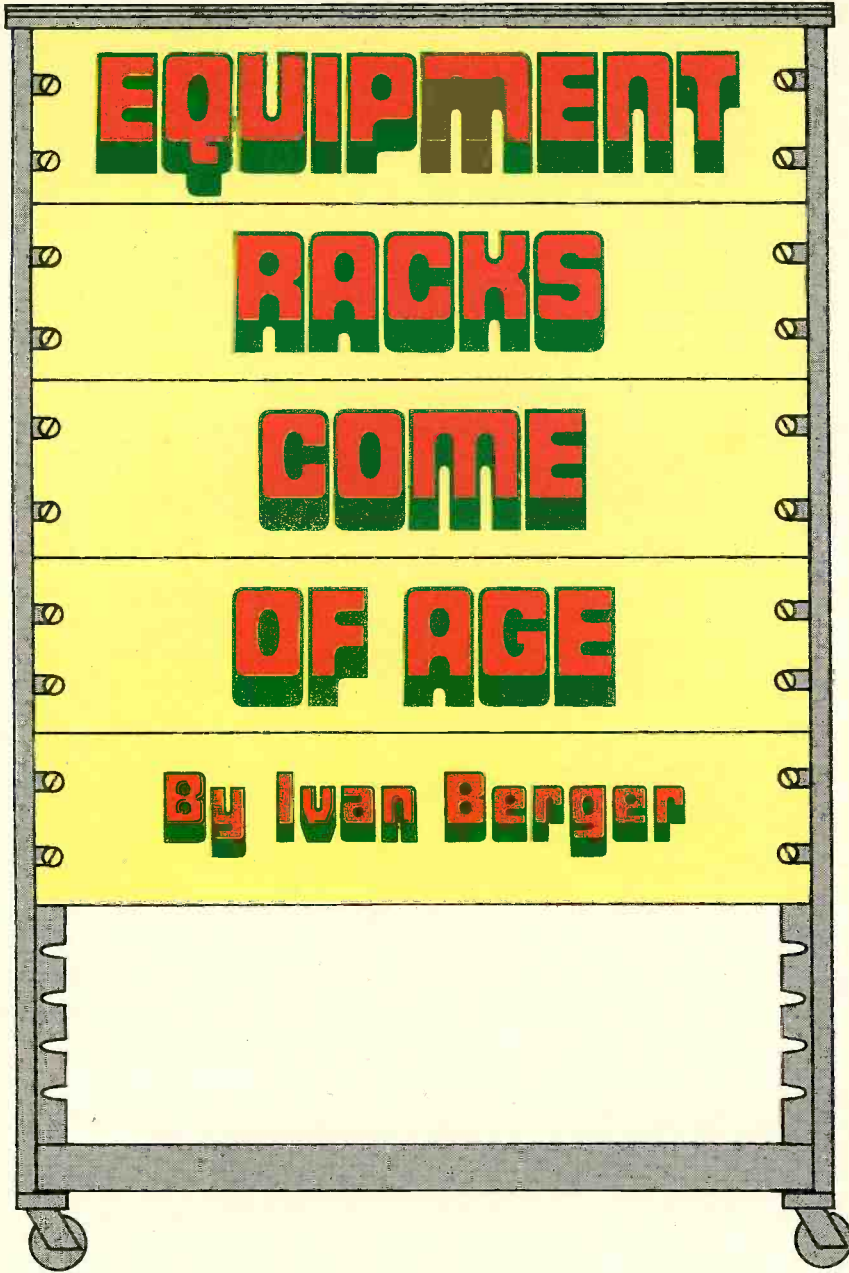


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CIRCLE NO. 37 ON READER SERVICE CARD

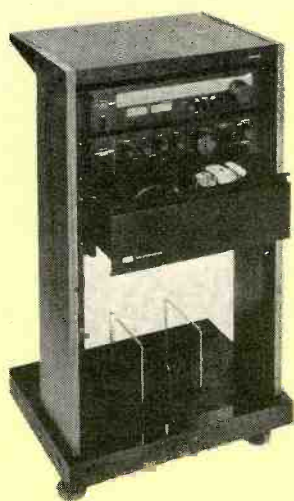




**W**HAT is sauce for the audio professional is usually spice for the amateur—which is probably the reason the “professional look” is so popular in home equipment. But the latest manifestation of that look—the vertical rack cabinet—does more than just confer a professional cachet. Racking up your hi-fi system makes sense from several standpoints: space, adaptability, appearance, theft resistance, and possibly shielding against external electrical interference—many of the same reasons, in fact, that accounted for the rack’s professional adoption in the first place.

The saving in floor space is the most obvious advantage. Components cover a smaller area when they are stacked rather than spread out side by side. As studios and labs became crammed with more and more equipment, this became a virtual necessity. And so it is at home, not just because we’re trying to fit in more equipment (though often we are) but also because more and more of us live in apartments or smaller houses with less and less floor space to spare—little wonder that vertical rack systems are an especially big hit in space-hungry Japan.

Vertical cabinets have of course been housing hi-fi equipment since long before racks started to appear in the home. But those cabinets have too often been makeshift—bookshelves and the like—and bookshelves are rarely deep enough to hold hi-fi components. They are usually wide enough, but often so wide that they sag under the weight of audio components. Since by no means all of the equipment on the market is designed for rack mounting, many audio furniture manufacturers—and some component makers as well—now sell vertical cabinets (often mis-called “racks”) designed specifically for hi-fi use. These are just deep and

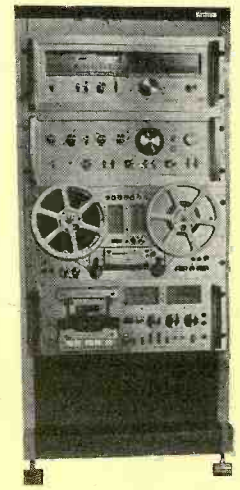


Sansui Model GX-5 with RX-150 drawer



Crown Model 70R

Pioneer Model JA-R2S





wide enough to hold most components (some companies, such as Sansui, JVC, Gusdorf, and O'Sullivan, offer several widths). Their construction is heavier, too. Hi-fi-dedicated cabinets with closed backs often have holes for ventilation and to permit cables to snake inconspicuously between components. Some stack cabinets have all adjustable shelves; others have shelves with fixed positions—less versatile, but sometimes sturdier.

True racks, by contrast, need no shelves at all. Rack-mounting components are held instead by bolts which fasten the properly drilled front panels to the rack's vertical frame rails by means of predrilled holes. If both the rack and component manufacturers follow the international standard for spacing (a few don't), any rack-mount component will fit and fasten easily to any standard rack. And the whole assembly—even if every component, rack included, comes from a different manufacturer—will present a nearly seamless, monolithic look.

The rack is only half of the mounting system. The components mounted in it make up the other half. True racks provide for equipment panels that are 19 inches wide and some multiple of 1¾ inches high (typical heights are 1¾, 3½, 5¼, 7, 8¾, and 10½ inches). Rack-mounting rails are spaced 17¾ inches apart, with holes at ⅝-inch intervals. Put a standard panel on a standard rack, and holes in the panel will line up with the screw-threaded holes in the rack behind it. In most cases, the component is held in place only by those screws through its front panel—the rest of the component hangs completely free behind the rails.

For the professional, the chief advantage of this system is that, with all components built to a standard dimensional module, he can readily move

components in and out of the rack when it's time to replace them, with no need to rearrange shelves, no waste space. For the audiophile, it's probably more important that this modular design produces a system that looks as if the cabinet had been custom-designed to fit just those particular components (which, in a sense, it has). If your components don't yet fill your rack, you can maintain that monolithic look by filling in the empty spaces with blank panels. Many of the racks designed for home use have record compartments at the bottom, and some of these can be turned into more component space once the slots above them are all filled.

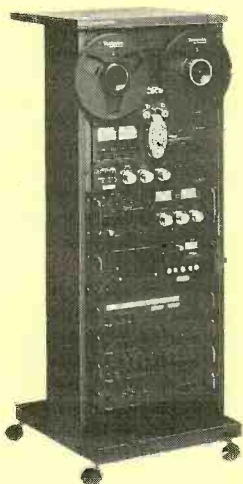
Shelf cabinets, by contrast, can give this custom look only if they are actually custom-designed to the dimensions of the components mounted in them. That's easy if you buy the whole works, cabinet and all, from one manufacturer, but it gets a little harder to achieve if you cherry-pick your system's components from several product lines. Kenwood offers a solution to this in the form of trim panels that fill the gaps between their smaller components and the larger compartments of their own stack cabinet; if you're handy you can make similar trim panels for your own shelf setup.

Another advantage of the rack, for pro and audiophile alike, is that the components' rigidly locked mounting makes it easier to wheel the entire system away from the wall for easy access to rear-panel connections. It also allows the entire system to be transported as a unit—very nice if you move every few years, and indispensable for professional touring sound systems. You can even truck the rack up to the country every summer, if you wish, and without having to take apart and remake the connections between components. Just be sure the rack is sturdy.

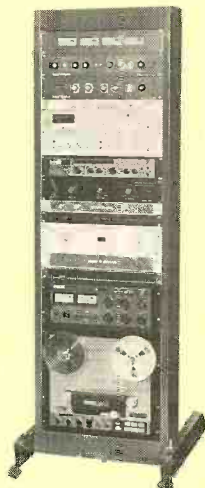
That's also a *disadvantage*—for thieves. A would-be thief must decide whether to rip components from the rack (probably making them unsalable), steal the entire array (not easy if the system is four to seven feet tall and weighs a few hundred pounds), hang around long enough to unscrew everything, or hit some other system. Both SAE and Intra offer an additional theft deterrent in the form of unusually attractive screws which must be tightened and removed with a hex-key Allen wrench instead of the more widely available screwdriver. Intra's are the standard 10-32 screw used in most racks; SAE offers both 10-32 and the less common 10-24 type. These screws (and some others, including those available from Crown and Premier) come with non-marring plastic trim washers.

## Rack Types

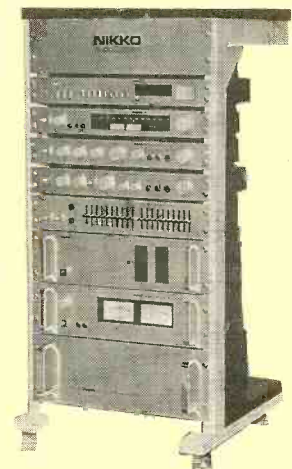
With a few exceptions either way, most racks for home use are built of wood or of particle board covered with either wood veneer or wood-grain vinyl, while most professional racks are made of painted metal. The home racks also come in a greater variety of shapes and sizes. While studio racks usually rise straight up to five, six, or seven feet in height, home racks are usually shorter (to permit a turntable to rest conveniently on top). Many home racks have more elaborate designs, too. JVC's LX-3000, for example, is actually *two* racks: a deep rack section with a large turntable well on top, plus a shallower rack section floating on posts above the turntable. JVC's LX-2000 and the O'Sullivan AR-162 also combine a shallow upper rack section with a deeper bottom one (with shelves, not rack frames, in the O'Sullivan), but here the upper section is the



Technics Model  
SH-905ST



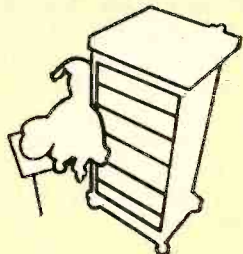
Vero Electronics  
Lab Rack



Nikko Model  
NSR-100



## THIS MONTH'S COVER



A tired Santa Claus pauses to rest after delivering some lucky audiophile's Christmas haul. Stacked in the rack, top to bottom, are: Sansui's AX-7 preamplifier-mixer, Teac's C-1 cassette deck, Crown's EQ-2 equalizer, Pioneer's RT-707 tape deck, JVC's SEA 7070 equalizer, and Marantz's 300DC power amplifier. The turntable is Technics' Model SL-1000 Mark II, and Santa's seating is provided by Kenwood's L-07T FM tuner. The well-filled rack is Gisdorf's Model 1460 Component File.

same width as the lower, and so can be supported by extensions of the cabinet sides. SAE offers several racks, including short ones (to match the various panel heights of SAE components) which can be stacked as needed, and a shallow one about 5 feet tall whose front casters are attached to bars which extend in front of the cabinet for greater stability. About the starkest style in home racks is a design available in similar forms from Pioneer, Rotel, and Nikko. It consists of two polished metal rack rails rising from a plain, black, casted platform, with a matching black turntable shelf cantilevered back from the top of the rails. Sansui has a similar model made of wood.

ClicK Systems' metal AudioFile trolley is also available in this shape, as

well as in other designs, since AudioFiles are built from modular parts. You can get them with the turntable shelf mounted below the top of the mounting rails rather than right at the top. Or, instead of the cantilever-top "C"-shaped configuration, you can get one with support rails in the back as well. AudioFiles can also be built with or without shelves, with open or closed sides, in a variety of heights, and even as "lowboys" two racks wide, with the turntable set atop the cabinet or recessed in an optional well. Like many wooden home racks (but few metal ones) ClicK AudioFiles are shipped knocked down, involving some (easy) assembly by the user.

Even more elaborate and interesting designs are available abroad. In Italy, you can get a "C"-type rack whose bottom third tilts outward to hold a tape deck at a more convenient angle. At the Technics showroom in Tokyo two years ago I saw a wide variety of racks and shelves, plus a number of useful accessories that could be attached to them. There were, for example, clamp-on lights whose articulated arms could swing to illuminate the turntable, instruction books, or anything else in the system; clip-on hooks for patchcords and headset storage; and even a clamp-on microphone boom. Technics acted quickly to bring into the U.S. the compact, glass-front, wood-side, rolling rack our party of journalists admired (it's their Model SH-999) and you will likely be seeing some of the other racks they presently offer to the Japanese market eventually.

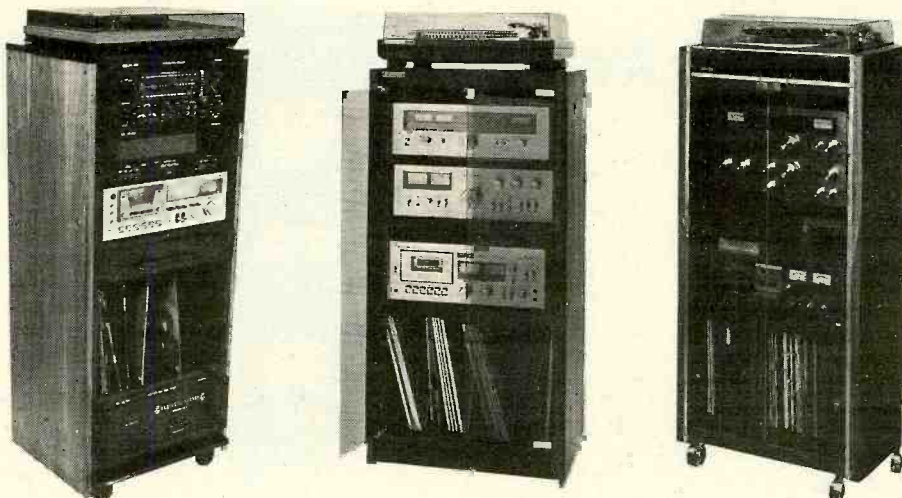
Wooden racks are not unknown among professional-rack makers, either. Intra, for example, makes a straight-sided rack with some interesting touches: walnut veneer on the sides and a front edge of 1/2-inch solid walnut to resist the wear and tear of frequent

mounting and demounting of equipment. Two types of rails are available, too—one with prethreaded holes and one with oversize holes that can be fitted with Speednuts to take the rack screws (if you strip a hole's threads, you just replace the nut instead of re-tapping the hole). Shelves are available for non-rackable equipment, and there are racking rails both front and rear. Rack-It has a console for large tape decks, with pleasantly rounded corners. And BSC's 700 Series II cabinets have console surfaces for tape editing and the like with additional rack space in pods above the tape-deck well.

But most professional racks are of metal—not the old, dull-gray crackle-finish creations of yore, but with a wide choice of colors and crisp, contrasting trim. Such racks, from firms like Bud, Optima, Par-Metal, Premier, and Stantron, can frequently be bolted together in multiple bays; you could even link tall and short racks, with your turntable atop the short one. For living-room use you might still want to modify their studio look a bit by ordering them without their metal side panels, making new side panels for them from a wood that fits into your color scheme. But if you have radio-frequency-interference problems—in other words, if your hi-fi keeps asking for a "10-32" or calling "breaker, breaker"—then you might even wish to order the optional metal back door (for ventilation, get the louvered type). Just don't forget that you'll need to install some kind of antenna external to the shielded rack for the radio portion of your system.

Pioneer has an interesting metal rack (called simply "The Rack") which is two bays wide with a white turntable shelf (optionally cut out for a Pioneer turntable) projecting at about waist level and with storage space below that in the rack. It's one of the biggest rack

From left to right: Intra Model SR-48, Kenwood SRC-85, Denon IR-8, Nakamichi SR-100, Toshiba DS-202, Mitsubishi DR-720, and JVC's LX-2000





systems around (it stands over 6 feet tall and weighs 400 pounds without components) and one of the most expensive—\$1,750.

At the opposite end of the scale is a slender rack from Vero, a slim upright frame (about half as deep as most components) rising from two casted metal horizontal rails. It's available in a wide variety of colors.

## What to Rack

This proliferation of 19-inch (and smaller) racks wouldn't mean much if there were few components to mount in them. But more than fifty manufacturers of home audio equipment now make either models that rack-mount directly, models for which rack-mounting adapters are available, or both. High-powered amplifiers, equalizers, and 10½-inch-reel tape decks (the components most likely to be used in both home and professional systems) are almost sure bets to be rack-mountable. But there are also some rack-mounting receivers (they are not common—most receivers are too wide for racks), preamps, cassette decks, tuners, accessory devices—everything but turntables. There are even speakers (from Sansui and from Ultralinear) designed for the rack; after all, if the rack is going to replace the bookshelf, where else would a bookshelf speaker go?

Not all rack-mounting audio components are built to the standard dimensions, however; Nakamichi, for example, has its own 16-inch rack standard for which it provides its own compact rack, similar in shape, if not in size, to Vero's. And many Japanese companies make 19-inch components whose panel heights are not built to the standard 1¾-inch size increment. Sansui and GUSDORF have a solution for that: their racks don't come with predrilled holes,

but instead use clamping brackets or sliding fasteners that permit any kind of component spacing. However, you can use standard racks too, leaving the slight gaps between some components as vent holes—or filling them in with homemade strips of Masonite.

Almost any component narrow enough to fit through the 17¾-inch space between rack rails can be rack-mounted with a little ingenuity. The neatest way is to build it into a 19-inch-wide panel of the appropriate height. The panel can be of ¼-inch Masonite, plywood, or aluminum painted or covered to match the other panels. You then cut the panel openings of the appropriate size and mount the component to the panel with angle irons. Pioneer's JA-R101 adapter for the TX-9500 and components of similar size (16⅞ x 5⅞-inch panels) is actually a rack-mounting shelf that could hold smaller components too.

Other options are available from such metal-rack makers as Premier: shelf angles that run from front to rear of the rack to hold wide components or (with a metal shelf) narrow ones, pull-out shelves (I use one for my preamp, so I can get to the rear connections easily), and sturdy drawers (I keep my top-loading tape decks in those).

## What Goes Where

Though racks let you stack your components in any order you like, it pays to think out their locations for greatest convenience. It's generally best to put power amplifiers at the bottom where their weight will add stability. Since you rarely readjust a power amplifier's controls, it won't matter much that you must occasionally stoop to reach them.

The preamp or integrated amp, though, should be high enough that you

can reach its frequently used controls *without* stooping—and low enough that no one who'll be using it will have to stretch. Tuners should generally be mounted closer to eye level so that you can see their dials clearly. Front-loading tape decks should usually be mounted fairly high too, for easy loading and VU-meter watching.

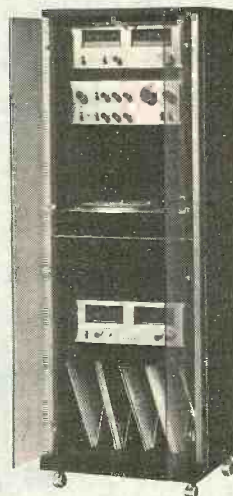
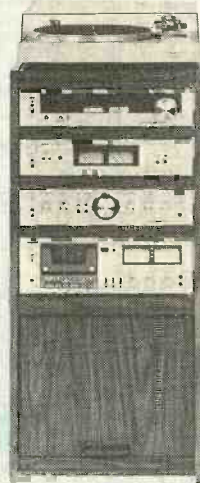
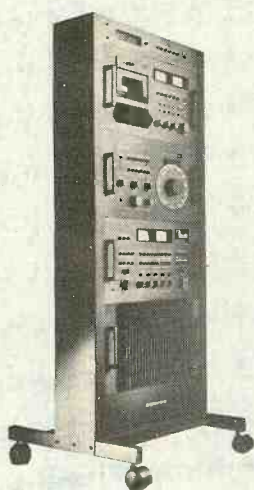
Drawer-mounted components should be low so that users needn't tiptoe up and crane over the drawer's front lip. And, if you plan to do tape editing, make sure your open-reel deck is at a convenient height for that too.

If your rack has mounting frames in back as well as in front, you might want to mount power amplifiers (whose controls you rarely use) back there. If you readjust your equalizer only rarely, you might want to mount that in the back of the rack, too, where its controls are less likely to be disturbed.

## Gadgets and Accessories

The rack's utility is extended by many accessories. Those drawers recommended earlier for tape decks can also be used to hold accessories. For that, use shallower drawers, like those available from Sansui, so your accessories can rest in *one* comprehensible layer, not in a jumble several layers deep. Intra has drawers designed specifically to hold cassettes (up to sixty in 3½ inches of rack space) or 7-inch tape reels (up to forty in 8¾ inches). They also sell rack-mounting shelves with optional dividers for 10½-inch tape reels or 12-inch discs.

When I rack-mounted my own system (years before today's rash of fine-furniture wood-paneled racks became available) a rack-mounting accessory called a patchboard was my prime reason. My patchboards are rack-mounting panels with two rows of twenty-





# RACKS

four phone jacks in each. All component-interconnecting cables can run through the patchboard rather than directly from one component to another. This brings all connections neatly to the front and allows equipment to be recombined in any order without replugging and confusing the rear-panel cords. As my patchboard is wired, all standard connections are made automatically behind the patchboard and are broken only when I plug a cable in from the front.

Using the patchboard I can quickly plug new components in for testing or trial periods; normal connections are restored as soon as I pull out my patch-cords. I can also plug my components together however I want—placing the equalizer, for example, between the preamplifier's recording output and the tape-deck input when I record 78's or placing it between the preamp and the amp for normal listening. And I can trace down system troubles: by plugging the left preamplifier output into the right power-amplifier input and vice versa, I can instantly discover whether the preamp or the amp has a dead channel. I can also substitute components,

using my rear-channel amplifier, for instance, while my front-channel one is undergoing repairs.

Patchboards have, as I said, been a studio standby for years. But there are models now available from home-equipment companies, too. Teac, for example, makes a compact one, using home-standard phono ("RCA") jacks instead of studio-standard quarter-inch phone jacks (it also lacks the "normaled-through" feature that lets you use professional patchboards with no cords plugged into them). Russound offers an update on the patchboard: a box with switches for the most common connections and changes, plus miniature-phone-plug patch facilities. Available for several years now, the switcher has just appeared in a rack-mount version. Switchcraft has an interesting variation on the professional patchboard, the JPO 1-2000, built in modules of four jacks each, allowing you to rewire one set of connections without removing the whole board and risking damage to the other connections in the process.

It's common studio practice to turn everything in a rack on and off with a master switch. Since few preamps can handle the switching loads of today's high-power amplifiers, this approach makes a great deal of sense. Plug strips to fit inside equipment cabinets can be

found at most good hardware or electrical-supply stores (be sure to keep signal cables as far as possible from the power strips to avoid hum pickup). Rack panels with a master switch (and possibly an extra outlet or two) in front and outlets in the rear, inside the rack, are available from SGL Waber and other manufacturers.

## Heat

The fact that in a standard rack the audio equipment is usually suspended by the front panels means that there is plenty of room (no shelves) around the components for cooling-air flow. However, some recent audiophile quasi-racks are simply redesigned shelf units, and heat can become a problem in such enclosures—especially if high-power amplifiers are mounted below the other components. But cooling fans and attractive vent grilles are available and can be adapted to fit most units.

It is clear that, aside from the "professional look" that rack mounting provides, there are substantial advantages in respect to both operation and installation convenience. When it comes to making your audio hobby an integral part of your home decor, the rack is not the only way to go, but it is without a doubt becoming an increasingly attractive option. □

### ► Racks, Vertical Hi-fi Cabinets, and Accessories

**AMCO ENGINEERING**, 7333 W. Ainslie St., Chicago, Ill. 60656

**AUDIO WORKS**, 840 Piner Road, Suite 14, Santa Rosa, Calif. 95401

**BSC, INC.**, 2932 River Road, River Grove, Ill. 60171

**BUD RADIO**, 4605 E. 355th St., Willoughby, Ohio 44094

**CLICK SYSTEMS**, Hammond Industries, 155 Michael Drive, Syosset, N.Y. 11791

**CROWN**, 1718 Mishawaka Road, Elkhart, Ind. 46514

**CUSTOM SOUND SERVICE**, 8460 March Road, Algonac, Mich. 48001

**DENON**, American Audiopoint, 1407 N. Providence Road, Columbia, Mo. 65201

**DYNACO**, Box 88, Blackwood, N.J. 08012

**ELF AUDIO**, 1625B Sycamore Ave., Bohemia, N.Y. 11716

**EQUIPTO ELECTRONICS**, 435 Woodlawn Ave., Aurora, Ill. 60517

**GAMBER-JOHNSON**, 801 Francis St., Stevens Point, Wis. 54481

**GLI**, 29-50 Northern Blvd., Long Island City, N.Y. 11101

**GUSDORF**, 6900 Manchester Ave., St. Louis, Mo. 63143

**HARMAN KARDON**, 55 Ames Court, Plainview, N.Y. 11803

**INTTRA CORP.**, 2636 Humboldt Ave. So., Minneapolis, Minn. 55408

**JVC**, 58-75 Queens Midtown Expressway, Maspeth, N.Y. 11378

**KENWOOD ELECTRONICS, INC.**, 1315 E. Watsoncenter Road, Carson, Calif. 90745

**KIRSCH CO.**, 309 N. Prospect St., Sturgis, Mich. 49091

**MARANTZ**, 20525 Nordhoff St., Chatsworth, Calif. 93112

**MITSUBISHI**, Melco Sales, 3030 E. Victoria, Compton, Calif. 90221

**NAKAMICHI**, 220 Westbury Ave., Carle Place, N.Y. 11514

**NEW ENGLAND PRECISION PRODUCTS**, 187 Streetsboro St., Hudson, Ohio 44236

**NIKKO**, 16270 Raymer St., Van Nuys, Calif. 91406

**NOMADIC FURNITURE**, 9525 Cozycroft Ave., Suites N and M, Chatsworth, Calif. 91311

**ONKYO**, 42-07 20th Ave., Long Island City, N.Y. 11105

**OPTIMA ENCLOSURES**, Scientific Atlanta, 2166 Mountain Industrial Blvd., Tucker, Ga. 30084

**OPTONICA**, 10 Keystone Place, Paramus, N.J. 07652

**O'SULLIVAN**, 19th & Gulf Sts., Lamar, Mo. 64759

**PAR-METAL**, 1260 Atlantic Ave., Brooklyn, N.Y. 11216

**PIONEER ELECTRONICS CORP.**, 75 Oxford Drive, Moonachie, N.J. 07074

**PREMIER METAL PRODUCTS**, 381 Canal Place, Bronx, N.Y. 10451

**QSC**, 1936 Placentia, Costa Mesa, Calif. 92627

**RACK-IT INDUSTRIES**, 8905 Odell, Bridgeview, Ill. 60455

**ROTEL**, 1055 Saw Mill River Road, Ardsley, N.Y. 10502

**RUSLANG CORP.**, 247 Ash St., Bridgeport, Conn. 06605

**RUSSOUND/FMP**, Canal St., North Berwick, Me. 03906

**SAE**, P.O. Box 60271, Terminal Annex, Los Angeles, Calif. 90060

**SANSUI ELECTRONICS**, 55-11 Queens Blvd., Woodside, N.Y. 11377

**SGL WABER ELECTRIC**, 300 Harvard Ave., Westville, N.J. 08093

**SONY CORP. OF AMERICA**, 9 West 57th St., New York, N.Y. 10019

**SPECTRO-ACOUSTICS**, 3200 George Washington Way, Richland, Wash. 99352

**STANTRON**, 6914-18 Beck Ave., North Hollywood, Calif. 91605

**STAR CASE**, 15525 South 70th Court, Orland Park, Ill. 60462

**SWITCHCRAFT**, 5555 N. Elston, Chicago, Ill. 60630

**TEAC**, 7733 Telegraph Road, Montebello, Calif. 90640

**TECHNICS**, One Panasonic Way, Secaucus, N.J. 07094

**TOSHIBA**, 280 Park Ave., New York, N.Y., 10017

**ULTRALINEAR**, 3228 E. 50th St., Los Angeles, Calif. 90058

**VERO ELECTRONICS**, 171 Bridge Road, Hauppauge, N.Y. 11787

**WOODLAB**, 1537 E. 56th St., Tulsa, Okla. 74105

**ZERO**, 777 Front St., Burbank, Calif. 91502

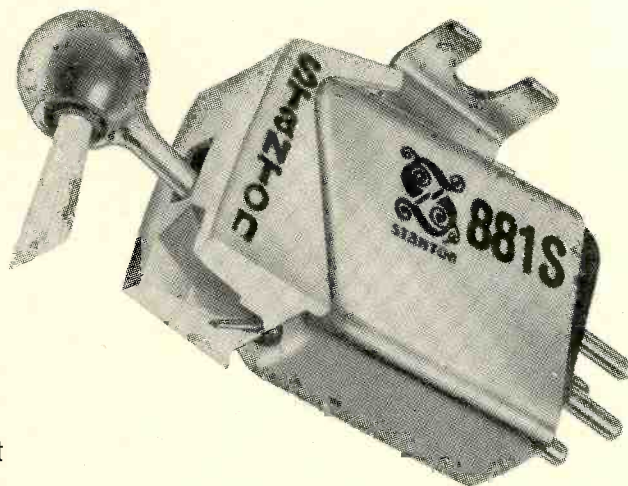


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|------------------|--|--|
| <p><b>1.</b></p> | <p><b>FEATURE</b></p> <p><b>Record Static Elimination System</b></p> <p>Every Stanton cartridge for the last 15 years has featured a patented stylus assembly which neutralizes the atmosphere surrounding the diamond stylus and discharges record static harmlessly into the grounded record playing system.</p> | <p><b>BENEFITS</b></p> <ul style="list-style-type: none"> <li>A. Eliminates harmful static electricity at the record.</li> <li>B. Eliminates static clicks and pops at the loudspeaker.</li> <li>C. Enables the brush to do a <i>proper</i> cleaning job.</li> <li>D. Permits the use of an Ungrounded Brush.</li> <li>E. Eliminates electrostatic dust attraction to the stylus tip.</li> </ul> |
| <p><b>2.</b></p> | <p><b>FEATURE</b></p> <p><b>"Longhair"® Brush</b></p> <p>Its independently hinged action does not interfere with the tracking force of the stylus while its tapered nylon bristles clean the grooves in front of the stylus. Stanton developed it in 1966.</p>   | <p><b>BENEFITS</b></p> <ul style="list-style-type: none"> <li>A. Cleans records efficiently.</li> <li>B. Damps tonearm resonance.</li> <li>C. Improves low frequency tracking.</li> <li>D. Dynamically stabilizes tonearm system.</li> <li>E. Aids in playback of warped records.</li> </ul>   |
| <p><b>3.</b></p> | <p><b>FEATURE</b></p> <p><b>Stereohedron™ Stylus Tip</b></p> <p>Patented in 1976, the Stereohedron stylus tip has a far greater bearing radius and more contact area with the groove.</p>  | <p><b>BENEFITS</b></p> <ul style="list-style-type: none"> <li>A. Exceptional frequency response.</li> <li>B. Superior protection of high frequency signals in the groove.</li> <li>C. Longer record life.</li> <li>D. Longer stylus life.</li> <li>E. Better tracing ability.</li> </ul>   |
| <p><b>4.</b></p> | <p><b>FEATURE</b></p> <p><b>High Energy Rare Earth Magnet</b></p> <p>First introduced by Stanton in early 1977, this type of magnet enabled the complete miniaturization of the stylus assembly and tip mass. It is the beginning of a whole new generation of cartridges.</p>                                     | <p><b>BENEFITS</b></p> <ul style="list-style-type: none"> <li>A. Outstanding tracking ability.</li> <li>B. Unequaled transient response.</li> <li>C. Higher output with one tenth the mass of ordinary magnets.</li> <li>D. Superior tracing ability.</li> </ul>   |

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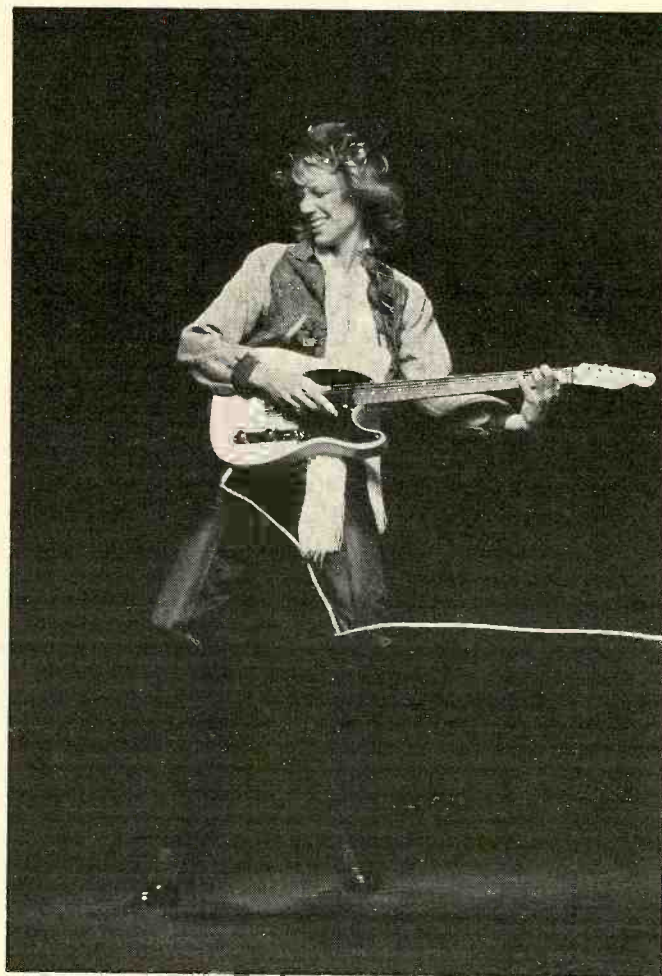




# THE MARSHALL CHAPMAN REPORT

Is this what lies  
on the other side  
of women's lib?

By Steve Simels



**R**EMEMBER the good old days of gender-confused rock-and-roll, say about 1973? When men were women, and women were publicists? When eye shadow and platform heels were as *de rigueur* for rock bands as drum solos and drug lyrics had been only five years before? Well, in case you don't, you probably haven't noticed that androgyny, which *Creem* once called "the dominant theme in rock-and-roll," is no longer as popular as it once was. Today, if guys are wearing Max Factor on stage, they're not striving to be outrageous but rather to look healthy and reasonably macho for the six o'clock news, and if there's anything that can be said to link such otherwise dissimilar rock stars as Johnny Rotten, Ted Nugent, the Bee Gees, and Bruce Springsteen, it's that they're all unmistakably (some might even say obnoxiously) male; not a limp wrist in the bunch.

Still, one of the most persistent rock-critic fantasies, along with the ever-popular Next Big Thing (the wait for

which has taken on an absurdist futility that Samuel Beckett would no doubt appreciate), has been that of the female rock star with, um, va-va-voom. For years now, writers have bemoaned the absence of a woman who could beat the men at their own game, who could play aggressively sexual no-nonsense rock without compromising her femininity and yet avoid rock's traditional female stereotypes—tragic loser (Janis Joplin), sensitive co-ed (Joni Mitchell), or sex kitten (Deborah Harry of *Blondie*). Certain critics have been known, in fact, to drool publicly at the very prospect, and so, for obvious reasons, have record-industry moguls: the commercial potential of a female who could compete seriously on male turf is simply enormous.

Throughout the Seventies, we've seen some (generally feeble) attempts at manufacturing such a phenomenon. There was April Lawton of *Ramatam*, a post-Hendrix guitar wiz who later turned out to be the product of a sex change, which pretty much blew her

credibility. There was Fanny, a group of four otherwise unprepossessing young ladies who were stigmatized rather on the level of performing poodles: "Hey, they don't play bad—for girls." There were the Runaways, five nubile nymphets who sprang full blown from the brow of huckster Kim Fowley, a gent whose biggest claim to fame remains authoring tunes on the last Byrds' album so wretched that they caused leader Roger McGuinn to pack the group in for good and all. There have also been Kiki Dee, Suzi Quatro, Elkie Brooks, and (still a contender) Genya Ravan. And then, finally, there was and is Patti Smith, undoubtedly the genuine article, but such an idiosyncratic artist that it's difficult to pin her down as *anything*, let alone the Great Female Hope of rock-and-roll.

So, when people began telling me this summer that I really ought to check out a young lady named Marshall Chapman, I took the advice with the proverbial grain of salt. I was only vaguely aware of her at the time; I





knew her first album—"Me, I'm Feeling Free"—had been progressive country, not my most passionate musical interest; I knew that she came from a privileged Southern background (colleague Noel Coppage's comment on her at the time was "My favorite rich kid who sings the blues is still Bonnie Raitt"); and the one photo I had seen of her made her seem far too much the glamour-puss to be a rock star. But I found I quite liked her recent second album, "Jaded Virgin," on which the country influences were considerably subdued, the whole thing rocking out like some curious admixture of Gram Parsons and Led Zeppelin. And so, out of curiosity more than anything else, I caught one of her last shows at New York's tiny Other End.

The experience didn't exactly change my life, but it did make me an instant fan. Marshall has it all: the looks (it's kind of hard to take your eyes off a lanky, scruffy, but elegant six-foot blonde female guitarist with the moves of Keith Richards); the atti-

tude ("This is a song for people who like to fuck around without getting screwed," she announced with a grin); and, most important, the voice (husky, nasal, and strangely vibrato-less, a lived-in, sexy sound that, for all the Lauren Bacall comparisons it has evoked, ultimately calls to mind nobody but its owner).

She was, in short, a knockout, and when her set was over I realized two rather startling things: first of all, she was the only distaff rocker I'd ever seen who was totally convincing with an electric guitar in her hands, and second, of the eight friends who attended the show with me (four guys, four girls, all straight), *everybody* was having sexual fantasies about her. Talk about larger than life! She's not, of course—at least off stage—as I discovered several weeks later when I flew to her home in Nashville for a chat. What she is is a bright, funny, tough-minded, independent woman who has worked very hard for the freedom to do what she wants to do, who likes to get a little

crazy at times, and who comes most alive when she's making the kind of rock-and-roll music that first alerted her to the fact that she didn't necessarily have to conform. About what she had to conform to, more later.

**S**HE lives these days in a messy but comfortable one-bedroom apartment in a building that looks like either a better-than-average college dormitory or the kind of place you'd find in a bad TV movie like *Terraces*. Her neighbors are mostly youngish (she turns thirty in January) and include her boy friend Dave Hickey (a former rock critic whom Marshall refers to as "a citizen of the world" and believes in implicitly) as well as an ex-psychiatrist who gave it all up recently to play acoustic versions of Sixties oldies in a little cellar of a bar called Frankenstein's. Marshall thinks he's great, but laments that "he can't get me prescriptions any more."

The apartment is obviously that of a rock musician. Its most prominent fur-



# CHAPMAN REPORT...

“... there's not much difference in attitude between Waylon Jennings and the Rolling Stones.”

nishings include an old upright piano, guitar cases, and a stereo, and the walls are covered with press clippings (a recent one proclaims that Little Richard has once again renounced music for the ministry), photos (Annie Liebowitz portraits of Keith Richards and Charlie Watts, an 8 x 10 glossy of George Jones), and all her own singles hung up in neat little rows. On another wall is a map of the United States with push pins indicating the cities she's played so far. There are several stacks of LP's on the floor, the most noticeable albums being one by J. J. Cale and “The Coasters' Greatest Hits,” which struck me as an accurate reflection of her influences.

BARELY had time to take all this in, however, before Marshall whisked me off in her van (which she and her band tour in, at rather close quarters, and which, she informed me, was paid for with songwriting royalties resulting from covers—by Crystal Gayle, among others—of her early country tunes). She drove me to a local soul-food joint whose bill of fare, by the time we arrived, consisted of nothing but roast beef. While we waited for dinner, she told me straight off that she can't stand either of her albums and solicited my opinion of them. I ventured that the country record seems a little bit formal, and that the second one pales beside her live show. She seemed most upset about the second one; she did not exactly get along with her producer, Al Kooper.

“I didn't know anything about him or his music,” she confessed. “I knew that he had produced Lynyrd Skynyrd, and that made the record company [Epic] happy. But as a person, all he was interested in was getting home on time and... well, he had a notebook with the names of about thirty chicks in different cities. Just their first names, and they all ended in i or y—y'know, like Bambi or Candy.” She winced at the memory. “And he hated my songs. Thought they were boring. He wanted to leave *A Thank You Note* [Marshall's witty anti-Nashville tribute to Hank

Williams, and one of her best numbers] off the record.”

Back at her place Marshall played me some rough mixes of the original versions of the songs for “Jaded Virgin,” cut late last year in Muscle Shoals. These included *Rancho Vu Motel*, scrapped by Kooper for reasons known only to himself and the Lord, an earlier version of *A Thank You Note* which could pass for a track from “Let It Bleed,” a revelatory heavy-metal treatment of Buddy Holly's *Everyday* that almost screamed “hit!”, and a rather curious ditty called *Don't Let It Go to Your Nose*. On strictly musical levels, at least, Marshall's unhappiness with Kooper appeared to be justified; what she played for me was far superior to what got released—and, incidentally, a lot more flattering to her voice. (The tape box was ironically labeled “Will the Real Marshall Chapman Please Stand Up, or Young Artists Don't Die, They Just Get Buried in the Mix.”) “Damn,” Marshall exclaimed after one tune finished shaking the speakers, “doesn't that sound like a person?”

Rock-and-roll that authentic made the studied c-&-w mode of the first album seem even more puzzling, and Marshall confirmed my suspicion that hard country was not her first love.

“The thing about country music,” she said, “is that I wasn't even aware of its existence when I was growing up, other than seeing Porter Waggoner on

the local TV station. It was just that when I moved to Nashville after Vanderbilt [University, where she spent two years before dropping out in 1970] I was looking for an out—like, what do I do? And I just fell in love with what I thought was the real part of country music, the stuff Waylon was doing, the stuff Willie was doing, when they were just starting out. What they were singing sounded real to me, and anyway there's not much difference in attitude between Waylon Jennings and the Rolling Stones. After that, I sort of educated myself back to the rest of it.”

NASHVILLE was an exciting place to be in those days, but for Marshall the romance is over now.

“When I first got here,” she said sadly, “I thought I could really help change it. But now I can't wait to get out. It's a really weird place. Everybody in this town wants to have a hit record that crosses over and makes lots of money so they can split for Vegas. It's sick. There isn't even any real place for live music any more, because all the best pickers make so much money doing sessions they can't be bothered doing anything else.”

To prove her point, Marshall drove me around town in a vain attempt to find some kind of a scene happening, and, by God, she was right: Music City U.S.A. on a Friday night is as dead as dead can be. In fact, you could hear

(Continued on page 90)

Can you spot the rock star in this picture? Yes, that's the future *Jaded Virgin* at bottom right, surrounded by mom and sisters. Little did they know...







## New shapes of sound from RTR The Rhombus Subwoofer...The Pyramid Satellite



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# CHAPMAN REPORT...

more (and better) music any night in New York. What was oddest was that there wasn't even that much *country* being played. When we dropped in at the Pickin' Parlor, for example, a honky-tonk where Marshall performed when she was starting out, the music was being provided by a typically sensitive singer/songwriter of the L.A. school. (On the wall, however, was a photo of Marshall in the early days, backed by some of the Nashville locals who wouldn't tour with her because "they just wanted to sit around here and get laid and paid and stuff.") Over at Frankenstein's, her ex-shrink and a buddy (they were billed as the White Animals) were singing old Peter and Gordon material, of all things. When we finally hit the notorious Devil's Den, a joint she derisively characterized as "one of those double-knit bars," there was a country outfit on stage, but they were running through a predictable repertoire of standards—Willie Nelson, Jimmy Buffet—with about as much conviction as an average Long Island Led Zep copy band. What country ambiance the place did possess was due more to the presence of several Snuff Queens (a term with which I was unfamiliar, but which Marshall informed me meant c-&-w groupies). Although they were all fat and forty, with bee-hive hairdos teased well into the ionosphere, I thought they didn't look all that different from some of the scuzzier denizens of CBGB's I've seen, but Marshall thought they were a real hoot. "If one of them sits on your face for an hour or so," she deadpanned, "you ain't never gonna get up."

There's a certain barely repressed glee in the way Marshall delivers an unladylike line like that one, as if she's thinking "Got away with another one." Which is more than understandable, if you consider her background. Unlike most rock-and-rollers, Marshall comes from old money, from a cloistered antebellum environment that in earlier eras gave us Scarlett O'Hara and Tallulah Bankhead, two legendary ladies who might be considered her spiritual cousins. Her family is part of the aristocracy of Spartanburg, South Carolina, where for years they've run the Inman Mills and lived the kind of comfortable, genteel lives one reads about in romantic women's fiction—mint juleps on the veranda and all. It's a place

where conservative virtues and values still survive and thrive, and the revolutionary paroxysms of the Sixties left it all but untouched. For Marshall it was, almost from the beginning, a place where she didn't fit.

"Learning to be white was nothing I needed to know," she sings about her childhood in *Why Can't I Be Like Other Girls*, everybody's favorite song from "Jaded Virgin," and the message was not lost on her parents, who, noting her early passion for rock-and-roll (brought on at age seven by seeing Elvis Presley's debut on the Ed Sullivan Show), packed her off as soon as possible to a school where her rebellious tendencies could be kept in check. Marshall has since described her adolescence as "one long sleep." It was a sleep that lasted through her collegiate days ("We were all really into that whole sorority number... Villager sweaters, the

... As far as I'm concerned, feminists have done to women what the Baptists did to religion."

whole bit. It was just like *Animal House*") and didn't end until the Kent State tragedy. "That finally did it," she told me. "I just said, 'Chuck the whole thing, this isn't for me, this isn't for real.' I've been a late bloomer all my life."

So, Telecaster in hand, Marshall cut her ties and began insinuating herself into the tight little circle of would-be renegades that was just then beginning to challenge the Nashville establishment. It took a little time, during which she worked as a waitress and established a reputation for herself as a demon pinball player, but eventually she got herself noticed enough to land a record deal and for Waylon Jennings to say of her, "Marshall's a good old boy. She can come on the bus." An apt phrase. Members of her own band, for instance, whom I saw fooling around with her at ex-Outlaw Tompall Glaser's recording studio, most definitely treat her as just one of the guys, somebody they can feel comfortable hanging out with, shooting the breeze and getting pleasantly drunk. It is an easy, relaxed camaraderie that seems to me to make a lot of feminist rhetoric irrelevant, and Marshall emphatically agreed.

"I don't like to wave banners about stuff like that," she said, "because overall, to me, the *first* thing is rock-and-roll. Men and women come second—y'know, this *thing* between men and women. The band and I joke about it. They're cool. There was a time, though, when we were all staying in the same room on tour, and I'd be shaving my legs in the sink, and none of them had ever seen *that* before. They freaked out, but it was fun. I'm not into any women's movement, or anything like that, though. As far as I'm concerned, feminists have done to women what the Baptists did to religion."

UNDERNEATH that kind of irreverence, as you may have guessed by now, Marshall Chapman is at heart an old-fashioned Sixties idealist, someone who believes in rock-and-roll and its power to affect the way we live. Before I left her, she told me that her biggest ambition is to "make a record that I can really be proud of, even if it's just one song." While that may be ingenuous, it's downright inspiring when you contrast it to the attitude of a contemporary of hers like Dolly Parton, who aspires to superstardom and getting on the cover of *People* magazine a lot. I doubt that "Marshall" is ever going to be the household word "Dolly" has become (although if Patti Smith can crack Top-40 radio, Marshall could too), and I'd be surprised if she turned into a stadium-rock attraction along the lines of Fleetwood Mac or Heart (the only other acts to which I suppose she could vaguely be compared), although she's certainly exciting enough. I'm not sure that the mass audience is ready for a woman whose commitment to rock-and-roll is so clear-cut and who is so unselfconscious, so unconcerned about her sexuality. Perhaps the reason we've never had a major female rock star doing it like a man is that the audience really doesn't want to see one, because they're somehow threatened by it in a way that all those guys acting like girls never threatened them. I just don't know.

I DO know, however, that despite it all, sooner or later, in one guise or another, Marshall Chapman is going to break through, Marshall Chapman is going to matter. Maybe it will be with that third album, for which she has all sorts of plans she doesn't want to divulge. Maybe not. But whatever happens, she'll keep working at it, because, to paraphrase the Stones (whom she considers "still the greatest rock band that ever was"), for her there is just no other answer to the old question: What *else* can a poor girl do? □



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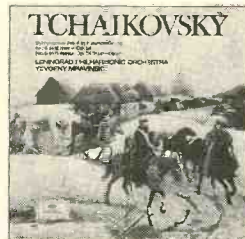
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# How to UNPACK, HOOK UP, TEST, TUNE, & INSTALL **YOUR NEW AUDIO EQUIPMENT**

By Robert N. Greene





LET'S fade in on you surrounded by your just-unpacked new hi-fi equipment. Of course you're finding the anticipation almost unbearable. This is the moment for perhaps the most important instruction we can give you: keep cool—take it easy! Even for the most experienced, a new component may involve something that requires careful study. Any system, simple or complicated, presents a number of opportunities for getting your wires crossed, so go at the whole thing as slowly and as methodically as possible; haste *does* make waste—and anger—and frustration.

Before you start, it would be helpful to have the following items on hand:

1. A roll of masking tape and a fine-tip permanent marking pen.
2. An accurate stylus-force gauge (the Shure SFG-2 is easy to use, accurate, and widely available, and it measures from one-half to three grams in small increments).
3. A very small screwdriver (blade width slightly under 1/8 inch) of the kind sometimes supplied with phono cartridges, and a regular 1/4-inch screwdriver as well.
4. A copy of the STEREO REVIEW SRT 14 test record and a good recording of music.
5. A copy of the STEREO REVIEW Troubleshooting Guide (see instructions for obtaining this and the test record on page 98).
6. A small roll of plastic electrical tape.
7. A couple of short lengths of speaker wire for "preliminary" connections.
8. Tweezers and/or needle-nose pliers.
9. A small lamp and magnifying glass.

The reasons for having these items handy will become apparent as we get to them. Incidentally, this is a basic list relating only to the electrical hookup of the system; a larger number of tools may be necessary for the physical installation, depending on how you choose to do it.

I hope you've had the foresight to have the audio equipment checked before it left the store so that you can start with the knowledge that everything will function properly if you do your part. Spending time getting a system interconnected only to discover that one of your beautiful new components is nonfunctional is a particular kind of letdown I would wish on no one (it's unlikely, but when it does happen it's invariably at a time when you can't get help).

Incidentally, this is where the Troubleshooting Guide reprint comes in. If something should go wrong, it will help you locate the problem. And notice I said *locate*, not repair. If you make some error in the hookup and have to correct it that's one thing, but the last thing you want to do is attempt to repair a brand-new unit yourself or have an unauthorized repair shop do it. The only thing such action definitely accomplishes is giving the manufacturer grounds for voiding the warranty.

## Unpack

Go about the opening of the packing cartons carefully, looking for any warnings or special steps in undoing the packing—and be especially alert for small parts, delicate subassemblies, pamphlets, or shielded leads concealed in the packing material, inside

cardboard folds, or in holes in the styrofoam pieces. With turntables in particular, most of which require some assembly, be on the lookout for hidden parts.

And before you remove anything from the carton, note carefully exactly how the unit and the packing material are placed in the box (some cartons come with an illustrative packing sketch). Should you have to repack the item, you may find it well-nigh impossible to get everything back the way it was without this help. Keep all the packing material; small things, including the transit

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**A**T some point very early in our audio careers, we have all come face to face with the challenge of installing a new component or—usually—a whole new audio system. You may already have been through it at least once and know that, although it is certainly part of the fun, it can also be quite a job. The following suggestions, based on years of seeing people do it the hard way, may make the task a little easier or indicate how improvements can be made on what has already been done. If you're just planning your maiden run, we'll try to help you get it right the first time.

---

screws or plastic inserts frequently used to stabilize the parts of record players and tape decks during shipment, can be kept most conveniently in a plastic bag in the carton to avoid loss.

Next—and this includes you old hands too—dig out the instructions and, with each unit in front of you for reference, read the instructions carefully (at least the section on hookup) until you understand them. Newcomers are forced to do this; it's the "experienced" ones who'll jump rashly ahead. Unless you *really* know the particular unit involved, you may be in for a rude surprise.

## Hook Up

Just to be on the safe side, don't mount everything in its final position or run back-of-furniture cabling until you satisfy yourself that all's well with the equipment and that you are familiar with the various jack locations. Put the unpacked units on the floor (unless you have some better large surface) and, instructions in hand, go through the whole interconnection procedure. You might, indeed, have to do this if your installation furniture isn't ready yet and you are willing to run the system "in the raw" for a

few days. Should this be the case, don't put any of the electronic equipment directly on soft carpeting; it will just sink into the carpet, blocking ventilation from the bottom. A piece of stiff cardboard—perhaps an insert from the shipping carton or the carton itself—is often adequate to support a not-too-heavy component properly on its feet and maintain sufficient air space beneath its bottom plate.

Since you're not going to leave the equipment sitting on the floor indefinitely, the hookup doesn't have to be pretty; you really don't even have to worry about getting the speakers in phase unless you want to sit back and listen for a while. You're only checking to see if everything works, so just put it all together in accordance with the instructions, making sure that the antenna and speaker leads are connected to the amplifier (or receiver) without short circuits between the terminals.

## Check Out

Next, switch the amplifier on with the volume down low. Set the input selector to FM, turn on the tuner (unless it's part of a receiver and is already on), tune around until the tuning meter(s) shows you're on a station, and then bring the volume up slowly. Hear audio? Great! You got it right the first time. Audio, but on the noisy side? Move the antenna around a bit and you should get something worth listening to, if not perfect. If the meter(s) shows activity and what you're hearing isn't too hissy or distorted, chances are your tuner (or tuner section) is okay and will be up to snuff once the antenna is properly placed and oriented. (Incidentally, if your antenna is inadequate or not connected at all, you may get little or no meter activity. Unlike your portable radio, a hi-fi component has no built-in FM antenna.)

When you've completed this test satisfactorily, you've also established that the amplifier (or amplifier section) functions. You might now run through quick tests on your record player and any other components you might have. Using some old records (just in case), make sure the phono performs its automatic functions, if any, the way it should.

## Trouble?

But let's suppose that you've switched on and nothing happens. Tough luck, but not necessarily a disaster. Do any of the lights go on? Okay, then you've got power going to the units. (You'd be surprised how many people forget the wall plug.) Recheck all your connections. Probably the equipment's okay, but you've made an error or omission. Find it.

If you're forced to the unhappy conclusion that some unit is indeed defective, contact your dealer at once for instructions. This, incidentally, is a point that you should have clarified prior to purchase: *for what period of time will the dealer implement the warranty, and in what manner?* Many dealers will simply replace the unit from stock for some given period and after that will repair it or ship it back to the manufacturer for



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"The more pieces of equipment you have, the greater the possibility hum will be introduced."

you. (The amount of service you can expect is generally inversely proportional, by the way, to the discount you received.)

On the electronic equipment, operate all of the controls to be sure they aren't noisy and that they perform their intended function. Is there a "thump" in the speakers when the amplifier is switched on or off? If so, does the demonstration unit in the store do the same thing when hooked up to a speaker as efficient or inefficient as yours?

Check to be sure that radio stations appear at the correct points on the tuning dial and that the signal-strength and center-of-channel meters agree not only with each other but with the point of best audible reception: Absolute precision throughout isn't vital, but discrepancies should be slight; if there is some error, a very slight internal adjustment is called for and your dealer should be able to help out. However, if you happen to have bought a digital tuner, it would certainly not be unreasonable to expect station readouts to be *precisely* correct.

## Hummm

Incidentally, while everything is still out in the open and accessible, checking a.c. power-line polarity would be a good idea. The more pieces of equipment you have, the greater the possibility that hum will be induced by incorrect orientation of power plugs.

Plug all your equipment into the sockets (either in the wall or in the rear of the amplifier or receiver) that will serve them in the final installation. Now, with the system turned on and the bass controls turned up, begin reversing plugs in their sockets by withdrawing them, turning them 180 degrees, and reinserting. If you hear a change in the system's hum level, adopt the orientation that results in the least hum. Chances are that one particular combination of plug positions will produce at least a bit less hum than the others. Mark all of the plugs (using the marking pen, nail polish, or whatever) so that you can duplicate the insertion polarity later on. And don't forget the plugs going directly to the wall socket when you're going through this exercise. Now you've finished your rough testing and you're ready to begin the actual installation.

## Wires and Cables

The simplest but potentially most annoying (barring hum) part of your installation can be the cabling. Here's where you can either foul up royally or score a coup: take the time and make the slight extra effort to

be methodical. You will do a better job and simplify later maintenance.

If you've already worked out, at least generally, where everything is going to be, you can prepare your permanent speaker wire now. Figure out how many feet are needed to reach from the amplifier to each speaker, including all the kinks and turns the wire may have to make around corners, behind furniture, perhaps up over doorways and what-have-you—and then add a yard or so more. These calculations almost invariably turn out to be wrong (perhaps some corollary of Murphy's Law applies) and it's better to find yourself with too much than too little. Of course you can always splice in more (using the tape you have handy) if you come up short, but that's not as neat and it is *avoidable* labor. Don't forget to allow enough extra length to permit servicing. Also, especially with speakers, you may find later that the original locations are not the most favorable and some shifting around is necessary, so prepare as best you can for this eventuality as well.

Don't use the very thin wire that's sold as "speaker cable." It's usually number 20 or 22 gauge and too light for most applications. You should use number 18 or heavier (the lower the number, the heavier the wire). If you're going to have an unusually *long* run of cable—say over 15 feet or so—or if you are using 4-ohm speakers, then number 16 is preferred. The heavier the cable, the less amplifier power will be dissipated by the cable's electrical resistance. Ordinary hardware-store lamp cord (sometimes called "zip" cord because it's scored in the center for easy splitting) is number 18 and quite suitable except where the heavier number 16 is called for, and that's also a hardware-store item.

One warning: even though ordinary electrical wire is used for connecting speakers, *under no circumstances should you use ready-made extension cords or introduce any standard a.c. plugs or sockets into speaker wiring.* If you do, you'll find that at some future time someone is going to plug a speaker or amplifier-output circuit directly into the a.c. wall outlet, and with catastrophic results.

Of late, a few manufacturers have been introducing new kinds of special loudspeak-

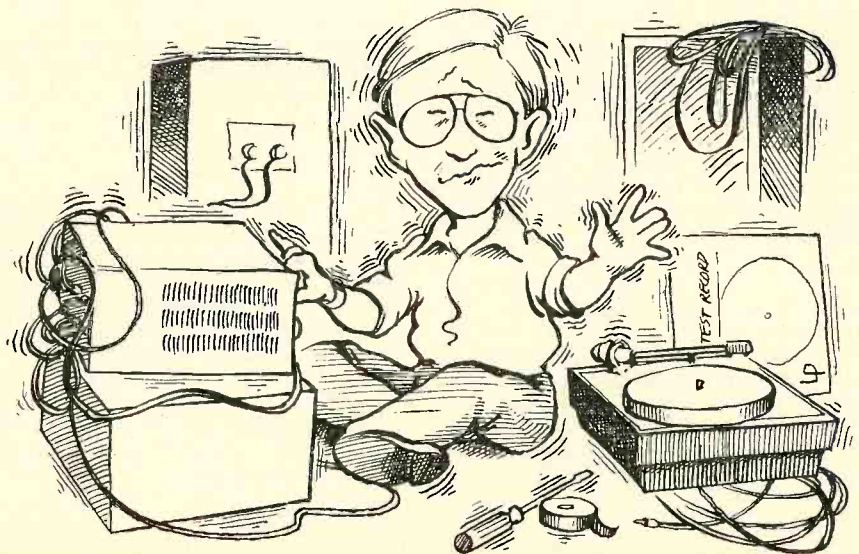
er cables ranging in price from one to ten dollars *per foot*! We'll reserve judgment on these products for the moment, and perhaps you had better do the same. There have been instances of amplifier failure when they have been used in combination with certain speaker systems. Ordinary heavy lamp cord will see you through for now, and you can always invest in other cables at a later time.

## Speaker Phasing

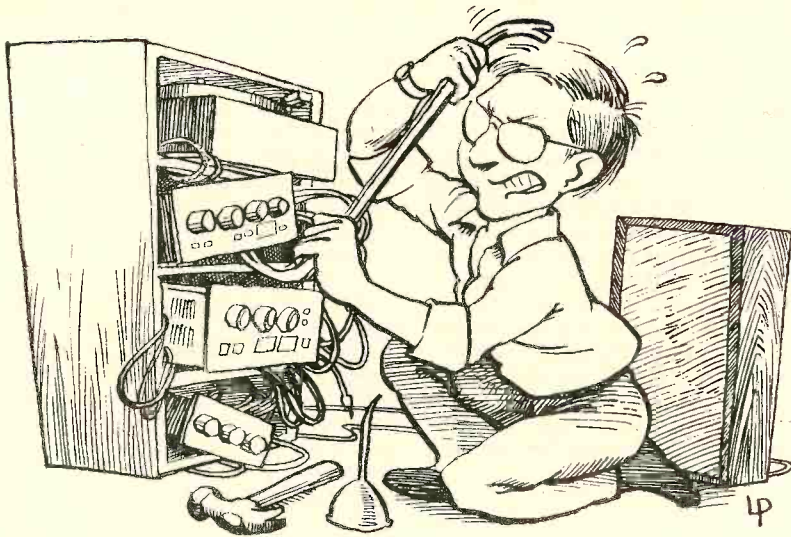
Since your stereo speakers have to be in phase with each other, proper polarity must be observed in the connecting wires. The cable manufacturer has made this easy for you—if you know what to look for. Bear in mind that it doesn't matter which way you connect a speaker to the terminals of your receiver/amplifier so long as you connect the other speaker in the same way. Some speaker terminals are marked + and -, others C and 8, and a few 1 and 2. To repeat: it makes no difference which amplifier terminal is connected to which speaker terminal, *just so long as the connections are the same for all channels.*

The most obvious polarity indication in wire is one copper- and one silver-colored conductor inside the plastic insulation. If your wire isn't made this way, look for a thin thread running through one side of the cable. Lacking both of these, look closely at the insulation itself; you'll see that one side is flat, has a line, ridges, or some similar marking embossed in the plastic. Any of these markings will save your having to run the wire through your fingers from one end to the other to tell which side is which.

There's also the battery polarity test, which can be used if you can actually see your woofer cones (if you cannot remove the grille, a flashlight shining through it will often work). With the cable ends connected to the speaker system, touching the other free ends to the terminals of an ordinary 1½- to 9-volt battery will produce a single "click" or thump in the speaker and cause the speaker's woofer cone to move either in or out. When you have both cones moving in the same direction (when the same relationship to the battery is established), they'll







be in phase. Label the lead going to the positive pole with a "+" mark and attach the cable to the amplifier accordingly. Even if you don't use this for phasing, it's an easy way of checking that the speaker cable is connected and unbroken.

## Cable Identification

Now to the masking tape mentioned earlier. Start using it from the very beginning to mark all your cables at both ends; this will prevent some confusion now and possible chaos later. My own method is to use tape in strips about 4 inches long. These are folded over the wire and the two gummed sides stuck together to make a little flag. With the fine-point permanent marker, print something that will unambiguously identify the cable and its destination—something that will be comprehensible to you a year hence when you have to go checking around the system again. If you have a complex system with long runs of cable, you may want to put labels at both ends of the cable. And don't forget to label the a.c.-cord plugs also. It's helpful to know which a.c. plug leads to which piece of equipment when you have five or six plugged into the back of one preamp.

Remember that you may someday have to sort out the cable routings in poor light or even hanging over the back of a unit looking at it upside down. Some people make a mirror-image diagram of the rear of each unit and tape it inside the back of the cabinet or any place it will be visible when needed.

Most equipment you buy will come with audio cables. These are generally fairly short, so if you expect you'll be needing lengths greater than two or three feet (it's best to keep them as short as possible, incidentally) you'll have to buy or make your own. Remember to allow more than enough length for the distance involved. And keeping a few spare cables on hand could save you from having to run out to a store in mid-installation should you find a bad one (a not unheard-of occurrence).

When you're buying the shielded cables, don't go for the cheapest; it may prove to be

a costly economy. On the other hand, it is possible to spend a considerable sum of money on cables—more than \$20 for a set of two, in fact. Again, we are not in a position to say whether such an amount can be justified. However, the best of these cables have sometimes proved to be highly effective against annoying pickup of CB radio and other unwanted electromagnetic transmissions. One thing these costly cables will ensure is a solid electrical connection with the jack. Lesser cables can be haphazard in this respect, requiring you to squeeze the assembly around the outside of the plug before it is inserted to guarantee that the outer shell of the jack is snugly gripped.

## Equipment Housing

Before you buy any equipment, you ought to know the exact dimensions of the space you have available to put it in. This may well narrow your field of choice greatly and simplify, for example, the question of whether to go for a receiver or separate components. A receiver might be more convenient than its equivalent components in some applications, but the smaller components can be spread around or stacked.

On the other hand, if the equipment is already purchased or definitely decided on, don't squeeze it snugly into some space just because it looks good there. And provide long enough cabling so you can move each piece forward on its shelf without tearing off all the wires. At this point, too, you might consider the advantage of mounting your equipment at or near eye level. And most certainly avoid putting the turntable at ankle level as decorators are inclined to do.

If you're going to want the equipment installed in some existing furniture, such as a valuable antique cabinet, find a good cabinetmaker unless you're very handy with woodworking tools. Your local audio salon (as opposed to a discount house) can probably refer you to someone expert in this kind of work. A qualified person can, for a price, create an installation that will do justice to your equipment and to the furniture in which it's going to live.

Perhaps you'll want to display your equipment on open shelving, either wall-mounted or free-standing. Certainly this is a convenient way of handling the problem, and it generally leaves everything accessible for servicing and adjustment. But keep the weight of your equipment in mind. While a given shelf might be able to hold, say, 50 pounds of books spread over its length, it could well sag or collapse when that same 50 pounds is the weight of an amplifier occupying less than a square foot of shelf surface. Sag can be circumvented by not leaving too great a length of shelf unbraced and/or by installing the heavy stuff right over a brace.

A handy way to hide your wiring in such open-shelf installation is to tack or tape artist's board or similar material to the backs of the shelves and then run the wires behind it. This eliminates the trouble of snaking the wires along the back edges of the shelves to keep them out of sight.

Much of the shelving in current use employs metal standards screwed to the wall, with hooked brackets inserted into slots spaced along the standards. The shelves are then simply laid across the brackets. Equipment weight is a particular problem here. Most such shelving is made to hold relatively narrow loads—bookshelves—are generally only about nine inches deep—and the added depth of audio equipment places a different and more concentrated kind of strain on the brackets and standard. It's often not enough simply to install deeper shelves—the entire standard and bracket system must be heavy-duty, not just the wooden shelves. If you're at all unsure about what you'll need in materials (or about the mounting method, which may be critical if you don't want everything ripping out of the wall), don't settle for your local hardware store (though some certainly may be knowledgeable), but check with a company specializing in this kind of heavy-duty shelving. They'll have seen your problem or similar ones before and will be able to supply the appropriate materials or, if you wish, perhaps do the whole installation for you. If there is no such outfit in your locality, a lumberyard would be a good second choice, if only for suggesting the local carpenter best equipped to handle the job.

Another equipment-placement possibility that has come into its own just recently is rack-mounting. You'll find all you need to know about home equipment racks in the article beginning on page 80.

## Installing the Turntable

Follow the manufacturer's instructions carefully once you have your record player unpacked. Since it has parts that have to be tied down and/or disassembled for shipping, it will be the most complicated piece of equipment you'll have to handle. Be sure you've found all the associated hardware listed in the instruction book—some of it may be hidden in the recesses of the packing material. And double check to be sure you've released or removed the shipping screws in accordance with the instructions. If they're removable, save them for possible future use.

If the player is to be mounted on a shelf or cabinet top, no sweat. But perhaps you want



# INSTALLATION...

"The first thing to remember is not to be seduced by the mystique of low tracking force."

it out of sight. If you don't have space inside a cabinet that permits access to the player, you may have to put it on slides so you can pull it out like a drawer. Such slides are available at radio parts houses and come in different sizes to accommodate different weights. The comments that follow are applicable to any turntable unit weighing up to perhaps 40 pounds or so.

The slides themselves are rather like a narrow piece of railroad track fitted inside a wider track and mounted on ball bearings; a built-in stop prevents the mounted unit from being pulled out too far. The outer tracks are fastened to the shelf surface with screws and the inner ones are fastened to the turntable unit. Rather than attaching the slides directly to the turntable base, it may be better to install a piece of half-inch plywood slightly larger than the base on the slides and use it as a mounting surface. You can cut a finger hole in the board to use as a drawer pull, or you can use small knobs with pointed wood screws that will go directly into the front edge of the plywood.

You'll have to allow adequate cabling so that the shelf can move forward; a piece of dressmaker's elastic tacked or stapled to the back of the cabinet shelf at one end and tied to the phono cables at the other will pull the cables back neatly when the "drawer" is closed. Note that when the slides are drawn out to their maximum extension, the record player will probably go slightly off level and will not be rock-steady. It's a good idea, therefore, to arrange for the actual record playing to be done with the unit slid as far back inside the cabinet as possible. Slide arrangements of this type are actually most desirable for such components as cassette or open-reel tape decks. Sometimes there is no alternative to mounting a turntable this way, but you should know that slides are not as sturdy and as stable as a turntable support really ought to be, and sensitivity to vibration and/or acoustic feedback may be the result of using them.

But no matter how you mount the record player, you'll have to pay some attention to its acoustic isolation. If your system response is strong in the bass, or if you'll be playing it at high volume, you might encounter acoustic feedback. This can also be a problem if the speakers and the record player are close to each other or installed on shelves attached to the same wall. Floors, of course, can transmit vibration as well as walls. If you can mount your turntable in or on some very heavy piece of furniture, so much the better—the more dead weight, the less likelihood the whole thing will vibrate. If your sound tends to howl or growl when you turn up the volume of your record player—but *not* your tuner or cassette deck—

you have an acoustic-feedback problem. Relocation of the player or the use of acoustic isolators (such as those sold by Netronics and Audio-Technica) should solve whatever problems occur.

When you're installing a record player or tape deck, be careful of its position relative to the amplifier or receiver. Power transformers in those units have 60-Hz a.c. fields around them that can be picked up as hum by phono cartridges and tape heads. If the player or deck must sit next to or above an electronic chassis, keep the hum-sensitive parts as far as possible from the hum-producing parts of the chassis. Sometimes a simple left-to-right switch-around of units can take care of this problem.

Be careful, too, about your turntable's proximity to electric clocks, fans, and high-



intensity lamps, all of which can be great little hum inducers. Your shielded cabling should also be arranged to minimize hum; audio cables that run *parallel* to a.c. wires will pick up the most hum, those that run at right angles will pick up the least. (Speaker wires need not be treated this carefully since they cannot pick up hum.)

## The Cartridge

Back to the record player itself. If you get one with the cartridge already mounted, you've saved yourself a bit of trouble. If you install the cartridge, you *must* follow the instructions for both the cartridge and the player. Make sure that the correct color-coded wire is attached to the proper pin on the cartridge. If you get it wrong, you'll have either a high hum level or loss of signal when you switch to mono. Also make sure you use the proper combination of screws and spacers (they are supplied with the cartridge *and* the record player) to install the cartridge properly.

In connecting the terminals, you'll find that a pair of tweezers and/or needle-nose pliers are a virtual necessity. You might also find a strong light and a magnifying glass helpful. If you're ham-handed, give the job to someone with a gentler touch. In the unlikely event that you have to replace a bro-

ken clip or wire, use a soldering pencil with a very fine tip. If you have no experience with soldering, then this isn't the place to learn; find some experienced hands. Two more pointers: (1) *Never* solder to any wire or clip while it's attached to the cartridge; if you slide the clip onto a large paper clip, it will make soldering a lot easier. (2) Before doing anything with the cartridge, unplug its stylus assembly if possible, or at least put the stylus guard in place.

Another reason for careful adherence to cartridge-mounting instructions is that the manufacturer's quoted tracking error is measured with the stylus tip located a precise distance from the tone arm pivot (assuming a fixed tone-arm mounting). Every manufacturer provides some means (in the tone arm or its cartridge-mounting shell) for adjusting the cartridge to this critical point precisely. If you change this by even the slightest amount, the tracking error will increase, producing distortion that will be most noticeable on the inner grooves of the record.

And now we come to an area where the manufacturer's instructions should (and can) be taken with a grain of salt: stylus force. The cartridge manufacturer will probably recommend a figure or a range—say, 1 to 2.5 grams—within which the cartridge should be used. These figures frequently err on the side of optimism, or they may reflect lab conditions you can't duplicate. They should therefore be used only as guides; work out *your* optimum stylus force for yourself. The STEREO REVIEW test record is a helpful tool in doing this. The first thing to remember is *not to be seduced by the mystique of low tracking force*. There is likely to be less record wear—and better performance—if your tracking-force setting is slightly too high rather than slightly too low. The higher force will insure good stylus-to-groove contact; having the stylus force too low causes the stylus to clatter around in the groove, causing undue record wear as well as distortion.

Once you've set the stylus force for best performance according to the test record, you can use your stylus-force gauge to see what figure you've arrived at and note it down. Compare that reading with the figure on the arm to see what the error, if any, is (and remember that tone-arm markings are not noted for their accuracy).

Another check to use if you suspect any problems in tone-arm operation is to set the arm back to zero stylus force so that it's floating over the table. When you blow on it lightly, the arm should move and then float gently to a stop—there should be no appearance of coming *abruptly* to a halt, which might indicate pivot-friction problems.

## Speaker Placement

Speaker placement and adjustment are of prime importance in any installation. There are, of course, general rules you may find helpful as guidelines, and we will limit ourselves here to those governing the most common speaker type: the front-firing bookshelf model. Speakers intended for corner installation, omnidirectional radiators, floor-

(Continued on page 98)



# 'I know why I smoke.'

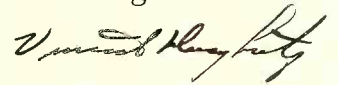
"There's only one reason I ever smoked. Good taste.

"So when I switched to low tar, I wasn't about to give that up. If you don't smoke for taste what else is there?"

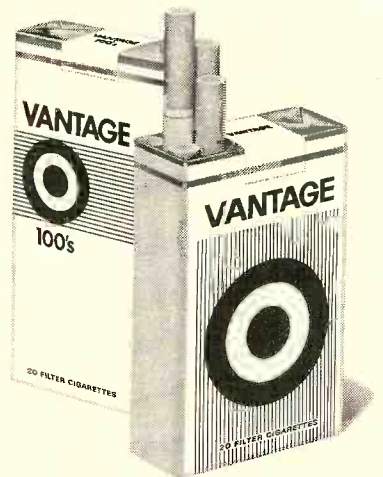
"But there was all that talk about tar.

"Unfortunately, most low tar cigarettes tasted like nothing. Then I tried Vantage.

"Vantage gives me the taste I enjoy. And the low tar I've been looking for."



Vince Dougherty  
Philadelphia, Pa.



Regular, Menthol,  
and Vantage 100's

Warning The Surgeon General Has Determined That Cigarette Smoking Is Dangerous to Your Health.

FILTER 100's: 10 mg. "tar",  
0.8 mg. nicotine, FILTER,  
MENTHOL: 11 mg. "tar", 0.8 mg. nicotine,  
av. per cigarette, FTC Report MAY '78.



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"There is only one rule: whatever provides the best sound balance is right."

standing units, and other special cases require close attention to the manufacturer's instructions for best results. With front-firing speakers, the simplest rule of thumb is to place them six to eight feet apart along the same wall. This a fine starting point for a small-to-average room, but it won't work if you're going to be sitting thirty feet from your speakers. Another, more complicated, rule is that the right and left speakers should be equidistant from your listening position and spaced so that there is about one-to-two-thirds of that distance between them—an isosceles triangle, in other words.

It should be borne in mind that the closer a speaker is to a wall, floor, or ceiling, the greater the bass response from that speaker. Further, the closer the speaker is to (and the greater the number of) adjoining surfaces (corners), the more bass. To carry this to extremes for explanatory purposes, a speaker hung in the center of a room away from all surfaces would produce the least bass; its heaviest (possibly *too heavy*) bass response would be with the speaker placed at the junction of two walls and the floor or—possibly—the ceiling.

Though these are the *general* rules, there is only one rule that actually applies in *all* cases: whatever provides the best sound balance is right. In actual practice, the amount of control you have over where the speakers are placed may be limited by any number of factors both practical and aesthetic, so arriving at the best sound is largely a matter of trial and error.

Assuming that, using the above guidelines to whatever degree is practical for you within the limitations of your situation, you have positioned your speakers at least tentatively, try a preliminary test: play a stereo recording you know has a good stereo spread (the STEREO REVIEW test record has a band that will be helpful for this). Since the purpose of a stereo system is to achieve a realistic stereo illusion, the sound you hear should provide a continuous image across the area between the speakers and possibly beyond. If the speakers are too close together, your "stage" will be too narrow; too far apart and you'll hear the two separate speakers with nothing between. Move the speakers until you have achieved a spacing you feel is correct relative to your listening position.

Incidentally, the business of speaker placement and adjustment won't be complete in a few minutes. What is being compressed here into the space of a few paragraphs may actually take you days, and your speaker positioning might even undergo some readjustment now and then over a period of months. Don't be concerned if perfection is not achieved in ten minutes. Actually, the sound may seem better to you in

those first few minutes than weeks later when you've had a chance for the newness to wear off and can really *study* what you're hearing.

The next suggestions apply right now, with the speakers in their first temporary positioning, and will reapply every time they're moved. In order to balance the stereo system properly, it must be treated as two mono systems operating side by side, with stereo forgotten for the moment. The object here is to make the two speakers sound as identical as possible from your listening position, and for this a mono program source is required. For a start, a radio an-

Now, with the system still in mono, play some music and turn the balance control all the way in either direction so that only one speaker is playing. As necessary, adjust the speaker's controls for what seems to be a natural musical balance. Only experience can teach you how to do this, so don't be surprised if your initial adjustments require revision a few days later. And don't be afraid to experiment. Much can be learned from exploring the possibilities of these adjustments, and much of the sonic performance of the final system setup will depend on them.

Now rotate the balance control all the way in the other direction and do the same thing with the other speaker. With that done, put your balance control back to the "center" position determined earlier and, with the system still in mono, see if the sound of *all* the music is coming from that phantom center point. You may find that the higher frequencies are shifted somewhat to the left or right. If so, the speaker controls can be tweaked a little to bring things back to acoustic center—without, of course, seriously upsetting the musical balance established for each speaker earlier. A slight readjustment of the balance control may also be needed.

What you're in now is a fine-tuning situation that may take some time for best results. The goal here is the total illusion of an imaginary mono speaker between the two real ones. Once this is achieved you can be confident your speakers are properly balanced and that the stereo illusion will be as nearly complete as you can make it in your listening room. With properly balanced speakers, you won't find, for example, that a violin recorded stage center will be partly on one side and partly on the other—or that it wanders as the frequencies vary. Don't blame your system for *all* aberrations, however; a badly made recording will sound rotten on the best-adjusted equipment.

## Fine Tuning

Fine tuning an audio system is a process even experienced audiophiles take with the utmost seriousness. Many never cease making these small adjustments, because there is always something new to be learned about the listening room and the speakers' complex interaction with it. As has been mentioned, the STEREO REVIEW test record contains material that will be of general assistance in these adjustments. More specific guidance is available in STEREO REVIEW's "How To" reprint series, which includes articles on room acoustics, system tuning and maintenance, and—should that grim specter raise its head in your system—radio-frequency interference and its cures.

You've probably put a fair amount of time and money into your system; given half a chance, it should serve you well for many years. Impatience or haste in the installation could result in your never realizing fully the level of performance your equipment actually has to offer. I will repeat, therefore, my earlier admonition: *take it easy!* Finally, permit me to remind you (and only *half-jokingly*) of the old industry maxim: "When all else fails, read the instructions!" □

**AID AND COMFORT**

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**STEREO TEST RECORD**  
for home and laboratory use



- STEREO REVIEW's SRT 14 test record is specifically designed to assist in audio-system setup and maintenance, and it includes tests for evaluation of frequency response, stereo balance and spread, phasing, and record-player adjustments. It costs \$7.95 (plus sales tax where applicable) and is available by mail from: Test Record, P.O. Box 278, Pratt Station, Brooklyn, N.Y. 11205.
- The reprints from STEREO REVIEW's "How To" series mentioned in the article, plus the useful troubleshooting charts, are available as a package (five reprints in all) for \$3.30 from: Stereo Review Reprints, Dept. SR-103, P.O. Box 278, Pratt Station, Brooklyn, N.Y. 11205.

nouncer's voice will do. The speaker controls (if any) can be set to their "normal" positions to begin with; in any case, be sure both speakers are adjusted similarly. Set your amplifier controls to mono and then adjust the balance control until the voice seems to be coming from a spot exactly between the two speakers. Don't be concerned if the setting isn't dead center—the control is there to be used and to compensate for your room acoustics as well as any minor imbalances in the system itself. (Should it be *far* off center, however, there may be an equipment malfunction.)





\*The DGC-20

# NOW, BEHIND THE BODY ARE BRAINS.

The Audiovox DGC-20 is the car stereo with a built-in computer. And some amazing capabilities.

It knows things.

A tiny micro-processor chip inside the DGC-20 has all the information to give you totally electronic tuning. And whether you choose to tune manually or automatically, the know-it-all chip stops and locks onto a station to virtually eliminate annoying drift.

It shows things.

Digital read-out displays the exact AM/FM when switched to mode 1. Also the exact AM/PM when switched to mode 2.

It remembers.

Memory pushbuttons can keep 12 stations "in mind." Even if you forget which station handles Handel or where Waylon wails, the DGC-20 remembers.

It understands.

How to search out and stop at the next available station. Automatic Seek does it.

And then, the Audiovox DGC-20 has some capabilities that are not amazing. Just important. Like a local/distant switch. And a mono/stereo switch. And outputs for 4 speakers and individual left-to-right and front-to-rear balancing controls. And a locking fast-forward and rewind on the stereo cassette player.

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



J. G. Walther. Musikalisches Lexikon, Leipzig 1732



## Bach's Four "Lutheran" Masses: Superb Music Brought to Life by Superb Musicians

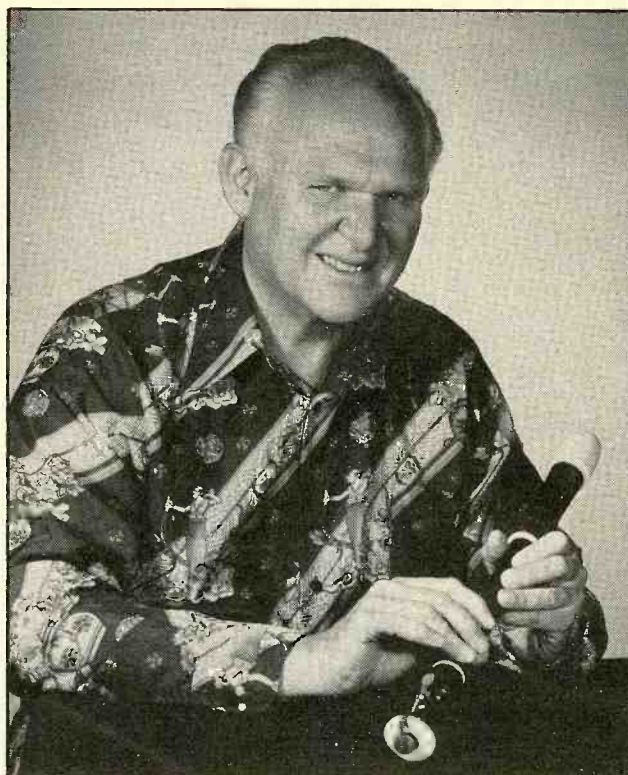
**B**ACH's four "Lutheran" Masses, though they comprise only settings of the Kyrie and Gloria texts and are largely reworkings of materials drawn from the cantatas, are nonetheless to be numbered among his finest creations. Two recent Argo recordings by the Richard Hickox Singers and Orchestra present these rarely heard works in their fullest magnificence.

The glory of Hickox's group is its ensemble sound. The sixteen or so singers are not only capable of producing a brilliant, massed homophonic sonority, such as in the Gloria of the A Major Mass, but they also bring clarity and order to the densest contrapuntal textures found in the motet-like Kyries. The orchestra, also made up of about sixteen players, is not only a razor-sharp ensemble, but its members are all talented soloists capable of the virtuosity demanded by Bach's intricate obbligato writing. The horns and strings fill the Gloria of the F Major Mass with a brilliance comparable to that of the First Brandenburg Concerto; the double-flute obbligato of the "Qui tollis" of the A Major Mass is a study in subtle delicacy; and the oboe playing of Sara Barrington in the G Minor Mass is superb. Perhaps the greatest achievement is the unison violin playing, which weaves fascinating webs of counterpoint around many of the arias. The strength of all the obbligato playing is that the parts are not treated as mere accompaniments but are put on an equal footing with the vocal lines. It is duetting of the highest order, and it gives us the full measure of Bach's contrapuntal genius. (Overleaf)





HEINZ HOLLIGER: a master of rubato



DON HAMMOND: a dazzling virtuosity

The vocal soloists are also all excellent. Special mention, however, must be made of Wendy Eathorne and Stephen Roberts. They have both found a style that brings clarity to Bach's instrumentally conceived vocal writing without dehumanizing it. Paul Esswood, although a little shrill in the upper register, is also in particularly fine shape here. "Dominus Deus," the duet from the G Major Mass, is a miracle of vocal blending. Successfully combining the antipathetic countertenor and soprano timbres is well nigh impossible, but Miss Eathorne and Mr. Esswood achieve a perfect match in both style and sound.

In short, this is one of the most exciting sets of recordings I have heard in a long time. One can dismiss all distracting thoughts about the efficacy of early instruments and authentic performance style and simply sit back to be thrilled by superb music brought to life by first-class musicians. —Stoddard Lincoln

**J. S. BACH: *Mass in F Major (BWV 233); Mass in A Major (BWV 234)*.** Wendy Eathorne (soprano); Paul Esswood (alto); Neil Jenkins (tenor); Stephen Roberts (bass); Richard Hickox Singers and Orchestra, Richard Hickox cond. ARGO ZRG 873 \$7.98, © KZRG 873 \$7.98.

**J. S. BACH: *Mass in G Minor (BWV 235); Mass in G Major (BWV 236)*.** Wendy Eathorne (soprano); Paul Esswood (countertenor); Philip Langridge (tenor); Stephen

Roberts (bass); Richard Hickox Singers and Orchestra, Richard Hickox cond. ARGO ZRG 829 \$7.98.

## Telemann: Transcendent High Baroque Uncannily Captured in Bravura Performances

**G**EORG PHILIPP TELEMANN (1681-1767), one of the most prolific composers who ever lived, suffers from a reputation as a hanger of Baroque wallpaper, but this ill fame is based on his moments of workaday, arid formula writing rather than on his quite frequent flashes of musical inspiration. In his day Telemann was universally admired, and four of his works in a new Philips album make it abundantly clear why. Although steeped in Baroque convention, the music on the disc transcends mere formula: the melodic writing is profound, the harmonies rich to the point of daring, and the formal structures full of originality.

While successful performance of Baroque music depends largely on the artists' ability to ornament and embellish

correctly and skillfully, like music of all eras it depends even more on such universal basics as good phrasing, clear articulation, tempos in keeping with the music, and, of course, an able technique. Oboist Heinz Holliger, as we know from his many recordings, can provide all of these basics in abundance—and a special gift for Baroque ornamentation and characterization as well. His uncanny ability to capture the perfect mood or "affect" of each movement (one of the basics of Baroque performance) is best heard in the six Arias that follow the *Grave* of Telemann's Partita in G Minor. All save one leave character and tempo to the discretion of the performer. Holliger has imbued each with a strong dance rhythm: Aria 2 becomes a graceful gavotte, Aria 5 a compelling bourrée, and Aria 6 a quick gigue highly spiced with capricious pauses and ambiguous hemiola patterns.

Rather than strait-jacketing the music into unrelenting tempos, Holliger brings grace to routine sequences by stretching a beat here and there. Movements do not just stop; they come rather to the convincing conclusions the judiciously paced retards have prepared us for. A master of rubato, Holliger brings to the music a rhythmic flexibility that highlights the structure. Another attractive feature of the music is the balance of sonorities. The dancelike character of the two works in G Minor



is emphasized by the use of a jaunty bassoon as the fundamental continuo instrument while the more molded sound of the cello is employed for the two works in the somber *sonata da chiesa* format. The harpsichord realizations of Christiane Jaccottet offer full support without being obtrusive. Her performance of the obbligato part in the Sonata in E-flat is superb, and the sonority of the work has been enhanced by the addition of a spinet for the figured bass. This work from the *Essercizi Musici* reveals both Telemann and the ensemble at their best and unmistakably invites me to terminate this review with an unqualified *Bravo!* —Stoddard Lincoln

**TELEMANN:** *Partita in G Minor for Oboe and Continuo; Solo (Sonata) in E Minor for Oboe and Continuo; Sonata in E-flat Major for Oboe, Obbligato Harpsichord, and Continuo; Solo (Sonata) in G Minor for Oboe and Continuo.* Heinz Holliger (oboe); Christiane Jaccottet (harpsichord); Nicole Hostettler (spinet); Manfred Sax (bassoon); Philippe Mermoud (cello). PHILIPS 9500 441 \$8.98.

## You're Not Going to Believe How Much Fun The Hammond Family Has with Recorders

**M**AYBE you'll find this hard to believe, but "Fun with Recorders" really is fun, at once a spoof and a musical experience. It was the whim of wind instrumentalist Don Hammond to put the historically most proper of instruments through a set of dazzling (and often anachronistic) virtuoso paces that would take a sly swipe at every sort of performing style from bravura classical to cocktail-lounge jazz. To confound the innocent (I was taken in myself at first), Mr. Hammond has apparently invented a considerably extended "Hammond Family" who seem to be remotely related to the P.D.Q. Bachs, for on closer inspection of the photographs that adorn the album back it appears that Don's "twin brother" William D. is baldheaded Don himself imperfectly disguised in the most preposterous of wigs, while camera-shy Paxton, the third brother, is represented only by a blank space. Credit is also

given to a crew of nephews whose names, as listed below, may or may not be genuine. The only ones I give full credence to (apart from Don himself) are the honorary "cousins" who handle piano, guitar, and drums.

No matter. Whoever they are, the member(s) of the Hammond group make droll and delightful things happen on this disc. There's the opening *Hora Staccato*, for instance, played in a musical accent that is a curious cross between Yiddish and Rumanian; it sounds like a calliope on a trip, and it is well calculated to put that particular moldy chestnut to rest forever. There's a Chopin *Minute Waltz* that survives two minutes and ten seconds of frantic tootling, and a Waltz in C Minor that seems to be suffering from advanced sylvan dementia. Add to this a Mendelssohn *On Wings of Song* that is pinned to the ground, a hysterical, perhaps inebriated, Rimsky-Korsakov bumblebee, a *Chinese Dance* from the *Nutcracker* that gets caught in its own pigtailed, and a Beethoven Minuet in G hooting its way to nowhere and you get some idea of what "The Hammond Family" is up to.

They're up to more of it with William D.'s "Pre-War Grotesque" jazz sequences—a *Moonglow* medley of murky insipidity, a Twenties *Bluesette* in ill-fitting clown's costume, a *Have You Met Miss Jones* as mindless as the tune it celebrates, and even a *Tico-Tico* samba to summon up memories of Ethel Smith at her MGM organ in high heels. The whole mad concert culminates in a Sousa march of dogged patriotic intensity performed on twenty-four overdubbed recorders, with the soprano tootling away on the piccolo part like Vivaldi astray in a U.S. Army band.

What makes "Fun with Recorders" something special is the amazing

amount of skilled playing that goes into this mischievous treatment of trite material that has been known to founder of its own weight in less light-fingered hands. The listener with possible aspirations as an arranger or composer of music for the recorder is warned straight off, however, *not* to use the examples on this disc as models. "Some of this material," writes the mysterious Paxton in the pseudo-informative liner notes, "was in rehearsal for three years. If you happened to get a couple of sticky passages into your composition, that could add up to a lot of overtime!" As Barnum and Bailey would likely tell you, comic ineptitude is skill disguised: clowns are clowns because they have the serious matters of technique down so pat they can afford to have fun with them. —Paul Kresh

**THE HAMMOND FAMILY:** *Having Fun with Recorders.* Don, William D., and Paxton Hammond (recorders); Herman, Helmut, Roger, and Donnie Hammond (background recorders); John Lesko (piano); Bucky Pizzarelli (guitar); Ted Sommer (percussion). GOLDEN CREST 4166 \$7.98.

## Conductor Ashkenazy Takes an Old War Horse Once More Over the Hurdles

**I**T's a bit early to tell whether Vladimir Ashkenazy the Conductor will measure up, over the long pull, to Vladimir Ashkenazy the Pianist as one of the peerless interpreters of his genera-



VLADIMIR ASHKENAZY: an essentially lyrical approach for the Tchaikovsky Fifth



tion, but if his Tchaikovsky readings—a just-released Fifth Symphony and an earlier collaboration with Boris Belkin in the violin concerto—are valid indications, then things are indeed promising for the future.

One would suppose that the Tchai-

*Pique-Dame* that we hear throughout much of the performance, the famous slow movement being the persuasive standout in this respect. Wonderful, too, is the variety of coloration and nuance to be heard at the beginning of the symphony at the point where parts of

as a whole is in the freely lyrical tradition one associates with Furtwängler at his best, which is to say that freedom never becomes license, never oversteps the bounds imposed by the basic pulse of the music. The end result here, thanks to magnificent playing by the Philharmonia Orchestra (in the woodwinds particularly), is wonderfully bracing to the spirit, a joy to the ear, and a reason for gratitude: these tired old war horses evidently *can* be given a new lease on life. —David Hall

**TCHAIKOVSKY: Symphony No. 5, in E Minor, Op. 64.** Philharmonia Orchestra, Vladimir Ashkenazy cond. LONDON CS 7107 \$7.98, © CS5-7107 \$7.98.



Robin Platzer

PAUL ANKA: the jeweler's art brought to music

## Paul Anka: Twenty Years of Razzle-dazzle Showmanship—and Determined Sincerity

EVER since the days when he first burst upon the American pop-music scene about twenty (say it isn't so!) years ago, a chubby Canadian kid yowling his own chart-busting *Diana* ("I'm so young/And you're so old..."), it has been difficult to ignore Paul Anka. Through the years he's honed his talent down to the point where he is now, along with Charles Aznavour, about the slickest, smoothest composer-performer around. His newest RCA release "Listen to Your Heart" comes rolling onto our turntables like a gilded Fabergé egg, a classic of the jeweler's art no ordinary chicken could ever lay claim to. From the Scavullo cover photo, to the string and rhythm arrangements by various skilled hands, to the production by David Wolfert, the whole album simply reeks of class—commercial-pop, Vegas-tilted class, to be sure—under the warranty of an absolutely assured, first-rank professional: Anka himself.

Throughout the ten songs here, four of which he collaborated on, there is a density of content, a completeness of conception and execution that only the master showman he's become could bring off. His best work on the album, both as composer and as performer, is the mordant, intense *Brought Up in New York (Brought Down in L.A.)*. He gives the dark, bitter lyrics a romantic, fiercely sullen reading that refuses to leave the mind. But all his work,

kovsky Fifth had been taken over the interpretive hurdles too many times to provide any further opportunity for fresh insights even by a certified conductorial genius. But, in my opinion, Ashkenazy has indeed achieved the apparently impossible, and without indulging in any monkeyshines. Since the dramatic approach has been virtually exhausted in the course of a seemingly infinite number of recorded performances, Ashkenazy has chosen to adopt an essentially lyrical approach while still giving the drama its due. Thus it is the Tchaikovskian lyrical line in the manner of *Eugen Onegin* and

the opening theme are repeated three times just before the march tune takes its turn on stage. And what a pleasure it is to hear the waltz movement neither perfunctorily treated nor fussed over; here it has proportions and assumes a place just right in relation to the score as a whole.

The finale, which more often than not becomes empty bombast, is here splendidly broad in its opening vistas and properly wild and woolly in the Cossack-dance episodes. The final pages carry the utmost power and conviction without seeming in the least overblown. Rhythmically, the reading



whether it be the larky *Love Me Lady* or the strained, bathetic *Starting All Over Again*, is distinguished by enormous concentration, quirky dramatic effects, and rock-solid musicianship.

For all the razzle-dazzle and hyper-showmanship, there has always been a core of determined sincerity in Anka's work. He claims to have written the lyrics to *My Way* (the tune is French) for Sinatra, but it seems more and more apparent that the philosophy of the song applies to him as well. Year after year he's been releasing albums, some of them, to be sure, indifferent in quality; but, best and worst, they all document an active, productive, *directed* life in the music business. And this latest, "Listen to Your Heart," maintains a consistent high level of quality that sets its creator on a plane significantly above that occupied by most of his MOR contemporaries. —Peter Reilly

**PAUL ANKA:** *Listen to Your Heart*. Paul Anka (vocals); orchestra. *Starting All Over Again*; *This Is Love*; *I'm By Myself*; *You Spoiled Me*; *Listen to Your Heart*; *Don't Ever Say Goodbye*; *Let's Start It Over*; *Love Me Lady*; *Brought Up in New York* (*Brought Down in L.A.*); *Starmaker*. RCA AFL1-2892 \$7.98, © AFS1-2892 \$7.98, © AFK1-2892 \$7.98.

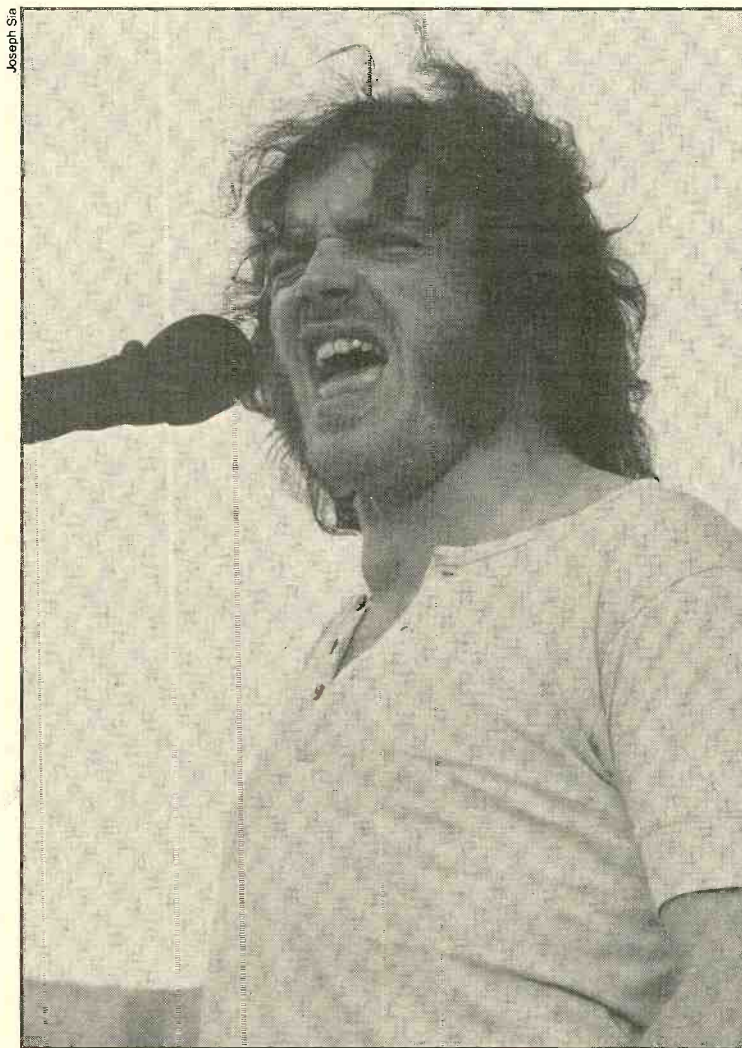
## What Just May Be Joe Cocker's Best Recording Ever Is a "Luxury You Can Afford"

**R**UN and get Joe Cocker's new album "Luxury You Can Afford" now. It's not only an artistic comeback for Cocker—that would be welcome enough—but it contains one of the all-time-great rock-and-roll performances in which singer, band, back-up vocalists, and arrangements are so ferociously *right* that they defy description. Cocker's version of *I Heard It Through the Grapevine* is that rare item, a late-entry interpretation that can stand beside the great original (in this case, the one by Marvin Gaye) and declare its artistic independence. The only other example of this phenomenon I can recall offhand is Aretha Franklin's superb reading of Otis Redding's *Respect*, and if Cocker's *Grapevine* isn't righteous rock-and-roll, then there just *ain't* no such thing.

Throughout the album Cocker main-

tains masterly control. His voice hasn't changed—it's still the same gritty, rasping, guttural, almost primeval instrument it always was—but he uses it with the subtlest of emphases, putting a little pressure on a phrase to make it shine, easing back at other times to let

and he has acquitted himself gloriously. Cheers also for guitarist Pete Carr, bassist Rick Danko, and the three thrilling back-up singers—Ann Lang, Clydie King, and Mona Lisa Young. If you think Joe Cocker's previous best work was done when he was singing



JOE COCKER: an all-time-great performance

the song breathe. Only the very best singer-musicians can do what Cocker does so well and have such fun at the same time.

The album is also blessed with an abundance of superior material: Barbara George's *I Know (You Don't Want Me No More)*, Phil Driscoll's ballad *Wasted Years*; Bettye Crutcher's *What You Did to Me Last Night* (she co-wrote *Who's Makin' Love*, the 1969 Johnnie Taylor hit), and *Lady Put the Light Out* by Guy Fletcher and Doug Flett, which Cocker performs with great delicacy and tenderness.

Allen Toussaint produced the album,

with the Grease Band behind him seven years ago, you're right; and if you think this is the best recording he's done since—maybe his best ever—you're right again. —Joel Vance

**JOE COCKER:** *Luxury You Can Afford*. Joe Cocker (vocals, harmonica), instrumental and vocal accompaniment. *Fun Time*; *Watching the River Flow*; *Boogie Baby*; *A Whiter Shade of Pale*; *I Can't Say No*; *Southern Lady*; *I Know (You Don't Want Me No More)*; *What You Did to Me Last Night*; *Lady Put the Light Out*; *Wasted Years*; *I Heard It Through the Grapevine*. ASYLUM 6E-145 \$7.98, © ET8-145 \$7.98, © TC5-145 \$7.98.





# POPULAR DISCS AND TAPES

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

**AMBROSIA: *Life Beyond L.A.*** Ambrosia (vocals and instrumentals). *Life Beyond L.A.*; *Art Beware*; *Apothecary*; *Dancin' by Myself*; and six others. WARNER BROS. BSK 3135 \$7.98, Ⓜ M8 3135 \$7.97, © M5 3135 \$7.97.

Performance: **Good**  
Recording: **Good**

Ambrosia just might click in a big way with "Life Beyond L.A.," their most accessible album to date. This American trio would probably be called a "university group" in England, since their lyrics and playing smack of an "intellectual" world-weariness that is always chic among the snobbish young. And Ambrosia has a firmer claim than most pop groups to membership in the musical intelligentsia: they played with the L.A. Philharmonic under conductor Zubin Mehta in 1971, and David Park, who sings and plays guitar and keyboards here, sang a leading role in performances of Leonard Bernstein's *Mass*. In any case, the songs on this disc are concerned with alienation, and the trouble is you get the feeling that they *like* that state of mind, since it gives them a fashionable excuse to complain about things. The performances, though, are uniformly crisp and clever, and on that account Ambrosia bears watching and listening. J.V.

**PAUL ANKA: *Listen to Your Heart*** (see Best of the Month, page 104)

**BLUE OYSTER CULT: *Some Enchanted Evening***. Blue Oyster Cult (vocals and instrumentals). *R. U. Ready 2 Rock*; *E. T. I.*; *Astronomy*; *Kick Out the Jams*; and three others. COLUMBIA JC 35563 \$7.98, Ⓜ JCA 35563 \$7.98, © JCT 35563 \$7.98.

Performance: **Danceable but boring**  
Recording: **Above-average remote**

Corrupting the word *cult* to this degree must have started out as someone's idea of a joke. Or maybe a marketing ploy. What this band does is make mindless boogie music, which seems especially ineffectual here considering that, I gather, there wasn't much room to dance in the four places where this live album was recorded. BOC strings together all manner of time-tested rock clichés and is about as "accessible" and low in common denominators as you can get. It's all done competently; there's even some taste in the instrumental fills, however warmed over (although the lead guitar here is overplayed). It's a tighter, more-disciplined-than-average live rock album—not bad if you want something other than disco music to boogie to—and there's a decent version of *We Gotta Get Out of This Place* you might even be able to sit still and listen to. On the whole, though, listening is not the best way to deal with this album. That would be roughly parallel to tasting when you eat at Burger King. N.C.

**BOSTON: *Don't Look Back***. Boston (vocals and instrumentals). *Don't Look Back*; *The Journey*; *It's Easy*; *A Man I'll Never Be*; *Feel-in' Satisfied*; and three others. EPIC FE 35050 \$7.98, Ⓜ FEA 35050 \$7.98, © FET 35050 \$7.98.

Performance: **Technicolor**  
Recording: **Cinerama**

Boston is very, very good at what it does, which is making slick, cleverly constructed *mélanges* of melodic elements and production ideas looted from the likes of Paul McCartney, Todd Rundgren, and Jimmy Page. To criticize them for not really being "about" anything beyond having a party, or because their work lacks the urgency of, say, a Bruce

Springsteen, is pretty much beside the point, as is carping about leader Tom Scholz's obsession with technology. Scholz may be a mad scientist, but the music he makes with this band has a lot more bounce than that of some other similarly inclined outfits. Between Boston and Queen, for example, there's no contest as to who sounds more like a group of actual human beings.

For me, anyway, the problem with Boston is not that they're derivative (which they are) or shallow (*A Man I'll Never Be* suggests that they do have more on their minds than a good time on Friday night), but rather that they don't have much personality in the vocal department. Brad Delp, when you get right down to it, is utterly indistinguishable from about a zillion other heavy-metal front men, and this lack of focus pretty much undercuts the rest of what they do, agreeable as it is. I mean, I'll put up with eclecticism as long as some identifiable kinks are in the mix. Still, Boston does make very pretty noises, and if their records are as insubstantial as the big-budget Hollywood film spectacles of yore (which, for some strange reason, they remind me of), there's nothing particularly wrong with that. As Samuel Goldwyn once said, you want a message, call Western Union. S.S.

**JOE COCKER: *Luxury You Can Afford*** (see Best of the Month, page 105)

**DEVO: *Q: Are We Not Men? A: We Are Devo!*** Devo (vocals and instrumentals). *Uncontrollable Urge*; *(I Can't Get No) Satisfaction*; *Praying Hands*; *Space Junk*; *Mongoloid*; *Jocko Homo*; and five others. WARNER BROS. BSK 3239 \$7.98, Ⓜ M8 3239 \$7.97, © M5 3239 \$7.97.

Performance: **Space-junk**  
Recording: **Likewise**

In case you haven't heard, Devo is the latest in the long line of Art Rock/Future of Rock-and-Roll hypes that extends back at least to Roxy Music and Be Bop Deluxe. What distinguishes them from the others is that they're American (part of the Ohio Mafia, the rest of which Stiff Records has locked up), and, more

## Explanation of symbols:

- Ⓜ = reel-to-reel stereo tape
- Ⓢ = eight-track stereo cartridge
- ⓐ = stereo cassette
- ⓑ = quadrasonic disc
- Ⓡ = reel-to-reel quadrasonic tape
- ⓑ = eight-track quadrasonic tape

Monophonic recordings are indicated by the symbol Ⓜ

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



important, they're funny, as anyone who has experienced their bizarre remake of the Stones' *Satisfaction* can attest. The real reference point for Devo's music is the Captain Beefheart of "Trout Mask Replica." Unless you are a doctrinaire New Waver, your reaction to them will pretty much depend on how you feel about the good Captain. If you think he's a fraud, you'll probably find Devo's stuff insufferably pretentious; if you think he's some kind of mad genius, Devo's brand of Robbie the Robot rhythm-and-blues will most likely be right up your alley.

In my opinion, most of what Devo does is about as avant-garde as the soundtrack for *Rocky Jones, Space Ranger* (the synthesizer stuff, in particular, is really hokey). But no matter; they're upholding a grand tradition. Listening to this album reminded me of a C.Y.O. dance I attended in New Jersey almost nine years ago. It starred a local combo called Rubella and the Dead Little Girls who wore gas masks and included a percussionist playing the rear fender of a 1968 Pontiac. By the middle of the set, the Grateful Dead fans who made up the audience that night were throwing beer cans at the stage. Rubella and the Girls accepted these tributes philosophically—they were, after all, creating Art. I don't know if that group still exists, but in Devo their spirit clearly lingers on. S.S.

#### RECORDING OF SPECIAL MERIT

**DAN FOGELBERG AND TIM WEISBERG:** *Twin Sons of Different Mothers*. Dan Fogelberg (vocals, guitar, bass, piano, synthesizer); Tim Weisberg (flute, piccolo, oboe); other musicians. *Twins Theme; Intimidation; Lazy Susan; Hurtwood Alley; Paris Nocturne*; and five others. FULL MOON/EPIC JE 35339 \$7.98, © JEA 35339 \$7.98, © JET 35339 \$7.98.

Performance: **Light and lively**  
Recording: **Approaching excellent**

I don't know if butterflies are into sound, but if they are, picture them green. With envy. This album could so easily have turned to schmaltz, being mostly airy instrumental music of the never-never sort somewhere near pop-jazz that requires so much technique and such a light touch that most musicians would have forgotten to put in any soul. But Fogelberg's delicate touch, especially on the guitar, and Weisberg's Pan-like approach to piping complement each other beautifully. And when there are vocals, Fogelberg gives them the same sensibility, part tenor, part whisper. The three songs with words, headed by Judy Collins' eleven-year-old *Since You've Asked*, one of my all-time favorites, keep up the spirit; the lyrics are intelligent but not heavy. Through it all, you have the sense that the musicians care about something beyond showing off their chops. I wouldn't want all albums to be like this, of course, but that's no problem; most other performers couldn't manage to make one like this anyway. N.C.

**GENTLE GIANT:** *Giant for a Day*. Gentle Giant (vocals and instrumentals). *Thank You; Spooky Boogie; Take Me; Little Brown Bag*; and six others. CAPITOL SW-11813 \$7.98, © 8XW-11813 \$7.98, © 4XW-11813 \$7.98.

Performance: **Good**  
Recording: **Very good**

It's been years since I've heard anything out of Gentle Giant. To tell the truth, I can't even

remember how the band used to sound, but this new edition, recorded in England, is sprightly, fresh, and generally fun to have around. True, the title song, based on an inane riff, might drive you nuts, but even there you can have a little fun catching some of the words—and how many rock albums have you said that about lately? The album has texture and variety, making good use of acoustic guitars now and then, leaving some air in the instrumentals, and incorporating at least snatches of melody that go beyond the basic three-chord blues derivative. The vocals are no great shakes, but the instrumentals should teach young rock bands a-forming that there are a lot more options in rock than their old Grand Funk records may have led them to believe. N.C.

**MERLE HAGGARD:** *The Way It Was in '51: "Hank and Lefty Crowded Every Jukebox."* Merle Haggard (vocals, fiddle); the Strangers (instrumentals). *The Way It Was in '51*;

*Moanin' the Blues; Lovesick Blues; Mom and Dad's Waltz; I Never Go Around Mirrors*; and five others. CAPITOL ST-11839 \$6.98.

Performance: **Good**  
Recording: **Very good**

Merle Haggard has come a cropper with a couple of theme albums in the past, but this tribute to Hank Williams and Lefty Frizzell is on pretty solid ground. He'd be the first to tell you Lefty had great influence on his vocal style, so the thing on the Lefty side was to stay away from some of the dumber songs Lefty wrote, which Merle does. And the thing on the Williams side—which he also does—was not to try to sound like Hank and his band but to suggest how they approached a song. Of course I'd still rather have Haggard write more and record *that*, but this is a nice reminiscence that should fit particularly well in the cab of an eighteen-wheeler. N.C.

(Continued overleaf)



Harry Langdon/Roy Gember

## Diahann Carroll Sings for Ethel Waters

"MODULATION Noise Virtually Eliminated... No Generation Loss While Copying... Wow and Flutter Eliminated... Audio Print-Through Eliminated... Performance Independent of Variations in Tape Characteristics." These are some of the claims set forth in a news release from the Orinda Recordings Corporation touting its new "digital master disc recording technique" using Soundstream, Inc., tape equipment. How a digital recording is made is a process I could never hope to understand, much less explain, but I would be the last to

put it down; the sound that results is unquestionably the crispest and clearest I've heard come off a record yet. At the same time, it must be noted that my review copy of Orinda's first digital release—Diahann Carroll's "Tribute to Ethel Waters"—contained its share of disc-pressing clicks and ticks in the opening grooves, which tended to tone down my initial enthusiasm for the "revolutionary technical breakthrough." Yet one suspects that the digital-master method may well turn out to be the way records of the future will be made. Meanwhile, this first U.S.-made example is offered only in a limited, numbered edition at the rather giddy price of \$14.95.

THIS leaves the program itself to consider, and a marvelous program it is. Diahann Carroll sings songs the legendary Ethel Waters made famous, with rich accompaniments and purely orchestral interludes by the Duke Ellington Orchestra conducted by his son Mercer. The band never sounded bigger or better than it does on this disc, and Carroll, knowing that she could not possibly duplicate the moving performances of Waters herself, has chosen the wiser course of singing *After You've Gone, Am I Blue, Supper Time*, and the rest in her own emphatic style, which is persuasive enough.

Still, one of the most exciting cuts is the instrumental treatment of the *St. Louis Blues*. It is hard to tell which contributes more, the impeccable playing of the orchestra or the clarity achieved by the new recording technique. In any case, this is a pretty thrilling record in both programmatic and technical terms, even though it is expensive. —Paul Kresh

**DIAHANN CARROLL:** *A Tribute to Ethel Waters*. Diahann Carroll (vocals); Duke Ellington Orchestra, Mercer Ellington cond. *After You've Gone; There'll Be Some Changes Made; Happiness Is a Thing Called Joe; My Man; Sweet Georgia Brown; St. Louis Blues; Am I Blue; When Your Lover Has Gone; Supper Time*. ORINDA ORC 400 \$14.95 (limited-edition digital-master disc available at select record and audio stores).



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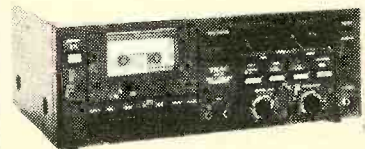
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LYNYRD SKYNYRD: Left to right, Billy Powell, Allen Collins, Artimus Pyle, Leon Wilkeson, the late Ronnie Van Zant, the late Steve Gaines, Gary Rossington

**RECORDING OF SPECIAL MERIT**

**DARYL HALL AND JOHN OATES:** *Along the Red Ledge*. Daryl Hall, John Oates (vocals and instrumentals); vocal and instrumental accompaniment. *Melody for a Memory*; *The Last Time*; *I Don't Wanna Lose You*; *Have I Been Away Too Long*; *Alley Katz*; and four others. RCA AFL1-2804 \$7.98, ® AFS1-2804 \$7.98, © AFK1-2804 \$7.98.

Performance: **Multidirectional**  
 Recording: **Very good**

Since "Beauty on a Back Street," their last studio set, Hall and Oates have continued to move closer to rock than roll. Here their r-&b roots have been fully integrated into an overall rock context that retains their earlier emphasis on strong melodies and still has some soft edges. Yet they seem to be singing and playing louder, if not necessarily better, a great deal of the time. This is a more virile and sassy sound, perhaps one they have been inching toward without wanting to make the transition too abrupt.

Some of the songs here start out as though they might lapse into something vaguely familiar, but they are full of unexpected changes that lend musical interest. The set also showcases the developing composing talents of John Oates. He wrote some of the most appealing music here—to wit, *Melody for a Memory* and *Serious Music* (which meshes Gershwin-esque fragments with contemporary rock sounds). And Hall achieves some especially fine lyrical moments on a lovely ballad called *August Day*, which concludes the set. P.G.

**THE HAMMOND FAMILY:** *Having Fun with Recorders* (see Best of the Month, page 103)

**GLADYS KNIGHT AND THE PIPS:** *The One and Only*. Gladys Knight and the Pips (vocals); instrumental accompaniment. *It's a Better Than Good Time*; *Sorry Doesn't Always Make It Right*; *All the Time*; *Be Yourself*; *Butterfly*; and five others. BUDDAH BDS 5701 \$7.98.

Performance: **Gladys rampant**  
 Recording: **Good**

Gladys Knight is back and *in charge!* As she rampages her way through the ten songs here,

she puts her lyrics, her arrangements, and, of course, the Pips through paces that would strike envy in the heart of Leona the Lion Tamer. The only time she calms down to hurricane intensity is in *Sorry Doesn't Always Make It Right*, which has a tinge of c-&-w mournfulness. As for the rest, it's typhoon time all the livelong day. Gladys makes her dramatic points with all the suavity of someone killing flies with a sledgehammer, and the others huff and puff trying to keep up with her. Woe betide the Pip who squeaks! P.R.

**LEO KOTTKE:** *Burnt Lips*. Leo Kottke (guitar, vocals). *Endless Sleep*; *Cool Water*; *Frank Forgets*; *Sonora's Death Row*; *Everybody Lies*; *I Called Back*; *A Low Thud*; and seven others. CHRYSALIS CHR 1191 \$7.98.

Performance: **Disappointing**  
 Recording: **Fair**

It's been a long time between Leo Kottke albums, but, sad to say, this one turns out to be not really worth the wait. I say this with true disappointment, for I'm not only a Kottke fan but a Kottke believer. Among his many attributes has been his keen sense of humor, which is entirely missing here. There are moments of lyricism in the solo guitar pieces, but the vocal material, nearly all of it written by Kottke, is morose and cynical. Then again, Kottke is a musician-poet, and they are subject to high and low moods. I still believe in him, and I'll wait faithfully for his next good album—no matter how long it takes. J.V.

**RECORDING OF SPECIAL MERIT**

**LYNYRD SKYNYRD:** *Skynyrd's First and Last*. Lynyrd Skynyrd (vocals and instrumentals). *Down South Jukin'*; *Preacher's Daughter*; *White Dove*; *Was I Right or Wrong*; *Lend a Helpin' Hand*; and four others. MCA MCA-3047 \$7.98, ® MCAT-3047 \$7.98, © MCAC-3047 \$7.98.

Performance: **Excellent**  
 Recording: **Good**

Despite a tendency to pound for the sake of pounding, Lynyrd Skynyrd was a fine, tight band combining disciplined execution with an honorable urge to be accepted and respected for what they were—a white Southern band (Continued on page 112)



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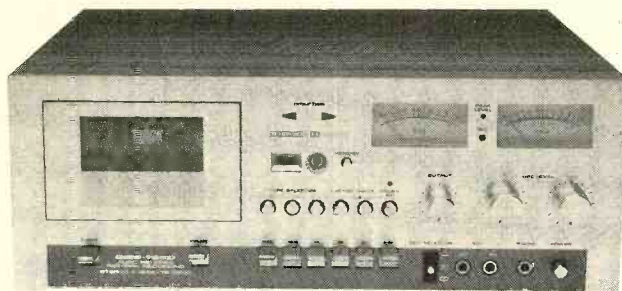
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**J**ANIS IAN has always reminded me of those anonymous aunts or cousins or nieces or, more rarely, those baby sisters who turn up from time to time in random family snapshots and who seem to leap out of the photograph at you. Not because of a grin or a grimace or a pose, and certainly not because they are in any noticeable way different looking than the rest of the group, but because the camera picks up some kind of aura about them, a light in the eyes. Reflected through those eyes are a mind and a sensibility that set them apart. They create their own space in a photograph as casually and naturally as they do at family gatherings—slightly to one side, noting, appraising, and digesting not only the actions of others but their own reactions and movements within the crowd as well. This veiled stare seems, moreover, to be a particularly female trait. I've noticed it in casual photographs of such diverse women as Sylvia Plath, Margaret Mead, Katharine Anne Porter, Barbra Streisand, Barbara Walters, and many unknown others. They all Know Something, that's for sure, and you get the feeling they would tell you what it is if only you had the nerve to ask.

Both of the photographs on Janis Ian's new Columbia release (called, sensibly enough, "Janis Ian") are glossy studio jobs. But if you look closely, particularly at the front cover, you'll perhaps see what I mean. Here is the rare little sister from the days of *Society's Child*, all grown up now and stage-managing a second career wrested from the wreckage of some very heavy personal problems. She has proved herself to be one of the most important writer-performers of the Seventies, and she looks at and into you from the cover photo with a veiled stare that can X-ray a situation, the people in it, and the probable outcome easily, knowingly, compassionately.

Janis Ian operates in the pop-music business, which perhaps denies her the instant credentials the fancier literary and artistic worlds might provide. But what she's been creating for the last several years is a body of

work that, for awareness and insight into life as it's being lived (or played) in our time, stands creditably alongside the best in any field of contemporary creative expression.

This newest album finds Ian in a more subdued and contemplative mood than the flash and fireworks of her previous "Miracle Row." There isn't anything here that raises the emotional temperature in quite the same way as, for instance, *Party Lights* or the grim Latin melodrama of *Will You Dance?* did. But, while most of the material here may be emotionally in a minor key, it is some of the most assured and elegant work of her career. In this group of eleven songs, literal meaning often gives way to less logical—but equally valid—color, mood, and texture. The key song seems to be the last one, *Hopper Painting*. It isn't about Edward Hopper, or even about one of his paintings. Instead, it is an ambiguous piece, either about Ian herself or about someone with whom she's once been close: "Thought I saw you writing/Like an outlaw on the dunes/Looking lost in the afternoon/Cool pretender/With your poetry and blues/Well I remember/What it cost just being you. . . ." She sings it to the spare accompaniment of her own piano playing, and by the time she reached the second chorus I had long since ceased to care much about what the song meant, and much more about the way it was making me feel. I surrendered to the atmosphere Ian was creating, and it was an entrance into a very Hopper-like world indeed. This song, like several others here (*The Bridge*, *Some People*, and *Streetlife Serenaders*), has the same cryptic beauty, the fascination with the everyday, and the moment-caught-forever feeling as Hopper's paintings.

**N**OT that Ian isn't still her familiar, prematurely wise, sardonic self in such things as *Hotels and One-Night Stands*, a sad-funny description of life on the road equally applicable to a rock star or a Fuller brush salesman. Two songs, *Silly Habits* and *I Need to Live Alone Again* (which, for sheer sound, is the best thing on the album), are the kind of thing that Carly Simon has been trying to write for several years but that Ian knocks off the way Chrissie Evert serves. And then there is the still beauty of *My Mama's House*. It is a song about how very much a child loves her sexually promiscuous mother despite the community's frowning disapproval.

"Janis Ian" is not—and surely was not meant to be—an Important, Significant, or Milestone album. It is simply another addition to an established body of work. As I've said, Ian is one of those ladies who Know Something. And one of the things she surely knows is that she doesn't have to count the critical handraises on her side to reassure herself of her unique talent. The ayes already have it.

—Peter Reilly

**JANIS IAN.** Janis Ian (vocals, piano, synthesizer, guitar); orchestra. *That Grand Illusion*; *Some People*; *Tonight Will Last Forever*; *Hotels and One-Night Stands*; *Do You Wanna Dance?*; *Silly Habits*; *The Bridge*; *My Mama's House*; *Streetlife Serenaders*; *I Need to Live Alone Again*; *Hopper Painting*. COLUMBIA JC 35325 \$7.98. © JCA 35325 \$7.98. © JCT 35325 \$7.98.



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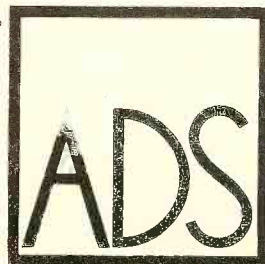
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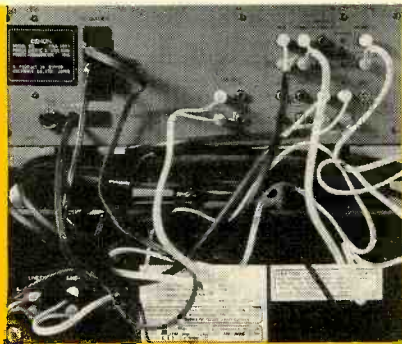
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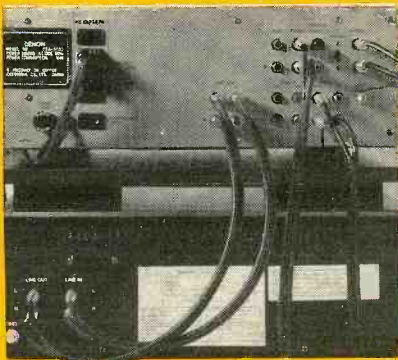


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making music about white Southern life. It should be remembered that, for social and political reasons, white Southerners have only recently been readmitted, by many people, to the human race. Skynyrd's commercial success facilitated this acceptance, which was a kind of reverse *Roots*.

Skynyrd lost three members in a plane crash last year, and, given the circumstances, one would expect this to be a typical posthumous album, a rummage-sale mixture of "greatest hits" and studio out-takes. Remarkably, it is not. These nine performances, six to eight years old, are by all odds among the band's best.

Originally recorded between 1970 and 1972, the cuts show that Skynyrd's decision as to what kind of band they were going to be was thrillingly correct, for there is no artistic discrepancy between this primary session and their last cohesive studio album, "Survivors." Indeed, two cuts from these initial dates—*Free Bird* and *One More Time*—actually appeared on "Survivors." Despite personnel changes and minor tinkering with overdubs in the interim, these performances stand tall. Consistency, it has been said, is the resort of small imagination, but if Skynyrd lacked imagination in the grand sense they had a grand idea of their own identity. J.V.

**VAN MORRISON: *Wavelength*.** Van Morrison (vocals); instrumental and vocal accompaniment. *Kingdom Hall; Checkin' It Out; Natalia; Venice U.S.A.; Lifetimes*; and four others. WARNER BROS. BSK 3212 \$7.98, © M8 3212 \$7.97, © M5 3212 \$7.97.

Performance: **Futile**  
Recording: **Good**

Van Morrison's recent singing has been characterized by near-manic intensity applied to

the feeble riffs and phrases he uses to disguise the pedestrianism of the songs he has composed. Is this what a former creator does when he realizes that he is no longer a creator and cannot be satisfied with being an interpreter? The result is uncomfortable for the artist and the listener.

Morrison wrote and sang *Brown Eyed Girl* in 1966 when he went solo after leaving Them, a British pop-blues group. Side one of this album is an attempt to rewrite *Brown Eyed Girl*—same plot, chord structure, and la-la-la scat choruses, but the gaiety is forced. On side two he drops the pretense and indulges in moody, brooding material in which he sounds more at home. But the only moment on the album where Morrison really takes care of business is with Jackie DeShannon's tune, *Beautiful Obsession*. With good material like DeShannon's, Morrison's tremendous vocal talent shines as brightly as ever. But he seems reluctant to give himself up to other writers' songs. Too bad. J.V.

**LEE OSKAR: *Before the Rain*.** Lee Oskar (harmonica, vocals); vocal and instrumental accompaniment. *Before the Rain; Steppin'; San Francisco Bay; Feelin' Happy*; and three others. ELEKTRA 6E-150 \$7.98, © ET8-150 \$7.98, © TC5-150 \$7.98.

Performance: **Wide-eyed but droopy**  
Recording: **Very good**

Well, we should've neutered those Harmonicas when we had the chance. On this, his second solo album, Lee Oskar of War fronts a big mood-music aggregation that sometimes edges toward a soft, amorphous sort of jazz-pop but most of the time sounds more like Muzak. Oskar knows how to play the harmonica—he seems to choke it just a bit

(Continued on page 116)



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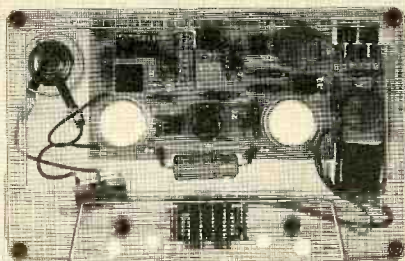
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## Dick Haymes, Mastersinger

DICK HAYMES was probably the only serious competition Frank Sinatra had during the Forties. Their backgrounds and their successes were similar: both were products of the big-band era, both achieved stardom through recording and through riotous personal appearances that left swooning bobby-soxers moaning in the popcorn-littered aisles, and both went to Hollywood to star in pictures. Once there they were both relentlessly cast as boy-singer types in a series of nitwit musical extravaganzas that soon wore out their public's interest in them, they both married gorgeous and temperamental screen vamps—and both seemed to be all washed up by the early Fifties.

But Sinatra, ever the street-wise survivor, made his own miracle and cajoled his way into a non-singing part in the movie version of *From Here to Eternity*. Since then he has never dropped the ball in a career that is a showbiz legend in its every aspect. Haymes, on the other hand, whose new and perhaps finest album yet, "For You, For Me, For Evermore," has just been released on Audiophile (though it was recorded in 1976), slid into the kind of choppy, on-again-off-again oblivion that reminds me of the plots for those backstage musicals through which he used to wander, half-hearted and phlegmatic. Unlike Sinatra, he apparently never much wanted to be an actor, as is painfully apparent to anyone who catches him on any of the late-late movies. For the last twenty years there have been an occasional club appearance, a spot on a TV show, an album made in England (where he lived for several years) but never released here, unhappy reports of dire financial troubles, and happy reports of how well he still sounded. None of it was *National Enquirer* dregs, but none of it was particularly encouraging either.

Well, pick yourself up, dust yourself off,

and start all over again in your appreciation of Dick Haymes, Mastersinger. He's back in a very big way with his new album, singing—wonderfully well—such standards as *Bidin' My Time*, a medley of *I'll Get By* and *It Had to Be You*, and twelve other superior songs with meltingly graceful musicianship and that distinctive vocal style that sounds better, richer, and more elegant than ever. What about the pipes? I can't do better than to quote Alec Wilder's liner-note opinion based on over thirty years of personal acquaintance with Haymes and his work: "Where before I had heard a marvelous voice, now I heard an even better voice and behind it, someone who truly and profoundly sensed and expressed the meaning and intent of the lyrics. The need and urgency to sing was present in every song."

So this is not a Calling All Nostalgia Freaks event, nor is it Let's Welcome Back The Grand Old Trouper time. It is instead a wonderful chance to hear an extraordinarily fine male singer at a time when there aren't too many of them around. If he's new to you, all the better; you're in for a pleasurable surprise. If you remember him, I'll bet you don't remember him sounding this good.

—Peter Reilly

**DICK HAYMES: *For You, For Me, For Evermore*.** Dick Haymes (vocals); Loonis McGlohon (piano); Terry Lassiter (bass); Jim Lackey (drums). *The Sounds Around the House; They Can't Take That Away from Me; I Only Have Eyes for You; Bidin' My Time; You Must Have Been a Beautiful Baby; Someone to Watch Over Me; Night Talk; Jeepers Creepers; How Long Has This Been Going On?; I'll Get By; It Had to Be You; A Foggy Day; Nice Work if You Can Get It; Where's the Child I Used to Hold?; For You, For Me, For Evermore.* AUDIOPHILE AP 130 \$6.98.

"the need . . . to sing was present in every song"



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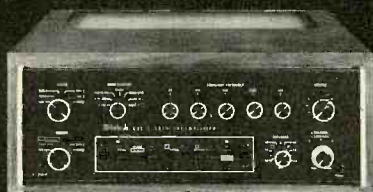
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all the time, a trick the old bluesmen taught us—but he doesn't actually *do* much here. Possibly he's stymied by the dullness of his own songwriting. I know I would be. Best thing is the sound effects by Mickey Hart, especially a spate of rainfall (is that a slate roof?). Or you might like the profundity of the lyrics, for example those of *Haunted House*, sung by a chorus in the manner of Ray Conniff: "You remind me of a haunted house I once was in," repeated over and over. And then there's the silence between the tracks, some of the most welcome silence I've heard lately. *N.C.*

**PLASTIC BERTRAND:** *Ça Plane pour Moi*. Plastic Bertrand (vocals); instrumental accompaniment. *Le Petit Tortillard; Bambino; Naif-Song; Sha La La La Lee; Pognon Pognon; Dance Dance*; and five others. SIRE SRK 6061 \$7.98, © 8147-6061 \$7.95, © 5147-6061 \$7.95.

Performance: **La la la**  
Recording: **Okay**

Here's an album that poses a question: Can an otherwise normal Belgian lad whose novelty single, *Ça Plane pour Moi*, combining a honking Fifties sax, early-Sixties Beach Boys falsetto harmonies, and late-Seventies punk guitar, has sold several million copies worldwide hope to be equally charming with a whole LP's worth of the same stuff?

Here's a review that answers it: no way. This album is utter *merde*. There is, perhaps, a certain *joie de vivre* in the performance of it, but it is *merde* nonetheless. *S.S.*

**JEAN-LUC PONTY:** *Cosmic Messenger*. Jean-Luc Ponty (electric violin, keyboards); instrumental accompaniment. *The Art of Happiness; Fake Paradise; Cosmic Messenger; Ego-centric Molecules*; and four others. ATLANTIC SD 19189 \$7.98, © TP 19189 \$7.98, © CS 19189 \$7.98.

Performance: **Okay**  
Recording: **Flashy**

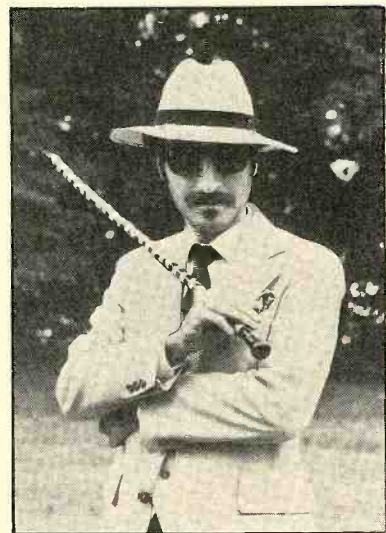
Did you know that Hector Berlioz went to a certain Adolphe Sax and asked him to invent a new kind of wind instrument for a special effect that he wanted? And that Herr Sax thereupon did just that? But instead of naming it after the composer he named it in his own honor, so that now instead of the berliozophone we have the saxophone. Stray thoughts such as this kept running through my mind as I sat through Jean-Luc Ponty's seemingly interminable effort to make the five-string electric violin an interesting instrument. The late Joe Venuti was about the only performer I've ever heard who was able to make the violin seem part of pop, and I have a feeling that that had more to do with the *brio* with which he played than with the instrument itself. Ponty's attempts to work up some excitement in this collection of his own cliché-ridden music are almost painfully boring. It sounds like a score attached to one of those Japanese sci-fi films that turn up on TV on odd channels at even odder hours. By the time Ponty's recital ended, my thoughts had ranged from Berlioz to Marlene Dietrich. Did you know that she used to have an act in which she played the musical saw? *P.R.*

**LEON REDBONE:** *Champagne Charlie*. Leon Redbone (vocals, guitar); instrumental accompaniment. *Champagne Charlie; Please*

*Don't Talk About Me When I'm Gone; Sweet Sue (Just You); Alabama Jubilee; Big Bad Bill (Is Sweet William Now); I Hate a Man Like You*; and four others. WARNER BROS. BSK 3165 \$7.98, © M8 3165 \$7.97, © M5 3165 \$7.97.

Performance: **Convincing**  
Recording: **Very good**

Leon Redbone possesses all the charm and mystery of a dust-covered bowler exhumed from an attic trunk. Where on earth did they find this guy and how did he arrive at such an eccentric style? Redbone refuses to give out information on his past, lapsing into tall tales when closely questioned, so we may never know. His rusty, tobacco-spitting voice—accompanied by banjo, washboard, ocarina, and other ancient instruments—would make you suspect that some oldies collector had assembled a series of selections pirated from



Warner Bros. Records

LEON REDBONE

*The charm and mystery of a dusty bowler*

yesteryear's radiocasts. But then how to account for the technical clarity of this album? I presume Redbone spent hours digging in the graveyard of American popular music to inter such ditties as *Please Don't Talk About Me When I'm Gone*, *Sweet Sue*, and Jelly Roll Morton's *I Hate a Man Like You*. He pulls it all off with convincing ease as he plucks at his guitar, crooning these musical fossils in a style suited to a turn-of-the-century saloon. For the time it takes to play the two sides of this album (it's his third from Warner Bros.), he insulates us from computerized technology, digit dialing, zip codes, air pollution, the urban crisis, double-digit inflation, and other ills of modern life. Relax and enjoy. *P.G.*

**KENNY ROGERS:** *Love or Something Like It*. Kenny Rogers (vocals, guitar); Pig Robbins (keyboards); Joe Osborn (bass); Tommy Allsup (bass); and seven others. UNITED ARTISTS UA-LA903-H \$7.98, © UA-EA903-H \$7.98, © UA-CA903-H \$7.98.

Performance: **Oh, shut up**  
Recording: **Good**

I concede the tune is catchy, but the runaway success of the *message* in the title song here  
*(Continued on page 118)*





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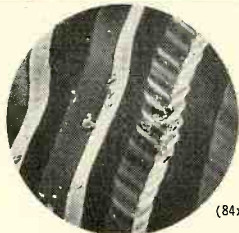
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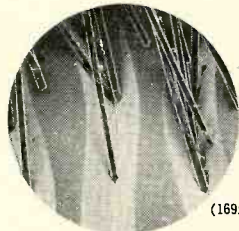


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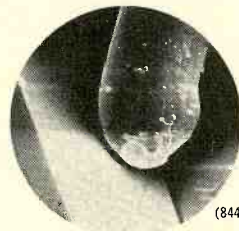
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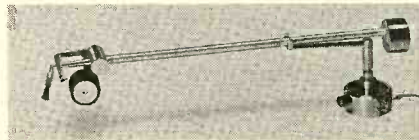
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makes me feel a little slimy about America, something like the way I felt when *Hustler* became a success, or when Larry Flynt found God, or when Larry Flynt got shot. I suppose there's supposed to be a little pathos about one-night stands under the surface of it, but not as much as there is promotion of them, or of tawdry glamour in general. And, speaking of promotion, Kenny Rogers is getting about as ubiquitous as the Red Menace was in the Fifties. He seems a lot more involved with hits than with music, which this album underscores; it's a hit-single-and-filler kind of album. There is one song over on side two, *Sail Away*, that's kind of interesting, although very brief. Not as good as Mickey Newbury's *Sail Away* or Randy Newman's *Sail Away*, this one by Rafe Van Hoy nevertheless stands out in this crowd. I just don't see enough depth in the kind of thing Rogers is doing now to enable him to stand up to the kind of exposure he's getting. But I guess that, to paraphrase Mencken, nobody in pop music ever went broke by being too shallow. N.C.

**LEON RUSSELL: *Americana*.** Leon Russell (vocals, guitar, bass, piano); instrumental accompaniment. *Let's Get Started; Elvis and Marilyn; From Maine to Mexico; When a Man Loves a Woman; Housewife; Shadow and Me*; and four others. PARADISE PAK 3172 \$6.98, © M8 3172 \$7.97, © M5 3172 \$7.97.

Performance: **Star trip**  
Recording: **Good**

During his struggling years—the mid to late Sixties, when he was beating on the door of pop stardom—Leon Russell was an inconsistent but arresting talent, a musical "outlaw" before the term was coined. As writer, producer, instrumentalist, and singer, he came up with work that was sometimes brilliant and sometimes wretched, but there was no denying the impact of his personality and no mistaking his Oklahoma accent. Since reaching stardom, however, he's paid less attention to his talent than he has to his accent. His performances have become mechanical, as if he couldn't be bothered any longer.

What I miss in Russell is his old ambition, which led him to attack songs with a gusto that he now seldom musters. But even during his scrapping days he had recurring lapses of taste that he still has. Two examples on his

present outing are *Shadow and Me*, in which a husband and the family dog are abandoned by the wife (and wouldn't you know Russell has a real dog on the track, yapping hysterically?), and *Elvis and Marilyn*, an exercise in necrophilia in which poor Marilyn's shade is summoned up for a hypothetical romance with the King. The ears burn, the head reels, the stomach churns. J.V.

**LEO SAYER.** Leo Sayer (vocals, harmonica); vocal and instrumental accompaniment. *Raining in My Heart; Something Fine; Running to My Freedom; Dancing the Night Away*; and six others. WARNER BROS. BSK 3200 \$7.98, © M8 3200 \$7.97, © M5 3200 \$7.97.

Performance: **Good, but ...**  
Recording: **Excellent**

Leo Sayer's vocals are fine, the mostly acoustic accompaniment here is clean, and Richard Perry's production is gentle and artistic. But despite all that, the album just doesn't work. If the intent was to present Sayer as a vocalist of subtle sensitivity, the scheme went awry in the selection of songs; none of them have any sting, any moment of crisis to be resolved by the artist. Some of the material was written by Sayer, but he also essays *Something Fine* by Jackson Browne (indeed, throughout the album he tries to sound like a cross between Browne and Harry Nilsson, that poetic technocrat) and *La Booga Rooga* by the daffy and delightful Andy Fairweather Low. Yet none of it catches fire, perhaps because there's no sense of commitment and nobody takes any chances. While there's nothing awfully wrong about this album, there isn't anything awfully right about it either. J.V.

## RECORDING OF SPECIAL MERIT

**THE STAPLES: *Unlock Your Mind*.** The Staples (vocals); instrumental accompaniment. *Love Being Your Fool; Unlock Your Mind; Handwriting on the Wall; Mystery Train*; and six others. WARNER BROS. BSK 3192 \$7.98, © M8 3192 \$7.97, © M5 3192 \$7.97.

Performance: **Folksy**  
Recording: **Good**

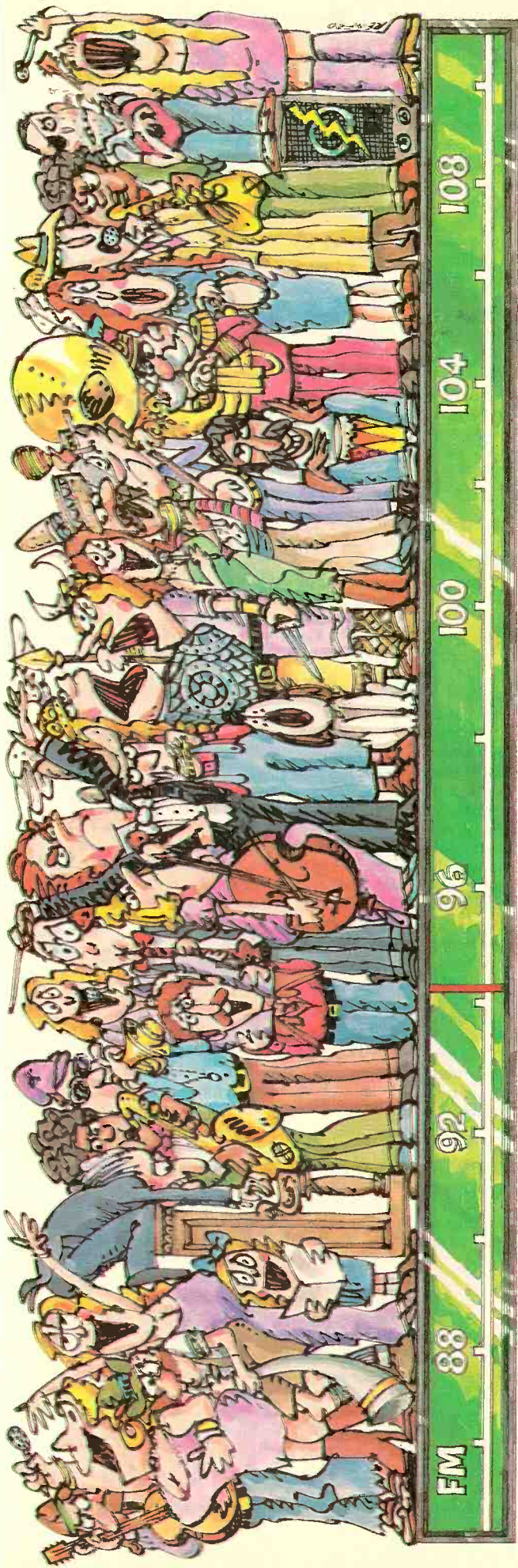
If the Staples ever tire of being billed as a soul-folk group, they might well cross the  
(Continued on page 120)



THE STAPLES:  
funky, folksy,  
and refreshing

Warner Bros. Records



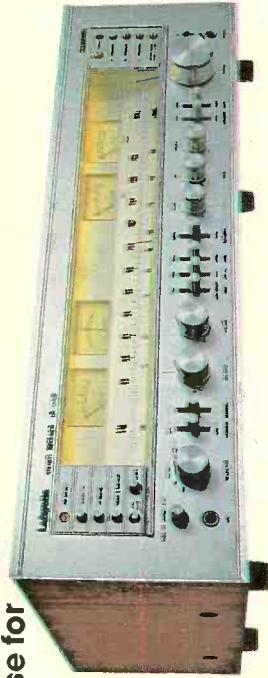


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bridge between musical categories and set up camp as funky country-and-westerners. Their style has always had a heavy country flavor, quite likely because they migrated to Chicago from Mississippi—and what could be more “country” than that? Furthermore, only a thin and not always distinguishable line separates c-&-w from the blues, itself a close cousin of the rural gospel music that provided the initial impetus for guitar-plucking Pop Staples and his swinging offspring.

“Unlock Your Mind” is laced with echoes of the Staples’ musical roots. Lead singer Mavis Staples twists her husky voice around selections that have a contemporary beat but still reflect the nuances of the blues, gospel, and traditional secular music. *Handwriting on the Wall* is nothing but a Saturday night, down-home, hand-clapping ditty, while *Mystery Train*, with its instrumental imitations of a passing train, is a folk standard. Pop indulges in a bit of extemporized preaching on *God Can* as the whole family lets go and has a good time. A folksy fun-fest, unpretentious and refreshing. *P.G.*

**SYNERGY:** *Cords*. Synergy (instrumentals). *Full Moon Flyer*; *Trellis*; *Terra Incognita*; *Phobos and Deimos Go to Mars*; *Sketches of Mythical Beasts*; and three others. **PASSPORT** PB 6000 \$7.98, © PST 8167-6000(N) \$7.95, © PST 5167-6000(N) \$7.95.

Performance: **Hmmm . . .**  
Recording: **Orgiastic**

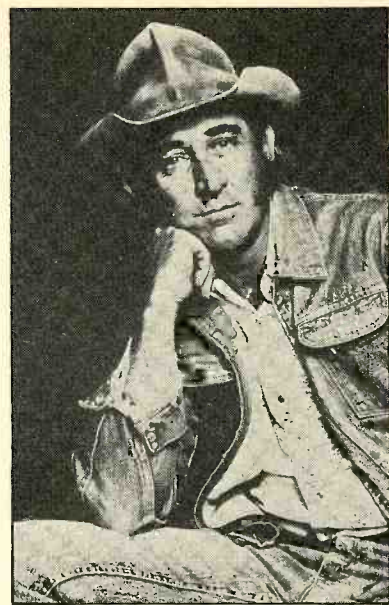
The news here is almost totally nonmusical. It seems that Larry Fast of Synergy has developed this gizmo that “is expected to revolutionize the synthesizer market” (which apparently has been depressed of late). Skipping all the technical details, basically what the thing does is allow guitar players to play through a synthesizer. I hope Larry Fast makes a million on his invention, and I suppose it would be nice if you wanted to leave one under the Christmas tree for whomever, but I think you’d better listen to this record before buying one.

As to what the damned thing sounds like, the closest I can come is that it resembles a horde of chipmunks, with little taps implanted in their furry little feet, let loose on a giant xylophone with super-sensitive microphones attached to each bar. The barrage of sound on this specially processed disc is impressive for the first few moments, but after that those chipmunks seem to be racing each other right out of the speakers and around the room. It’s not very comfortable listening. *P.R.*

**FRANKIE VALLI:** *Frankie Valli Is the Word*. Frankie Valli (vocals); instrumental accompaniment. *Grease*; *You Can Do It*; *A Tear Can Tell*; *No Love At All*; *Needing You*; and five others. **WARNER BROS.** BSK 3233 \$7.98, © M8 3233 \$7.97, © M5 3233 \$7.97.

Performance: **Like old times**  
Recording: **Good**

Even though he’s beginning to look a lot like the late Katina Paxinou (a shade less rugged, perhaps), the current Frankie Valli still sounds deadeningly like the early Frankie Valli. The film *Grease* breathed some new life into his career, but his latest album demonstrates that Frankie firmly intends to prolong his adolescence, Fifties style, into recording eternity. No matter what he sings here, including *Grease* and another Barry Gibb num-



ABC Records

**DON WILLIAMS**  
*Impossible to dislike*

ber, *Save Me, Save Me*, he still comes on like that same old grossly unrequited teenage lover nervously baying outside the corner candy store. I’m sure that there are middle-aged matrons around who still get the hiccups when Frankie starts up, just as I’m sure also that he’ll still be the rage among certain citizens of Sun Cities in the 1990’s. But by that time I hope to be quite deaf. *P.R.*

**RECORDING OF SPECIAL MERIT**

**DON WILLIAMS:** *Expressions*. Don Williams (vocals, guitar); Kenny Malone (drums); Shane Keister (keyboards); Joe Allen (bass); Dave Kirby (guitar); other musicians. *I Would Like to See You Again*; *You’ve Got a Hold on Me*; *Tears of the Lonely*; *All I’m Missing Is You*; *Tulsa Time*; *Give It to Me*; and four others. **ABC AY 1069 \$6.98.**

Performance: **Stylish**  
Recording: **Very good**

Don Williams’ admirers include Eric Clapton, and this album reminds me a little of Clapton’s “Slowhand”—not too deep, not too assertive, but catchy and pleasant and virtually impossible to dislike. In the sense that one is known by the company he keeps, Williams is a country musician, but no label beyond “mellow” has ever really fit him. He just keeps going along, doing his thing, and the world slowly but surely catches on. This time he’s got an awful lot of musicians involved, but he and producer Garth Fundis have somehow managed to keep them restrained without sounding overcontrolled or too planned. Kenny Malone does an absolutely rock-solid job of anchoring it on the drums, and the songs that rock gently, such as *All I’m Missing Is You* and, especially, *Tulsa Time*, make the strongest impressions. Side two sputters a bit in the last couple of cuts, but by then the listener is so laid-back and mellowed-out he doesn’t mind too much. This may not become many people’s favorite album, but I’ll bet you can’t round up ten people who won’t like it. *N.C.*

(Continued on page 124)



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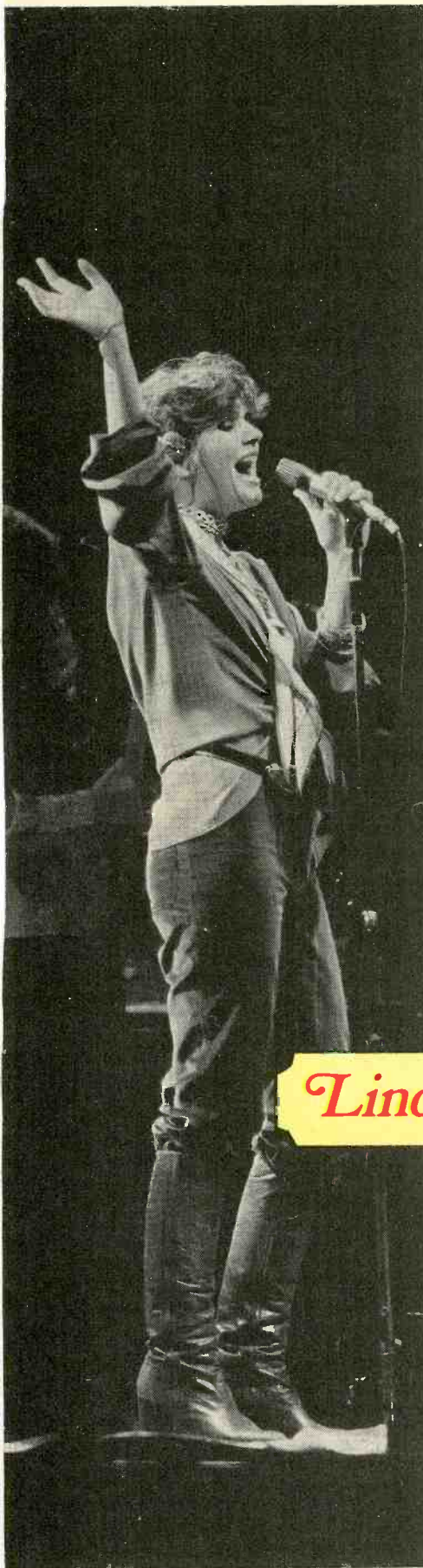
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CIRCLE NO. 43 ON READER SERVICE CARD





Russell Ebert/Peaf

I HAD the uncomfortable distinction of being a minority of one around STEREO REVIEW when Linda Ronstadt's last album came out; in fact, unlike the rest of my colleagues, who, commendably, are nowhere near as cynical and mean-minded, I actively detested it. For me, Linda completely missed the joke crucial to *Poor Poor Pitiful Me*, her band played *Tumbling Dice* as if it had been composed for halftime at the Superbowl, and Peter Asher produced the rest of the material with such scrupulous, crabby precision that he seemed to have created a whole new—and thoroughly unpleasant—genre: Spinster Rock. So I was, shall we say, primed to dislike her new one from the minute I saw her decked out in early ads as the Roller Derby Queen of Rock. Enough is enough, I figured.

Eat crow, Simels. It turns out that "Living in the USA" is not only one heck of a good record, but a really heartening sign that Linda Ronstadt is toughening up her act. Growing, even. Realizing that there is more to life than waxing aren't-we-all-tragic-victims laments over *Lost Love* for college girls weeping in their dorm rooms, she has taken a number of enormous chances with her song selection this time out, for which she would deserve enormous credit even if the results weren't so successful. Fact is, this is the first record she has made in what seems like ages that has, if you'll pardon the euphemism, glands.

Not that *everything* works, of course. Chuck Berry's *Back in the USA*, for example, is treated rather stiffly by the band (the secret is that good rock-and-roll *swings*, guys), although Linda has Chuck's sly, drawling phrasing down to a tee; and the resurrection of Sigmund Romberg's (!) *When I Grow Too Old to Dream* seems at best ill-advised, despite a technically spectacular vocal workout. But she's testing her limits, which in the past she has been somewhat reluctant to do. After all, she could sing Eric Kaz L.A. archetypes in her sleep—and does again here, with the forgettable, predictable *Blowing Away*—but most of the rest of "Living" is a lot more challenging, both for the listener and for her.

Case in point: Smokey Robinson's *Ooh*

ingly evocative Springsteenish sax break. Costello's lyrical vision couldn't be further away from Ronstadt's usual *toujours l'amour* approach; in fact, *Alison*, pretty as it is, is one of the *nastiest* love songs ever written. But not only does she sing it as if she means it (there's a falsetto note at the end that will curl your hair), she effectively and intelligently transforms it into a Woman's Song. The larger question her version raises—whether its becoming a hit single (it should) would amount to a co-opting of the New Wave—I will leave to pop theorists. For my money it is one hell of a performance; it may even be better than the original.

So is the other triumph here, Warren Zevon's majestic and mysterious *Mohammed's Radio*. The band, driven by Waddy Wachtel (he may yet turn into Linda's Keith Richards), gives this one everything, playing with enormous passion and bite. In the end, however, the song belongs to Linda, who rides over the whole thing magnificently, giving a resonance to the lyrics that Zevon's own merely serviceable Marlboro Country voice never could. If there is any justice in this world, it will become her signature tune.

**T**HIS has been one of the better rock-and-roll years in recent memory, with a lot of surprisingly good records coming from a lot of surprising people (the Stones' "Some Girls" being the most obvious example), and there's no use pretending that those nasty old punks are not at least partly responsible. Linda Ronstadt, of course, is not a punk, but she's also no dope, and it's quite possible that the intelligence, authority, and drive of the music she is making now is a result of the threat, real or perceived, that punk rock poses to the music-biz aristocracy she represents. I'm not suggesting that "Living in the USA" is any kind of classic, but its best moments are as tough and uncompromising as they are surprising, and that's what rock is *supposed* to be about. What's really nice about this is that it strikes another blow for solidarity: it won't alienate her old fans, and it could well win her some new ones. With the Eighties closing in

## Linda Ronstadt: Toughening Up

*Baby Baby*, which in the original is one of the most gut-wrenching, tour-de-force vocal performances ever. Linda ain't Smokey, but she gives him a run for his money, and the starkness of Asher's production for once has the effect of framing the naked emotionality of her singing in a legitimately affecting way. This is strong stuff, and it shows up some of the facile emoting she's dispensed in the past for the high-class MOR it really was. Even a marvelous old r-&-b chestnut like *Just One Look* benefits from this ambitious intensity: she could have done it as jauntily as her Buddy Holly covers, but it emerges instead with a sense of desperate longing that the lyrics only hint at.

But the real stunners are the totally unexpected, left-field songs. The first is Elvis Costello's *Alison*, dressed up here with a surpris-

fast, and the biggest rock stars of the day making utter fools of themselves (as anyone who has witnessed the *Sgt. Pepper* disaster can attest), we need the kind of musical heroes and heroines who can reassure us that we're all—Old and New Wavers alike—in this thing together. Get up there on that pedestal, Linda!

—Steve Simels

**LINDA RONSTADT:** *Living in the USA*. Linda Ronstadt (vocals); Waddy Wachtel (guitar); Kenny Edwards (bass); Russ Kunkel (drums); other musicians. *Back in the USA*; *When I Grow Too Old to Dream*; *Just One Look*; *Alison*; *White Rhythm and Blues*; *All That You Dream*; *Ooh Baby Baby*; *Mohammed's Radio*; *Blowing Away*; *Love Me Tender*. ASYLUM 6E-155 \$7.98, © ET8-155 \$7.98, © TC5-155 \$7.98.



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## DISCO



**BONEY M: *Nightflight to Venus*.** Boney M (vocals); the Rhythm Machine (instrumentals); other musicians. *Nightflight to Venus*; *Rasputin*; *Painter Man*; *He Was a Steppenwolf*; *Rivers of Babylon*; and five others. SIRE SRK 6062 \$6.98, © 8147-6062 \$7.95, © 5147-6062 \$7.95.

Performance: **From Somewhere Else**  
Recording: **Good**

Since liner notes, with their bloated but frequently informative mini-histories, have gone out of style, I could only conclude, on first hearing the strange conglomeration of sounds on this record, that it was the result of a marriage between European tavern tunes and American disco rhythms, with a snatch of Fauré, a whiff of *Poinciana*, a whisper of reggae, and a few historical references thrown in for good measure. An examination of the credits revealed that it was recorded in Munich; Boney M is evidently the latest group to ride the German-American disco connection to recognition, arriving solidly with the hit *Rivers of Babylon*.

Though it was initially disconcerting that the folksy melodies just didn't seem to fit the beat, I gradually found myself liking this album. The conception increasingly seemed to be a clever one, juxtaposing dissimilar musical elements to create a fresh sound. Furthermore, it's so catchy that I have found it impossible, over the past few days, to stop singing snatches of an outrageously funny tune called *Rasputin*, about Russia's greatest sex machine. The group doesn't sing particularly well, but the music doesn't call for much professional polish. There's plenty of verve and

hand-clapping, though, and everything fuses to make this album an appealing standout from the ordinary. P.G.

**THE BROTHERS JOHNSON: *Blam!!*** The Brothers Johnson (vocals and instrumentals); instrumental accompaniment. *Ain't We Funkin' Now*; *So Won't You Stay*; *Blam!!*; *Ride-O-Rocket*; *It's You Girl*; and three others. A&M SP 4714 \$8.98, © 8T 4714 \$7.98, © CS 4714 \$7.98.

Performance: **Nothing extraordinary**  
Recording: **Very good**

The brothers Louis and George Johnson have risen to prominence under the aegis of Quincy Jones, who achieved recognition years ago as a jazz prodigy but has moved decidedly toward the popular mainstream of late. The Johnsons are obviously talented, each one playing an assortment of instruments with some level of competence and also singing with spirited infectiousness. But I must admit that they have never really knocked me out, and I find this album even less interesting than their first two. Perhaps I was expecting too much of them, considering their mentor's reputation for versatility. Unlike Jones, they seem to be stuck in a rut of the tried and tired. They blast out their songs with a gusto and mix in some soft numbers to dispell monotony, but they never rise above the predictable. On this album, *Blam!!* substitutes volume for substance. *Ain't We Funkin' Now* is a lively dance number with lyrics that have a suggestive edge, and *It's You Girl* has a smidgen of interest, but on the whole this is just another forgettable pop album. P.G.

### RECORDING OF SPECIAL MERIT

**CAROL DOUGLAS: *Burnin'*.** Carol Douglas (vocals); instrumental accompaniment. *Fell in Love for the First Time Today*; *Burnin'*; *Night Fever*; *All My Love*; and three others. MIDSONG INTERNATIONAL MCA-3048 \$6.98, © MCA-3048 \$7.98, © MCA-3048 \$7.98.

Performance: **Fine**  
Recording: **Dandy**

Carol Douglas is still burnin'! This early Queen of Disco remains as sweet-voiced as

BONEY M: an appealing standout from the ordinary



Sire Records



ever, and the sweaty arrangement of the title song on her newest LP has her right back on top of the heap. *Burnin'* isn't the only worthwhile track here: side two includes three top-drawer Douglas numbers—*So You Win Again*, *Let You Come into My Life*, and her justly successful version of the Bee Gees' *Night Fever*—that were previously available only as singles. All three have Michael Zager arrangements, and they're all rich, inventive, up-beat, and worth having on hand for your next dance party. **E.B.**

**THE EMOTIONS: Sunbeam.** The Emotions (vocals); instrumental accompaniment. *Spirit of Summer*; *Whole Lot of Shakin'*; *I Wouldn't Lie*; *Time Is Passing By*; *Ain't No Doubt About It*; and five others. COLUMBIA JC 35385 \$7.98, Ⓜ JCA 35385 \$7.98, Ⓢ JCT 35385 \$7.98.

Performance: **Polished, but not slick**  
Recording: **Very good**

The Emotions' album "Rejoice" (Columbia PC 34762) was one of last year's best in terms of both production and performance. Maurice White provided superb settings for thoroughly first-rate songs, and his touch was apparent in every groove. The Emotions' general approach is similar to Earth, Wind & Fire's except that the voices are female rather than male. Those voices are skillfully woven into comparatively complex arrangements and employed like instruments, though the lyrics are sung with crisp clarity. They keep mostly in the high register, often singing in ensemble and stabbing sharply at the notes, something like a trumpet section. Yet the sound is consistently light and flexible, with the vocals supported by a battery of imaginative percussive effects and clever chord changes.

"Sunbeam" is from the same mold as "Rejoice"—and a very good mold it is—though the outcome here falls just a bit short of the previous opus. The album gets off to an energetic start with the rousing *Spirit of Summer*, which recalls *Best of My Love*, the opener on the older album. However, the body of this set, which was shaped with obvious care, is somewhat less distinctive than it might have been. There are no really dull moments, but several of these selections do not have the sort of staying power that has marked this group's best recent work. **P.G.**

**GIORGIO AND CHRIS: Love's in You, Love's in Me.** Giorgio Moroder, Chris Bennett (vocals); vocal and instrumental accompaniment. *Love's in You, Love's in Me*; *Keep It Together*; *I Can't Wait*; and three others. CASABLANCA NBLP 7104 \$7.98, Ⓢ NBL8 7104 \$7.98, Ⓢ NBL5 7104 \$7.98.

Performance: **MOR disco**  
Recording: **Very good**

Giorgio Moroder was the arranger and co-producer on five of Donna Summer's classic disco albums. This time Giorgio's teamed up with the Munich Machine's vocalist Chris Bennett, and the electronic wizardry definitely takes second place to the singing. The result is very listenable—almost gentle—disco, but the bouncing beat works on the dance floor too.

All three of the songs on side one are integrated into a single band, which lets the dancing fever build. Clever as this is, side two is even better, opening with a rocking boogie

(Continued on page 128)

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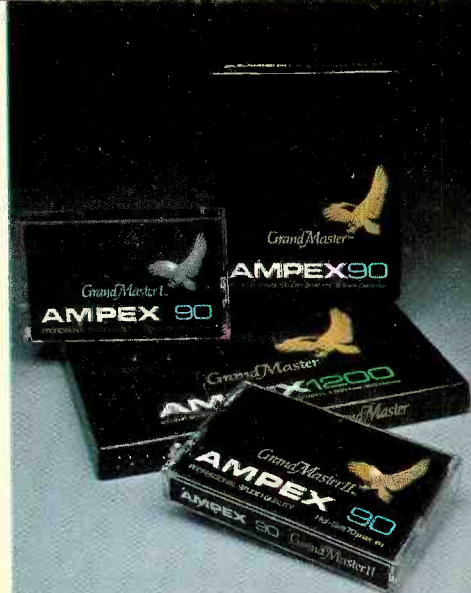
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## Diana Ross Is Dorothy

THE film version of *The Wiz* reportedly turned out to be the most expensive musical ever made: \$28 million at final cut. Never mind; the producers should be able to recoup at least half that handily from the soundtrack album alone. It is the kind of sure-thing, platinum-plus winner that won't arouse resentment in anyone. Except perhaps (or of course) the mandarins of the counterculture Establishment who have never quite recovered from their initial delight in discovering a simplistic parable that unmask all authority figures as dithering a-holes. They will relish not at all having their memories of tripping through the gorgeously gem-like Technicolor of the original *Wizard of Oz* co-opted into the rude commercial present.

And there are probably a few die-hard Judy Garland fans as well, still in mourning (but not too preoccupied to exchange knowing glances about Liza's increasingly riotous life), who will regard it simply as sacrilege. But *The Wiz* isn't about the Revolution, or mind-expanding drugs, or morbid star worship. It is about courage and friendship and being satisfied with what you are instead of mooning miserably after that Better and More Interesting Self you only think you hear yoo-hooing from the other end of the rainbow.

L. Frank Baum's little fable has by now so expanded into the American consciousness that at least two generations are as familiar with its symbols of the Yellow Brick Road,

the Emerald City, and the Red Slippers as they are with their own life-milestones. "I'm going to get you, Dorothy, and your little dog Toto too!" I recently heard one little girl chant to another while they were playing, proof to me that even the dialogue has penetrated our lives. I had my own reasons for not liking the Broadway-cast recording of *The Wiz*, most of which I've forgotten. But I do remember that it seemed to me too much a gimmick, a coolly calculated exploitation of the then-sudden eruption of black legitimate theater—plays of real content, by real talents, about black life in America—and also (an

a new kind of magic  
from the Siren of  
Impure Delight

opinion I still hold) that the stage *Wiz* didn't have much in the way of a score.

This film production has twelve new pieces of music—some songs, some dance interludes—by Quincy Jones, Nick Ashford, and Valerie Simpson. They slip in and (yes) integrate plot and action as smoothly as a gear

shift on a Maserati, but I can't honestly say that any one of them is a match for the single really *smash* song from Charlie Smalls' Broadway score: *Don't Nobody Bring Me No Bad News* (a request that, if I had my way, would be imprinted on every breakfast dish made). But what is missing in the way of lyric and melodic inspiration is more than made up for by the absolutely splendiferous job Jones has done as producer. This two-disc album races along like a glittering projectile shot into a cloudless night, leaving behind it a delightful, sparkling trail of pop program music.

The intoxicating Diana Ross has been cast as Dorothy, a selection that struck me at first as being about as sensible as asking Garbo to star in *Annie*, but Berry Gordy, as usual, knew exactly what he was doing. Ross' work in such things as *Can I Go On?*, *Soon As I Get Home*, and *Believe In Yourself* is a new kind of magic from this heretofore Siren of Impure Delight. She sounds so damned convincing! She is Dorothy and she is young! Not the gosh, golly, gee-willikins "young" of the ham actress, but the "young" that comes from the spirit: curious, courageous, forward-looking, and optimistic. There is very little of the teary waif in her vocal performances; her Dorothy is instead part wide-eyed kid in a fun-house, part determined young girl, and all grit and resources. Even in her joyous *Ease On Down the Road*, Ross' Dorothy is a kid determined to find her way around in a tough world. Her interpretation is one very much suited to the Seventies, just as Garland's rather Dickensian one was correct for a time when World War II hadn't yet boiled over.

As to who plays and sings so well the roles of the Straw Man, the Tin Man, the Cowardly Lion, and (most of all) the Witch, you'll have to wait, along with me, until you see the film\* because nowhere on the album is anyone, including Ross, identified other than by their character name. It is a nuisance to a reviewer to be kept in the dark that way, but the more I thought about it the more I admired the integrity of the gesture. The album is being presented to listeners in the same way a book is to its readers: this is the musical story of a magical experience in a young person's life, and any real-life young person can listen to it on those terms without worrying that the Tin Man or the Straw Man or anyone else in it will turn up on the tube, or in another film, as themselves and thereby dispel the illusion.

This same thread of thoughtful good taste runs throughout this blockbuster of an album. Its thoroughly necessary grandiosity is at every point matched by its sensitivity, its bone-cracking professional showmanship by its very real heart. An absolutely lovely job; congratulations to everybody who had anything to do with it.

—Peter Reilly

**THE WIZ** (Charlie Smalls—Quincy Jones—Valerie Simpson—Nick Ashford). Original-soundtrack recording. Diana Ross, others (vocals); orchestra. MCA MCA2-14000 two discs \$11.98, Ⓜ MCAT2-14000 \$14.98, Ⓞ MCAC2-14000 \$14.98.

\*No, you won't: Richard Pryor, the *Wiz*; Mabel King, the wicked witch Evillene; Lena Horne, the good witch Glinda; Michael Jackson, the Scarecrow; Ted Ross, the Lion; and Nipsey Russell, the Tinman.

—Ed.

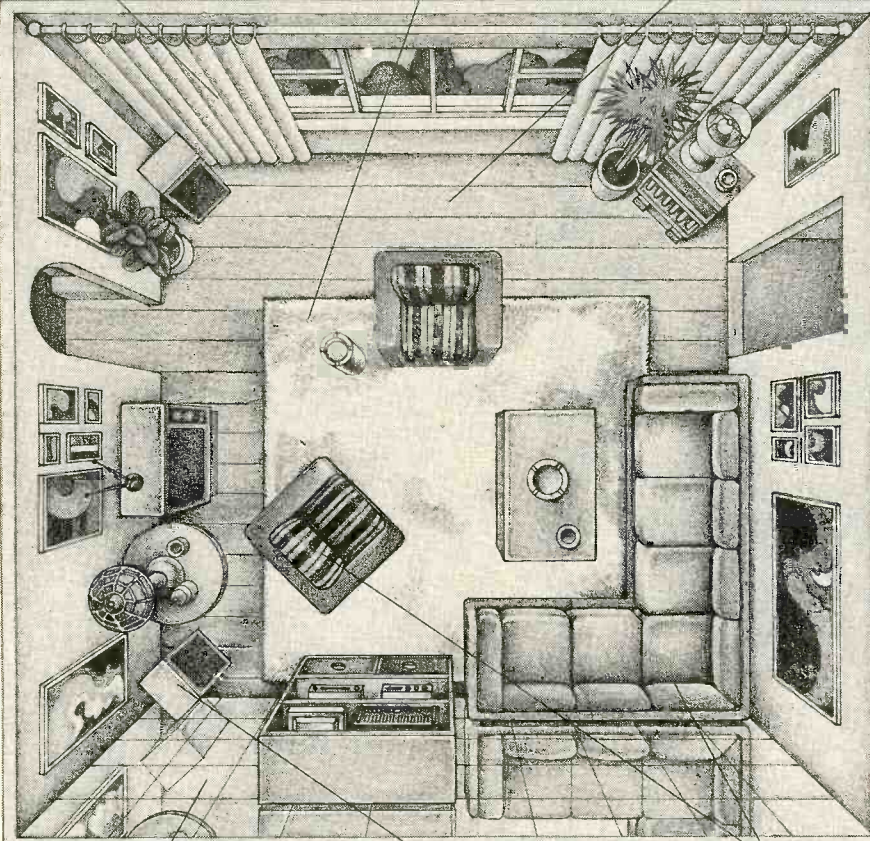


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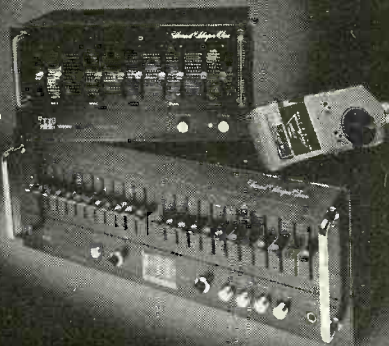
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called *Love Now, Hurt Later* that is much more imaginative than anything on side one, and ending with the album's best song (and wildest electronic arrangement), *Let This Night Go On for Days*. All in all, this album takes the middle ground in the increasingly diverse field of disco—somewhere between the Bee Gees and Donna Summer's own great Munich Machine collaborations. **E.B.**

**MAJOR LANCE: Now Arriving.** Major Lance (vocals); vocal and instrumental accompaniment. *I Never Thought (I'd Be Losing You)*; *Wild and Free*; *Chicago Disco*; *Do the Mess Around*; *How My Love Goes*; and four others. Soul. S7-751R1 \$7.98. ⓑ S8-751-H \$7.98. ⓒ S75-751-H \$7.98.

Performance: **Pro at work**  
Recording: **Good**

Major Lance, who had some hits in the 1960's—notably *Monkey Time* and *Um, Um, Um, Um, Um, Um (Curious Mind)*—was one of the Chicago musical crowd whose pivotal figures were vocalist Jerry Butler, arranger Johnny Pate, and the multit talents Curtis Mayfield when he sang with the Impressions. Major Lance hasn't been heard from in some time, which is a shame since he's a real pro. He's back now with this danceable, mostly disco album on which he delivers smooth, fluid vocals. It's a pleasure to listen to a craftsman at work; may the album sell and sell and sell. **J.V.**

### RECORDING OF SPECIAL MERIT

**MECO: The Wizard of Oz.** Meco (vocals and instrumentals). *Over the Rainbow*; *Cyclone*; *Ding-Dong the Witch Is Dead*; *The Merry Old Land of Oz*; *Poppies*; *The Spell*; *Munchkinland*; and eight others. MILLENIUM MNLP 8009 \$6.98, ⓑ MLN8 8009 \$7.98, ⓒ MLN5 8009 \$7.98.

Performance: **Wonderful**  
Recording: **Fine**

Click your heels three times and poof—you're in discoland! As he did so successfully a year ago with *Star Wars*, Meco has here transformed a movie into a dance trip. In this version of the classic fantasy, *Oz* is Studio 54 and the Wizard is none other than Meco himself.

The album opens and closes, appropriately enough, with *Over the Rainbow*; the arrangement is bright, bouncy, and sassy—a nice contrast to the sentimental treatment the song usually gets. With Toto barking, the cyclone whirling, and the wicked witch cackling, we sail nonstop through such great Harold Arlen tunes as *We're Off to See the Wizard*, *Ding-Dong the Witch Is Dead* (yes, Munchkins!), and *The Merry Old Land of Oz*. In the end we return home, fiderer but wiser. The music and story are so much a part of my childhood that it's hard to be an objective disco critic here. All I can say is that Meco's arrangements work: they are just fine for dancing while remaining true to the film. In effect, then, this is not just a dance trip but a nostalgia trip as well—two for the price of one wonderful LP. **E.B.**

### RECORDING OF SPECIAL MERIT

**ROSE ROYCE: Strikes Again!** Rose Royce (vocals and instrumentals). *Get Up off Your Fat*; *Do It, Do It*; *First Come, First Serve*; (Continued on page 130)



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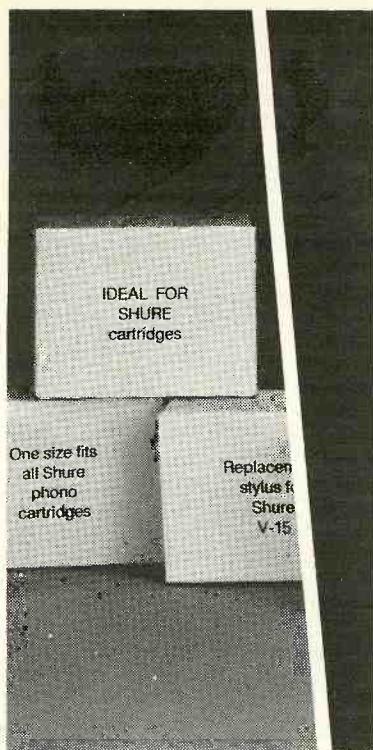
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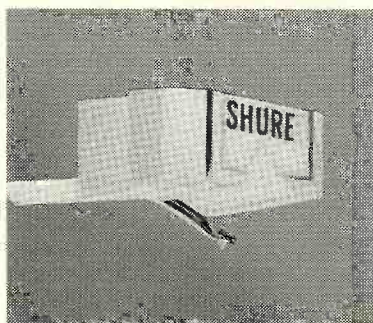




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CIRCLE NO. 67 ON READER SERVICE CARD



Don Lynn

## Ashford and Simpson: It's Still Good

I DON'T know what's going on personally between Nicholas Ashford and Valerie Simpson, but if their albums are to be used as a gauge, this duo has maintained one of the longest musical orgasms on record. A controlled sensuality pervades their sets, particularly when Nick insinuates his tenor into the high register to brush against Valerie's flirtatiously teasing tones. The voltage generated when they mesh in such close harmony seems to exceed what might be attributed to mere musicianship, and the feeling of joy they create spills over into the listener's cup.

Love Don't Live Here Anymore; Let Me Be the First to Know; and four others. WHITFIELD WHK 3227 \$7.98, Ⓜ M8 3227 \$7.97, Ⓞ M5 3227 \$7.97.

Performance: **Refreshing**  
Recording: **Very good**

The more I hear of this group, the more I like them. They not only sing and play with a spunky self-assurance, they mix up their offerings to cover the range from fast-paced finger-poppers to sweet ballads. On the latter end of the scale, their most valuable asset is lead singer Gwen Dickey, who is featured here on two enticing ballads, *Love Don't Live Here Anymore* and *Angel in the Sky*. *Do It, Do It* is heavy on standard funk, while *That's What's Wrong with Me*, highlighted by the fluent guitar work of Kenji Brown, is closer to straight-line rock. Though this album isn't exactly venturesome, it is more varied than most pop albums of this sort. Writer-producer Norman Whitfield, one of the veterans in this field, has done extremely well by Rose Royce.

P.G.

Their new Warner Brothers album epitomizes the appealing elements of their style and clearly ranks as one of their finest. As usual, they successfully combine a strong, propulsive beat with lightly flowing, firmly defined melodies that provide ample latitude for their vocal excursions, which are emotionally intense but never strident or self-indulgent. Their singing, exciting in itself, is enhanced by the authority they exercise over their material, which they write themselves. And Valerie further reinforces this musical cohesion by serving as pianist throughout, setting down the firm foundation on which the whole is constructed.

THIS time around we are treated to exceptionally tasty fare. The weakest track here is the opener, *It Seems to Hang On*, which is shaped in a rather predictable disco mold, but it quickly gives way to the choicest of items, *Is It Still Good to Ya*, quite likely their best shot since the memorable *Gimme Something Real*. In it they gradually build to a peak with a practiced restraint that comes from years of togetherness, and when they do hit the climax, the result is a tingling all the way to the toes. Other moments of special pleasure are *Ain't It a Shame*, in which Nick shows off his impressive vocal range, the high-stepping *Get Up and Do Something*, and *You Always Could*, which sports some lovely background choral effects.

I hope Ashford and Simpson never tire of each other's company, for it seems to me that they work together as naturally and effectively as two exuberantly clapping hands.  
—Phyl Garland

ASHFORD & SIMPSON: *Is It Still Good to Ya*. Nicholas Ashford (vocals); Valerie Simpson (vocals, piano); instrumental accompaniment. *It Seems to Hang On*; *Is It Still Good to Ya*; *Ain't It a Shame*; *Get Up and Do Something*; *You Always Could*; *Flashback*; *The Debt Is Settled*; *As Long As It Holds You*. WARNER BROS. BSK 3219 \$7.98, Ⓜ M8 3219 \$7.97, Ⓞ M5 3219 \$7.97.

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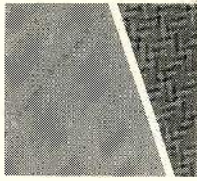
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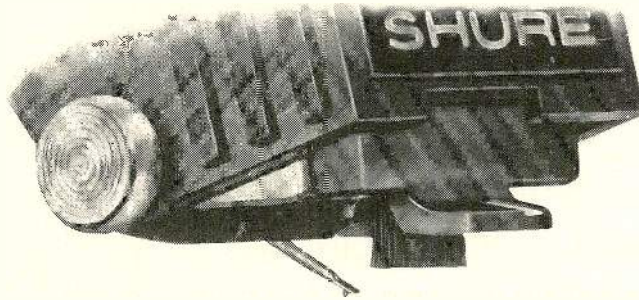
(List compiled by John Harrison.)

(Continued on page 132)

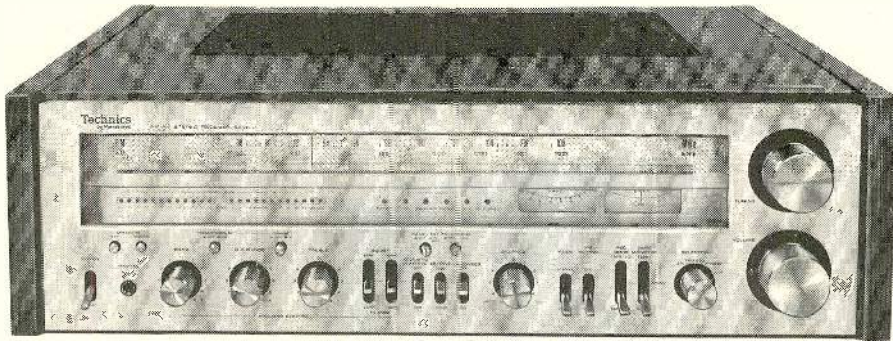




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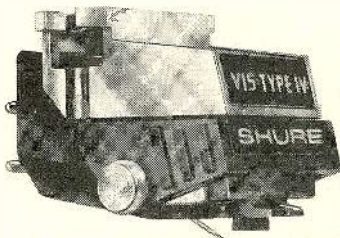
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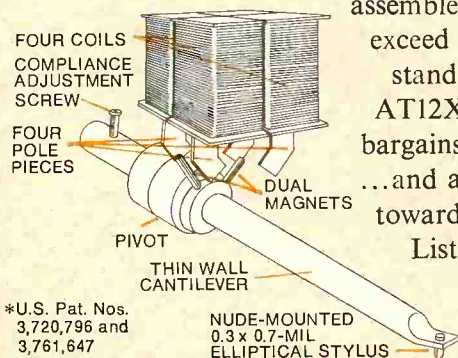
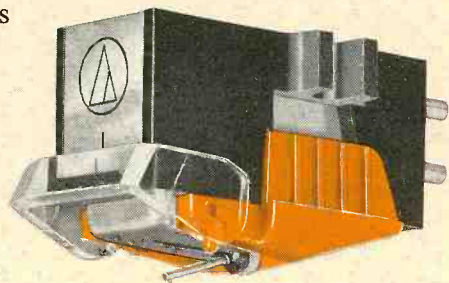


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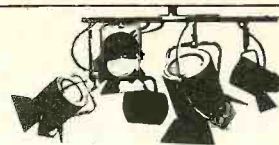
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THEATER • FILMS

**STOP THE WORLD, I WANT TO GET OFF** (Leslie Bricusse–Anthony Newley). Original-cast recording, 1978 revival. Sammy Davis, Jr., Marian Mercer, Shelly Burch, Wendy Edmead (vocals); chorus and orchestra, Ian Fraser cond. WARNER BROS. BSK 3214 \$8.98, ⓑ W8-3214 \$8.98, ⓒ W5-3214 \$8.98.

Performance: **Better than it deserves**  
Recording: **Excellent**

*Stop the World, I Want to Get Off* was a silly musical when it opened in London in 1961, and it hasn't become any less silly with the passage of time. The story of Littlechop, a kind of Cockney Everyman who conquers the world but can't make his loved ones happy, was the flimsy scaffolding for a string of songs, some of which survived the show thanks to the way Anthony Newley, in the Littlechop role, put them over. (It was Newley, in fact, who, with Leslie Bricusse, wrote the book, music, and lyrics for the whole affair.) *What Kind of Fool Am I?* became a winner, of course, Sammy Davis, Jr., has sung it often, and I guess it was inevitable that he go on to play the role of Littlechop in a limited-run revival of the piece at the New York State Theater in Lincoln Center last summer.

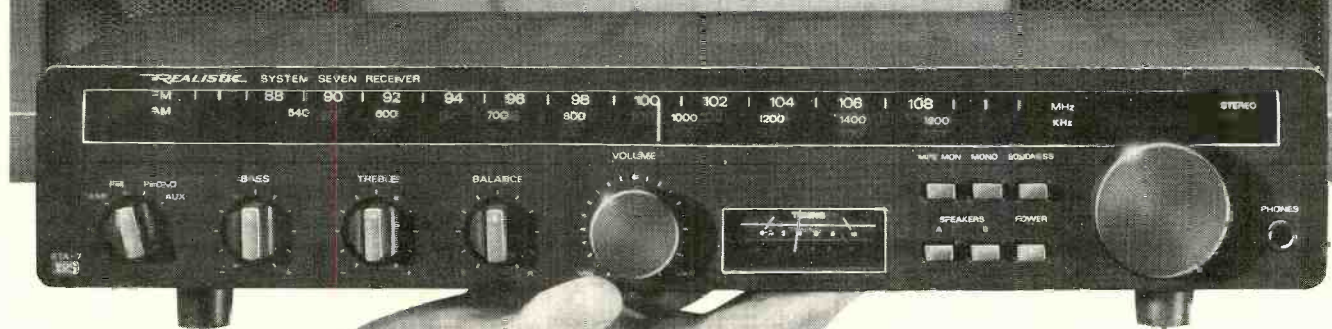
Davis is, along every bit of the route, a match for Newley in the part—indeed, he's more than a match; the role actually confines him. You have to wait until the very end for him to have his special way with *What Kind of Fool Am I?*, and when he gets to it he's surprisingly restrained. Before that big moment, though, he's entirely plausible, leading the chorus in a version of *Gonna Build a Mountain* that turns it into a real gospel number and successfully bringing off a song called *Life Is a Woman* that wasn't included in the original London-cast recording. It is one of the conceits of the piece that the Russian, German, English, and American women Littlechop falls in love with during his travels are all played by the same actress—in this case, the highly talented Marian Mercer, who makes the most of what opportunities she has. It's not her fault that all her lyrics are set to the same goofy tune.

As if there weren't already sufficient vulgarity mixed in with the whimsy of *Stop the World*, the revivers have seen fit to insert some mindless topical humor about Hadassah ladies and "Temple Beth Meyerson" into the big political-campaign production number toward the end. As I said, it's a silly show, but Davis and Mercer do have their moments on this record. P.K.

**WORKING** (Studs Terkel–Stephen Schwartz). Original-cast recording. Susan Bigelow, Steven Boockvor, Rex Everhart, Army Freeman, Bob Gunton, David Patrick Kelly, others (vo-  
(Continued on page 134)



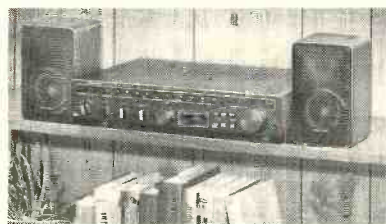
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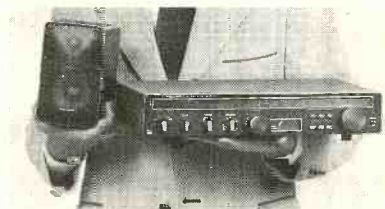
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Joseph Sia

## Doc and Merle Watson

If the ethnomusicologists would become plumbers or truck drivers or something useful and just let Doc Watson carry on their work, what a wonderful world this would be. From the modern (make that "contemporary"—musicologists love that word) folk statements by Bob Dylan and Eric Von Schmidt through such set pieces as *Under the Double Eagle* (which goes well with Doc's incomparable flat-picking) and a two-harmonica *Dixie* to the incorrigible old-time blues antics of *'Rangement Blues*, Doc continues to uncover the damndest, most American assortment of songs. And if you listen to enough of his albums, you'll get a fair idea of just where some of our most musical citizens have their roots and what kinds of branches they've followed.

Doc and son Merle's latest United Artists release, "Look Away!", has to rank pretty high aesthetically among their albums. It has a clean, uncluttered sound, those fine, mellow,

just-this-side-of-humorous vocals, Doc's rippling guitar, and tasty slide work by Merle. The feeling it gives you that all the holes *don't* have to be filled up is luxurious. And the assortment of music Doc can relate to (it's certain he won't play it if he *can't* relate to it) makes for one of the most vivid and pleasant heritage lessons you can get. Get it.

—Noel Coppage

### DOC AND MERLE WATSON: *Look Away!*

Doc Watson (vocals, guitar, harmonica); Merle Watson (guitar, slide guitar, dobro); T. Michael Goldman (bass); Johnny Gimble (fiddle); other musicians. *Florida Blues*; *Don't Think Twice, It's All Right*; *My Love Comes Rolling Down*; *Gypsy Davie*; *'Rangement Blues*; *You Two-Timed Me One Time Too Often*; *Blues in My Mind*; *It's a Crazy World*; *Under the Double Eagle*; *God Holds the Future*; *Dixie*. UNITED ARTISTS UA-LA887-H \$7.98, © EA887-H \$7.98, © CA 887-H \$7.98.

tributions from six songwriters in all: Schwartz, Micki Grant, Mary Rodgers, Susan Birkenhead, Craig Carnelia, and James Taylor. Even so, it seems all of a piece—in fact, there's a patina of grey monotony over the entire original-cast recording. James Taylor's *Brother Trucker* is wide-awake enough, but as the endless succession of waitresses, masons, newsboys, schoolteachers, and millworkers unfold their dreary tales, one begins to long for a few unreal, romantic figures.

Performance: **Dreary**  
Recording: **Very good**

For some years now, Studs Terkel has been painting himself into something of a corner by overdefining his image as the mouthpiece of the Common Man. In his books, you can read *ad nauseam* exactly what taxi drivers, truck drivers, farmers, and bartenders think about any subject in the world. His latest volume, *Working*, ran to quite a few hundred pages, many of them devoted to the opinions of blue-collar workers. Offhand, it didn't sound like much of a subject for a musical, and, as it turned out, it wasn't. *Working* opened on Broadway in May 1978 and closed only a few months later.

It was composer Stephen Schwartz who got the idea of setting the speeches in *Working* to music, but the actual score is made up of con-

There are a couple of bright musical moments in *Working* and a first-rate cast does its best to keep it going. It's just that it's practically impossible to make much of a show out of nothing but shoptalk. Or songs either. Indeed, the high point is the opening number based on Walt Whitman's litany of trades in *I Hear America Singing*, set to music with "additional lyrics" by Schwartz. After that, it was mostly downhill.

P.K.

(Continued on page 136)



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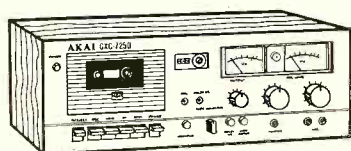
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# JAZZ



**KENNY BURRELL: *Stormy Monday*.** Kenny Burrell (guitar); Richard Wyands (piano); John Heard (bass); Lennie McBrowne, Richie Goldberg (drums). *One for My Baby; I Got It Bad; The Masquerade Is Over*; and three others. FANTASY F-9558 \$7.98, © 8160-9558H \$7.95, © 5160-9558H \$7.95.

Performance: **Predictably palatable**  
Recording: **Good**

Kenny Burrell, a consistent performer who combines flawless technique with original lyrical ideas, has yet to come up with an album that can be compared with "Guitar Forms" (Verve V-8612), his extraordinary collaboration with arranger Gil Evans. Sure, Burrell has made many other excellent albums, including this one, but, as "Guitar Forms" so clearly indicated, there's a lot more to Kenny Burrell's wide-ranging talent than generally meets the ear. Nevertheless, this set of five quartet selections and one unaccompanied solo offers a fine (if skimpy) thirty-five and a half minutes of Burrell's bluesy, quieter side as recorded in 1974. C.A.

**CHICK COREA: *Friends*.** Chick Corea (piano); Joe Farrell (reeds, flute); Steve Gadd (percussion); Eddie Gomez (bass). *The One Step; Sicily; Friends; Samba Song*; and four others. POLYDOR PD-1-6160 \$7.98, © 8T-1-6160 \$7.98, © CT-1-6160 \$7.98.

Performance: **Back to the drawing room**  
Recording: **Excellent**

About twenty years ago the Dave Brubeck Quartet set a new kind of standard, in both public acceptance and sales, for a kind of immaculate, drip-dry, pop-jazz performing. But, when all was said and done, it was drawing-room jazz, and Brubeck remained eminently resistible to the True Believers. One of the basic but largely overlooked reasons for his success was that his records were superbly produced and so beautifully engineered that they made the equipment of the time seem even better than it was. Chick Corea seems to be following in Brubeck's carefully elegant foot steps (one track here, *Waltze for Dave*, is dedicated to Brubeck). Corea's songs and arrangements all have a microphone-oriented feel and everything *does* sound gorgeous—not all that important or stimulating, but gorgeous. His piano playing, whether on a Steinway grand or a Fender Rhodes, is as flossily splendid as the Master's own, and Corea's group acquits itself handsomely in providing lush accompaniment. Listening to the whole album made me feel that I was in one of those men's-cologne advertisements, smoking a pipe in my patched suede sports jacket while a thoroughbred Irish setter and a tawny Lauren Hutton type fought for my attention. Cue in Chick Corea's new album and you'll feel like you've Arrived. P.R.

## RECORDING OF SPECIAL MERIT

**THE L.A. FOUR: *Watch What Happens*.** The L.A. Four (instrumentals). *Summertime; Mona Lisa; Nuages; Misty*; and three others. CONCORD JAZZ CJ-63 \$7.98.

Performance: **It happens, for sure**  
Recording: **Excellent**

This is the L.A. Four's third album. Its title is appropriate, for something special *does* happen to this group as Jeff Hamilton replaces Shelly Manne on drums. The group with Manne was excellent, and my delight with Hamilton—a young Woody Herman alumnus—by no means abrogates any of my past praise for Manne; but Hamilton is a more venturesome drummer who seems to have loosened up his three colleagues as well. The result is that the L.A. Four has virtually a new style, and it suits the group well.

Bud Shank's alto gets a bit tangled up at one point on Chuck Mangione's *Land of Make Believe*, and that is unusual because this quartet's performances are generally flawless. But it is also forgivable because Mangione's hit song never sounded better. C.A.

**CLEO LAINE: *Gonna Get Through*.** Cleo Laine (vocals); instrumental accompaniment. *One More Night; When I Need You; I'll Have to Say I Love You in a Song; On and On; Just the Way You Are*; and five others. RCA AFL1-2926 \$7.98, © AFS1-2926 \$7.98, © AFK1-2926 \$7.98.

Performance: **Classy MOR**  
Recording: **Satisfactory**

Cleo Laine is incapable of doing anything in poor taste. She can be counted on to bring a touch of class to every vocal offering whether she chooses to treat it with a bit of whimsy, to work it over in a jazz style, or to transform it into a modern art song by exploiting her wondrous range and timbre. And, unlike so many other popular singers, she appreciates the importance of lyrics, always taking care to project their meaning.

These qualities are all apparent on Ms. Laine's new album, though unfortunately they are not displayed to best advantage. Many of the selections here are lifted from the popular mainstream, and there are fewer of the jewel-like rarities we have come to expect from her. The tempo throughout is unflinchingly moderate, while the arrangements, mostly by Ken Gibson (who also contributes a couple of terrible trombone solos), are numbingly middle-of-the-road. There are a few moments when Laine manages to poke through the corn, as in *I Believe You* and in a playful vocal-sax duet with spouse John Dankworth on *Just the Way You Are*. Overall, the mood is intimate, but it doesn't take a Cleo Laine to do this material, which is merely pleasant. It's rather like taking the Rolls for a quick trip to the supermarket. P.G.

**ADAM MAKOWICZ: *Adam*.** Adam Makowicz (piano). *I Got It Bad and That Ain't Good; Jig-Saw Puzzle; Tea for Two; Once Yes Once No; Tribute to Erroll Garner; Cherokee*; and five others. COLUMBIA JC 35320 \$7.98, © JCA 35320 \$7.98, © JCT 35320 \$7.98.

Performance: **Polish polyester**  
Recording: **Good**

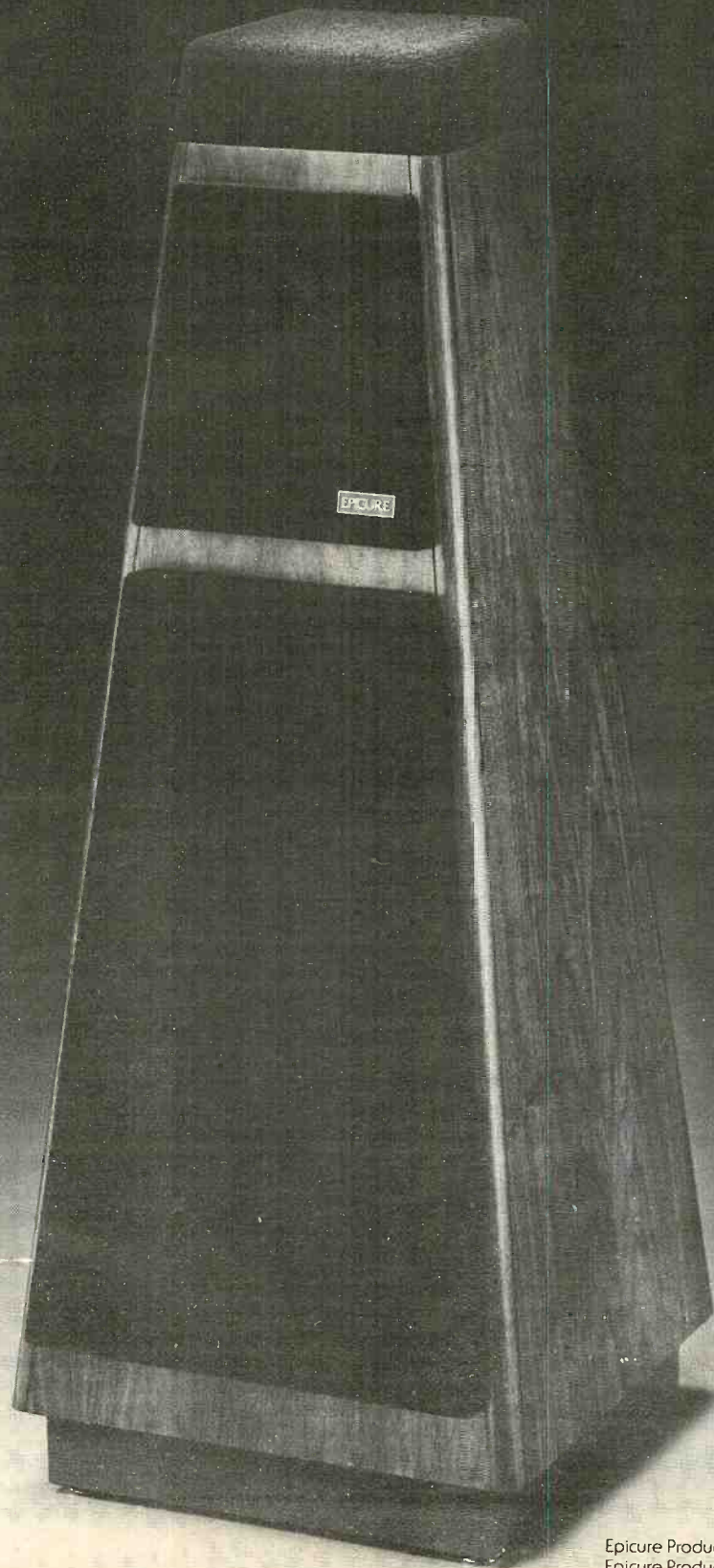
Adam Makowicz is a Polish pianist who has had some thirty albums released in Europe. (Continued on page 138)



# 3.0

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"Adam" marks his recording debut in this country, and the man responsible for bringing him here is John Hammond. One wonders whatever possessed him. Sure, Makowicz has good technique—though it was somewhat flawed when I heard him in person—but it doesn't begin to measure up to that of, say, Cecil Taylor, who is further advantaged by having an original style and a sense of rhythm. In fact, Makowicz pales in comparison to a disheartening number of American pianists who go unrecognized by Columbia and other major American labels.

Hammond's production credits include recordings by such major figures as Bessie Smith, Billie Holiday, Count Basie, and Bob Dylan, and that only skims the surface. Yet

he has called Makowicz "the most unusual pianistic talent in the last thirty years" and this album "one of the best albums [he] ever had anything to do with." And all this about a pianist who seems to spend most of his time at the keyboard imitating Art Tatum but with less rhythmic sense than Tatum had in his left pinkie. I just don't understand it. Columbia should scrap their plans for an encore album and check out some of the real talent here at home. Bringing Adam Makowicz to the U.S. makes no more sense than shipping Thunderbird wine to the Rhône Valley. C.A.

**CHUCK MANGIONE:** *Children of Sanchez*. Chuck Mangione (flugelhorn, keyboards); instrumental and vocal accompaniment. *Chil-*

*dren of Sanchez Overture; Lullabye; Fanfare; Pilgrimage (Parts I and II); Consuelo's Love Theme; Hot Consuelo;* and eight others. A&M SP-6700 two discs \$9.98, © AAM 6700 \$9.98, © AAM 6700 \$9.98.

Performance: **Dull**  
Recording: **Very good**

Hall Bartlett made a film based on Oscar Lewis' best-selling book *The Children of Sanchez*. He called Chuck Mangione, who'd just completed an exhausting road tour, and asked him to compose a soundtrack score. Mangione, in a burst of enthusiasm and emotional commitment (I paraphrase his own liner notes), responded with over twenty-three hours of music.

This double album does not contain all twenty-three and a half hours—it just seems that way. The music is bland, tedious, corny, and trite. The vocal selections, with Mangione's greeting-card lyrics, are so hilariously awful as to be an unintentional parody of jazz singing. Sanchez's children should sue. Mangione states that composing and performing this music was one of the great emotional experiences of his life, but, as I recall his liner notes on previous albums, almost *everything* he does is the greatest emotional experience of his life. Listening to this was certainly not one of mine. J.V.

#### RECORDING OF SPECIAL MERIT

**RAY MANTILLA:** *Mantilla*. Ray Mantilla (percussion); Jeremy Steig (flutes); Joe Chambers (piano, marimba, drums); Carl Ratzer (guitars); Eddie Gomez (bass). *Inca Love Chant; Chango Llama; Caravanessa;* and two others. INNER CITY 1052 \$7.98, © 8371-1052(H) \$7.95, © 5371-1052(H) \$7.95.

Performance: **Impressive**  
Recording: **Very good**

Percussionist Ray Mantilla, who has performed with some of the biggest names in recent jazz, did well in choosing the sidemen for "Mantilla," his debut album as a leader. The presence of flutist Jeremy Steig and bassist Eddie Gomez insures a certain quality and cohesiveness, of course, but pianist/drummer Joe Chambers, a lesser-known performer, does not take a back seat to anyone, and guitarist Carl Ratzer is superb.

Rhythmic excitement and melodic invention permeate every track. Steig proves once again that he is one of the finest jazz flute players around, and Gomez—who seems to be under the healthy influence of Ron Carter these days—plays better than I have ever heard him play before. This is an outstanding album. C.A.

**THE NEW BRUBECK QUARTET:** *Live at Montreux*. Dave Brubeck (piano); Dan Brubeck (percussion); Darius Brubeck (synthesizer, electric keyboards); Chris Brubeck (electric bass, trombone). *(It's a) Raggy Waltz; Brandenburg Gate; In Your Own Sweet Way;* and three others. TOMATO TOM-7018 \$7.98.

Performance: **More like it**  
Recording: **Satisfactory**

It has been so long since the name Brubeck quickened my pulse that this album came as something of a surprise. For years it seemed that Dave Brubeck, once the great popularizer of jazz within the mainstream, had lapsed

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into an introspective state in which he produced "important works" that I could not remember to save my life. Then came the bit with his sons, which, suspecting nepotism, I have avoided.

But this album has reawakened my appreciation of Brubeck as both pianist and composer. Thundering tackiness has become such a sign of our times that it is a real pleasure to rediscover the delicate grace of his piano, his politely interpolated baroque comments. I still have some reservations about his sons, though. The percussive work of Dan Brubeck on the opener, *Raggy Waltz*, seems to be considerably more raggedy than it needs to be, even jarring at times. The others fall into place unobtrusively for the most part. The album is worth hearing if only because of the senior Brubeck's subtlety on *In Your Own Sweet Way*, which I had almost forgotten he wrote in some soft yesterday. P.G.

**HEINER STADLER: A Tribute to Monk and Bird.** Thad Jones (coronet, flugelhorn); George Lewis (trombone); George Adams (tenor saxophone, flute); Stanley Cowell (piano); Reggie Workman (bass); Lenny White (drums); other musicians; Heiner Stadler arr. and cond. *Au Privave; Air Conditioning; Misterioso; Straight No Chaser*; and two others. TOMATO TOM-2-9002 two discs \$9.98.

Performance: **Jazz update**  
Recording: **Very good**

If you have never heard of Heiner Stadler, you are not alone, but this new album should do much to establish his name, at least on the jazz scene. Born in Poland in 1942, Stadler came to the U.S. from Germany thirteen years ago. He has composed numerous "structures" within which jazz players can improvise, and in recent years he has recorded several of his works for his own Labor Records label, but none have been as ambitious as this tribute to two of his idols, Charlie Parker and Thelonious Monk.

The double album, partly supported by a grant from the National Endowment for the Arts, contains three Monk and three Bird compositions that Stadler has arranged for improvisational ensemble. I would describe Stadler's music as "radical" in that the familiar compositions have taken a back seat to the arrangements. But that is not a criticism of Stadler or his performers; the results are excellent, and the tribute is impressive.

Stadler's structure was obviously not easy to follow even for this excellent group of players. Robert Palmer's informative, well-written notes indicate that there were "mistakes" (which Stadler refers to as "acceptable deviations"), but I venture to say that only Stadler and the musicians involved know where those mistakes occur; Stadler left ample room for improvisation, especially of the free collective kind. Charlie Parker and Thelonious Monk enthusiasts will not necessarily find this album to their liking, for it transcends in time the styles of both men. But it has all the ingredients of good jazz, ingredients Monk and Bird themselves used, and it is a fitting tribute to two men whose influence on modern American music has yet to be fully assessed. C.A.

#### RECORDING OF SPECIAL MERIT

**MEL TORMÉ.** Mel Tormé (vocals); various orchestras. *I Can't Get Started; Country Boy*;

*April in Paris; Gone with the Wind; Stranger in Town; Cottage for Sale; I Cover the Waterfront*; and five others. GLENDALE GL 6007 \$5.95.

Performance: **Classic**  
Recording: **Good restorations**

This is an album of radio transcriptions recorded in the late Forties, and it is a lovely testimony to the fact that Mel Tormé's famous style has grown quite naturally from the way he hears music in his mind. What then seemed so affected, so mannered, now seems absolutely logical, affinitive, and clearly stated, particularly in such classics as *April in Paris* or *I Can't Get Started*. Like most originals, Mel Tormé (or the Velvet Fog, as he was unfortunately known) took a bit of getting used to. But, like most originals, he knew something we didn't back then: that there's only one way for any truly creative performer to perform—his way. P.R.

#### COLLECTION

#### RECORDING OF SPECIAL MERIT

**CONCERT IN ARGENTINA.** Earl Hines: *Medley—Black Coffee/I've Got the World on a String; Close to You; Medley—The Girl from Ipanema/Bluesette/A Pretty Girl Is Like a Melody/Sweet Lorraine/Tea for Two.* Teddy Wilson: *Two Gershwin Medleys; Rosetta; Ain't Misbehavin'; Body and Soul; Flying Home.* Ellis Larkins: *Perfidia; Blues in the Night; Blues in My Heart; Ill Wind; Things Ain't What They Used to Be.* Marian McPartland: *Rockin' in Rhythm; Time and Time Again; Wave; Ellington Medley.* HALCYON 113 two discs \$9.95 (from Halcyon Records, 302 Clinton Street, Bellmore, N.Y. 11710).

Performance: **Play it again...**  
Recording: **Good remote**

It isn't often one gets four top pianists under one roof, much less a roof in Argentina. But that's what happened the night this album was recorded, and on many other nights in the fall of 1974, when Marian McPartland, Teddy Wilson, Ellis Larkins, and Earl Hines toured Mexico and six South American countries.

There are four solo sets here, each taking up one side of a record—in all, close to an hour and a half of fine, often exciting keyboard work. Their diverse styles make the four artists readily distinguishable from one another, but they have in common a penchant for lyrical material and the ability to embroider it with imagination and taste. Marian McPartland and Ellis Larkins approach the piano with feline delicacy, gently twisting into wondrous new shapes the familiar melodies of such composers as Duke Ellington and Harold Arlen. Teddy Wilson runs his fingers through Gershwin with feather lightness, and Earl Hines ends this remarkable concert with a mind-boggling set of brilliantly conceived and executed improvisations. Hines, the oldest member of this foursome, consistently amazes me. There just seems to be no end to his creativity, and the years have eroded none of his vitality. His side alone makes "Concert in Argentina" worth acquiring.

Marian McPartland's admirable efforts to capture and preserve the work of outstanding jazz pianists on her Halcyon label may not be as well appreciated now as they will be by future scholars and listeners, but we are all in her debt. C.A.

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FANTASY was a dedicated jazz label back in the days when jazz was something one graduated to from rock-and-roll, but in the late Sixties, under new ownership, the signing of the rock group Creedence Clearwater Revival (earlier known as the Golliwogs) turned things around. As Creedence repeatedly climbed to the top of the charts, Fantasy, riding high on the waves of the San Francisco rock explosion, prospered and expanded. Part of its growth was the acquisition of one budding and two major jazz labels: Milestone, a small record company nurtured by former Riverside co-owner/producer Orrin Keepnews, and its erstwhile competitors Riverside and Prestige. As Fantasy tapped the impres-

overdubbing, techniques that tend to rob a performance of spontaneity and are therefore best avoided in dealing with jazz. That Michel also likens a musician producing his own session to do-it-yourself brain surgery gives me further cause for alarm, because it reflects the kind of insecurity that makes a producer meddle rather than assist. It is an attitude that has been the bane of many recordings and, indeed, some whole labels as well.

This review covers nine of the initial ten releases (a tenth album, "Tiptoe Tapdance" by Hank Jones, was not included in the shipments we received). Space limitations preclude extended treatment of each album, but brevity can be soulful.

by way of multiple tracking. The technique worked when Bill Evans employed it (see my review of his "New Conversations" in October), but here it doesn't.

Cal Tjader is probably best known for his slick, voluminously arranged albums on Verve, but his recording career as a leader began on Fantasy in 1954. He has been back with Fantasy since 1970, and his first Galaxy release, "Breathe Easy," is an aptly named, relaxed set featuring a quintet playing six standard tunes in no-frills fashion. It's good to hear Tjader back in a jazz context with a fine supporting cast. I am far less impressed by "Thank You Thank You," an album featuring drummer Roy Haynes in various instrumental combinations ranging from a septet to a duet with percussionist Kenneth Nash. Haynes is a superb drummer whose influence is widely felt, but he makes the typical drummer's mistake of dominating his own recordings. Let's face it, lengthy drum solos are often a crashing bore, even when the man behind all that paraphernalia is someone of Haynes' stature. We get drummed to death on this album, especially on *Processional* (the aforementioned duet), which runs five minutes longer than any drum performance ought to. The title tune contains good, robust work by tenor saxophonist John Klemmer, and vibraphonist Bobby Hutcherson plays with imagination, style, and grace on three selections, but only *Sweet Song*, a lovely composition by Stanley Cowell, finds Haynes playing with appropriate subtlety.

By contrast, ace bassist Richard Davis, who is rarely heard on records as a leader, seems content with a supporting role. His album, "Fancy Free," is—with one deplorable exception—worthy of his reputation as one of the finest bass players around. Unless Davis has grown extra fingers, there is some overdubbing in here, but it sounds all right in this case, as does the work of trumpeter Eddie Henderson, saxophonist Joe Henderson, pianist Stanley Cowell, and drummer Billy Cobham. What does *not* sound all right is a selection called *I Still Love You, Baby*, written and sung by Dolly Hirota. It's a dumb song, and Ms. Hirota sings it in an irritatingly mannered style. Its inclusion in the album is inexplicable, but then so is the arranger/conductor credit given Bill Lee, for this sounds to me like a pretty straightforward blowing session with head arrangements.

Tommy Flanagan's "Something Borrowed, Something Blue" has him playing both acoustic and electric piano in a trio setting. I suspect that producer Michel was responsible for Flanagan's going electric on us. At least I hope it wasn't his own idea, for I would hate to think that Flanagan actually likes the damned contraption; I've tried *very hard* to like the instrument, but it remains water to an acoustic piano's wine, and it has that neuter sound of a glockenspiel being tapped by wind-up trolls. Fortunately, Flanagan uses it on only two selections, the title tune and *Good Bait*. The rest of the album is excellent.

"Excellent" does not adequately describe "Crossings," the finest Galaxy album I have heard so far. It reunites pianist Red Garland with drummer Philly Joe Jones, his old colleague in an early Miles Davis quintet, and

## Galaxy Jazz: for Openers

Philly Joe Jones, Ron Carter, and Red Garland



Galaxy/Phil Bray

"'Excellent' doesn't adequately describe this trio"

sive catalogs of Riverside and Prestige for reissues, the company also released new recordings on the Prestige and Milestone labels, but many of the new releases—including some on Fantasy—contained a commercialized brand of music that had little or nothing to do with jazz.

Perhaps for this reason, Fantasy has now launched the Galaxy label, which, according to a press release, will feature "mainstream jazz product." The term is misleading, for none of the albums released so far contains what is normally referred to as mainstream jazz, nor do they point in any other single direction. If Galaxy eventually does develop its own identity as a label, let's hope it's simply an identity with good jazz. I bring that up because Ed Michel, who has produced several of the initial releases, favors such technical devices as editing, multiple tracking, and

Pianist Stanley Cowell's "Waiting for the Moment" opens with four solo performances on acoustic piano. The first two, *Ragtime* and *Boogie Woogie* from Jimmy Heath's "The Afro-American Suite of Evolution," are rather straightforward, simplistic pieces that could be performed equally well by any number of lesser pianists. The second two, Bud Powell's *Parisian Thoroughfare* and Thelonious Monk's 'Round Midnight, are quite another matter, for here Cowell displays not only his technical skill but also the kind of imagination that makes him a first-class improviser. Those tracks, and *Spanish Dancers*, the solo for African thumb piano that follows, are the album's highlights. The rest—all of side two—is dull fare that has Cowell playing various instruments (acoustic and electric pianos, synthesizer, clavinet, and thumb piano) simultaneously, in various combinations,



brings them together with bassist Ron Carter, who was a member of a later, equally celebrated Davis rhythm section. It's a dream trio whose renditions of mostly familiar material are so absorbing that it takes several playings of the album to digest them. Let's hope producer Orrin Keepnews is able to reassemble this remarkable trio for an encore album.

Pianist Hank Jones was never a great individualist as far as style goes, but he is a player of great facility and taste. His "Just for Fun" is an album of relatively obscure tunes played with characteristic feeling and swing. There is fine support from bassist Ray Brown, drummer Shelly Manne, and—on three selections—guitarist Howard Roberts. Shelly Manne's own album, "Essence," is greatly enhanced by the presence of saxophonist Lew Tabackin and pianist Mike Wofford, two relatively young players who manage to sound modern while relating stylistically to the past. The quartet is completed by bassist Chuck Domanico—who isn't to be sneezed at, either—and the music that flows from these men is high-caliber swing with a modern touch. Tabackin's reading of Fats Waller's *Ain't Misbehavin'* is alone worth the album price, but this set has a lot more to offer, and if Michel continues to produce albums of this quality my anxieties will soon be allayed. The same goes for Red Garland's "Red Alert," a set featuring Garland with sextet, quartet, and trio. Garland was very active on the jazz scene in the late Fifties and early Sixties, but then he moved to Dallas, where he performed in relative obscurity. Now a new generation seems to be discovering him, and it's good to see him so favorably recorded. Here, again, Ron Carter gives an excellent performance,

and the horns—cornetist Nat Adderley and saxophonists Harold Land and Ira Sullivan—are perfectly cast. I have always had an intense dislike for *The Whiffenpoof Song*, but something very nice happens to it on its way out of Sullivan's tenor, and that old warhorse *Sweet Georgia Brown*, played by the full sextet, hasn't sounded this good in a long time. No weak spots in this album.

**S**UMMING it up, Galaxy promises to be a rather nice label to listen to. I hope it doesn't restrict its roster of artists to the tried and true, though a generous sprinkling of those is always in order, and I hope it becomes more venturesome—in terms of artists and music—than these first releases indicate. There is a tendency to form jazz repertory companies on labels and simply shuffle the same artists into various combinations, as CTI did; we are already getting some of that in these first Galaxy releases. It's nice for the musicians who find themselves in the shuffle, and it makes things a lot easier for the producers, but it limits a label's scope and heightens the possibility of its developing a formula sound that inevitably wears thin. Jazz artists with a long history of having to eke out a living are easy and often willing prey for commercially minded producers who would rather sweeten a performer's music with familiar sounds or so-called "hooks" than advocate an effort to popularize his inherent sound by means of adequate promotion. Ed Michel calls jazz a "specialized music" that isn't going to sell. With that negative attitude coming from the label's principal producer, I fear for Galaxy's future. Let's hope I'm worrying needlessly.

—Chris Albertson

**SHELLY MANNE: *Essence*.** Shelly Manne (drums); Lew Tabackin (flute, tenor saxophone); Mike Wofford (piano); Chuck Domanico (bass). *What Am I Here For?*; *Yesterdays*; *Take the Coltrane*; *Ain't Misbehavin'*; *Essence*; *Soon*; *Body and Soul*. GALAXY GXY-5101 \$7.98.

**RICHARD DAVIS: *Fancy Free*.** Richard Davis (bass); Eddie Henderson (trumpet, flugelhorn); Joe Henderson (tenor saxophone); Stanley Cowell (piano); Billy Cobham (drums). *The Wine of May*; *Silver's Serenade*; *Emily*; *Nardis*; *I Still Love You*; *Baby*; *Fancy Free*. GALAXY GXY-5102 \$7.98.

**ROY HAYNES: *Thank You Thank You*.** Roy Haynes (drums); John Klemmer (tenor saxophone); Bobby Hutcherson (vibraphone); George Cables, Stanley Cowell (piano); Cecil McBee, Ron Carter (bass); others. *Thank You Thank You*; *Bullfight*; *Quiet Fire*; *Processional*; *Sweet Song*. GALAXY GXY-5103 \$7.98.

**STANLEY COWELL: *Waiting for the Moment*.** Stanley Cowell (keyboards). *Coup de Grass*; *Spanish Dancers*; *Ragtime*; *Boogie Woogie*; *Parisian Thoroughfare*; *Round Midnight*; *Sienna/Welcome My Darling*; *Sienna/Waiting for the Moment*; *Today*, *What a Beautiful Day*. GALAXY GXY-5104 \$7.98.

**HANK JONES: *Just for Fun*.** Hank Jones (piano); Howard Roberts (guitar); Ray Brown (bass); Shelly Manne (drums). *Interlude*; *A*

*Very Hip Rock and Roll Tune*; *Lullaby*; *Little Rascal on a Rock*; *Bossa Nouveau*; *Just for Fun*; *Kids Are Pretty People*. GALAXY GXY-5105 \$7.98.

**RED GARLAND/RON CARTER/PHILLY JOE JONES: *Crossings*.** Red Garland (piano); Ron Carter (bass); Philly Joe Jones (drums). *Solar*; *Railroad Crossing*; *Never Let Me Go*; *Oleo*; *But Not for Me*; *Love for Sale*. GALAXY GXY-5106 \$7.98.

**CAL TJADER: *Breathe Easy*.** Cal Tjader (vibraphone); Allen Smith (trumpet); Hank Jones (piano); Monte Budwig (bass); Shelly Manne (drums). *Tangerine*; *If You Could See Me Now*; *The Way You Look Tonight*; *When Lights Are Low*; *Just Friends*; *Goodbye*. GALAXY GXY-5107 \$7.98.

**RED GARLAND: *Red Alert*.** Red Garland (piano); Nat Adderley (cornet); Harold Land, Ira Sullivan (tenor saxophones); Ron Carter (bass); Frank Butler (drums). *Sweet Georgia Brown*; *It's Impossible*; *The Whiffenpoof Song*; *Theme for a Tarzan Movie*; *Stella by Starlight*. GALAXY GXY-5109 \$7.98.

**TOMMY FLANAGAN: *Something Borrowed, Something Blue*.** Tommy Flanagan (piano); Keter Betts (bass); Jimmie Smith (drums). *Bird Song*; *Good Bait*; *Peace*; *Friday the 13th*; *Something Borrowed, Something Blue*; *West Coast Blues*; *Groovin' High*. GALAXY GXY-5110 \$7.98.

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Michael Marks

□ Here's at least one answer to that perennial question, Where do those rock groups get all those crazy names? On tour in Detroit, the members of **REO SPEEDWAGON** were taken for a ride on the real thing by members of the Walker family of Attica, Michigan. Posing holding up a 1933 Reo Speed-Wagon fire truck (!)

are, front, Bruce Hall, Kevin Cronin, Donald Sr., Thelma, and Donald Jr. Walker; on the truck are Neal Doughty, Gary Richrath, and Alan Gratzer. Reo Speedwagon's latest-model album is "You Can Tune a Piano, but You Can't Tuna Fish" (Epic JE-35082). How about "You Can Drive a Reo to Rio, but Not All the Way"?

# POP ROTOGRAVURE

By Rick Mitz

□ Fifty-Second Street has been designated **SWING STREET** by the City of New York because of its having been jazz's main drag, so to speak, throughout the Thirties and Forties. Commemorative plaques honoring famous jazz artists will create a Jazzwalk there similar to Hollywood's Sidewalk Hall of Fame. At ceremonies near CBS headquarters in New York,

Thelonious Monk Jr. (above left) accepts a plaque honoring his father from Dr. Billy Taylor. Monk Sr. is one of the first twelve artists to be honored on Swing Street. The others are Kenny Clarke, Miles Davis, Roy Eldridge, Dizzy Gillespie, Coleman Hawkins, Billie Holiday, Charlie Parker, Stuff Smith, Art Tatum, Sarah Vaughan, and Lester Young.

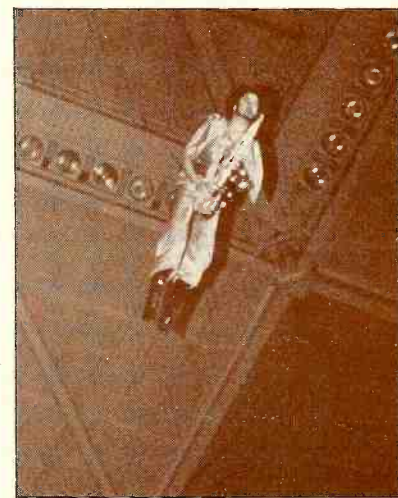


Peter Levinson



Epic Records

□ It's a bird, it's a plane, it's . . . Mary Martin? No, it's **ALTO REED**, pseudonymous horn player (what else?) in Bob Seger's Silver Bullet Band and totally unrelated to the Flying Burrito Brothers, the Wallendas, or Paul McCartney and Wings. As a regular part of their act, the group flies Reed, tootling, over the heads of the crowds whenever the architecture permits. To keep the Peter Pan-ish spontaneity safely airborne, the band's manager has hired a union rigger (at a cool \$675 a week) to make sure this Reed remains unbroken—at least until they've sold a few more copies of their latest, "Stranger in Town" (Capitol SW-11698).



Marti C. Griffin

□ Appropriately, it took place on the south lawn of the White House: **MUDDY WATERS**, near-legendary bluesperson, accepted music-loving Jimmy Carter's invitation to play at the White House staff picnic this past summer. Waters (real name McKinley—no relation—Morganfield) played tunes from his latest release, "I'm Ready" (Blue Sky JZ 34928). The President interrupted the program to praise his guest: "As you know," said Carter, "Muddy Waters is one of the great performers of all time. He's won more awards than I could name . . . and he comes from a good part of the country." True, but then why were they serving hot dogs and baked beans instead of ribs, greens, and hush puppies?



□ Time was that the name Les Paul (left below) automatically brought the late Mary Ford to mind, but it begins to look like we're going to have to get used to a new duo: **CHESTER AND LESTER**—Chester being, of course, Chet Atkins

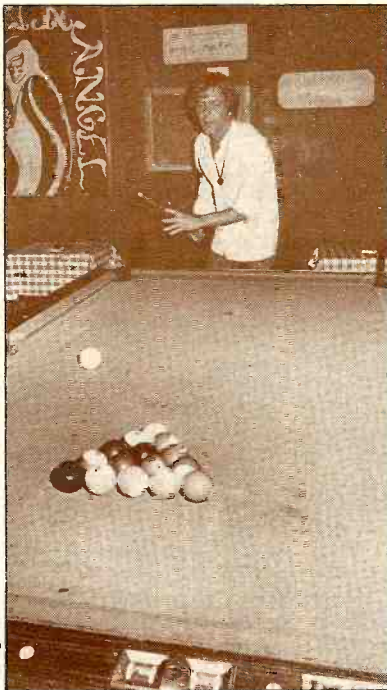
(right). The two guitarists have already made two albums together ("Chester and Lester," RCA APL1-1167, and "Guitar Monsters," APL1-2786) and are playing live dates as well, the first not long ago at New York's Bottom Line.

RCA Records



Colliers and Hoskin

□ Likely you won't be seeing her on any magazine covers, but country-eastern singer **DOLLY RABBITT** has been making party appearances in this getup lately, maybe so people won't forget that the Dolly Parton/Eddie Rabbitt concert this fall in New York was a hopping success. The same might be said of her latest album, "Heartbreaker" (RCA AFL1-2797), and his "Variations" (Elektra 6E-127).



Waring Abbott

□ We sometimes forget that not all performers are bouncing extroverts; there are a few shrinking violets, too, and **MICHAEL JOHNSON** is one of them. His pre-performance jitters sometimes get so bad that he is driven to the pool table. Why? "It's easier to play pool than to worry," says Johnson, whose chart-topping single *Bluer than Blue* (from the EMI/America "Michael Johnson Album," SW-17002) is putting even more pressure on him. Johnson attributes his relaxed stage presence to exhaustion: "When I get nervous, I get tired, and when I get tired I get sleepy, even on stage. It just looks laid back."

Roz Levin Perlmutter



□ There is absolutely no truth to the rumor that **LOU REED** and **DION DI MUCCI** were discussing the formation of a new group to be called the Velvet Belmonts when they met recently backstage during Dion's gig at New York's Bottom Line. According to usually reliable sources, what they were in fact planning is a New School lecture series tentatively titled "From Doo-wop to Punk: The Ethnomusicological Dimensions in Twenty Years of Urban Music Facture." Demonstration material will be drawn from recordings such as Reed's recent "Street Hassle" (Arista 4169) and DiMucci's "Return of the Wanderer" (Lifesong JZ-35356).

□ Just a boy and his bike: **MEAT LOAF**, two hundred and sixty-five pounds of rock recording star, celebrated the double-platinum success of his debut album "Bat Out of Hell" (Cleveland International PE 34974) by posing

on a Harley-Davidson hog in London. Seems that the Motique Chopper Bike Club (that's Hell's Angels in our English) likes to shepherd its favorites from Heathrow Airport to hotel with a high-decibel escort. Quaint.

Columbia Records







# CLASSICAL DISCS AND TAPES

Reviewed by RICHARD FREED • DAVID HALL • GEORGE JELLINEK • PAUL KRESH  
STODDARD LINCOLN • ERIC SALZMAN

J. S. BACH (arr. Cohen): *Liebster Jesu, Wir Sind Hier; Ertot Uns Durch Dein' Güte* (see MOZART)

J. S. BACH: "Lutheran" Masses (see Best of the Month, page 101)

## RECORDING OF SPECIAL MERIT

J. S. BACH: *Mass in B Minor (BWV 232)*. Margaret Marshall (soprano); Janet Baker (soprano, contralto); Robert Tear (tenor); Samuel Ramey (bass); Academy and Chorus of St. Martin-in-the-fields, Neville Marriner cond. PHILLIPS 6769 002 three discs \$26.94, © 7699 076 \$17.96.

Performance: **Tops of its kind**  
Recording: **Superb**

This is just about the best performance of its kind—the contemporary "pure" approach to Bach and Baroque music generally—that is now available on discs. The touchstone of this performance is phrasing, more precisely vocal and instrumental articulation and big-line phrasing. The planes and the shading, made up of the most artfully interwoven lines, are laid down on a big, beautiful canvas. The vocal and instrumental sound is always meltingly beautiful, grand, and ultra-Baroque.

On the other hand, this performance is almost too even-handed, too balanced, too close to perfection. The interweaving of the

lines, for example, is sometimes so perfectly balanced that it is hard to hear the individuality of the counterpoint. Everything is treated as equally important, so nothing emerges as especially important except the whole.

Closely related to this is another problem: a certain sense of detachment that emerges from all the artfulness and beauty. The intensely emotional interior of this music is hard to glimpse through the gorgeous but opaque surfaces. Everything has been put on display, as if we were in a well-appointed art gallery, not in a church or a theater. Only Robert Tear seems deeply concerned with projecting the emotionality of the music. Dame Janet Baker—who sings both the second soprano and the alto parts!—comes close, but she touches the depths only in the *Agnus Dei*. Samuel Ramey, although vibrant, vital, and in wonderful voice, is caught up in the dynamic of the total performance.

The chorus is too genteel. They are fabulous at singing sixteenth notes; their voices are pure and perfectly blended—and they never raise them. At times—and this is really Neville Marriner's doing—the choral sound is so blended into the ensemble that you really cannot hear clearly where the voices leave off and the instruments begin.

The best way to appreciate this kind of performance is to pick up a copy of the score and sing along. It is very much a participant's performance, with everything in perfect mesh, and it is also wonderful to listen to—for a while. I don't question the validity of this very Baroque performance, which brings out certain aspects of the music as well as or better than anything else I have heard. But eventually I miss those other qualities that are also Baroque—the theatricality and the intense emotions that are hidden in Marriner's web of perfect proportion. E.S.

**BARTÓK: Five Songs, Op. 16** (see KILPINEN)

## RECORDING OF SPECIAL MERIT

**BARTÓK: Sonata for Two Pianos and Percussion.** **MOZART: Andante with Five Variations (K. 501).** **DEBUSSY: En Blanc et Noir.** Martha

Argerich, Stephen Bishop Kovacevich (pianos); Willy Goudswaard, Michael de Roo (percussion, in Bartók). PHILLIPS 9500 434 \$8.98.

Performance: **Grand**  
Recording: **Excellent**

The combination of titles here may look odd to collectors who prefer self-cataloguing discs, but this is a marvelous program, and the performances are simply grand, each superbly attuned to the specific nature of the respective piece and carried off with a maximum of joyous involvement, flair, and finesse. The Bartók in particular is sheer magic, alive with mystic electricity and evocativeness. The Mozart *Andante* with Variations for piano duet is also ideally characterized, generating a feeling of spontaneity—accounted for only in part by a pace somewhat brisker than usual—that makes the work exceptionally vivid, and the Debussy (for two pianos) is revelatory in its projection of color, poetry, and overall vitality. Throughout all three works one has the impression that the pianists (and their splendid associates in the Bartók) are not merely collaborating effectively, not even "re-creating" in the ordinary sense, but actually living the music. Nowhere is there a hint of caution or restraint, and yet nowhere, either, is there the faintest suggestion of scrappiness in the name of exuberance. This has the sort of virtuosity and give-and-take that keep building on each other to turn a performance into an Event—of which there are three on this excellently recorded disc. R.F.

## RECORDING OF SPECIAL MERIT

**BEETHOVEN: Variations for Flute and Piano: Op. 105, Nos. 1-4, 6; Op. 107, Nos. 1, 3, 5, 7, 9.** Michel Debost (flute); Christian Ivaldi (piano). SERAPHIM S-60307 \$3.98.

Performance: **Ingratiating**  
Recording: **Very good**

Beethoven followed his 1820's settings of Scottish, Irish, and Welsh folk songs with two sets of variations for flute and piano on Scottish, Irish, Tyrolese, Russian, Austrian, and

### Explanation of symbols:

- Ⓡ = reel-to-reel stereo tape
- Ⓢ = eight-track stereo cartridge
- Ⓒ = stereo cassette
- Ⓛ = quadraphonic disc
- Ⓡ = reel-to-reel quadraphonic tape
- Ⓢ = eight-track quadraphonic tape

Monophonic recordings are indicated by the symbol Ⓜ

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



Ukrainian airs. Six of these constitute his Op. 105 collection of "Very Easy Themes Varied" and another ten make up the somewhat more imaginatively colored and developed group published as "National Themes with Variations," Op. 107. Michel Debost and Christian Ivaldi, in their offering of choice items from both sets (omitting only No. 5 of the Op. 105 collection and the even-numbered pieces from Op. 107), present these delicious little rarities most ingratiatingly, and the Seraphim recording is gratifyingly realistic in terms of both presence and perspective. The assortment offered here is the sort of thing one stumbles across by accident and then keeps in a special place for frequent and un-failing refreshment of the spirit. R.F.

#### RECORDING OF SPECIAL MERIT

**BOCCHERINI: String Quartets, Op. 32, Nos. 1-6.** Quartetto Esterházy. TELEFUNKEN 6.35337 two discs \$17.96.

Performance: **Splendid**  
Recording: **Well balanced**

Boccherini's quartets get into circulation less frequently than the cello quintets, but they are no less worth discovering. It is a special treat to encounter this particular demi-dozen from Telefunken, especially in such capable and sympathetic hands as those of the Quartetto Esterházy, a Dutch group led by Jaap Schröder that uses "original instruments"—which are distinguished, one assumes, from other old fiddles in current usage by more faithfully preserved necks and bridges as well as gut strings.

This set was originally published as Boccherini's Op. 33 at about the same time Haydn produced his Op. 33. While these quartets are assuredly less prophetic and on a smaller scale than Haydn's, there is a remarkable variety of mood and color in them, as well as an expressive depth in some of the slow movements that may come as the most striking of the set's several agreeable surprises. Number 2, in E Minor, begins with a funeral march, and both its slow movement and that of No. 4 are conspicuously solemn and elegiac. The *largo* of No. 2 represents a curiously original touch in that it serves as both a retrospective trio to the brief minuet and a prefatory gesture to introduce the finale. The Spanish element that illumines so many of Boccherini's chamber works is not neglected here (the set was written for the Infante in whose service Boccherini was at the time), and it is especially appealing in the trio of No. 6, a little fandango with guitar effects. Though all the other quartets in the set are cast in four movements each, Nos. 3 and 4, with only three movements apiece, contain some of the most memorable material—such as the aforementioned slow movement of No. 4; the same work's opening movement, marked *Allegro bizzarro*, with its prominent soloistic part for Boccherini's own instrument, the cello, and a rather Haydnish (but actually quite Boccherinian) cadenza for the first violin; and the finale of No. 3, with its reminders of the corresponding movement of Haydn's Symphony No. 88. Throughout the six works, the themes are in the familiar Boccherini style, marked by a certain warmth of heart in both genial and dramatic settings. The playing, too, is very much in this style, in every respect appropriate to the material, and it benefits from an unassumingly rich, well-balanced record-

ing. I do have a complaint about the side layout, however. Quartets Nos. 2 and 5 are interrupted for turnover between movements. Since No. 2 is the only one of the six quartets as long as sixteen minutes and three of the others are under fourteen minutes each, surely it would have been possible to distribute the six works on four sides in such a way as to avoid these breaks. R.F.

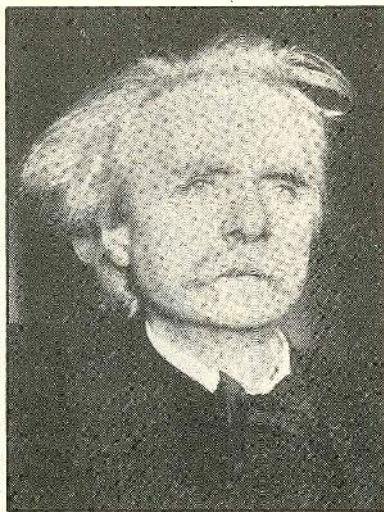
**BORODIN: Symphonies: No. 1, in E-flat Major; No. 2, in B Minor; No. 3, in A Minor. Prince Igor: Overture; March; Dance of the Polovetsian Maidens; Polovetsian Dances. Petite Suite; In the Steppes of Central Asia; Nocturne for String Orchestra. Mlada: Act IV, Final Dance.** John Alldis Choir; National Philharmonic Orchestra, Lorin Tjeknavorian cond. RCA CRL3-2790 three discs \$15.98.

Performance: **Colorful**  
Recording: **Good**

The complete orchestral works of Alexander Borodin presented here are divided about equally between those he brought to completion himself—the first two symphonies, the *Polovetsian Dances*, and *In the Steppes of Central Asia*—and those that others arranged or otherwise put into order after his death. The *Nocturne* is Charles Gerhardt's expansion of the popular slow movement from the D Major String Quartet, and the *Petite Suite* is

actually an arrangement from a series of seven piano miniatures to which Glazounov added an eighth number; it is basically pleasant fare comparable to the better Tchaikovsky piano miniatures. Of more consequence is the colorfully cinematic finale of the abortive opera-ballet, *Mlada*, that was meant to be a composite work by César Cui, Moussorgsky, Rimsky-Korsakov, and Borodin (Rimsky eventually wrote his own full-length opera on the pagan-Russia subject, besides editing Borodin's contribution). However, the real musical substance of this album lies in the three symphonies, the *Prince Igor* music, and *In the Steppes of Central Asia*.

Lorin Tjeknavorian was born in Iran and trained in Vienna and America. He has accumulated some impressive recording credits in London, conducting not only his own compositions and this Borodin album, but also the Sibelius Fourth and Fifth Symphonies, the Tchaikovsky Fifth, and the *Gayne* ballet score of Khachaturian. His flair for eliciting rhythmic vitality and colorful playing from Britain's National Philharmonic was evident in the *Gayne* set, and we get more of the same in this Borodin compendium—but not always to the benefit of the music. If Andrew Davis' two-disc Borodin set for Columbia seems a bit prim at times, Tjeknavorian errs in the other direction. Certainly the two lovely movements of the incomplete A Minor Symphony



EDVARD GRIEG (1843-1907)

## Great, Soaring Adagios

A SATISFYING musical program is, from all evidence, about as rare as a well-balanced meal, but both make encounters of the very best kind. One of the former has been practically glued to my office turntable since it caught my ear a couple of weeks ago.

The Baroque Strings Zurich have brought together on one platter three perfectly matched musical dishes: Edvard Grieg's *Holberg Suite*, Benjamin Britten's *Simple Symphony*, and Samuel Barber's *Adagio for Strings*.

The Grieg and the Britten are both essentially dance suites of perfect musical proportions themselves, and each contains an adagio (called *Air Religioso* in Grieg's case, *Sentimental Sarabande* in Britten's). So that makes three adagios for the listener to wallow in, three great, soaring, seamless melodies that seem to be played more on the heart strings than on any mere musical instrument. If you've been keeping an eye on the classical charts lately, you will know that adagios are very big this season; listen to these three and you will know why.

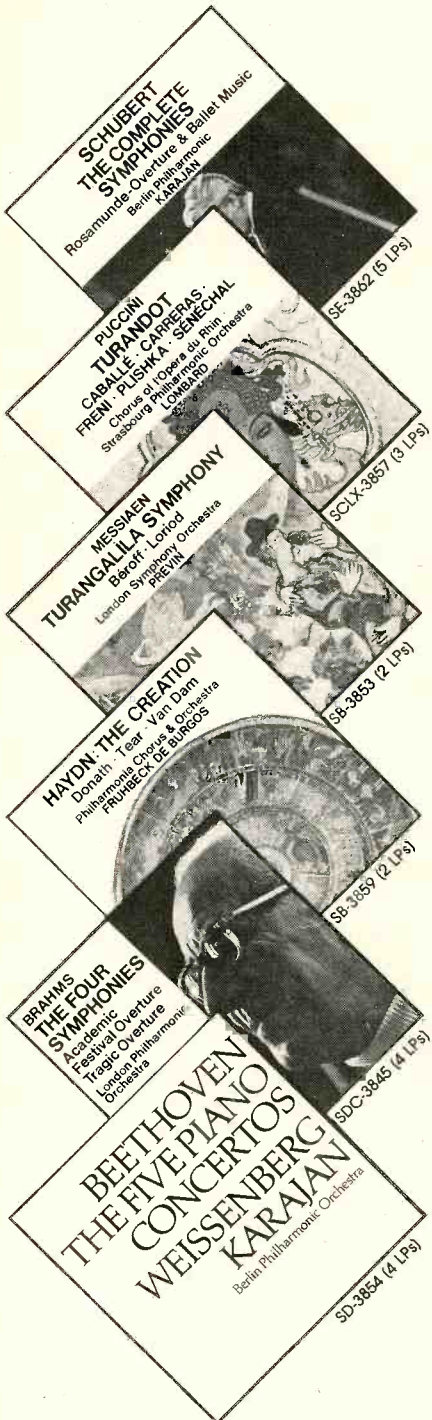
BUT there is more to this disc than the music—splendid as it is—for this is one of those Japanese Denon discs recorded with the pulse-code modulation system (digital, in another word). The result is 45½ minutes of sonic voluptuousness that will permit you to hear the sound of tomorrow today. Listen particularly to the second movement of the Britten; it is a pizzicato *tutti* of the rich, plummy kind that will make you glad you spent all that money on your speakers.

—William Anderson

**GRIEG: Holberg Suite, Op. 40. BRITTEN: Simple Symphony. BARBER: Adagio for Strings, Op. 11.** Baroque Strings Zurich. DENON/PCM OX-7120-ND \$14 (from selected audio dealers or from American Audioport, 1407 North Providence Road, Columbia, Mo. 65201).



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can be heard to better effect in Davis' subtle, restrained, and rhythmically precise reading. Except for some sloppy ensemble work in the approach to the slow-movement climax, though, Tjeknavorian does well with the First Symphony. I would have liked a hair faster pacing of the slow movement in the B Minor, and, oddly enough, Davis brings more fierceness to its barbaric finale. The *Prince Igor* music here comes off well, especially the march, which is made more effective by the addition of a chorus. The same John Alldis Choir, however, seems a bit reticent in the famous dance sequence. Perhaps the best performance in the Tjeknavorian set is of that flawless eight-minute masterpiece *In the Steppes of Central Asia*.

The general quality of orchestral playing is excellent throughout, with rich but occasionally diffuse sonics. *D.H.*

**BRAHMS: *Magelone*lieder, Op. 33 (see RANGSTRÖM)**

**BRAHMS: *Sonatas for Violin and Piano: No. 1, in G Major, Op. 78; No. 2, in A Major, Op. 100; No. 3, in D Minor, Op. 108. Trio for Violin, Horn, and Piano in E-flat Major, Op. 40.*** Stoika Milanova (violin); Dora Milanova (piano); Vladislav Grigorov (horn). MONITOR MCS 2158/9 two discs \$7.96.

Performance: **Firm and true**  
Recording: **Very good**

Stoika and Dora Milanova are sisters and from Bulgaria, whence this recording comes.

They are very talented and strike a mean between the romantic Slavic style and a cooler, cleaner Western approach—a nice balance, therefore, between the passionate and intellectual qualities of music amply endowed with both. The *Waldhorn* Trio is less notable than the sonatas mainly because of the unprepossessing quality of Vladislav Grigorov's playing; his pale sound is swamped by the rich and enthusiastic sound of the Milanovas. The disc is very well recorded by Balkanton, the Bulgarian national record company, and nicely transferred by Monitor. A good buy for the sonatas. *E.S.*

**DEBUSSY: *En Blanc et Noir* (see BARTÓK)**

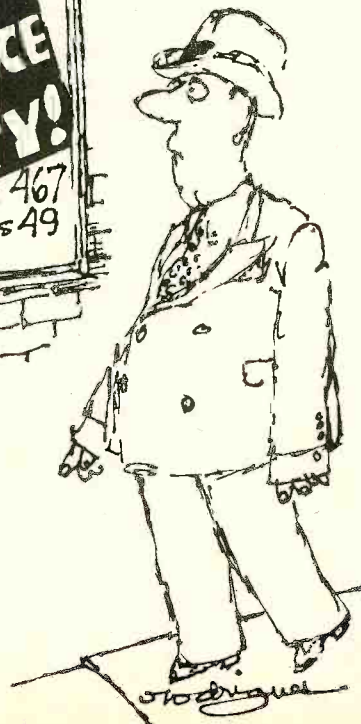
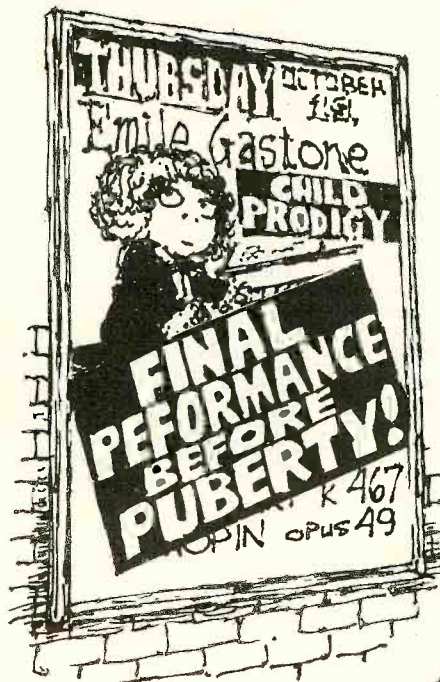
**FAURÉ: *La Bonne Chanson, Op. 61* (see Collections—Carole Bogard)**

**HAYDN: *The Seven Last Words*.** Academy of St. Martin-in-the-Fields, Neville Marriner cond. ANGEL S-37480 \$7.98.


Performance: **A bit heavy**  
Recording: **Not spectacular**

"About fifteen years ago I was applied to by a Clergyman at Cadiz, and requested to write instrumental music to the Seven Words of Jesus on the Cross. . . . The task of writing seven Adagios . . . without wearing the hearers was none of the lightest. . . . The music was originally without text and was printed in that form. It was only at a later period that I was induced to add the text." Thus

(Continued on page 148)







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IN what might be dubbed "The Thinking Person's Christmas Record" (although it is actually called "Christmas Songs from Europe"), soprano Elly Ameling offers us one of the season's more unusual musical experiences. There is an austerity about this record—and a minimum of seasonal tintinnabulation—that quite belies its supposed purpose. Even the list of titles and artists gives little clue to the actual aural experience to come, at least until one discovers the inclusion of Debussy's bitter, war-inspired *Noël des Enfants*, and then realizes that this can be no ordinary holiday record.

Most listeners are by now acquainted with the sheer loveliness of Miss Ameling's voice and with her accomplished and wide-ranging

angels hung on copper wires..."), but even the words of this one point to Ravel himself as the creator, and, as a matter of fact, he wrote both text and music for the song.

The Brahms song, meant for and usually sung by a lower voice, begins rather woodenly but develops nicely, though there are better recordings of it available. The high points of the record are, I think, several of the folk songs, the Haydn, the Ravel (which is rarely recorded), and the Debussy. I have never heard a more affecting performance of the last. Emphasizing the childlike qualities in her voice, Ameling underplays the cry of the orphans in a way that reminds me of the way another great singer, Billie Holiday, underplayed the agonies of *Strange Fruit*.



Sheldon Soffer Management

## The Thinking Person's Xmas Record

musicality. Most listeners should also be familiar with some of her interpretive characteristics: the emotional coolness, the absolute refusal to "mug" in any way. These characteristics are underlined by the instrumental support she receives here—simple piano or lute, an added viola in the Brahms song, and only in the Haydn, which is a sort of miniature cantata, anything approaching a festive sound. The Haydn is, in fact, a festive sort of work, scored for two horns, strings, and organ, which will remind some listeners of the Czech Christmas *pastorella* recordings that have delighted us for some years now. The performance is exquisite.

Also exquisite are the performances, and the settings, of the many folk songs included here, the variety of which—English, Silesian, Dutch, Flemish, Catalanian, Andalusian, French, etc.—is staggering. Miss Ameling's pronunciation in each case, though I am not linguist enough to declare it faultless, seems eminently convincing. But those used to the folk-song treatment of a Schwarzkopf, particularly in the dialect songs, should be aware that Ameling sings them "straight." The settings themselves are interesting in that most are by composers of considerable skill and some reputation, Joaquin Nin, Felix de Nobel, and Willem Pijper among them. The jacket rather ingenuously (and incorrectly) lists Ravel's *Noël des Jouets* (*Noël of the Toys*) as a folk-song arrangement too ("... peace in the stable is assured by beautiful unbreakable

In all, then, this decently recorded and nicely produced disc (with texts and summaries, but no notes) is an experience in and of itself. It is not a Christmas record so much as a record of musical thoughts *about* Christmas, not a means of celebration so much as of contemplation. It is not for the eve of the holiday, nor for the day itself, but for the night, after everyone else has gone to sleep, and one can listen in quiet and think, to paraphrase Yeats, of Christmases past and passing, and Christmases yet to come. —James Goodfriend

**ELLY AMELING:** *Christmas Songs from Europe*. Traditional (arr. De Nobel): *As I Sat on a Sunny Bank*; *Uff'm Berge*; *O Suver Maecht van Ysraël*; *Klein, Klein Jezuken*. Traditional (arr. Dorumsgaard): *Sweet Was the Song*. Traditional (arr. Alió): *Cansó de Nadal*. Traditional (arr. Altmann): *Villancico—Baile de Nadal*. Traditional (arr. Nin): *Villancico de Córdoba*; *Villancico Andaluz*. Traditional (arr. Pijper): *Entre le Boeuf et l'Âne Gris*; *L'Appel des Bergers*; *Noël pour l'Amour de Marie*. *Tabulature Book of Henricus Beginiker, 1622*: *In Dulci Jubilo*; *Nun Wiegen Wir das Kindlein*; *Ecce Nova Gaudia*. Brahms: *Geistliches Wiegenlied, Op. 91, No. 2*. Haydn: *Ein' Magd, Ein' Dienerin*. Debussy: *Noël des Enfants Qui N'ont Plus de Maisons*. Ravel: *Noël des Jouets*. Elly Ameling (soprano); Dalton Baldwin (piano); Toyohiko Satoh (lute); Albert de Klerk (organ); Ensemble of Horns and Strings. PETERS INTL. PLE 092 \$7.98.

Haydn explained the metamorphosis of this strange work on the occasion (in 1801) of its publication as an oratorio (it had, in the course of a decade or so, passed through a string-quartet version as well). It is hard to believe that Haydn did not have some kind of text in mind right from the start—presumably taking off from those famous last words—but the orchestral version is the original, and Haydn unquestionably rose to the task of composing seven consecutive slow movements. This is one of the great masterpieces of the late eighteenth century, and it is never less than engrossing, deeply felt, highly original, and most moving.

Neville Marriner and the Academy of St. Martin-in-the-Fields *ought* to be ideal interpreters for this music, but somehow it doesn't seem to work out that way. The performance is all inward, following the modern idea of a churchly meditation. The eighteenth-century idea, magnificently expressed in the score, has much more drama. We should never be fooled by the perfection of the form or the sweet patina of antiquity. This music is full of the sharpest and most deeply felt stabs of pain: the wounds of Christ, expressed quite literally in dissonance. Marriner and his players are too polished; there is here only the possible memory of pain wrapped in the sweet afterglow of time. The reverberant recording also softens the edges by dulling the high frequencies. E.S.

**HAYDN:** *String Quartets in G Major and F Major, Op. 77, Nos. 1 and 2*. Guarneri Quartet. RCA ARL1-2791 \$7.98, © ARK1-2791 \$7.98.

Performance: **Spirited**  
Recording: **Very good**

These spirited, attractive performances of Haydn's two greatest string quartets are marked by a sense of real involvement. Articulation is crisp, ensemble is impeccable, and there is an organic flow from the first phrase to the last in each work. RCA, for its part, has come through with a handsome recording and very clean surfaces. In short, there is a good deal of pleasure to be had here, in what may well be the most appealing recording the Guarneri Quartet has made so far without the participation of Arthur Rubinstein. I still prefer the more elegant versions of the Tátrai Quartet (Hungaroton SLPX 11776), but I do not think anyone will be disappointed in these agreeable performances from RCA. R.F.

### RECORDING OF SPECIAL MERIT

**HAYDN:** *Violin Concerto in C Major (Hob. VIIa/1)*; *Sinfonia Concertante in B-flat Major (Hob. I/105)*. Pincas Zukerman (violin); Ronald Leonard (cello); Barbara Winters (oboe); David Breidenthal (bassoon); members of the Los Angeles Philharmonic Orchestra, Pincas Zukerman cond. DEUTSCHE GRAMMOPHON 2530 907 \$8.98, © 3300 907 \$8.98.

Performance: **Excellent**  
Recording: **Excellent**

This excellently recorded new disc contains the finest performance of each of these works now available. Indeed, Zukerman's way with the Violin Concerto is so thoroughly persuasive, as both soloist and conductor, that one begins to regret a bit less the deletion of the elegant old Philips version by Arthur Gru-

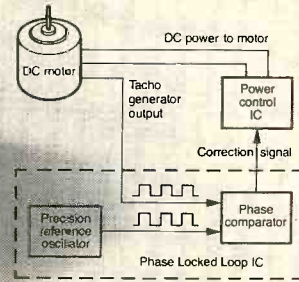
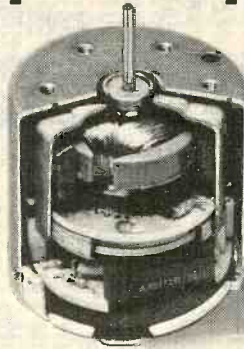
(Continued on page 150)





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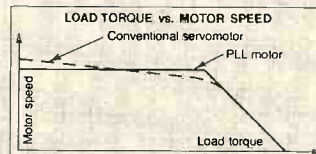


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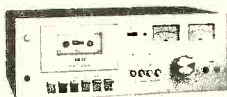
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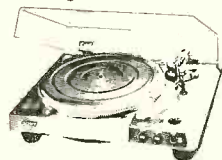
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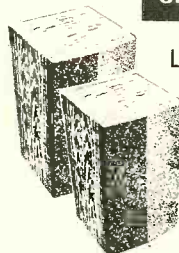
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miaux and Raymond Leppard (and be assured there is a harpsichord in the new performance, though it is not mentioned on either jacket or label). The vivacious realization of the Sinfonia Concertante, in which Zukerman's three fellow soloists are first-chair members of the Los Angeles Philharmonic, is in a class otherwise occupied only by the perhaps even more warmhearted but less richly recorded performance under Karl Ristenpart on Nonesuch H-71024. Both musically and sonically this is an outstanding release. R.F.

**KILPINEN:** *Songs of Death, Op. 62; Songs of Love I and II, Opp. 60 and 61.* **BARTÓK:** *Five Songs, Op. 16.* Rolf Leanderson (baritone); Helene Leanderson (piano). Bis LP-43 \$8.98 (from Qualiton Records, Ltd., 65-37 Austin Street, Rego Park, N.Y. 11374).

Performance: **Sensitive**  
Recording: **Excellent**

The Finnish composer Yrjö Kilpinen (1892-1959) was the latest of late Romantics. He was principally a lieder composer, having set over seven hundred songs in a somewhat overripe Central European style, which, except for its morbid tone, seems essentially untouched by the twentieth century. Kilpinen certainly had a melodic gift, and before World War II he had something of a following in England and Germany (many of his songs have German texts). It is said that his subsequent eclipse was due to his (presumably right-wing) political views. But there is also something problematic about a composer's work when his *Songs of Love* sound just like his *Songs of Death*; only at the end of the second set of love songs does a lighter note or two unexpectedly appear. (The texts, all by Christian Morgenstern and in German, are provided on the album sleeve, and there is an insert with translations.)

The Bartók Five Songs, Op. 16, were written in 1916, certainly much earlier than the undated Kilpinen. Yet they are much closer to our time in sensibility. The texts are by the Hungarian symbolist poet Endre Ady, and the music is full of psychic intensity. Here the love-death connection is explicit and a source of fantasy images of an extraordinary kind.

Rolf Leanderson is not only a topnotch professional singer but also a medical doctor specializing in vocal disorders! He and his wife Helene make an excellent team, performing this unusual material with great sensitivity and communicativeness. E.S.

### RECORDING OF SPECIAL MERIT

**LEHÁR:** *Paganini.* Anneliese Rothenberger (soprano), Princess Anna Elisa; Friedrich Lenz (tenor), Prince Felice; Nicolai Gedda (tenor), Paganini; Heinz Zednik (tenor), Pimpinelli; Olivera Miljakovic (soprano), Bella; Benno Kusche (bass), Beppo; others. Bavarian State Opera Chorus; Bavarian Symphony Orchestra, Willi Boskovsky cond. ANGEL □ SBLX-3863 two discs \$16.96.

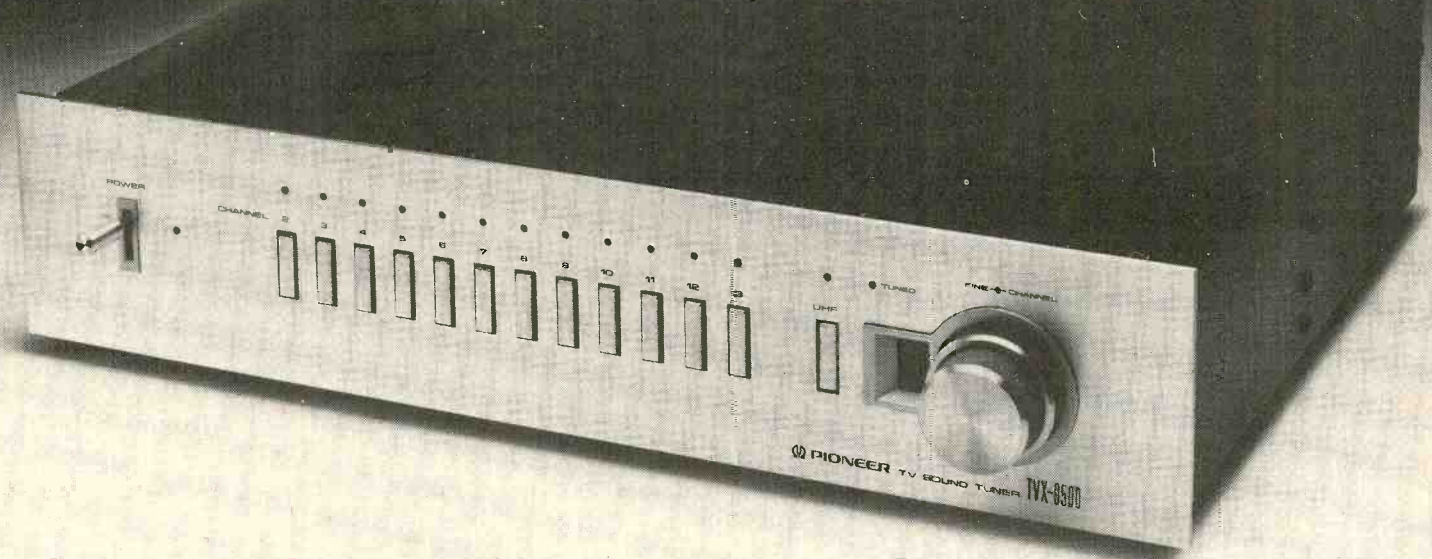
Performance: **Very good**  
Recording: **Good**

Franz Lehár started out as a violinist and was a student of Antonín Dvořák, another erstwhile fiddler. No wonder that he responded enthusiastically when librettist Paul Knepler approached him with the book of *Paganini*. The plot of the operetta is sheer fabrication. (Continued on page 152)

STEREO REVIEW



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## Another Welcome "Butterfly"



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**P**UCCINI'S ever-popular *Madama Butterfly* has enjoyed a stunningly successful career in the recording medium; Columbia's outstanding new entry under the baton of Lorin Maazel is the eighth stereo edition in the current catalog. Of these, six can be unhesitatingly recommended, and even the two that cannot (Victrola 6095 and London 13121) are not totally without distinction.

The opening measures of the new recording are rather disconcerting: Maazel races through them in the headlong manner conductors sometimes choose to demonstrate their skill at the expense of the music. But from the moment the curtain rises on the drama, everything settles into the right spirit, and the conductor's tempos, while not always conventional, can no longer be faulted. Maazel may not deliver the most passionate statement of which this music is capable, but he reveals a fine ear for Puccini's colors and sonorities, observes his dynamic markings with scrupulous care, and supports the singers sympathetically while drawing a beautiful sound from the orchestra. Sonically, however, the orchestra here does not have either the prominence or wide dynamic range of those in the Angel (S-3702, Barbirolli) and London (13110, Karajan) versions.

This is Renata Scotto's second *Cio Cio San* on records, and it is an absolute triumph. We are accustomed to outstanding interpreters in this role, and of course Tebaldi, De los Angeles, Price, Freni, and Caballé are the standards of comparison. They are all, in various ways, superb, and a few may even score minor points over Scotto in purely vocal terms. One gathers from Scotto's portrayal that hers is a carefully thought-through interpretation based on many years of immersion in the role (eleven years have gone by since her first recording under Barbirolli), yet it sounds fresh, spontaneous, and therefore dramatically con-

vincing. Vocally, too, she is in excellent form. "Un bel di vedremo" blossoms out of her narrative naturally, poignantly, without excess of theatricality. She floats some beautiful pianissimos in the high register and manages the difficult ascending phrase "quando fa la ni-diata il pettirosso" to perfection. Responding admirably to Maazel's meticulous direction, she gives a moving, committed, and altogether admirable portrayal.

**W**E'VE had our share of outstanding Pinkertons on records, too, so it would perhaps be unreasonable to expect Placido Domingo to shatter any precedents. But he does sing beautifully throughout, exchanging lovely legato phrases with Miss Scotto in the Love Duet and managing to make a caddish character surprisingly sympathetic through the charm of his vocalism. (He also avoids the stentorian high C at the end of Act I, thereby improving the musical effect.)

Ingvar Wixell, a commanding Sharpless, makes a strong contribution, and Gillian Knight (she has impressive D'Oyly Carte credentials) is a satisfactory Suzuki. Malcolm King (the Bonze) stands out among the supporting singers, who are a capable but by and large not very impressive group. Aside from the previous comment about the orchestral reproduction, the recorded sound is excellent.

—George Jellinek

**PUCCINI: *Madama Butterfly*.** Renata Scotto (soprano), *Madama Butterfly*; Placido Domingo (tenor), Lieutenant Pinkerton; Ingvar Wixell (baritone), Sharpless; Gillian Knight (mezzo-soprano), Suzuki; Florindo Andreolli (tenor), Goro; Ann Murray (mezzo-soprano), Kate Pinkerton; Malcolm King (bass), the Bonze; others, Ambrosian Opera Chorus; Philharmonia Orchestra, Lorin Maazel cond. COLUMBIA M3 35181 three discs \$23.98.

but this much of it is true: the legendary violinist did live and work in Lucca, a principality then ruled by Napoleon's sister Elisa. That Knepler built a romance out of these circumstances proved fortuitous for Lehár, who provided appropriately soaring vocal melodies interspersed with equally appropriate violin fireworks. And it was a lucky score for Lehár, for *Paganini* was the first of his operettas in which Richard Tauber assumed the principal tenor part (1926). Three of the work's set numbers are among the greatest tunes Lehár penned: "Gern hab' ich die Frau'n geküsst"; "Liebe, du Himmel auf Erden"; and "Niemand liebt dich so wie ich." For the rest, his inspiration ran high enough to parade before us a variety of pleasing waltzes, lively dance numbers, and melodies with Italian color.

With their technique honed on Mozart, Bellini, and Richard Strauss, Anneliese Rothenberger and Nicolai Gedda bring to this music a complete mastery of voice and style. That both artists would have performed these roles even more brilliantly ten years ago matters little when we realize that today no other pair could do them better. In the lesser roles, the level of skill is equally high, and Ulf Hoelscher tosses off the devilish violin solos with a bravura flair worthy of the old master himself. The orchestra, too, is topnotch, led by Willi Boskovsky—yet another fiddler! While the recorded sound is quite stunning in its brilliance and impact, on my equipment a disturbing response to sibilants is noticeable. I also find that the brief part of the Prince is heard at a consistently low level. The album production, on the other hand, is exemplary. G.J.

**MOZART: *Andante with Five Variations* (see BARTÓK)**

### RECORDING OF SPECIAL MERIT

**MOZART: *Piano Sonatas: No. 12, in F Major* (K. 332); *No. 15, in C Major* (K. 545); *No. 17, in D Major* (K. 576).** J. S. BACH (arr. Cohen): *Liebster Jesu, Wir Sind Hier* (BWV 633); *Ertot uns Durch Dein' Güte, from Cantata No. 22.* Alicia de Larrocha (piano). LONDON CS 7085 \$7.98.

Performance: **The very best**  
Recording: **Very good**

Harriet Cohen's two Bach transcriptions make a very pleasant warm-up for the real business of this album, namely, three exemplary Mozart sonata performances. Seldom indeed have I heard, either on or off records, Mozart keyboard playing with such unerring precision of passagework, subtle gradation of dynamics, and rhythmic vitality. Larrocha projects a humanistic view of the music that catches the essence of the Mozartian spirit. The F Major Sonata has long been a favorite of mine, and in the wonderful slow movement Larrocha makes me believe that Chopin, too, must have known and loved this music. Her handling of the ornamental run at the expressive climax of the adagio simply takes my breath away. As for the famous "Eighteenth Century Drawing Room" Sonata, K. 545, Larrocha's performance will either give rise to total despair among aspiring pianists or spur them on to feats beyond their dreams. I have never before been able to warm up to the "Trumpet" Sonata, K. 576, but this performance makes a wholly absorbing listening experience of what heretofore seemed to be a

(Continued on page 154)

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cool essay in technique. In short, this disc is what great Mozart keyboard performance is all about. Fortunately, the recorded sound does it full justice. D.H.

### RECORDING OF SPECIAL MERIT

**NICOLAI: *The Merry Wives of Windsor*.** Karl Ridderbusch (bass), Falstaff; Wolfgang Brendel (baritone), Herr Fluth; Alexander Malta (bass), Herr Reich; Claes Haaken Ahnsjö (tenor), Fenton; Helen Donath (soprano), Frau Fluth; Trudeliese Schmidt (mezzo-soprano), Frau Reich; Lilian Sukis (soprano), Anna; Heinz Zednik (tenor), Spärlich; Alfred Sramek (baritone), Dr. Cajus. Bavarian Radio Chorus; Bavarian Symphony Orchestra, Rafael Kubelik cond. LONDON OSA 13127 three discs \$23.94.

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

My enthusiastic endorsement of the Deutsche Grammophon version of *The Merry Wives of Windsor* last year ("Best of the Month," August 1977) put me on record as a great admirer of this opera. I am delighted that the recording industry has rediscovered it in such spectacular fashion, with two outstanding versions in relatively quick succession.

The London *Wives* has a lusty, sonorous Falstaff in Karl Ridderbusch, a colorful singing actor (he seems to know how to *sound fat*) able to make that great character come to life. I was even more impressed, though, by Kurt Moll, the DG Falstaff, whose rounder, firmer tones have an admirable solidity. While neither interpreter of Frau Fluth is ideally cast—Edith Mathis (DG) and Helen Donath (London) both sound a bit too girlish for the mature and worldly character—both sopranos are charming, effervescent, and in splendid vocal form. Donath, incidentally, was the perfect Anna on the DG set; London's Lilian Sukis is good, but not quite her match.

Both sets offer first-rate Fluths (the character who corresponds to Ford in Verdi's *Falstaff*) and excellent Fentons as well. Although DG's Peter Schreier gives more voice to Fenton's music, London's Claes Haaken Ahnsjö manages his slender vocal means more endearingly. On the other hand, Hanna Schwarz (DG) is a firmer and more interesting Frau Reich than Trudeliese Schmidt in the London set. In the lesser roles of Spärlich and Dr. Cajus, Heinz Zednik and Alfred Sramek, two of the best character actors of the Vienna State Opera, turn in capital interpretations.

Both versions have wisely reduced the spoken dialogue, and London sustained its wisdom in dispensing with the narrative text DG favored. The two sets are fairly evenly matched, and if I lean slightly toward DG's it is because of Kurt Moll's superlative singing and because I find that the playing of the Berlin State Orchestra under Bernhard Klee is firmer and more precise. G.J.

**POULENC: *Concerto for Organ, Strings, and Timpani; Concert Champêtre for Harpsichord and Orchestra*.** Simon Preston (organ, harpsichord); London Symphony Orchestra, André Previn cond. ANGEL S-37441 \$7.98.

Performance: **Earnest**  
Recording: **Good**

These two concertos have been coupled before, but never with the same performer playing the solo parts in both. Simon Preston and

the orchestra under André Previn acquit themselves very well on technical grounds here—everything is as neat as a pin—but neither side quite takes wing. In the Organ Concerto, which benefits from deep, rich, well-defined sound, there is a rather externalized sort of energy and a general heavy-footedness that keeps the music from soaring up in the blaze one wants. The overside *Concert Champêtre* is performed with similar earnestness and very little charm. On this side, too, the sonic focus, with the harpsichord conspicuously overbalanced by the orchestra except in solo passages (in which it is suddenly very close), does not help matters, though again the playing itself is admirably clear and tidy.

R.F.

**RACHMANINOFF: *Piano Concerto No. 2, in C Minor, Op. 18; Prelude in D Minor, Op. 23, No. 3; Prelude in E-flat Major, Op. 23, No. 6; Prelude in G-sharp Minor, Op. 32, No. 12*.** Dmitri Alexeev (piano); Royal Philharmonic Orchestra, Vladimir Fedoseyev cond. ANGEL □ S-37481 \$7.98.

Performance: **Disciplined**  
Recording: **Very rich**

This twenty-first recording of the Rachmaninoff C minor Concerto in the current catalog features the thirty-one-year-old international-prize-winning Soviet pianist Dmitri Alexeev. His is no swooning, sentimental reading, but one that is strongly disciplined, rhythmically taut, and, in its own way, highly effective. For myself, I prefer a little less steel in the fingers and a bit more warmth in both tone and phrasing. The slow movement fares best, largely because of the beautiful solo flute and clarinet work in the opening pages.

It is in the three preludes that fill out side two that Alexeev really displays what are clearly very substantial musical gifts. In all three he shows that his sense of coloration, rhythm, and phrasing need defer to none. The piano sound is outstandingly fine, especially with four-channel playback to enhance the ambiance. D.H.

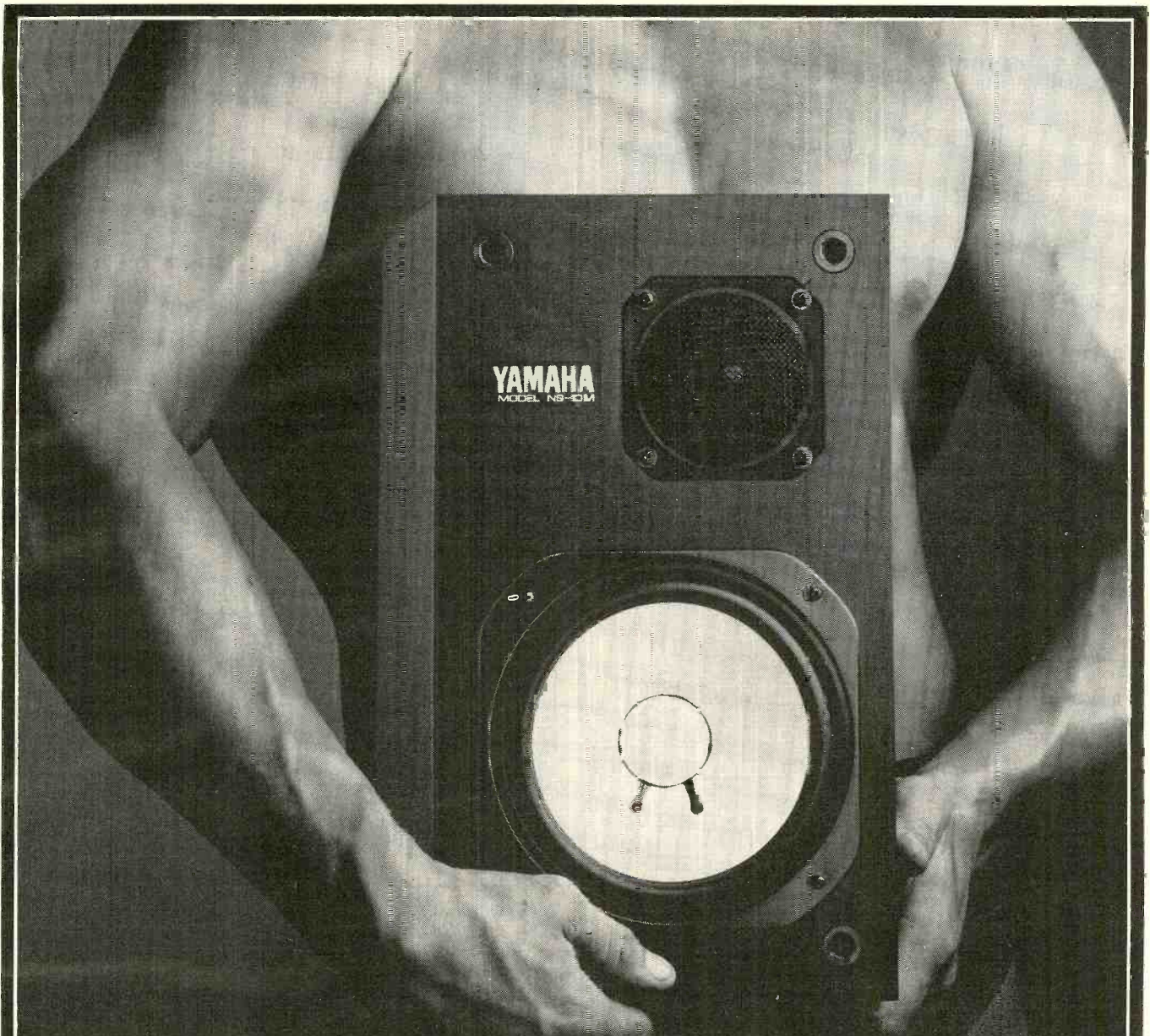
**RANGSTRÖM: *King Erik's Songs*.** BRAHMES: *Mageloniclieder, Op. 35, Nos. 1, 2, 4, 5, 8, 9, 14*. SIBELIUS: *Diamonds in the March Snow; The Little Hunter; Astray; Sunrise; Romeo*. Walton Grönroos (baritone); Raif Gothóni (piano). BIS LP-67 \$8.98.

Performance: **Good, with reservations**  
Recording: **Good**

This is an adventurous sequence of rarely heard songs. The real discovery is the five-part cycle by Ture Rangström (1884-1947) on poems about a mad king by Gustav Fröding, who himself, according to the annotations, "was considered mad for the greater part of his life." The songs, ranging over a variety of moods, are concise, very skillfully set, and quite gripping. Walton Grönroos, a young Finnish artist, sings them with intensity and utter conviction.

Only one of the five Sibelius songs (*Diamonds in the March Snow*) may be called somewhat familiar. All five, therefore, help to round out a representation on discs that is far from adequate. In common with the majority of Sibelius' songs, these all have Swedish texts. The *Magelone* songs of Brahms are also hard to find on records even though Dietrich Fischer-Dieskau recorded the entire cycle (Continued on page 156)





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## “Salome”: Close to Perfection

FOR an admittedly thorny opera—extremely demanding vocal writing and no less forbidding orchestral requirements, to say nothing of the extraordinary task of balancing the two—Richard Strauss’ *Salome* has fared remarkably well on records. Angel’s just-released new version under the direction of Herbert von Karajan was preceded by two excellent stereo editions (from London and RCA) and a rather uneven and imperfect one (from Deutsche Grammophon), and I am happy to say that the new set adds another excellent alternative. I would rate it, in its totality, higher than the RCA version (Caballé/Leinsdorf) and place it on the level of the London (Nilsson/Solti).

Solti and Karajan both keep the seething music under firm control and maintain high tension throughout the performance. And their views of the work are not very divergent. Solti is perhaps the more incisive, eliciting greater orchestral fury in such an episode as the Baptist’s return to the cistern after rejecting Salome. Karajan, on the other hand, seems to have succeeded in drawing more expressive performances from his singers. Both are blessed with the Vienna Philharmonic as their instrument, and both achieve glorious results with it.

Birgit Nilsson is London’s Salome, and she is, of course, in a class by herself. In the new Angel release, Hildegard Behrens, a less spectacular vocalist, portrays a quite different Salome and an excellent one in its own terms. She is a nymph in the early scenes, openly calculating but still childish. In the later episodes with the Baptist and with Herod she runs the whole gamut of sensuous amorality. Her Final Scene does not have the flooding strength of Nilsson’s, and her pronunciation is often indistinct, but the music is served with a steady, pure, well-centered tone.

The other principals range from good to excellent. That extraordinary artist José van

Dam brings dignity, sonority, and superb clarity to the Baptist’s pious utterances. Without allowing his tone to spread or be submerged by the orchestra (in this, Karajan must share the credit), he sounds imposing in the climaxes and brings flowing lyricism to the “Geh, such ihn” passage. Karl-Walter Böhm plays a suitably lecherous and decadent Herod without resorting to the excessive ranting Gerhard Stolze (London) displays in his otherwise effective portrayal. Likewise, Agnes Baltsa avoids overstatement without in any way lessening the apt strength of her characterization of Herodias. Like most Narraboths, Wieslaw Ochman is at times blanketed by the orchestra, but it is well worth straining the ear for his smooth, lyrical singing. The bit parts are all well cast, though Jules Bastin sounds rather subdued in the part of the First Nazarene.

**SALOME**, the “symphony with voices” as it has wrongly been called, is difficult to record to perfection, but Angel’s engineers came gratifyingly close to that elusive goal here, with excellent presence for the orchestra and good balances nearly always. All in all, a brilliant production. Detailed annotations are supplied with the libretto. (The first interpreter of *Salome*, however, is incorrectly identified as Eva von der Osten. That honor belonged to Marie Wittich.) —George Jellinek

**R. STRAUSS: *Salome*.** Hildegard Behrens (soprano), Salome; Karl-Walter Böhm (tenor), Herod; Agnes Baltsa (mezzo-soprano), Herodias; José van Dam (baritone), Jochanaan; Wieslaw Ochman (tenor), Narraboth; Heljä Angervo (contralto), Page; Heinz Zednik (tenor), David Knutson (tenor), Martin Vantin (tenor), Gerhard Unger (tenor), Erich Kunz (baritone), Five Jews; others. Vienna Philharmonic Orchestra, Herbert von Karajan cond. ANGEL SBLX-3848 two discs \$16.96.

twice (rather definitively, I think). The seven songs offered here are probably the best of that lovely cycle.

Grönroos has a dramatic flair and honest commitment that effectively serve the cause of this repertoire. His tone, however, is not particularly appealing, for it tends to lose focus in his mid-range and to turn dry on top. Pianist Ralf Gothóni is first-class, and the sound is good enough, though it lacks the brightness and impact associated with some earlier releases on this label. My review copy was warped. G.J.

**SCHUMAN: *Concerto on Old English Rounds for Viola, Women’s Chorus, and Orchestra.*** Donald McInnes (viola); Camerata Singers; New York Philharmonic, Leonard Bernstein cond. COLUMBIA M 35101 \$7.98.

Performance: **Excellent**  
Recording: **Excellent**

Some years ago, in his *New England Tryprych*, William Schuman took hymn tunes by the Colonial American composer William Billings and made them his own by, as he said, “using them as if I’d invented them.” The result was a lively piece of work, as fresh and simple as a whitewashed clapboard church. Now in his late sixties, Schuman has attempted to assimilate four old English rounds—which he first arranged and performed thirty-five years ago—into the elaborate fabric of a concerto for viola, women’s chorus, and orchestra, and the result is a piece of considerable ambition and high technical gloss that is in the end overwhelmed by the very skill that went into constructing it. What Philip Ramey, in an album-cover interview with the composer, calls Schuman’s “no-nonsense masculinity” is much in evidence, but at the same time the music does go on and on somewhat like an interminable telephone conversation between gossiping housewives. Time and again the viola soars to eloquence, the women sing their hearts out in the simple rounds and the composer’s complicated variations on them, and the orchestra plays with the “stunning sound” for which Schuman always strives, but every passage manages to outlive its welcome. Like so many big contemporary pieces, here is yet another that is more impressive in its display of musical carpentry than in its inspiration. It seems to be searching for a core that it never finds. On the way, though, there are some lovely digressions. The playing by violist Donald McInnes, the singing by the Camerata Singers under Abraham Kaplan, and the orchestral contributions by the New York Philharmonic under Leonard Bernstein are all excellent, and so is the recorded sound—except, on my review copy, for some of the noisiest surfaces ever. P.K.

**SIBELIUS: *Songs*** (see RANGSTRÖM)

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Performance: **Charming**  
Recording: **Excellent**

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(Continued on page 158)



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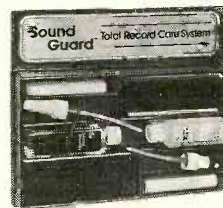
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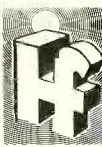
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the Ballet Russes de Monte Carlo. Happily, Dorati turned to the music of Johann Strauss Jr., picking and choosing from hundreds of themes and creating a scintillating sequence. The ballet was an instant success, but the score got lost and Dorati had to invent a whole new version from memory. Later the original score turned up, and what is heard here is a combination of the best of both efforts played with just the right balance between lilt and glitter under Dorati's own inspired direction. *Graduation Ball* has been recorded by other conductors, but never with the sense of cinematic continuity that Dorati himself brings to it. There was a *mite* more energy and propulsion in his earlier recording for Mercury, but the playing here is more graceful and far better recorded, and the climactic moments are brought off with incomparable dash and charm. P.K.

**TCHAIKOVSKY: Symphony No. 5, in E Minor, Op. 64** (see Best of the Month, page 103)

**TELEMANN: Sonatas and Partita for Oboe and Continuo** (see Best of the Month, page 102)

**VICTORIA: Motets** (see Collections—Pro Cantione Antiqua)

**RECORDING OF SPECIAL MERIT**

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Performance: **Excellent**  
Recording: **Excellent**

There was something of a guitar craze in Central Europe after the Italian virtuoso Mauro Giuliani settled in Vienna in 1807. Hummel and Schubert were among the composers who wrote for the instrument, but Weber seems to have surpassed even their enthusiasm. The nineteen songs included here were either written expressly for guitar accompaniment or published in editions for piano or guitar.

Written between 1809 and 1818, the songs range from love songs and cradle songs to knightly tales, folksy tunes, and a few adapted Italian *canzonette*. Friedrich Kind, librettist of *Der Freischütz*, and August von Kotzebue, Beethoven's occasional collaborator, are among the poets. Poetically as well as musically, these are simple and unassuming songs with accompaniments usually consisting of arpeggiated figures and light ornamentations. In all likelihood, the lied would have progressed as it did from Beethoven to Schubert and beyond had Weber *not* ventured into its realm, but this delightful sequence makes me glad that he did.

On the surface, there are no real vocal challenges here, either. And yet I doubt that even a handful of singers can be found today who can make these songs seem *this* easy, who can match Peter Schreier's gracious lightness, consummate technique, and admirable pronunciation. Konrad Ragossnig, a frequently heard regular in the Archiv Baroque series, is the perfect accompanist, and the sound is ideal in its clarity and intimacy. G.J.

(Continued on page 161)

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**SIMON BARERE: The Legendary Pianist.**  
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Performance: **Sweeping**  
Recording: **Mostly old transcriptions**

Simon Barere was truly a legendary pianist. He was born in 1869 in Odessa—that ultimate Jewish/Russian musical ghetto—and died on the stage of Carnegie Hall in 1951. He made a mighty reputation but few records. The Liszt and Chopin items on this disc are from studio recordings; the others are all taken from transcriptions—acetate discs—made during Carnegie Hall concerts.

Barere was an old-fashioned virtuoso with an extraordinary technique (although he was not beyond a bit of smudging here and there) and a tremendous amount of flair. The studio recordings are easily the most together sounding, but the live stuff has a quality of excitement—best exemplified by the incredible performance of *Islamey*—that even the variable recorded quality can't obscure.

E.S.

**DÁNIEL BENKŐ: Thirteen Hungarian Verse Chronicles and Songs by Sebestyén Tinódi and His Contemporaries.** Péter Kertész, György Bordás, Gábor Agárdi, Lajos Miller, Sándor Sólyom Nagy (baritones); Melinda Lugosi (soprano); instrumental accompaniment; Dániel Benkő, lute and arr. HUNGAROTON SLPX 11868 \$7.98 (from Qualiton Records, Ltd., 65-37 Austin Street, Rego Park, N.Y. 11374).

Performance: **Good**  
Recording: **Very good**

In the second half of the sixteenth century, as the spirit of the Renaissance freed secular music from church domination, the art of solo singing with string accompaniment began to take hold all over Europe. England headed toward the golden age of Dowland, Campion, and other lutenists; their vihuelist counterparts flourished in Spain. This was the time of Hans Sachs in Germany and similar master singers in France and the Netherlands. Most of Hungary was then occupied by the Turks, and the Habsburgs ruled the remainder. In this period of Hungarian national tragedy was born the "verse chronicle," a mixture of folk music and simple written tunes sung by minstrels to their own lute or fiddle accompaniments. The songs related heroic deeds, lamented the plight of a forlorn nation, and occasionally expressed the minstrel's own views of the world.

The best known among these lutenists was Sebestyén Tinódi (1505-1556), and seven of the selections on this Hungaroton disc are taken from his legacy of twenty-four chronicles. While the vocal melodies are primitive, they are quite haunting at times, always shaped to the rhythms of Hungarian speech. In their characteristic accentuations and lines of uneven lengths, they reveal the roots of

(Continued on page 164)

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In any case, when it comes to Pavarotti no news is still good news. The man deserves all his fame and popularity. Aside from being a superlative singer, he is a warmly effusive personality with brains, charm, and a remarkable flair for showmanship. The twenty selections on "Bravo Pavarotti" do him eminent justice. They exhibit the solid technique that allows him to solve virtually all vocal problems tastefully, gracefully, and without any audible effort. The high points are many, but you may wish to seek out "O mes amis" from *La Fille du Régiment* to rediscover Pavarotti's debonair handling of nine successive high C's, or his "Ingemisco" and "E lucevan le stelle" to rejoice in the exquisite diminuendos they contain. The low points are few indeed: a *Traviata* duet ("Libiamo") that would do for others but not for a Sutherland and a Pavarot-

ti, a *Lucia Sextet* that is decently sung but slackly conducted, and a "Non piangere Liu" that is splendidly sung but badly engineered. The engineering, overall, is not distinguished. Since the selections come from various sources, they seem to have been homogenized into a somewhat bland and boxy totality. But the singing saves it all.

Following the flagship comes a single disc, also from London, titled "Pavarotti: Hits from Lincoln Center." This contains fourteen selections from the memorable telecast of February 12, 1978, but not as recorded at that time. Seven are brand new recordings, the other seven—true to form—come from previously released masters. In fact, "E lucevan le stelle" and "Quando le sere al placido" are repeated from "Bravo Pavarotti," though the latter aria is here rounded out with its *cabaletta*. The new items are all winners, including the somewhat surprising Gluck and Beethoven entries, and the Tosti songs are delivered with a special, insinuating magic.

At this point, however, a slight criticism must be made. Why does this otherwise painstaking artist permit himself the carelessness of adding unwritten vowels at word endings? However correct his version may be grammatically, Verdi and Donizetti opted for "amor" and not "amore" in "Un di, felice eterea" and "Spirto gentil," to mention but two of many similar infractions. This is a mat-

ter of musical rightness: ignoring it is unworthy of an artist of Pavarotti's caliber.

Five other new discs introduce a new London import label of Italian origin: Cime. Most important among them is Rossini's *Petite Messe Solennelle* with Mirella Freni, Lucia Valentini, Ruggiero Raimondi, and Pavarotti as soloists. These four extraordinary singers supply precisely the luscious Italian sound I missed in RCA's recent release of the work (reviewed here in October). There are some fascinating background details in the annotations, but we are not given an explanation for the use of a solo piano instead of the two pianos originally called for. Leone Magiera plays the demanding part very well in any case. Some of Pavarotti's attacks are registered a bit too loud, but the sound is fine, with good presence for the harmonium.

"Concerto Verdiano" combines Pavarotti and Katia Ricciarelli. Taped at a Parma concert in 1976, it contains unduplicated Pavarotti entries that are, characteristically, all excellent. As for Ricciarelli, she has at last developed from a merely promising soprano into an accomplished one. A hint of uncertainty is evident in her approach toward the feared high C in "O patria mia," but her vocalism is warmly expressive and her phrasing frequently exquisite. The liner notes are unnecessarily apologetic about these artists' undertaking

**BRAVO PAVAROTTI!** Donizetti: *Lucia di Lammermoor: Tu che a Dio; Sextet. La Fille du Régiment: O mes amis; Pour me rapprocher de Marie. L'Elisir d'Amore: Chiedi all'aura lusinghiera. La Favorita: Spirto gentil. Puccini: La Bohème: O Mimì, tu più non torni. Tosca: E lucevan le stelle. Turandot: Non piangere Liu. R. Strauss: Der Rosenkavalier: Di rigori armato. Verdi: Un Ballo in Maschera: La rivedrà nell'estasi; E scherzo od è follia. Luisa Miller: Quando le sere al placido. La Traviata: Libiamo; Un di, felice. Requiem: Ingemisco. Rigoletto: Parmi veder le lagrime; La donna è mobile; Quartet. Il Trovatore: Ai nostri monti. Bellini: I Puritani: A te o cara. Luciano Pavarotti (tenor); Joan Sutherland, Helen Donath (sopranos); Huguette Tourangeau, Marilyn Horne (mezzo-sopranos); Ryland Davies (tenor); Sherrill Milnes, Roland Panerai (baritones); Nicolai Ghiaurov, Gian Carlo Luccardi (basses); various orchestras and conductors. LONDON PAV 2001-2 two discs \$13.96, © PAV5 2001-2 \$13.95.*

**LUCIANO PAVAROTTI: Hits from Lincoln Center.** Donizetti: *L'Elisir d'Amore: Una fur-tiva lagrima. Lucia di Lammermoor: Fra poco a me ricovero. Gluck: Orfeo ed Euridice: Che farò senza Euridice. Rossini (arr. Gam-ley): La Danza. Beethoven: In Questa Tomba Oscura. Bellini: Vanne, O Rosa Fortunata; Vaga Luna, Che Inargenti. Donizetti: Me Voglio Fà 'Na Casa. Verdi: Luisa Miller: Quando le sera al placido. Tosti: A Vucchella; Aprile. Puccini: Tosca: E lucevan le stelle. Turandot: Nessun dorma. Leoncavallo: Mat-tinata. Luciano Pavarotti (tenor); various or-chestras and conductors. LONDON OS 26577 \$7.95, © OS8 26577 \$7.95, © OS5 26577 \$7.95.*

**CONCERTO VERDIANO.** Verdi: *La Traviata: De' miei bollenti spiriti. Aida: O patria*



roles here (Aida, Otello) that they are not yet ready to tackle in the opera house. The way Pavarotti sings Otello's love music is balm to the wounds that particular music has sustained hereabouts over the years.

Two more Cime discs are devoted to "Great Voices from Verona," also captured in live concert. While certainly interesting, these are less appealing. For one thing, the Orchestra del Teatro Arena di Verona is small in size and at times only adequate in quality. For another, intrusive applause and shouting greets every selection; even though such tributes are usually deserved, they are grating nonetheless. In a sequence of familiar selections, Ricciarelli, Pavarotti, and Piero Cappuccilli appear in their usual good form, while Mirella Freni is somewhat below her best in "Vissi d'arte." Special interest attaches to soprano Raina Kabaivanska and baritone Renato Bruson, two heretofore neglected singers. The soprano surpassed my expectations here with her deeply felt and sensitively projected interpretations from *Otello* and *Adriana Lecouvreur*. The baritone, whose career has been steadily on the rise in recent years, discloses a voice of appealing dark timbre, solid and well centered. He is a seasoned artist who should be heard in complete operas as well.

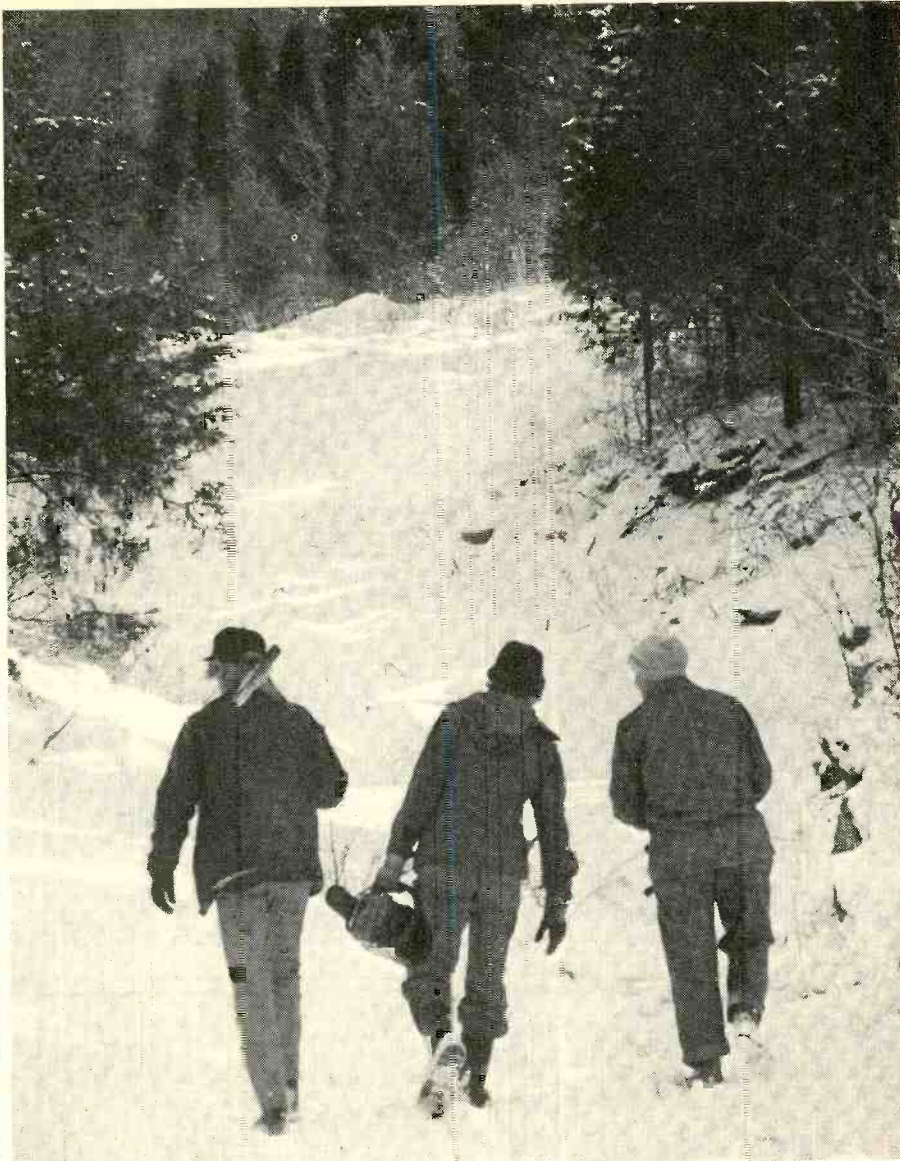
—George Jellinek

*mia. Macbeth: Ah, la paterna mano. La Forza del Destino: Pace, pace mio Dio! I Lombardi: La mia letizia infondere. Il Corsaro: Non so le tetre immagini. Falstaff: Sul fil d'un soffio etesio. Otello: Già nella notte densa.* Katia Ricciarelli (soprano); Luciano Pavarotti (tenor); Orchestra del Teatro Regio di Parma, Giuseppe Patané cond. CIME ARS NOVA ANC 25001 \$8.98.

**ROSSINI: Petite Messe Solennelle.** Mirella Freni (soprano); Lucia Valentini (mezzo-soprano); Luciano Pavarotti (tenor); Ruggero Raimondi (bass); Coro Polifonico del Teatro alla Scala; Leone Magiera (piano); Vittorio Rosetta (harmonium); Romano Gandolfi cond. CIME ARS NOVA C35/134 two discs \$17.96.

**LE GRANDI VOCI DELL'ARENA DI VERONA. Volume 1:** Arias from Puccini's *Tosca*, *Fanciulla del West*, *Turandot*, and *Madama Butterfly*; and Verdi's *Rigoletto*, *Don Carlos*, *Macbeth*, and *La Traviata*. Mirella Freni, Raina Kabaivanska, Katia Ricciarelli (sopranos); Gianni Raimondi (tenor); Renato Bruson (baritone); Orchestra del Teatro Arena di Verona, Bruno Martinotti and Armando Gatto cond. CIME ARS NOVA ANC 25003 \$8.98.

**LE GRANDI VOCI DELL'ARENA DI VERONA. Volume 2:** Arias from Donizetti's *L'Elisir d'Amore*; Verdi's *Otello* and *Un Ballo in Maschera*; Giordano's *Andrea Chenier*; Puccini's *Turandot*; Ciléa's *Adriana Lecouvreur*; and Gounod's *Faust*. Raina Kabaivanska, Katia Ricciarelli (sopranos); Luciano Pavarotti (tenor); Piero Cappuccilli (baritone); Ruggero Raimondi (bass); Orchestra del Teatro Arena di Verona, Bruno Martinotti and Armando Gatto cond. CIME ARS NOVA ANC 25004 \$8.98.



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Bartók's idiom. The singers include folk-song specialists and two operatic baritones of international caliber (Lajos Miller and Sándor Sólyom-Nagy). All of their contributions are first-rate. G.J.

**CAROLE BOGARD: La Bonne Chanson.** Fauré: *La Bonne Chanson, Op. 61.* Chabrier: *L'Île Heureuse; Lied.* Gounod: *Venise; Viens, les Gazons Sont Verts!* Bizet: *Chanson d'Avril; Berceuse; Chant d'Amour.* Carole Bogard (soprano); John Moriarty (piano). CAMBRIDGE 2775 \$6.98.

Performance: **Charming and idiomatic**  
Recording: **Very good**

In an earlier recital of similar material ("Songs on Verlaine Poems," Cambridge 2774), Carole Bogard demonstrated her affinity for this repertoire. Her French is idiomatic and clearly pronounced. She is alert to poetic nuances and sings with charm and musicianship. Vocally, however, she is somewhat uneven: her upper range is thin, and, though she has a lovely pianissimo, the sustained notes in the high register are unsteady.

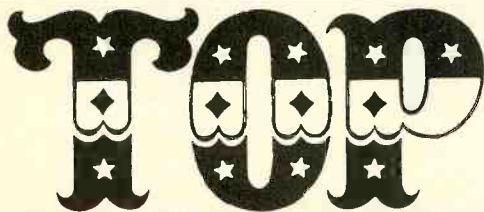
The music will, of course, delight the *chanson* aficionado. *La Bonne Chanson* is possibly the best among French song cycles; Verlaine's passionate poems inspired music from Fauré that is sensuous, exquisitely colored, and wrought with infinite elegance. Bogard doesn't match the caressing warmth and suavity of Gérard Souzay in his early recording of the cycle, nor does she capture the mesmerizing quality Souzay brought to Gounod's gorgeous *Venise* on an even earlier occasion. But deleted treasures are of little good to today's buyer. The present disc is here, eminently available, and it offers several rarely recorded charmers by Bizet and Chabrier as well. John Moriarty's accompaniments are fine, and the sound is clean and well balanced. The presentation is further enhanced by complete texts and good notes. G.J.

**PRO CANTIONE ANTIQUA: El Siglo de Oro.** Victoria: *Salve Regina; O Sacrum Convivium; O Ildephonse; Duo Seraphim; Quam Pulchri Sunt Gressus Tui; Magnificat; Super Flumina Babylonis; Domine Non Sum Dignus; Beati Immaculati; Sancta Maria; Senex Puerum Portavit; Ave Maria.* Guerrero: *O Domine, Jesu Christe; Salve Regina; Ave Virgo Sanctissima; Magnificat.* Lobo: *O Quam Suavis.* Esquivel: *Veni Domine.* Ceballos: *Hortus Conclusus.* Morales: *O Crux Ave. Vivanco: Stabat Mater.* Pujol: *Laudate Dominum.* Navarro: *In Passione Positus.* Castro: *Angeles ad Pastores Ait.* Pro Cantione Antiqua; London Cornett and Sackbut Ensemble, Bruno Turner cond. TELEFUNKEN 6.35371 three discs \$23.94.

Performance: **Austere**  
Recording: **Luminous**

Designed as a showcase for the works of Tomás Luis de Victoria (with a sprinkling of music by his older and younger contemporaries) and as a presentation of the music so beautifully described in Robert Stevenson's book *Spanish Cathedral Music in the Golden Age*, this album is necessarily monochromatic and austere in mood. After several listenings, however, it becomes apparent that Victoria was a master equal to Palestrina and Byrd.

The Pro Cantione Antiqua, comprising ten of England's finest chamber singers, is certainly the most aristocratic group of vocalists  
(Continued on page 166)



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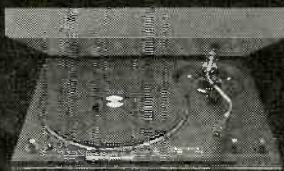
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singing early music today. For this album they are joined by seven other excellent singers and supplemented by the London Cornett and Sackbut Ensemble. Their ensemble is impeccable, there is never the slightest worry about pitch, and the blend is that of a good string quartet. Each line is exquisitely molded in its own right, thus producing a perfect polyphony that at the same time reveals the inner parts and the total sonority. These performances truly embody the Renaissance ideal of noble restraint. (But it is certainly irresponsible of Telefunken not to supply texts, since these works are so dependent on word painting to make their point.) S.L.

**JOHN RUSSO. Schumann: Three Romances, Op. 94. Vanhal: Sonata in B-flat Major. Mendelssohn: Tarantella, Op. 102, No. 3; Reverie, Op. 85, No. 1; Elegie, Op. 85, No. 4. Spohr: Six German Songs, Op. 103.** John Russo (clarinet); Lydia Walton Ignacio (piano); Katherine Ciesinski (mezzo-soprano). ORION ORS 77273 \$7.98.

Performance: **Fluent**  
Recording: **Good**

**MELVIN WARNER. Weber: Grand Duo Concertant, Op. 48. W. O. Smith: Five Pieces for Clarinet Alone. Spohr: Six German Songs, Op. 103.** Melvin Warner (clarinet); Allan Dameron (piano); Diane Ragains (soprano). CRYSTAL S332 \$7.98.

Performance: **Fluent**  
Recording: **Soprano distant**

Both Melvin Warner, based in northern Illinois, and John Russo, based in Philadelphia, give fine accounts of themselves and of the music for clarinet that they have chosen for these collections. The one point of convergence is the all but unknown set of songs by Spohr, which is definitely worth hearing. Katherine Ciesinski, it seems to me, has gone more deeply into them and gives a very polished and convincing performance. Diane Ragains is put at a considerable disadvantage by the Crystal recording, whose curious focus leaves her rather far from the center of things. The two instrumental works on the other side of Warner's disc fare much better in this respect. Warner and Dameron are more enlivening in the Weber Duo than Wendelin Gärtner and Günter Krieger on MHS 1309, and Warner makes the most of the opportunities for solo display in William O. Smith's Five Pieces, which have the virtue of brevity if not much substance. The gem on Russo's disc, aside from the Spohr songs, is the delicious little sonata by Johann Vanhal (Wanhal), a composer best remembered now, perhaps, as the cellist in the after-hours quartet whose other members were Haydn, Dittersdorf, and Mozart. The Schumann Romances, originally for oboe, adapt handsomely to the clarinet, and Russo's own transcriptions of the three Mendelssohn *Songs Without Words* are attractive enough to make a generous little prelude to the Spohr songs on side two. If I had to choose between the two records, the combination of the Vanhal and the superior presentation of the Spohr songs would sway me in favor of the Orion, but not without second thoughts about forgoing Warner's fine performance of the Weber. Mark W. Street's notes for Crystal are a good deal more informative than the anonymous ones on Orion; song texts are given in German on the Orion liner, in English on Crystal. R.F.





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Prepared by David Stein



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By using a simple test you can prove to yourself that Marantz loudspeakers deliver the same brilliant sound separation over the widest possible listening area:

Here's the test:

Have your Marantz dealer place any pair of Marantz floor standing loudspeakers in a normal listening position. Now, listen as your selection of dynamic music is played through the Marantz loudspeakers. Notice the three dimensional quality of the sound. Now close your eyes and have two people slowly turn the Marantz loudspeakers until they're actually *facing each other*.

Did the sound change?

In almost every case we've found the listener cannot hear a change in the sound . . . because there isn't any! Even with the loudspeakers facing each other. Incredible!

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In a nutshell: Constant Radiated Power (CRP)—180 degrees dispersion regardless of frequency. To achieve CRP we consider both the frequency response and dispersion characteristics of each individual transducer in the system; woofer, midrange and tweeter. The result is a unique design approach incorporating three important performance parameters:

1. We know that dispersion is determined by the diameter of the radiating surface—the speaker cone—and the frequency being reproduced. So we pick the precise frequency at which each individual driver radiates 180 degrees and use this as the crossover point.

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2. Our transducers are positioned on the baffle to ensure the best possible dispersion.

Other manufacturers may position their driver for eye-appeal, but that's not good enough for Marantz.

3. To control transition between our drivers, we use the most sophisticated, best thought-out crossover networks ever developed.

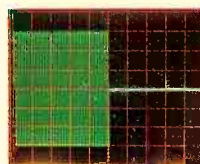
As you can see from the illustration below (Fig. A), wherever you are in the room you hear the same ideal stereo separation and 180 degrees dispersion pattern. Notice how the other speaker

"beams" certain frequencies in a narrow corridor (Fig. B). Unless you sit directly in front of those speakers, you lose part of the music.

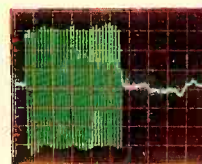
## TRANSDUCERS YOU'D EXPECT FROM A WINNER.

Wide sound dispersion alone doesn't guarantee sonic accuracy. You also

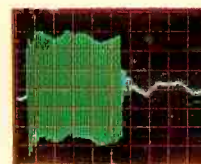
### Tone burst test demonstrates superior low stored energy characteristics of Marantz loudspeakers.



Original signal. Note instant start/instant stop of trace.



Marantz loudspeaker. Note close similarity to original signal.



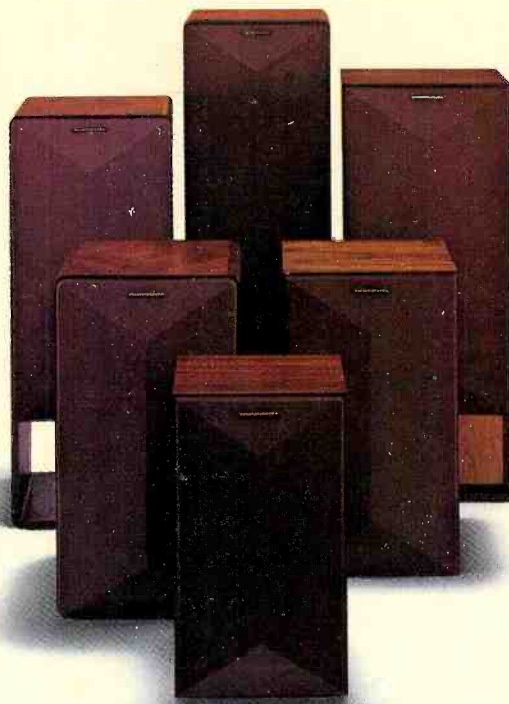
Competitor. Note overhang caused by inability of cone to stop vibrating.

need transducers that exhibit low distortion and low stored energy.

Stored energy is the continued vibration of a loudspeaker's radiating element after the driving force has stopped. It can exist in any loudspeaker; woofer, midrange or tweeter, and is heard as a smearing or running together of the individual instruments.

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The Marantz speaker disperses all the frequencies 180 degrees. Conventional speakers tend to narrow certain frequencies.

In actual test, speakers should be placed the same distance apart as you are away from them.





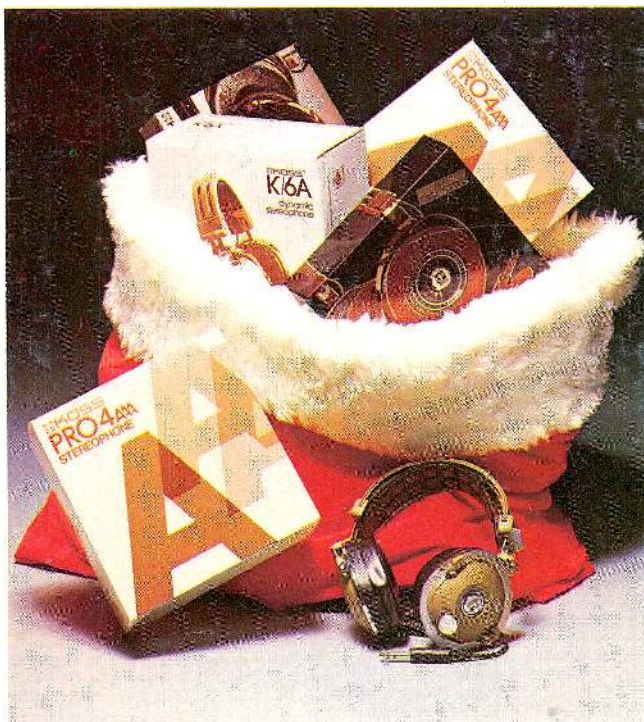
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