

Stereo Review

NOVEMBER 1975 • ONE DOLLAR

CENTENARY: MAURICE RAVEL



262912 SIT 80260E90 741J NOV77
 E GLENN SMITH
 RT 5
 BOX 268-C
 PHOENIX CITY
 AL 36867
 11

A·M

2.0 μ V FM Sensitivity.
Solid-State Ceramic FM IF Filters.

S-7210

MINIMUM RMS POWER
OUTPUT: 26 WATTS PER
CHANNEL [BOTH CHANNELS
DRIVEN @ 8 OHMS,
20-20,000 Hz.; MAXIMUM
TOTAL HARMONIC DISTOR-
TION, NO MORE THAN 0.8%].

Solid-State Ceramic FM IF Filters.
The latest integrated circuitry.

1.9 μ V FM Sensitivity [IHF].

Front panel switching of
4-channel decoder [doubles as
second tape monitor].

Built-in Dynaquad 4-channel
matrix circuit.

S-7310

MINIMUM RMS POWER
OUTPUT: 38 WATTS PER
CHANNEL [BOTH CHANNELS
DRIVEN @ 8 OHMS,
20-20,000 Hz.; MAXIMUM
TOTAL HARMONIC DISTOR-
TION, NO MORE THAN 0.5%].

Solid-State Ceramic FM IF Filters.
Phase lock loop Multiplex.

1.8 μ V FM Sensitivity.

Front panel switching of
4-channel decoder [doubles as
second tape monitor].

Built-in Dynaquad 4-channel
matrix circuit.

Sherwood Electronic Laboratories
4300 North California
Chicago, Illinois 60618



SHERWOOD

The word is getting around.

Cabinets shown are constructed
of plywood with a simulated
woodgrain vinyl covering.



If you can't afford the State-of-the-Art...

S-7900A

MINIMUM RMS POWER
OUTPUT: 60 WATTS PER
CHANNEL [BOTH CHANNELS
DRIVEN @ 8 OHMS,
20-20,000 Hz.; MAXIMUM
TOTAL HARMONIC DISTOR-
TION, NO MORE THAN 0.3%].

Direct-coupled output circuitry
with electronic relay protection.

Front panel four-channel
provision [doubles

as second tape monitor].

Ceramic FM IF Filtering; FET's,
microcircuits.

Four-gang tuning capacitor.

Built-in Dynaquad 4-channel
matrix circuit.

The optional cabinet shown is constructed of
particle board with a simulated wood grain
vinyl covering.



you can still enjoy most of the benefits.

Considering the Best Buy ratings and favorable reviews, it's not surprising that a growing number of audiophiles are settling for nothing less than Sherwood's top-of-the-line stereo receiver.

Of course, not everyone needs the high power output and operational flexibility offered by the S7900A. Which is why we produce other, more economical models.

Like the S7900, each piece of equipment in the Sherwood line provides a performance capability unsurpassed in its price category.

There are no useless gimmicks. No misleading claims. And no disappointments. The specifications we post for our products are generally quite conservative. And we utilize only the finest of proved componentry.

After all, you shouldn't have to sacrifice quality, just because you require a little less than the state-of-the-art.

S-7010

MINIMUM RMS POWER OUTPUT: 10 WATTS PER CHANNEL [BOTH CHANNELS DRIVEN @ 8 OHMS, 40-20,000 Hz.; MAXIMUM

TOTAL HARMONIC DISTORTION, NO MORE THAN 0.9%]

Provision for two sets of stereo speakers.

2.8 μ V FM Sensitivity [IHF].

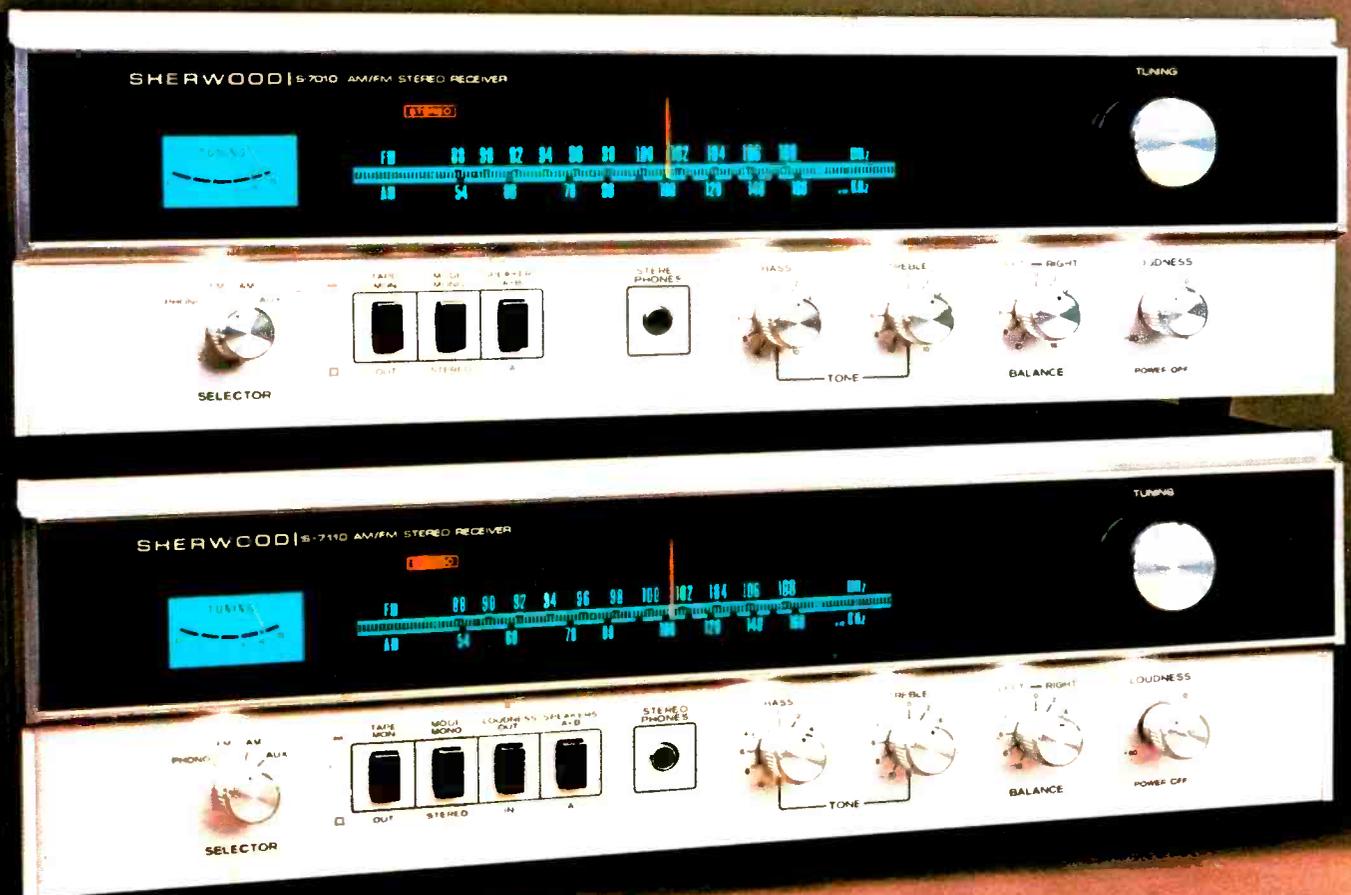
FET Front End.

S-7110

MINIMUM RMS POWER OUTPUT: 17 WATTS PER CHANNEL [BOTH CHANNELS DRIVEN @ 8 OHMS, 40-20,000 Hz.; MAXIMUM TOTAL HARMONIC DISTORTION, NO MORE THAN 0.9%].

Direct-coupled amplifier.

The latest integrated circuitry.



IVER



TUNING

LOUDNESS



POWER OFF



LEFT - RIGHT



BALANCE



TAPE DOUBBING



STEREO PHONES

4-CH ADAPTER



NORM

TAPE MONTR



NORM

HIGH FILTER



FLAT

FM HUSH



OFF

LOUD OFF



ON

MAIN (FRONT)



SPEAKERS (DYNAQUAD)

REMOTE (REAR)



SPEAKERS (DYNAQUAD)

IN



OUT

The Rule:

“Only separate components can deliver truly great performance.”

This is how TR-2075 broke the rule.

Very powerful amplifiers can degrade tuner and preamplifier performance. So separate components became the rule and—for years—the rule made sense. But now we've found ways to break the rule and build a very high-powered receiver with better performance for less cost than comparable separate components.

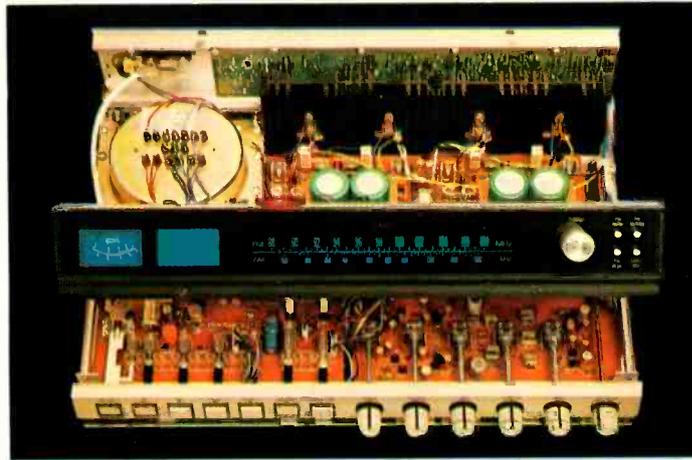
We started with a high-power toroidal transformer to eliminate stray electrical influence on other components within the unit. An expensive device not usually found in consumer products, it offers superior stability and performance.

The transformer feeds two powerful amplifiers. They have a wide frequency range for transparent sound. Ample overload margin for low distortion. And true complementary, direct-coupled circuits. Four protective circuits help deliver this exceptionally clean high power safely to your speakers.

TR-2075 has separate preamplifiers for each input to keep low-level signals noise-free. And sensitivity controls to equalize listening levels. (First stages of amplification occur within millimeters of signal input. An expensive, but effective, way to achieve low noise and clean sound.)

Push-button electronic time-delayed diode switching provides noise-free blends when changing program sources. This innovation allows us to put the controls in the best position for easy operation and the electronics where they can deliver the best performance. Independent tape-to-tape facilities add to the extreme versatility of TR-2075.

TR-2075 also offers electronic FM tuning for stability and long life. Phase-locked loop decoding for superb stereo separation. And phase linear filtering for low distortion. (Just a few of the reasons why this FM tuner/IF circuitry equals—or excels—any we know.)



Put it all together and you can see Tandberg has actually built three separate components—and overcome the problems of combining them on one chassis. Your ears can tell you more than our technical descriptions. So we invite you to listen to the new TR-2075. But don't compare it only to receivers that cost the same. Compare it to separate components that cost far more.

TANDBERG

We're our only competitor.

Tandberg of America, Inc. Labriola Court, Armonk, New York 10504. Available in Canada.
CIRCLE NO. 65 ON READER SERVICE CARD

FORMERLY HI FI/STEREO REVIEW

Stereo Review®

NOVEMBER 1975 • VOLUME 35 • NUMBER 5

The Music

| | | |
|---|------------------------------------|-----|
| MAURICE RAVEL <i>Is he the most influential composer of the twentieth century?</i> | ERIC SALZMAN | 66 |
| MANUEL ROSENTHAL <i>A Ravel pupil recounts some anecdotes about his teacher</i> | HAROLD LAWRENCE | 73 |
| JACKSON BROWNE: THE PERFORMER <i>"I hated the radio and the music that was on it, you know"</i> | JOSH MILLS | 76 |
| JENNIE TOUREL <i>A brief memoir of "... an honest-to-God Queen of Song"</i> | ROBERT OFFERGELD | 78 |
| THE BASEMENT TAPES <i>What Dylan and the Band were up to in that house in West Saugerties</i> | NOEL COPPAGE | 96 |
| THE RETURN OF JOHN FOGERTY <i>A multi-talented troubadour tries the comeback trail</i> | STEVE SIMELS | 108 |
| STEPHEN STILLS AND NEIL YOUNG <i>Demonstrating the difference between puttering and marking time</i> | NOEL COPPAGE | 118 |
| BERNSTEIN COMPLETES HIS MAHLER <i>Not a stop unpulled in his performance of the Tenth Symphony Adagio</i> | GEORGE JELLINEK | 127 |
| RAVEL'S DAPHNIS ET CHLOÉ <i>"... sounds as if it had been composed only yesterday"</i> | DAVID HALL, JAMES GOODFRIEND | 132 |
| A DAZZLE OF (EARLY EUROPEAN) DANCES <i>Wheezy crumhorns, snarling rackets, buttery sackbutts, golden viols</i> | STODDARD LINCOLN | 142 |

The Equipment

| | | |
|--|------------------------|----|
| NEW PRODUCTS <i>A roundup of the latest in high-fidelity equipment</i> | | 12 |
| AUDIO QUESTIONS AND ANSWERS <i>Advice on readers' technical problems</i> | LARRY KLEIN | 16 |
| AUDIO BASICS <i>Schools for Sound</i> | RALPH HODGES | 23 |
| TAPE HORIZONS <i>Regular Maintenance</i> | CRAIG STARK | 24 |
| EQUIPMENT TEST REPORTS <i>Hirsch-Houck Laboratory test results on the B&O Beogram 4002 record player, Allison One speaker system, Yamaha CR-800 AM/FM stereo receiver, and Uher CR 134 stereo cassette recorder</i> | JULIAN D. HIRSCH | 27 |
| QUADRAPHONIC SOFTWARE <i>Getting four channels onto one disc is a ticklish business</i> | CHARLES REPKA | 58 |

The Reviews

| | |
|------------------------------------|-----|
| BEST RECORDINGS OF THE MONTH | 87 |
| POPULAR DISCS AND TAPES | 92 |
| CLASSICAL DISCS AND TAPES | 126 |

The Regulars

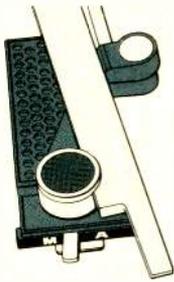
| | | |
|-----------------------------|---------------------------|-----|
| EDITORIALLY SPEAKING | WILLIAM ANDERSON | 6 |
| LETTERS TO THE EDITOR | | 8 |
| TECHNICAL TALK | JULIAN D. HIRSCH | 26 |
| THE OPERA FILE | WILLIAM LIVINGSTONE | 44 |
| THE SIMELS REPORT | STEVE SIMELS | 48 |
| GOING ON RECORD | JAMES GOODFRIEND | 50 |
| THE BASIC REPERTOIRE | MARTIN BOOKSPAN | 54 |
| CHOOSING SIDES | IRVING KOLODIN | 124 |
| ADVERTISERS' INDEX | | 146 |

COVER: Portrait of Ravel by Alan Magee

COPYRIGHT © 1975 BY ZIFF-DAVIS PUBLISHING COMPANY. All rights reserved. Stereo Review, November 1975, Volume 35, Number 5. Published monthly by Ziff-Davis Publishing Company; Editorial and Executive Offices at One Park Avenue, New York, N.Y. 10016; Telephone: 212 725-3500. Hershel B. Sarbin, President; Furman Hebb, Executive Vice President; Vincent Perry, Financial Vice President and Treasurer; Charles B. Seton, Secretary. Also the publishers of Boating, Car and Driver, Cycle, Flying, Modern Bride, Popular Electronics, Popular Photography, and Skiing. One year subscription rate for U.S., \$7.98; U.S. possessions and Canada, \$8.98; all other countries, \$9.98. Second class postage paid at New York, N.Y. and at additional mailing offices. Authorized as second class mail by the Post Office Department, Ottawa, Canada, and for payment of postage in cash. SUBSCRIPTION SERVICE: Forms 3579 and all subscription correspondence should be addressed to Stereo Review, Circulation Department, P.O. Box 2771, Boulder, Colorado 80302. Please allow at least eight weeks for change of address. Include your old address, as well as new - enclosing if possible an address label from a recent issue.

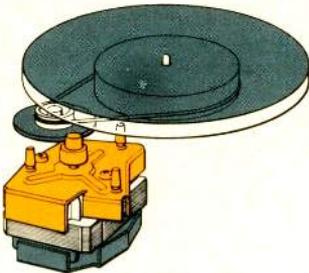
Four questions you multiple-play

1. Does it perform as well as any single-play turntable?



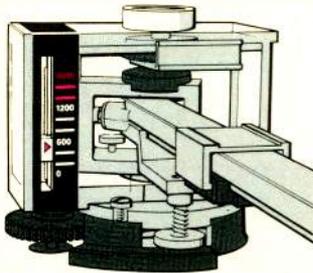
There are some who believe that a single-play turntable is somehow inherently better than a multiple-play unit. All right—the Z2000B *is* a single-play turntable. Its capacity to function as a multiple-play unit offers convenience with no compromise of performance. The *automatic* mechanism which gently indexes the arm, lifts it at the end of play, returns it to the arm rest and shuts off the motor—is completely disengaged during record play. A 2-position control sets the proper vertical tracking angle for single or multiple play. The Z2000B can truly be called the automated, single-play turntable with multiple-play capability.

2. Does it have belt-drive and variable speed?



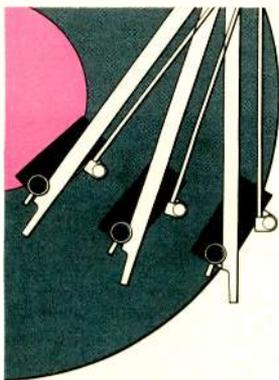
Garrard engineers have attained remarkable results by combining the world famous Synchro-Lab motor and an inventive belt/idler drive combination. A 5 lb., die-cast, dynamically balanced platter is rotated via a flexible belt. Not only are the tiniest fluctuations of speed smoothed out, but an extraordinary -64dB rumble is only one example of the impressive specifications achieved. A variable speed control corrects out-of-pitch recordings and an illuminated stroboscope provides optical confirmation. The Z2000B combines all of these elements to achieve the main goal of Garrard engineering: superior performance at reasonable cost.

3. Does it handle records gently?



All responsible turntable manufacturers are concerned with protecting your records. With Garrard, it's an obsession. The Z2000B boasts an array of features designed solely to prolong the life of your records. In addition to the exclusive, articulated tonearm, it incorporates an exceptionally accurate magnetic anti-skating device. Cueing is viscous damped in *both* directions. The ingenious built-in automatic record counter keeps track of how many LP sides the stylus has played. And unlike some of the highest priced changers that support records only at the center hole, the Z2000B supports them at the hole *and* edge, and the release mechanism operates at *both* points. Protection for your records indeed!

4. Does it eliminate tracking error?



The grooves of a record are cut by a stylus that travels in a straight line. Conventional playback tonearms move in an arc. The difference between these two paths is called "tracking error." Simply stated, tracking error launches a cycle of distortion and record wear. In good design, the error is averaged over the record so that distortion is minimal. But such compromise was unacceptable in the Z2000B. What Garrard engineers did about it was summed up by High Fidelity Magazine which described the Zero Tracking Error Tonearm as "... the best arm yet offered as an integral part of an automatic player." The Z2000B is the *only* automatic turntable in the world without tracking error.

For your free copy of the New Garrard Guide, write to Garrard, Division of Plessey Consumer Products, Dept A, Plainview, New York 11803.

must ask about any turntable.



The Garrard Z2000B. Yes. Yes. Yes. Yes.



\$229.95

Garrard
The Automatic Choice

CIRCLE NO. 22 ON READER SERVICE CARD

Stereo Review

PUBLISHER
EDGAR W. HOPPER

EDITOR
WILLIAM ANDERSON

MANAGING EDITOR
WILLIAM LIVINGSTONE

EDITORIAL COORDINATOR
LOUISE GOOCH BOUNDAS

MUSIC EDITOR
JAMES GOODFRIEND

TECHNICAL EDITOR
LARRY KLEIN

ART DIRECTOR
BORYS PATCHOWSKY

ASSOCIATE TECHNICAL EDITOR
RALPH HODGES

POPULAR MUSIC EDITOR
STEVE SIMELS

ASSISTANT MUSIC EDITOR
VIVIENNE WINTERRY GOODMAN

PRODUCTION EDITOR
PAULETTE WEISS

CONTRIBUTING EDITORS

CHRIS ALBERTSON
MARTIN BOOKSPAN
NOEL COPPAGE
RICHARD FREED
DAVID HALL
ROY HEMMING
JULIAN D. HIRSCH
GEORGE JELLINEK
IGOR KIPNIS
IRVING KOLODIN
PAUL KRESH
STODDARD LINCOLN
J. MARKS-HIGHWATER
LINCOLN PERRY
PETER REILLY
ERIC SALZMAN
CRAIG STARK
JOEL VANCE
ROBERT WINDEI ER

LONDON EDITOR
HENRY PLEASANTS

ADVERTISING DIRECTOR
JAMES J. SULLIVAN

ADVERTISING SERVICE MANAGER
LINDA BLUM

ASSOCIATE PUBLISHER
STANLEY NEUFELD

EXECUTIVE ASSISTANT
PEGI McENEANEY

Editorial and Executive Offices
Ziff-Davis Publishing Company
One Park Avenue, New York, New York 10016
212 725-3500

Eastern Advertising Manager: Richard J. Halpern
Midwestern Office: The Pattis Group
4761 West Touhy Ave., Lincolnwood, Ill. 60464
312-679-1100
Arnold S. Hoffman

Western Office
9025 Wilshire Boulevard
Beverly Hills, California 90211
213 273-9050, 272-1161

Western Advertising Manager: Bud Dean
Japan: James Yagi
Oji Palace Aoyama, 6-25, Minami Aoyama
6-Chome, Minato-ku, Tokyo, Japan
Telephone: 407-1930/6821, 582-2851

Circulation Office
P.O. Box 2771 Boulder, Colorado 80302

EDITORIAL CONTRIBUTIONS must be accompanied by return postage and will be handled with reasonable care; however, publisher assumes no responsibility for return or safety of art work, photography, or manuscripts.

Member Audit Bureau of Circulations



ZIFF-DAVIS PUBLISHING COMPANY
Hershel B. Sarbin, President
Furman Hebb, Executive Vice President
Vincent Perry, Financial Vice President and Treasurer
Phillip T. Heffernan, Senior Vice President, Marketing
Edward D. Muhlfield, Senior Vice President, Sports Div.
Philip Sine, Senior Vice President
Frank Pomerantz, Vice President, Creative Services
Arthur W. Butzow, Vice President, Production
Lawrence Sporn, Vice President, Circulation
George Morrissey, Vice President
Sydney H. Rogers, Vice President
Sidney Holtz, Vice President
Al Traana, Vice President
Philip Korsant, Vice President
Charles B. Seton, Secretary
Edgar W. Hopper, Vice President, Electronics Div.

William Ziff, Chairman
W. Bradford Briggs, Vice Chairman



EDITORIALLY SPEAKING

By WILLIAM ANDERSON

SINS OF THE CRITICS

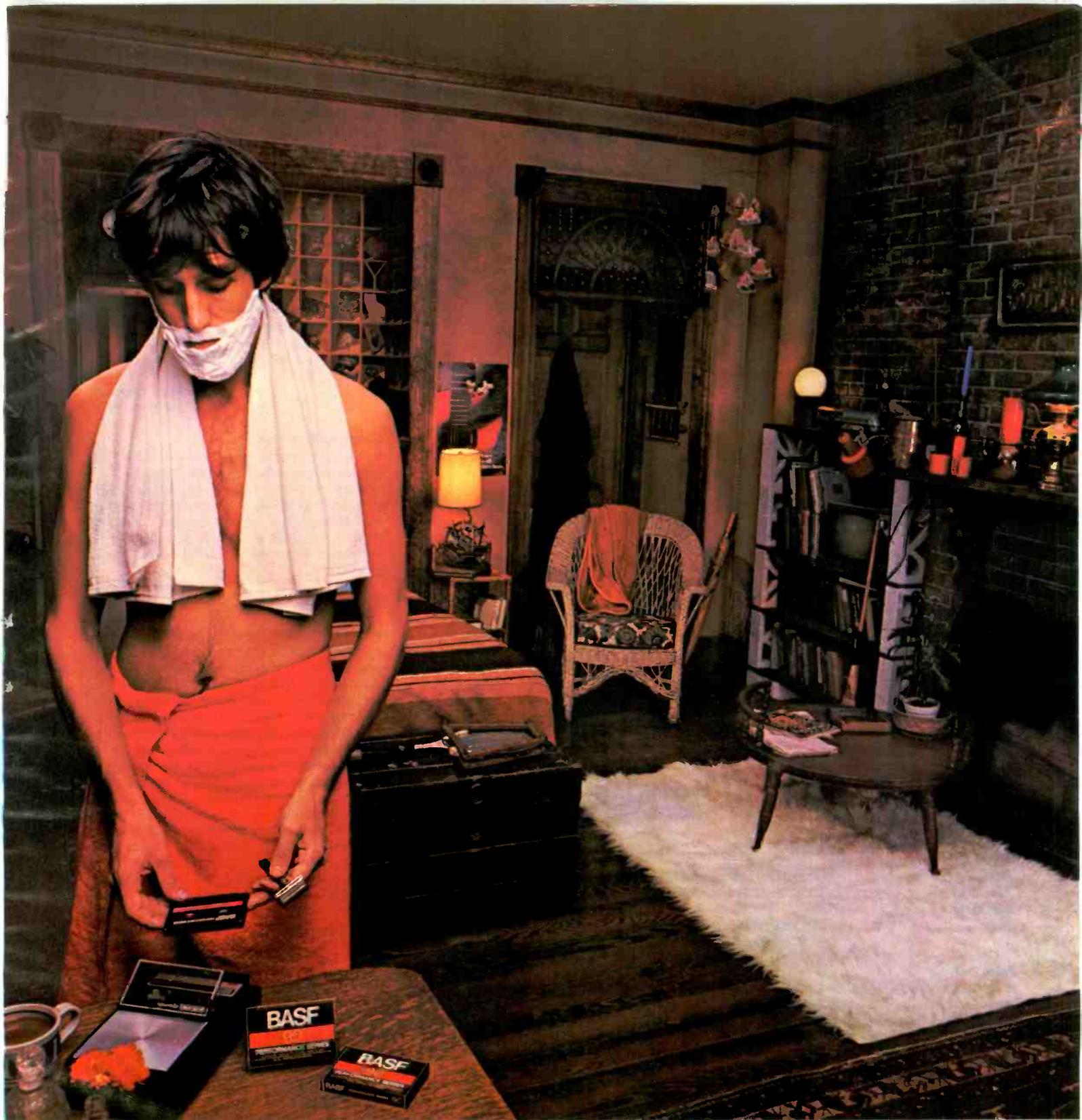
JUST as there is a limit to the amount of audio power a given loudspeaker can take without going into distortion or blowing up, there is a limit to the amount of information any one of us can accept and process without drawing a blank or going quietly bonkers. In the world's whole history, no generations other than our own have ever faced so concentrated, so unremitting, so infinitely various and devilishly attractive a barrage from the so-called "media." Newspapers, magazines, books, radio, TV, recordings, movies, and even telephones have us in their sights waking and sleeping. Little wonder that many with slight appetite and/or low tolerance for these kinds of botheration head for the hills, that others avoid bookstores, record shops, and newsstands, let subscriptions expire, and unlist their telephones.

But such avoidance tactics are only half solutions, for in that welter of messages there are many that are interesting or entertaining, others that are useful, perhaps even a few that are vital. A better solution, therefore, is to install a personal filter system, a network of deputies to handle the "in" box and separate what is important from what is trivial. We call such deputies "critics"; one can find them working, ready to be consulted, in every field from poetry to politics. Without meaning to make any comparison between their functions, I think one should be at least as careful in choosing a critic as in choosing, say, a dentist. Do not, first of all, rule out a critic simply because he does not share your biases; someone you *always* disagree with is at least recommended by his admirable consistency. Treasure him—but at an angle of 180 degrees. Do, however, rule out at once all those venial sinners, the picky pedants, the paraders of knowledge, the dull writers, the petty, the tasteless, the ignorant, the sophomores in judgment (chronological age notwithstanding). You will then be free to protect yourself from subtler threats to your intellectual balance, those cardinal sinners, otherwise blameless, whose opinions are disfigured by some fatal critical flaw such as . . .

● *The Hanslick Fallacy:* Poor Eduard Hanslick, as the half-educated never tire of reminding us, was Wrong About Wagner. He was also Right About Brahms and a lot of other composers, and he was "wrong" about Wagner in a way that was perfectly right for his own time. Therefore, beware the critic pridefully more concerned with being "right" a hundred years hence than with being useful now. Opinions, even opinions about greatness in art, change with the needs of the times. Composers (some of them) may have to wait to be appreciated, but that is posterity's business, not ours. And who are we to deny them the innocent pleasure of feeling superior?

● *The Fallacy of the Single Standard:* We are evidently a good deal cleverer about our stomachs than we are about our ears. We would not, for example, criticize pizza for not measuring up to *quiche Lorraine*, Coke for failing to remind us of Cabernet Sauvignon. But how easy it is to fall into the trap of condemning a major composer's minor works (is it inconceivable that he intended them that way?) or a minor composer for not being a major one. "Nothing but the best" is a very thin diet indeed. It leads, paradoxically, to its own kind of satiation: starvation through boredom. You should go on "red alert" whenever you find a critic comparing a composer or performer with another who is patently out of his or her league.

● *The Ad Hominem Fallacy:* There are, it appears, no more men, women, or people in performing life, only "personalities." That may be okay for the general public, free to drift as they will with their unexamined prejudices, but we expect more of the critic. His eye is supposed to be on the art, not the artist—and not the audience either. If a critic has so little to say about the performance itself that he must turn his basilisk glare on the performer's face, form, or private life, if he must deplore the audience's witless taste, he doesn't belong on your team either, for in exercising his ill humor he places his satisfaction before yours.



**If you've never heard music on BASF tape before,
turn the page and see how it sounds.**



LETTERS TO THE EDITOR

American Music Awards

● The American Music Conference, an educational and research association, is inaugurating its American Music Awards to honor composers and performers who have influenced the development of all aspects of American music. The initial list, to be announced in July 1976, will include approximately two hundred musicians, both living and dead. Candidates already under consideration include Charles Ives, William Billings, Louis Armstrong, John Phillip Sousa, Aaron Copland, Bessie Smith, W. C. Handy, Scott Joplin, Irving Berlin, and George M. Cohan.

Nominations are welcome from the general public and the music industry and should include native-born Americans and/or those who reached their musical maturity in the United States. A jury of outstanding musicians will review the list and make the final selections. Additions to the list will be made at five-year intervals.

Anyone wishing further information about the American Music Award, or interested in entering nominations, should contact the American Music Conference, 150 East Huron Street, Chicago, Illinois 60611.

CLARA DEGEN
Chicago, Ill.

John Denver

● Noel Coppage's ridiculous article on John Denver (September) deserves only one evaluative and summary comment: Pfffft!

A. HUMPHREY
Atlanta, Ga.

● Noel Coppage drives home the central quality about John Denver and his music in the first few paragraphs when he says that the Middle Class produced Denver. Precisely! The same Middle Class that gave us McDonald's, Five-Day Deodorant Pads, Astroturf, and Richard Nixon could not help but deliver on a plastic, pre-packaged, sanitized, shallow hype like John Denver.

Why an articulate person like Noel Coppage sees fit to add to the mass-media deification of America's primo pine needle junkie is beyond me. Had this same article on Mr. Far-Out been printed in *National Lampoon*, it would have stood excellently on the basis of its ludicrous direction and content. John Denver talking about "art" and "truth" is a

philosophical absurdity, and to print such trash is a waste of paper and ink.

MARK FAHRENKRUG
Newburgh, Ind.

● I had thought of John Denver as a fast-buck singer—country for the audience, soft rock for the identity—until I read Noel Coppage's excellent and convincing article. I see now that nothing in his music is intended to be spectacular, not even *Take Me Home, Country Roads*. Mr. Coppage's words, "Good people, the ones I see every day running the libraries and things in small New England towns," brought out another element—that John Denver and those surrounding him are congruent with my concept of sincere friendliness, with the ability to communicate about any subject in a simple, well-thought-out way and to share knowledge of what makes for optimum peace of mind.

ALEXANDRE G. BARBIER
Elmira, N.Y.

● Come on—you blew a great article on John Denver with a plug of "est," the rip-off of the century. STEREO REVIEW usually does an outstanding job with monthly interviews, but this one stinks. What a shabby way to show a star like Denver.

GARY JOHNSON
Minneapolis, Minn.

● Thank you for your September cover story on John Denver. I have long felt and admired—both through media observations and through the music—the "toughness" yet "innocence" of the man. I could never have summed it up the way Noel Coppage did. Maybe Mr. Coppage has some of Denver's skill in simplifying the complicated. Anyway, the article was informative, positive, and just a pleasure to read. It's nice to get an inside look at someone with an inside worth looking at.

ROBERTA ROSENFELD
Reedsville, Pa.

● One night back in the 1960's in a smoky little Washington, D.C., folk club called the Cellar Door, my wife and I watched John Denver lope on-stage in his first appearance as replacement for Chad Mitchell in the Chad Mitchell Trio and belt out *Long Tall Texan*

with the same grinning, jug-eared exuberance that remains with him in 1975. Although I'm not a rabid Denver fan—for me his lyrics fall a little short of real life—his consistent good-humoredness and pleasant voice have earned his records a place in my collection. Moreover, I've always had a feeling that there was more substance to Denver, more depth and conviction, than his lyrics hint, and I've been irritated with writers and columnists who treated him as all presence, no brain.

So, quite simply, Noel Coppage's thoughtful article was the finest on Denver that I've read. Peeling away and discarding the show-biz veneer, the easy answers, as Coppage did, is demanding journalism. That Denver is dissected and yet emerges as a whole person and not a freak is a tribute to him and to Coppage's sense of painstaking responsibility. More Coppage!

AVERY COMAROW
New York, N.Y.

Sleeping Beauties

● Please continue James Goodfriend's September column on "Sleeping Beauties." In reading this article, I happily discovered that I own three of these genuine golden oldies. I am sure many of us who have been collecting records for some years will be delighted to rediscover treasures we already own. More, please.

ELIZABETH FORD
Washington, D.C.

● Music Editor James Goodfriend's July column on "Sleeping Beauties" was so delightful STEREO REVIEW should make it a regular feature, inviting all critics and guests to contribute. Mr. Goodfriend's mention of the Eastman Wind Ensemble should remind record companies that they could celebrate the Bicentennial by reissuing, at the very least, the Ensemble's incomparable performances of American wind music: Robert Russell Bennett's *Suite of Old American Dances*, Samuel Barber's *Commando March*, Vincent Persichetti's *Psalm and Symphony*, and Peter Mennin's *Canzona*. Finally, I'd like to offer one of my favorite Sleeping Beauties: Zino Francescatti's recording of violin concertos by Niccolò Paganini and Camille Saint-Saëns. The performances are marvelous and the record is still listed in Schwann-2!

ALAN M. COOPER
New Haven, Conn.

Scotto

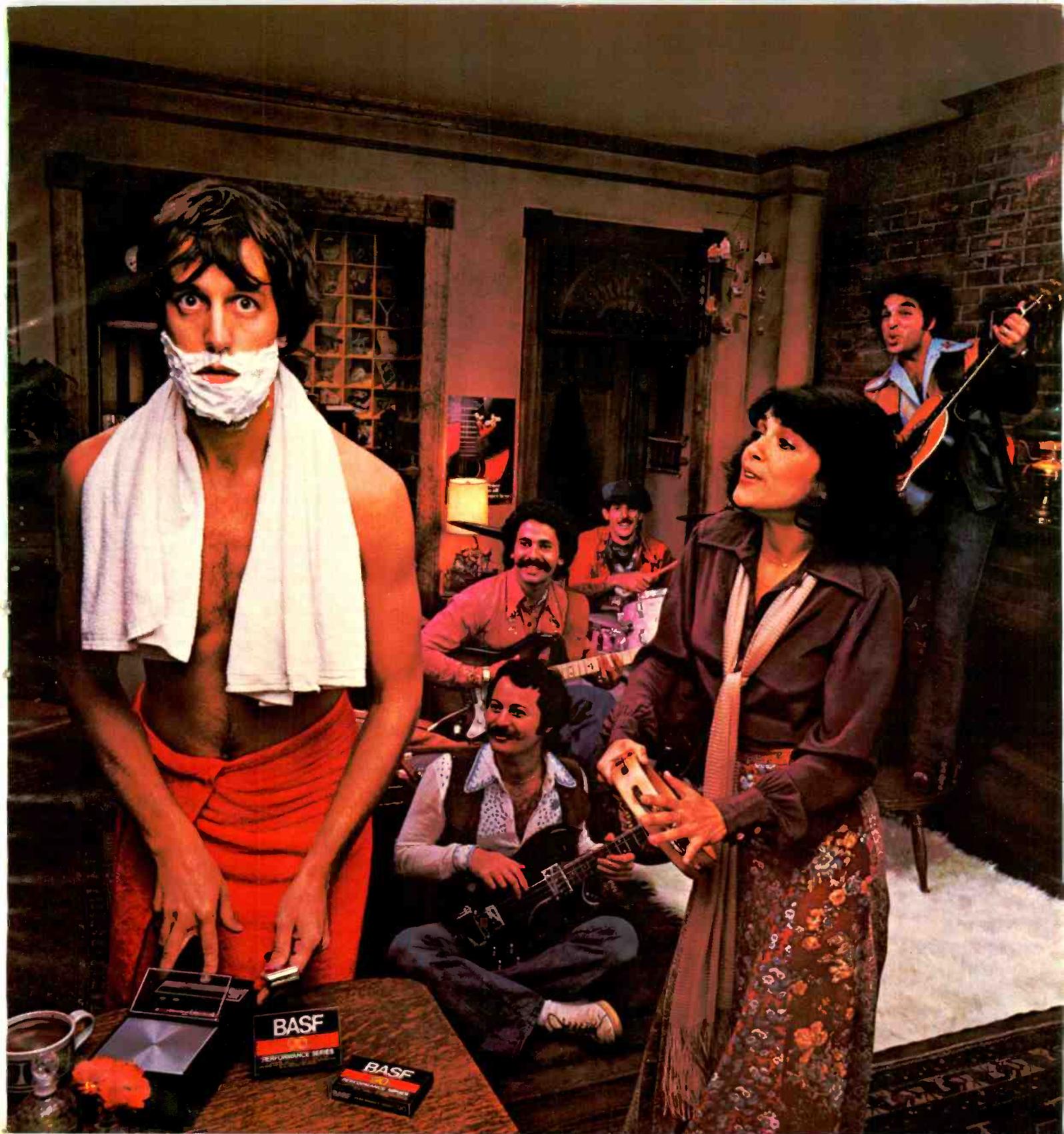
● Thank you for William Livingstone's September review of Renata Scotto's new discs; it is nice to know that at least one critic feels we in the U.S. don't get enough of her recordings. I have thought so ever since I bought the first record I had ever seen her name on almost ten years ago: "Monte Carlo Opera Gala" (Deutsche Grammophon SLPM 138653).

VERNON BARTHOLOMEW
San Francisco, Calif.

Opera Fans

● I was amused by Peter J. Kaufman's letter (September), in which he complained that Renata Scotto revived interest in Bellini's *I Capuleti* only to see Beverly Sills record it. The passionate devotion of fans like Mr. Kaufman is part of what makes the whole subject of opera so exciting. The letter reminded me of an article I read on the bel canto revival: Montserrat Caballé was quoted as saying,

(Continued on page 10)



BASF sound is so clear and true, nothing comes between you and the music.

What you experience when you listen to music you record on BASF tape is simply this: the music. Pure and clear.

How does BASF make this phenomenal clarity happen? By polishing the tape. Literally.

When tape is made, it has thousands upon thousands of tiny bumps and ridges that can cause background noise. By getting rid of most of them, we get rid of most of the noise as well.

And to make sure the sound you *do* hear is all there, we give the tape incredible range and response by

using a highly magnetizable dense oxide coating.

Of course, when you listen to music this rich and clear, you don't just hear it. The music happens. (Which may come as a surprise if what you've been experiencing until now is background noise.)

Now if all this sounds too good to be true, there's something we'd like to point out. BASF invented audio tape in the first place. Giving us lots of time to perfect it.

So it isn't surprising we sound so much like the original. You see, we are the original.

BASF. We sound like the original because we are the original.

CIRCLE NO. 11 ON READER SERVICE CARD



"Leyla Gencer exhumes these forgotten operas; Beverly Sills records them; I sing them." Caballé probably never said that, but if she didn't, she should have.

JOHN LONG
New York, N.Y.

Hardware/Software

● Ralph Hodges and STEREO REVIEW should be commended for September's coverage of the Chicago Consumer Electronics Show. Given the scope of the show, reportage has to be somewhat limited, but Mr. Hodges was surprisingly comprehensive in his approach. Dividing the report into various component sections was a very thoughtful aid which did not go unappreciated.

Steve Simels' contribution on the software

side of audio certainly fits my ideal of what a music critic is supposed to do. Critics aren't around to trash records—they're here to inform the public of good music that may otherwise have been missed. Mr. Simels did us all a service in his column by sharing a bit of the wealth of excellent and unrecognized folk-based music of English groups such as Fairport Convention and Steeleye Span.

ESAU SIMMONS
Bronx, N.Y.

Mea Culpa, You All

● First, I had to remove the St. Christopher medal from the dashboard of my Corvaire. Then I had to take the Nixon souvenir ashtray off the coffee table. Now I'm told Steve Simels is fallible and has turned himself in,

using his September column ("The Critic Recants") as a confessional. How much more can I take? Next, Julian Hirsch will claim that my Oompah speakers are not state-of-the-art. I warn you, Mr. Hirsch—I'll o.d. on Bon Vivant consommé!

DALE PIZZINI
Springfield, Va.

● I must write to you while the enthusiasm over Steve Simels' September column is fresh in my mind. Honesty is a rare quality today—especially in a reviewer.

CARLA J. LUCHT
Lowell, Mass.

Eagles: Another Clutch

● I was very upset to read "The Proficient Eagles" by Steve Simels (August). He says, "I can't explain why the group hasn't done any better than they have done." Well, Steve, what's wrong with being No. 1?

RICK PRATT
Springfield, Va.

● Just because Steve Simels thinks the sun rises and sets on Mick Jagger and heavy rock in general doesn't mean that everybody does. The Eagles (August) happened to come along at a time when people were ready for a more together, more mellow sound of the Seventies. As far as tight music goes, the Eagles are in a super class by themselves. And the fact that an egotistical rock would-be can sit down at a typewriter and severely dismember a very worthwhile effort by a group of serious performers who make not good music but refreshingly *great* music just blows my mind.

KENNETH J. FLANAGAN
Glastonbury, Conn.

● In his "Eagles" article (August), Allan Parachini says he is still looking for a new musical messiah. Well, look no more, Allan; he's here and his name is Bruce Springsteen.

TOM COLUMBO
West Orange, N.J.

Greek Glitch

● David Hall, to my surprise, committed a grammatical horror in his review of Stokowski's *Eroica* (September). He uses *kudos* as a plural word—there's no such thing as a "kudo." It's like saying "praise are due the horns. . . ."

DAVID PIERCE
Vero Beach, Fla.

The Editor replies: Mr. Pierce (and others) is perfectly correct, and we're ashamed of ourselves. One more demonstration of how the general illiteracy wears away the once-sharp tools of communication. One way to keep out of trouble, of course, is to use very little Latin and even less Greek: the English language contains quite enough challenge for anybody.

Pope's Handel

● Paul Hennessey's letter (August) completely misrepresents Alexander Pope's attitude toward Handel in *The Dunciad*. The poem is meant to praise Handel in the strongest possible terms.

*Strong in new Arms, lo! Giant Handel stands,
Like bold Briareus, with a hundred hands;
To stir, to rouze, to shake the Soul he comes,
And Jove's own Thunders follow Mars's Drums.*

Pope, in fact, had written the libretto for Handel's first oratorio, *Esther*, in 1720, and

Accuphase

The critical acclaim
has been as impressive
as the product
itself.

These independent
test laboratory reviews
and these superb
stereo components are
now readily available.

RSVP

TEAC Corporation of America
7733 Telegraph Road, Montebello, California 90640

later explained that he praised Handel in his poem because "merit in every branch of science ought to be encouraged."

Pope's confusion, owing to his admitted lack of musical knowledge, is hardly helpful: when he refers to "chromatic tortures," he seems not to have understood that such tortures were *introduced* by Handel.

EDWARD MENDELSON
New Haven, Conn.

● Paul Hennessey, in his August letter, is incorrect in suggesting that Alexander Pope shared James Goodfriend's indictment of Handel, for Pope's comments on Handel are regularly favorable. And Handel's setting of Pope's "Where-e'er you walk, cool Gales shall fan the Glade" goes some distance toward contradicting Mr. Goodfriend's view of Handel's music.

WILLIAM DICKEY
San Francisco, Calif.

Elton John and Superfluity

● I don't mind subjective criticism. In fact, I'd say that music criticism and objectivity are a contradiction in terms. However, Peter Reilly has abandoned criticism in his review of Elton John's latest: "Elton John . . . make(s) reviewing or criticism superfluous." Why? I don't think that Elton John's communication with a huge audience exempts him from criticism. If it does, then what is the role of the critic? To reinforce public opinion?

DAVID ROSENAK
Ventura, Calif.

● I thought the review of "Captain Fantastic and the Brown Dirt Cowboy" was great. Peter Reilly is right in saying that you can't describe Elton's music in words—but Bernie Taupin does it in his lyrics. I may not understand what he's talking about all of the time, but he still touches me.

SHARRESE KALIBJIAN
Livermore, Calif.

Tatum

● I must compliment Irving Kolodin on his September column on Art Tatum. Mr. Kolodin certainly chose one of the greatest jazz pianists known. Art Tatum may never make your front cover, but perhaps someday his equal will. May I suggest Oscar Peterson?

GARY FARR
Tampa, Fla.

Schiøtz

● Irving Kolodin's tribute to the late Aksel Schiøtz (August) recalled to me my one encounter with his art. In May 1960 I was a member of the M.I.T. Choral Society for a performance of the Bach *St. Matthew Passion*. Klaus Liepmann, the society's leader, was our conductor, Blake Stern was a moving Evangelist, and the soloists included such Boston luminaries of that day as Phyllis Curtin, Eunice Alberts, and Paul Matthen. Aksel Schiøtz was Jesus. I remember to this day his dignity of bearing, the stiffness of his face, the nobility of his projection. I did not know at the time how deep his understanding of suffering went.

HARRY WELLS MCCRAW
Hattiesburg, Miss.

Baez

● I didn't think it was possible to analyze the beauty of Joan Baez's art, but Peter Reilly came very close to accomplishing this feat in

his review of "Diamonds and Rust" (September). His articulate description of her vocal qualities will be cited whenever I'm asked why I'm such an avid Baez fan. And it was good to see Joan Baez cited *twice* in Best of the Month. Both Peter Reilly and Noel Coppage should be commended for their ability to make musical evaluations without becoming involved in analyzing Baez's political convictions. I realize that her politics and her music stem from the same philosophical idealism and human sensitivity, but too many critics who react negatively to her politics let their political reactions color their aesthetic responses.

PAUL GOODNATURE
Albert Lea, Minn.

Hollywood Goo

● It grieves me that Paul Kresh could equate Alex North's brilliant *Spartacus* score (September) with the kind of Hollywood goo dished out by such skillful but uninspired composers as Elmer Bernstein, Victor Young, and Miklos Rozsa. North's passionate, eloquent score transcends the genre of mere film music and is both innovative and creative in its own right—just think of the superb *fugato* under Saul Bass' chilling main titles, the music itself crumbling into the most dissonant harmonies as the final statue begins to disintegrate on the giant screen, foretelling plainly the decline of the Roman Empire. There is nothing overblown or conventional about North's greatest film achievement.

DANIEL GREGG
Bronx, N.Y.

From Teaneck to Tenafly

● Drummond McInnis must have slipped on the wrong disc when he refers to Teaneck, New Jersey, as the home of the young Lesley Gore (June). She was a resident of Tenafly, New Jersey.

CHARLES EVERETT
Sag Harbor, N.Y.

Mr. McInnis replies: Sorry, but we're both right. Before Miss Gore scored her recording successes, she was a resident of Teaneck, New Jersey, moving to Tenafly at age sixteen or thereabouts.

Cryptoquad Revisited

● The "quad identity crisis" persists. In the September Letters column, Jay Rudko says he hopes Polydor will release a four-channel version of the *Tommy* movie soundtrack. It's been done, and is available as a QS-encoded record. Another "secret" QS album just released is Ray Thomas' (ex-Moody Blues) album "From Mighty Oaks." Angel has been kind enough to send me a mimeographed copy of all their SQ releases, some of which do *not* carry the double-circle logo that is supposed to identify quadrasonic releases. However, the company says all its SQ albums will carry this logo in future press runs.

BRIAN A. MOURA
Hayward, Calif.

Yes, and Angel's parent company, EMI of England, has announced that all future classical releases in that country will be in stereo-compatible SQ quadrasonic to avoid the expensive "double inventory" (stereo and four-channel) problem on both the production and retail ends. American Angel has not yet gone along, but it can only be a matter of time.

The market goes up and down.



But English Leather hangs in there steady.

Today's market makes any man look for solid value. Suddenly, spending a lot for expensive colognes doesn't seem so smart.

Not when there's English Leather®. It has a fragrance that says class and a price tag that doesn't say rip-off.

Then too, smart women like smart men. So invest in English Leather liquid assets.

MEM COMPANY, INC. Northvale, N.J. 07647 © 1975

NEW PRODUCTS

THE LATEST IN
HIGH-FIDELITY
EQUIPMENT

Scott RD 1000 Digital Stereo FM Receiver

The standout feature of H. H. Scott's most elaborate stereo receiver, the FM-only RD 1000, is its frequency-synthesizing FM section. Based on techniques developed for the company's Model T33S, the tuner section now incorporates a built-in memory in which ten stations can be preprogrammed for instantaneous recall. Frequencies of the stations to be programmed are "read" into the memory via a ten-button keyboard and are retained permanently, even when the receiver is turned off or unplugged, until deliberately cleared. Any station thus stored in the memory can be tuned in automatically at the touch of a single pushbutton. In addition, there is a manual tuning mode in which the station's frequency is simply punched in on the keyboard and a scanning mode that causes the tuner to sweep up or down in frequency,



bringing in all stations along the way or, if desired, only the stereo stations. The tuned frequency is indicated by a brightly lit light-emitting diode (LED) digital display; additional LED's show signal strength, register the presence of multipath, and indicate the operating mode of the tuner.

The RD 1000's FM-tuning circuits are referenced to a quartz-crystal oscillator, and a phase-locked loop is employed in the multiplex section. Basic specifications include an IHF sensitivity of 1.7 microvolts, an ultimate signal-to-noise ratio of 70 dB, and a frequency response of 20 to 15,000 Hz \pm 1 dB. Alternate-channel selectivity is 100 dB, capture ratio 1 dB, and AM suppression 75 dB. Spurious-response rejection is 100 dB. The tuner has 40-dB stereo separation at 1,000 Hz, and harmonic distortion is 0.2 per cent in mono, 0.3 per cent in stereo. The FM de-emphasis is switch-selectable between 25, 50, or the standard 75 microseconds. The tuner also has a switchable filter to blend the high frequencies for reduced noise on stereo broadcasts.

The amplifier section of the RD 1000 is rated at 100 watts per channel from 20 to 20,000 Hz with both channels driven simultaneously into 8 ohms. Harmonic and intermodulation distortion are, respectively, 0.15 and 0.1 per cent at rated output. Controls include knobs for bass, treble, and mid frequencies as well as volume and balance, and there are pushbuttons for six inputs (two phono, two tape, FM, and AUX), tape monitoring (two three-head tape machines are accommodated), high- and low-cut filters, loudness compensation, tone-control bypass, mode, and audio muting. A final pushbutton introduces an accessory such as a graphic equalizer into the signal path.

There are front-panel inputs and outputs for one of the tape machines and a stereo headphone jack. The RD 1000 has a black wooden cabinet with overall dimensions of 21 $\frac{1}{4}$ x 6 $\frac{5}{8}$ x 13 inches. Price: \$1,500.

Circle 115 on reader service card

Sansui Linear Motion Speaker Systems

The LM series of three new speaker systems for Sansui employs a unique tweeter configuration. In each system, a 2 $\frac{1}{2}$ -inch cone tweeter is mounted on a separate baffle that includes three exponential horn-loaded slots through which the rear radiations of the tweeter are directed straight up and to either side. The front of the tweeter operates as a conventional direct radiator. Aside from increasing the high-frequency acoustical output of the system, this technique is said to improve stereo imaging. For low frequencies the LM speakers employ vented cabinets with woofers of 10 (Model LM-330, shown), 8 (LM-220), and 6 $\frac{1}{2}$ (LM-110) inches. Frequency responses for the three systems extend up to 20,000 Hz, and down to 31 Hz for the Model LM-330, 32 Hz for the LM-220, and 38 Hz for the LM-110. Other specifications for the systems, in the same order: peak power-handling capability, 60, 45, and 35 watts; output (for a 1-watt input measured at a distance of one meter), 92, 91, and 90 dB. The crossover frequency for all three systems is 2,000 Hz, and the nominal impedance is 8 ohms. Rear-panel controls are provided to



adjust the output levels of the tweeters. The walnut-grain cabinets of the systems measure, respectively, 28 x 12 $\frac{1}{4}$ x 12 inches, 24 $\frac{1}{2}$ x 11 x 10 inches, and 21 x 9 $\frac{3}{4}$ x 7 $\frac{3}{4}$ inches. The dark cloth grilles are removable. Prices: \$199.95, \$169.95, and \$124.95.

Circle 116 on reader service card

Kenwood KX-620 Stereo Cassette Deck

The KX-620 is Kenwood's first front-loading cassette deck and also the least expensive unit in the company's present line. The machine is equipped with Dolby-B noise reduction as

well as switchable bias for ferric-oxide and chromium-dioxide tapes and equalization for standard, chromium-dioxide, and ferrichrome formulations. Push keys control the transport, which has a pause function and employs an extra-large capstan and a feedback-controlled d.c. servo motor. The recording levels are set by two large control knobs



concentrically mounted and affecting both line and microphone inputs. When recording from microphones, an attenuator can be switched in when necessary to avoid overload of the mike inputs. The microphone jacks are located on the front panel along with a stereo-headphone jack.

Frequency response is 40 to 11,000 Hz \pm 3 dB for iron-based tape formulations, and 40 to 12,000 Hz \pm 3 dB for chromium dioxide. Signal-to-noise ratios are 50 (standard tape) and 53 (chromium dioxide) dB with Dolby noise reduction, which improves both figures by 8 dB when in use. Size of the Kenwood KX-620 is approximately 17 x 5 $\frac{1}{2}$ x 11 $\frac{3}{4}$ inches. Price: \$219.95.

Circle 117 on reader service card

Phase Linear 1000 Autocorrelator Noise Reduction System

The ingenious signal-processing circuitry of the Phase Linear 4000 preamplifier is now available in a self-contained accessory stereo unit, the Model 1000, for addition to any existing audio system. The principal operating feature of the Model 1000, the Phase Linear "autocorrelator" noise-reduction system, affords approximately 10 dB of noise reduction above 2,000 Hz with any program material. No preprocessing or encoding of the material is necessary.

The autocorrelator is a complex and sophisticated approach to noise reduction. Over fixed time increments, the "history" of the input signal is examined in such a way as to permit music (correlated information) to be distinguished from noise (uncorrelated information). From these data are derived control voltages that effect the opening and closing of a series of one-octave-wide filter gates acting above 2,000 Hz. The gates, normally closed, are opened in the presence of music both at the fundamental frequency and at frequencies corresponding to the overtones of the fundamental (since overtones or higher harmonics can be assumed to accompany a musical fundamental). The operation of the gates is also

(Continued on page 14)

THE ESSENTIALS

IF YOU CALL THESE ACCESSORIES,
SO ARE YOUR RECORDS.

DISCWASHER: The superior record cleaning system. Without exception. \$15.00.

SC-1: The first precision cleaning and viewing instrument for delicate styli. \$6.00.

D'STAT: Audible-static reduction turntable mat. Europe's run-away best seller. \$10.00.

ZEROSTAT: The ultimate antistatic instrument. Positive and negative ion neutralization for records, film, dust covers, or any surface. Nothing to replace. \$29.95.

DISCWASHER FLUID: 16 oz. bottle, the most effective, safest record cleaning fluid known. Recommended for use with SC-1.

DISCORGANIZER: Offers ready access to your essential accessories. \$6.00.



DISCWASHER, INC.
909 University
Columbia, Mo.

ALL PRODUCTS AVAILABLE AT AUDIO SPECIALISTS WORLDWIDE

Crown The Known Value...

at an uninflated price!

An honest value isn't hard to find, if you know an honest supplier. CROWN's reputation for providing more recorder value for your dollar is as old as our company. Nothing would ever cause us to change that.

CROWN recorders offer you day-in, day-out worry-free reliability, plus brilliant performance. Both result from simple, rugged design, with only a few moving parts. The CROWN belt drive and massive flywheel almost completely isolate the capstan drive from any vibration or rumble.

CROWN electronic circuits are carefully designed for maximum reliability, and electronic components are thoroughly tested before assembly. Oversize meters and easy-to-handle-controls make operation simple. The result? A professional tape deck, used to produce quality recordings in many a studio.

Each CROWN transport has undergone 100 hours of testing. Each CROWN recorder has its own performance report, signed, not stamped, by a CROWN inspector. And each CROWN recorder is backed by a one-year full warranty on parts and labor; and an additional two-year limited warranty on parts only. We put the CROWN name on these recorders proudly - we believe they've earned it.

Why not talk to your nearby CROWN dealer about the long-term values of a CROWN recorder. And the uninflated price. It could be the year's best buy.

Write us for his name. CROWN, Box 1000, Elkhart, IN 46514



CROWN
WHEN LISTENING BECOMES AN ART

CIRCLE NO. 14 ON READER SERVICE CARD

NEW PRODUCTS

THE LATEST IN HIGH-FIDELITY EQUIPMENT

affected by circuits that sense the high-frequency content and dynamic rate of change of the input signal in order to prevent the generation of audible side effects ("breathing" or noise modulation, modulation of the signal by the control voltages, etc.). The Model 1000



also contains a comparatively simple dynamic filter acting below 200 Hz to eliminate low-frequency noise (rumble, etc.) occurring below a certain threshold level.

The second function of the Model 1000 is dynamic-range expansion: "Peak Unlimiter" and "Downward Expander" circuits act above and below carefully chosen threshold levels to automatically adjust program levels in a manner said to complement the signal compression usually introduced during recording. The action of these circuits has also been designed to eliminate undesirable audible side effects.

The Model 1000 can be installed within the tape-monitor loop of an amplifier or receiver, in which case the tape-monitor switching facilities of the Model 1000 replace those taken up by its installation. Frequency response is 20 to 20,000 Hz \pm 1 dB, and distortion is under 0.25 per cent. Maximum input before overload is 3 volts rms into the 70,000-ohm input impedance, and maximum output is 8 volts. The autocorrelator and expander circuits can be switched in or out of the signal path independently; both have continuously variable threshold adjustments that permit them to be set for optimum audible performance. The Model 1000 measures 9 1/2 x 5 x 12 inches. Price: \$349. An optional walnut cabinet is available for \$29.00.

Circle 118 on reader service card

Maxell UDXL Cassettes

A new magnetic particle developed by Maxell is said to open the way for significant improvement in the performance of high-output/



low-noise audio tape. The particle consists of an outer shell of cobalt ferrite bonded to a solid, needle-shaped core of gamma ferric oxide. The Maxell process is reported to control particle size and length-to-width ratio

within very close tolerances; particle dispersion and orientation within the tape coating are also held to very high standards. As a result of these efforts, Maxell claims a noise level that is more than 1 dB lower than that of comparable tapes as well as increases in output of 4 dB at low and mid frequencies and 6 dB at high frequencies without any degradation of print-through characteristics. The new tape is available in C-60 and C-90 lengths in Maxell's UDXL series of cassettes.

The cassette shells used in the UDXL series are formed with new tooling to provide precision molding. Tolerances are said to exceed the Philips standards by a factor of three. Internally, the UDXL cassettes employ roller-type tape guides turning on metal pins and carbon-impregnated Teflon slip sheets. Prices: C-60, \$4.89; C-90, \$6.89.

Circle 119 on reader service card

Audio Research D-150 Stereo Power Amplifier

Physically one of the largest and heaviest amplifiers ever built for consumer use, the Audio Research D-150 is a vacuum-tube de-



sign with a rated output of 150 watts per channel into any load impedance from 4 to 16 ohms, with a maximum of 0.5 per cent harmonic or intermodulation distortion. Rated power is available at any frequency from 20 to 20,000 Hz, both channels driven simultaneously. The signal-to-noise ratio is 90 dB.

In common with some other large amplifiers of its type, the D-150 has front-panel meters (separate for each channel) that display the cathode currents of the eight output tubes so that grid biases can be set via the readily accessible screwdriver controls. In their normal mode of operation the meters read output power. A third meter indicates the a.c. line voltage, and an associated switch (which also turns the amplifier on) permits the power-supply voltages to be adjusted correspondingly to fall within the range of safe operation. Designed for optional rack mounting, the D-150 has a 19 x 10 1/2-inch front panel and a depth of 16 1/2 inches. Ventilation is maintained with three built-in cooling fans. It weighs 110 pounds. Price: \$1,995.

Circle 120 on reader service card

PUBLISHER'S NOTICE: Recent fluctuations in the value of the dollar will have an effect on the price of merchandise imported into this country. So, please be aware that the prices quoted in this issue may be subject to change.

18 mg. "tar", 1.1 mg. nicotine av. per cigarette, FTC Report Apr. '75.

Warning: The Surgeon General Has Determined That Cigarette Smoking Is Dangerous to Your Health.

Old Gold pleasure!
Today's good taste!



Get the good taste of today's Old Gold.

© 1975 LORILLARD

AUDIO QUESTIONS and ANSWERS

By LARRY KLEIN *Technical Editor*



Parental Guidance

Q. I am having a dispute with my parents over the question of record damage from cheap phonographs. I am fifteen and own a reasonably good record player with a 1½-gram cartridge installed. My mother likes to play my valuable records on my sister's \$100 compact system. The so-called turntable on this unit has no stylus-force gauge, an unnamed cartridge, and seems to track at about 6 grams. Isn't my mother damaging my records?

MARK BIZER
Amherst, Mass.

A. Probably. There will be an increase of "surface" noise, a loss of high frequencies, and a harshness permanently added to the program material. Good luck in your efforts to make her stop.

Speed Defect

Q. I frequently make cassette copies of my discs and have noticed that when I compare the cassette with the record by switching back and forth between them the tape playback falls behind the disc. There is also a pitch change when I switch that confirms that the tape is running slower by a small amount. This doesn't bother me when listening to the tape by itself, but I wonder whether it is an indication of some defect in my equipment.

R. A. STEPHAN
Carmel, Calif.

A. The question of whether a piece of equipment—any kind of equipment—is "defective" is sometimes difficult to resolve. What I'm saying is there are no hard and fast rules. Obviously, if nothing happens when you push the ON button despite the fact that you've observed all the manufacturer's requirements as to connections, then any reasonable person would judge the equipment to be defective. But when it comes to (as in your example) slightly off-speed operation, or an occasional production of a strange noise, or the tendency to run warm, and so forth, then the user, if dissatisfied, can only hope that the manufacturer's definition of "defective" agrees with his. To return to your specific case, if the manufacturer guarantees your cassette deck to be within a given range of speed accuracy, and the one you are using falls outside that limit, then everyone can agree that it is defective.

Tone-control Design

Q. I have noticed that many of the more expensive components have the normal treble and bass controls plus a switch or switches labeled "turnover," with two separate frequencies indicated. For the treble control there might be a choice of 3,000 and 6,000 Hz; for the bass control, 100 and 250 Hz. Is it useful to have such tone-control switching, and exactly what is its purpose?

CHARLES BOLTAN
Los Angeles, Calif.

A. Many designers have become aware that conventional tone controls do not do a very good job of compensating for practical frequency-response problems. For example, rooms with thin walls or rooms that are too small make it very difficult for even good speakers to deliver bass much below about 70 Hz. With conventional bass tone controls, any attempt to boost the low bass in an effort to provide a flatter response in a specific room will also result in an unneeded boost at 100 Hz and higher—causing boominess or muddiness in the sound.

At the very high end—say, above 10,000 Hz—more or less the same situation exists. The higher frequencies can be soaked up by carpets and heavy drapes or emphasized because of the lack of same. The conventional treble control cannot cope with these situations because it is unable to apply the boost in the frequency areas where it is needed without also injecting boost in areas where it isn't. The accompanying graph A illustrates the problem. Many speakers are also deficient in the upper highs (starting at about 8,000 Hz or so) and would benefit from some equalization.

If tone controls are designed to affect narrow areas that may need adjustment without also disturbing adjacent frequencies, the advantages are obvious. This is what the various controls that have "turnover" switches attempt to achieve, specifically by adjusting the frequency at which the tone control starts to operate or—in technical language—the "turnover point." A few components have a separate mid-range control, and these can be helpful too, mostly because the bass and treble controls are designed to work at frequencies lower and higher than is usual.

In my view, the most useful type of tone control divides the audio frequency band into five or more segments, each of which can be adjusted individually. This permits the knowledgeable user to compensate in those exact

areas that require it (see graph B) without creating unwanted effects in adjacent octaves.

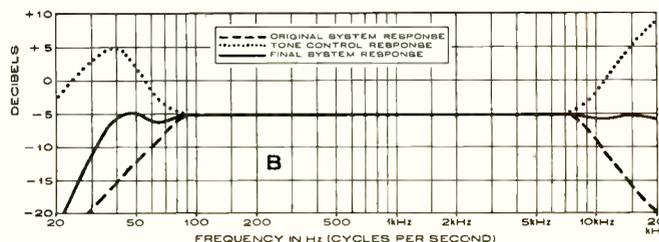
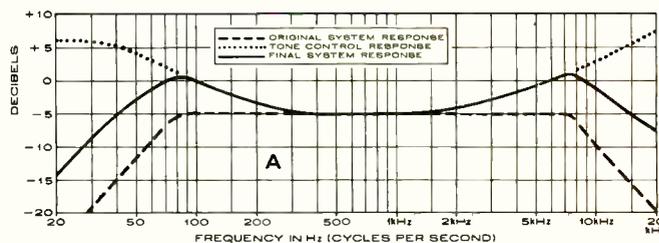
Electrostatic Reaction

Q. I trust that you or Ralph Hodges will correct the error in Part 15 of the *Glossary of Technical Terms* concerning "Ground." Hum (120 Hz, not 60 Hz) is not induced electrostatically; it results from an electromagnetic field. My guess is that Mr. Hodges is not an electrical engineer, or if he is, a lesser editor made an inadvisable change in the article.

PHILIP BLAIR
Lyndhurst, Ohio

A. I am the "lesser editor" who inserted the term "electrostatic" in Mr. Hodges' definition. The distinction was meant to differentiate between hum induced in a circuit from the electromagnetic field of a turntable motor or transformer and hum picked up by a high-gain, high-impedance unshielded circuit. In the second case, a copper screen, for example, would provide adequate shielding; in the case of an electromagnetic field, a ferrous shield of some kind would be needed.

It's true that any hum field can be referred to as "electromagnetic" in nature—even light can be—but that clarifies nothing. As to the question of hum frequency, it can be anything that is being radiated, with 60-Hz hum being merely the most prevalent in low-level signal lines.



(A) The dashed line shows the response of the system before the correction. The bass and treble tone controls inject the response shown by the dotted line, which produces the less-than-satisfactory final response shown. (B) A tone-control response (dotted line) that can place the correction in exactly the frequency area where it is required can produce the extremely flat final system response shown.

Beginning November 1,
there will be
a music system
with total flexibility.

To meet your
changing needs.
Today and tomorrow.

Heath Company introduces a timeless new concept in component music system versatility.

MODULUS™

Total modularity for total flexibility. A system for all times. Expands, adapts, flexes. To your changing needs, to advancing technology. A system that is what you want it to be. Always.



MODULUS — as you like it.

A Digital AM/FM Tuner/2-4 ch. Preamp/Control Center.



A Stereo Receiver of the medium or high power.



A 4-Channel Receiver — high or medium power.



With sophisticated optional capabilities.



Concept explored.

Over two years ago, because of the confusing array of equipment and changing modes of music production, Heath began exploring the concept of total flexibility in music systems. The result is MODULUS. The system that gives you freedom of choice. The ability to change without obsolescence. The system that expands and adapts to your wishes. With the superior performance of separate components, and the easy convenience of integrated systems.

Module I — the Tuner/Control Center

A superb AM/FM tuner with digital readout, an exceptional 2+2 preamplifier, headphone amplifier, tape dubbing center, and unusually versatile control center. All in one. Unique. Unmatched. The heart of MODULUS.

The Tuner. Quality you can hear.

Four 1/2" LEDs display broadcast — only frequencies accurately measured by its digital counter. Careful attention was given to AM design so it isn't just something you listen to, but something you enjoy. It features dual-gate MOSFETs, computer-designed LC filter, shielded loop antenna. Purely superb FM. With dual JFET 4-gang tuner for 1.7 μ V sensitivity, low distortion digital discriminator, sophisticated LC filter for over 100 dB selectivity, adjustable muting, phase-locked loop multiplex for 40 dB stereo separation, signal and center-tune meters, multipath outputs, direct planetary drive. Professional.



2+2 Preamplifier. The quiet one.

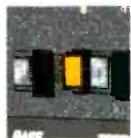
Differential amplification and active current sources yield distortion levels below 0.05% at full output. Hum and noise as low as 80 dB below full output. A new phono section designed for 94 dB dynamic range. Headphone amplifier for stereo or 4-channel. Tape dubbing facilities for stereo or 4-channel. Full 4-channel capability in every section...ready when you are.

2/4 ch. preamp.



Versatile Control Center

You are in complete command of every function. Functions are selected by twenty-one pushbuttons – each with lighted tip – to indicate which are activated. The pushbutton functions include: *Output* (disables preamps. for headphone listening); *Inputs* (stereo phono, CD-4 phono, auxiliary, tape, tape monitor, dubbing, AM, and FM). The dubbing button connects the 4-ch. jacks on the front panel for recording and playing tape without removing the permanent connections on the rear panel; *Mode* (mono, stereo – front channels only, stereo – front and back channels, SQ decoding, and discrete 4-channel); *Other Functions* (high filter, low filter, loudness compensation, tone flat, squelch defeat, and FM Dolby); *Power* (turns off the unit and two accessories).



Total control. Separate Baxandall bass and treble controls for front and rear channels. Separate level controls for each channel. Master volume control. Tuning control.

Full metering. Four lighted output meters with 40 dB dynamic range and peak-indicating circuitry to follow the softest and the loudest passages; they even respond to record "clicks." Tuning meters that light only when needed: signal-strength meter for AM, signal-strength and center-tuning meters for FM.

Relay protection for your speakers. At a touch of the Power pushbutton, the relay disables the preamps.

Distinctive styling. Massive diecast front panel. Black textured metal cover. Simulated walnut-grained metal end panels. Tastefully luxurious.

Build it yourself.

With 28 ICs, 134 transistors, and 55 diodes, obviously some kit building experience would be helpful. But it isn't difficult. Modular construction simplifies – 14 circuit boards and 4 wiring harnesses. Most of the boards flip up for checking while the unit is operational. The built-in test meter helps, too.



Modules II and III – Stereo Power Amplifiers.

Expand your MODULUS system with your choice of stereo power amplifiers. Module II is a medium power amplifier (35 watts per channel); Module III is higher powered (60 watts per channel) 35 or 60 watts: minimum RMS, per channel into 8 ohms at less than 0.1% total harmonic distortion from 20-20,000 Hz. Both styled to match the Module I Tuner/Preamp. Add one of either power to make a MODULUS Stereo Receiver. Add two of either power to make a MODULUS 4-Channel Receiver.



Module IV – FM Dolby

To enjoy the reduced noise and increased dynamic range of specially-encoded Dolby FM broadcasts, add this module. It fits inside the Module I Tuner/Preamp.

Module V – CD-4 Demodulator

The spacious quadrasonic sound of CD-4 discrete 4-channel recordings is yours with this option. And no external black boxes, as it slips securely inside Module I.

Module VI – SQ Decoder

Sophisticated circuitry with full-logic and variable blend enhancement for excellent quadrasonic separation from matrixed records, tapes, and FM broadcasts. Like the others, it has a place waiting inside your Module I.

MODULUS. For what it is, what it can be, surprisingly low cost.

Module I, 599.95; Module II, 159.95; Module III, 179.95; Module IV, 39.95; Module V, 79.95; Module VI, 49.95.

MODULUS. For today, for tomorrow.

See next page for specifications

MODULUS™

Features and specifications

MODULE I — Digital AM/FM Tuner/2-4 Ch. Preamp/Control Center (#AN-2016)



MODULE II — Medium power Stereo Power Amplifier (#AA-1505)

Perfect match for Module I in styling and performance; also compatible with most other preamps. 35 watts, minimum RMS, per channel into 8 ohms at less than 0.1% total harmonic distortion from 20-20,000 Hz. Intermod. distortion less than 0.1% at full output. Frequency response: -0.5 dB from 8 to 45,000 Hz. Damping factor: 60. Drives two sets of 8 ohm stereo speakers. Front panel switching of Main and Remote Speaker systems. Polarized speaker connectors. Lighted power button.



MODULE III — High power Stereo Power Amplifier (#AA-1506)

Identical to Module II in features and specifications, except: 60 watts, minimum RMS, per channel into 8 ohms at less than 0.1% total harmonic distortion from 20-20,000 Hz.



MODULE IV — FM Dolby (#AD-1504)

Using this module for noise reduction of Dolby encoded FM broadcasts is like moving the station one-third closer. You get better reception of more stations (not for use on regular FM broadcasts). Uses two special ICs; unity gain; noise reduction up to 10 dB.



MODULE V — CD-4 Demodulator (#AD-1507)

High performance plug-in module for reproducing four discrete channels of audio from CD-4 discs. LSI IC in each channel with detection quality enhanced by LC filters. Separation ≥ 20 dB, front to back, side to side, or diagonally. Total harmonic distortion less than 1%.



MODULE VI — SQ 4-Channel Decoder (#AM-1503)

Latest concept in matrix decoding from CBS, Inc.; full logic circuitry with variable blend. Uses three special ICs. Response ± 1 dB, 25 to 15,000 Hz; total harmonic distortion 0.5% or less; separation 40 dB L-R front; 12 dB L-R rear; 18 dB front-to-back; 20 dB diagonally.



AN-2016 SPECIFICATIONS — PREAMPLIFIER — Frequency Response: 10-30,000 Hz. -0.5 dB. Total Harmonic Distortion: 0.05%. Intermodulation Distortion: 0.05% Hum and Noise: phono. -75 dB (ref. 10 mV input); hi-level. -80 dB (ref. 0.25V input). — FM — Sensitivity: 1.7 μ V. Total Harmonic Distortion: less than 0.3%. Alternate Channel Selectivity: greater than 100 dB. Capture Ratio:

1.3 dB. IM Distortion: less than 0.05%. Frequency Response: 20-15,000 Hz, ± 1 dB. SEPARATION: 40 dB at 1k Hz. Signal-to-Noise Ratio: 68 dB. SCA Rejection: 65 dB. — AM — Sensitivity: 6 μ V for 20 dB S+N/N. Signal-to-Noise Ratio: greater than 48 dB. Alternate Channel Selectivity: greater than 60 dB.

AUDIO BASICS

By RALPH HODGES



SCHOOLS FOR SOUND

SOUND engineering may be the glamorous career of the Seventies, to judge from the number of inquiries we receive from readers who want to get into it. Before tackling the questions of what to study and where to apply (the most common queries in these letters), let's touch on an even more basic point: what, exactly, is the job?

When you think of an audio engineer, do you see a mixing-desk jockey pulling a Led Zeppelin tune into a chart-climbing smash with a few deft flicks of the pan-pots, or a loose-jointed concert-sound man chatting easily with Elton John as he checks out the stage monitors at the Tuscaloosa Civic Center? Well, these romantic (if oversimplified) ambitions are legitimate—at least in the case of those lucky few who get to the top.

Equally legitimate, if less romantic, is the vision of the audio engineer as a key member of a motion-picture or radio-broadcast team, an equipment designer, a maintenance specialist or service technician, a disc-cutting engineer, a researcher, a teacher/instructor, a man who mikes sound for panty-hose commercials or installs public-address systems in churches or meeting rooms, and, strictly speaking, even the patient chap who dubs programs for radio stations.

These sound specialists, although often degreed professionals, lack diplomas saying "Audio Engineer" to hang on their office walls, because no fully accredited U.S. colleges or universities award a degree in audio engineering. However, a growing number of college catalogs list an occasional course that is directly related to the subject. Even when there are no such offerings, it's sometimes possible—with faculty guidance—to assemble a good program leading in the right direction. A musical background is always stressed by professionals as being invaluable, so a proper curriculum would be heavy in music, together with applied physics, electronics, and anything touching on acoustics that is available. Also, don't overlook

courses in digital design, bound to play a large role in recording studios of the future. In a college setting it's possible to attain a mastery of these subjects that goes well beyond what the audio "trade" schools can offer. But, on the other hand, what the better trade schools have on their side is an orientation toward practical experience.

These trade schools, along with various other study programs and seminars, have sprung up rapidly in the wake of audio's popularity surge; in general, they purport to give the enrollee a useful background in recording-studio techniques or some other branch of the business. Some of them can be highly recommended; others seem to be fly-by-night, and still others, occupying a middle ground, are probably well intentioned, but for some reason—either lack of experience or inappropriateness of study materials to today's real world of audio engineering—are not of as much value to the fledgling sound man as their claims (and tuitions) would indicate. None of these organizations are accredited, which is not surprising since there now exists no accrediting body.

The Audio Engineering Society (60 East 42nd Street, New York, N.Y. 10017) has appointed a committee to investigate educational possibilities in audio. According to Technics/Panasonic's Almon Clegg, who has been active in this group, the committee has started to look into teaching establishments offering some audio instruction, and even has some hopes of informally screening their qualifications. This plan may prove too ambitious, but even so, the AES is still the most dependable source of school information at present. If possible, plan to attend its fifty-second convention at the Waldorf Astoria Hotel in New York City, from October 31 through November 3. Several of the more prominent schools have already reserved display space, and the rest of the exhibits—all types of sound gear—will be an education in themselves.

When you
hear the
incredible
sound . . .



when you
touch the
sensitive,
responsive
controls . . .



and when
you see
the beautiful
craftsmanship . . .



you'll want
to own one.

Onkyo offers a full line of highly rated stereo receivers, amplifiers and tuners; the world's 1st fully automatic 4-ch receiver; 2/way & 3/way speaker systems . . . all in a broad price range. See your dealer.

ONKYO

Onkyo Sales Section/Mitsubishi Int'l Corp.
25-19 43rd Ave. Long Island City, N.Y. 11101
935 Sivert Drive, Wood Dale, Ill. 60191

CIRCLE NO. 46 ON READER SERVICE CARD

KLH RESEARCH TEN PRODUCTS FOR THE DECADE



It's virtually impossible to build a product that is so optimized that it can never be improved. But we believe it is possible, indeed an obligation, to build loudspeakers that are so deep in concept and technology that they remain fresh and exciting performers for many, many years. Our classic electrostatic Model Nine is a perfect example of such a product. After nearly fifteen years, it is still rated "Best Attainable Sound" by the prestigious "Stereophile" magazine and equally praised by other leading publications and authorities in the field.

But times and technology do change. And we, albeit with a certain sadness, recognize that although our original acoustic suspension bookshelf loudspeakers are still perfectly adequate sound reproducers, they are no longer representative of the best we have to offer. KLH Research Ten is our new line of loudspeakers that takes full advantage of all of today's incredible advances in audio technology. The tweeters, the woofers, the crossover networks are the most sophisticated devices ever designed for loudspeakers—regardless of what those loudspeakers cost. Whether it's our smallest KLH Research Ten loudspeaker or our largest, you'll find there's an amazing commonality of design, components, and most important, sound. Which is to say virtually no sound at all. Because if there is a single thing that typifies this new group of loudspeakers, it is an uncommon lack of coloration. You'll also find that the differences between each of the loudspeakers in the line is quantitative rather than qualitative. You'll be able to buy more performance for somewhat more money. But whether you spend the extra money or not, you'll still be getting a loudspeaker that is unequivocally the best you can buy in its price range. And if you'll just think about our Model Nine for a moment, you'll realize you'll also be getting a loudspeaker that you'll be able to live with for a long, long time. That's KLH Research Ten. We hope you have a very happy decade with us.

TAPE HORIZONS

By CRAIG STARK



REGULAR MAINTENANCE

A NEW recorder, like a new car, won't maintain its high-quality performance very long unless you give it systematic and proper care. And, as with automobiles, there are three basic levels in a tape-recorder maintenance program: routine things that *everybody* should be able to do for himself; less frequent, but slightly more difficult, chores that most people would rather have done in the shop; and really technical (and, fortunately, infrequent) jobs that must be left to experts who have both the experience and the necessary specialized tools and test equipment.

The basic routine maintenance procedure consists of cleaning and demagnetizing those parts of the recorder that the tape touches as it passes from one reel to the other. Once you are set up, the job takes only a few minutes. Studios are likely to go through the routine every day, but, depending on how much you use your machine, once a week *or* once a month may be adequate. A safe rule of thumb is to clean and degauss after every twelve to twenty hours of use. Despite the little effort required, these two forms of cleaning (the physical and the magnetic) are crucial. Just as a car's get-up-and-go won't last long if you don't give it regular maintenance, your recorder's extended high-frequency response, which might have cost hundreds of extra dollars, won't be heard through even the slightest oxide build-up on the heads. Worse still, the heads and tape guides—every ferrous-metal part that touches the tape—can acquire a magnetic charge with use. If this isn't removed by demagnetizing, it will permanently record hiss and erase the delicate high frequencies every time you play a tape.

For cleaning, you'll need a bottle of isopropyl alcohol and a few cotton swabs, to which you may want to add a couple of round wooden toothpicks (for caked-on debris that's hard to reach) and perhaps about a foot of carpet thread. If your machine uses felt pressure pads, the best cleaning device I know for them

is the kind of hard-bristle brush used to clean out electric shavers.

To get at the heads, remove their protective covers along with any magnetic shields, moisten (don't soak) a cotton swab with alcohol and rub their faces until they're shiny clean. Most oxide debris will come out of the guides in the same way, but sometimes getting into their corners is difficult. Here's where the toothpicks may be helpful, or (depending on your machine's layout) that short length of carpet thread, soaked in alcohol. Simply wrap it around the top and bottom corners in the guides, and you'll get the last traces. Using fresh swabs as needed, scrubbing the capstan and puck roller completes the process. You can rotate them by hand if you like, but it's usually easier to fool the machine's automatic shut-off temporarily into thinking you've got a tape threaded up. If you then put the machine in *PLAY*, the capstan and roller will turn by themselves. Hold the wet swab against the roller and capstan until they're clean.

And now, while the head covers are off, you demagnetize. Head "degaussers" are available at any audio shop for a few dollars or considerably more for some very powerful units. The procedure is simple, subject to three cautions: (1) Turn off your recorder entirely. (2) If your demagnetizer has exposed metal tips, cover them with plastic electrical tape lest you accidentally scratch a head face. (3) Never turn the degausser on *or* off within arm's length of the recorder, or you may remagnetize the machine to a worse state than it was in originally! So, plug in and turn on the demagnetizer *at a distance*, and *slowly* bring it up to each head, guide, and capstan. It does its work within seconds. Then, again slowly, withdraw it, and turn it off only when safely far away.

At least once a year, however, more than basic cleaning is required. You have to lubricate, check wear inside, etc. For those who want to do it themselves, I'll have some advice in a future column.

The SCX³

A significantly better way to listen to music.



The KLH Research Ten SCX³ is an awesome performer. Its uncanny ability to recreate the timbre and texture of every instrument in an orchestra will absolutely astound you. All too often, loudspeakers that can successfully reproduce the bite of brass unfortunately bring the same brittleness to the sound of violins. Or if they can capture the sizzle of the cymbal, they fizzle when it comes to the plucking of a string. Clearly this is due to the severe limitations of the single-ended tweeter—cone or dome. Too much mass has to be started, accelerated and stopped too quickly. The structure just doesn't allow for it. Consequently there's a lack of air between instruments, a kind of a blur and overlapping that squashes the music together.

Not so with our new DVR Tweeter. The DVR combines the best attributes of dynamic and electrostatic tweeters. It has an ultra thin membrane with an etched printed circuit "voice coil" — plus an array of many rare-earth samarium-cobalt magnets on either side of the membrane to create a push-pull effect. Because the membrane mass is so low and the magnets have such extraordinary force, the inertial



qualities are exceptional. The membrane can be accelerated and stopped with *extreme accuracy*. The result is very extended frequency response with truly low distortion. Overlapping completely disappears. Fuzziness is gone. The inner voices of the orchestra come alive. There's the kind of airiness and transparency you find only in the concert hall. And all of this is achieved without the traditional drawbacks of the electrostatic tweeter — no capacitive load to drive your amplifier crazy

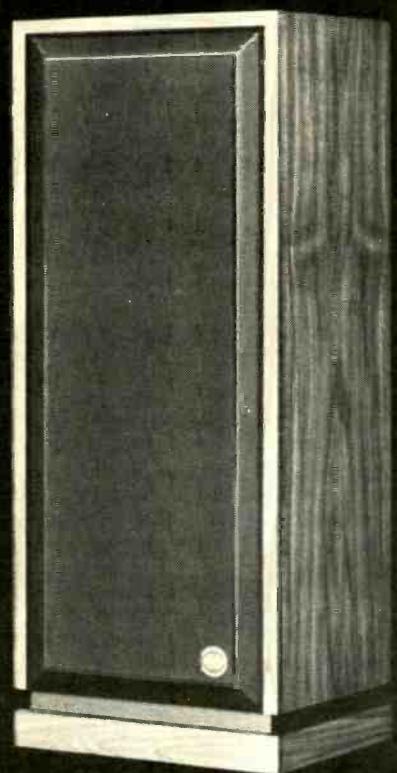


The DVR Tweeter.

and no need for a power supply. But a tweeter, even a great tweeter, doesn't make a loudspeaker. Actually, though, there isn't much we can say about the SCX³'s mid-range. It's just the best mid-range made. Period. As for the 12" Megaflux™ Woofer, it is probably the most unique magnetic structure available today. It uses many specialized strips of magnetic material which, housed in its large, box-like structure, create and focus magnetic energy (flux) into the voice coil gap with



KLH Research Ten Division
KLH Research & Development Corp.
30 Cross St., Cambridge, Mass. 02139



essentially no external stray field. Since all of the energy is directed to an exact and predetermined area of the voice coil, very large woofer excursions are possible. Also the magnetic field produced is so uniform that many non-linear types of distortion found in conventional designs simply are no factor in this configuration. But perhaps even more important is the staggering power handling capacity of this woofer — over 200 watts RMS at 30 Hertz.

In short, the SCX³ has an exceptional woofer. And exceptional metalized Mylar[®] capacitors. And exceptional air core inductors (as opposed to iron core inductors which saturate at high listening levels and cause major distortion).

What we're obviously trying to say is that the SCX³ is an exceptional loudspeaker — a significantly better way to listen to music.

At \$400, it darn well better be better.

For more technical information, write to KLH Research & Development, 30 Cross St., Cambridge, Mass. 02139. (Distributed in Canada by A. Allen Pringle Ltd., 30 Scarsdale Road, Don Mills, Ontario, Canada.)



TECHNICAL TALK

By JULIAN D. HIRSCH

● **THE ABC'S OF A-B TESTING:** Readers have from time to time informed me that they "know" the Sono-Blast 1000 amplifier has immeasurably greater definition (or "detail," or "clarity," or whatever) than its competitors—especially the highly touted Super-Brute 800, whose muddy bass and horrendous crossover distortion (or "TIM," or "slow slew rate," or similar congenital defect) completely disqualifies it from serious consideration by any truly knowledgeable audiophile.

And the Super-Brute 800, oddly enough, has *its* own coterie of faithful admirers; they "know" with equal certainty that the Sono-Blast 1000 is prone to self-destruction when driving anything more complex than an 8-ohm non-inductive resistor, that it is unlikely to survive more than a minute or two of a Rolling Stones recording played at reasonable rock listening levels (say, 110 to 115 dB), and that it is also noted for the veiled, gritty quality that is instantly audible to anyone who listens to it through a "good" speaker system. "Good" may be defined as a speaker which sounds veiled or gritty when driven by the Sono-Blast, but is a paragon of clarity when coupled to the Super-Brute 800. (By some strange happenstance, "good" speakers are almost always large, expensive, and available only in limited quantities through a handful of dealers whose average distance from any prospective customer seems to be about 223 miles.)

Proponents of both the Sono-Blast and the Super-Brute share one characteristic—a deep and abiding *faith*. They *know*, without question, that their amplifier is superior to the other. They know this because they have been told that it is so by someone else who "knows." He may be a dealer (disinterested, of course), another audiophile, or a magazine reviewer who writes only for an obscure, small-circulation super-audiophile publication.

There are still some skeptical souls, however, who actually try to listen for themselves before committing their faith, a policy I heartily endorse. This is done by means of an "A-B test" in which two products are compared with each other with little or no interruption in the program. If performed correctly, an A-B instant-switching test *should* be able to unmask minute differences that might pass undetected in casual listening. And, in fact, it does just this—but the key word is *correctly*. Nothing must change except the single component being evaluated. The program material, auxiliary equipment (preamplifiers, etc.), and speakers must be common to both components,

TESTED THIS MONTH

●
B&O 4002 Record Player
Allison:One Speaker System
Yamaha CR-800 AM/FM Receiver
Uher CR 134 Cassette Recorder

and ideally the loads presented to the preamplifier by the two amplifiers should be identical. Finally, the listening volumes must also be absolutely identical since we tend to hear a slight increase in loudness as being somehow "better," especially when it is too small to be perceived as a loudness change. (I usually avoid using the word "absolutely," but if it applies *anywhere* in audio, it does here.)

If two amplifiers have the same frequency response over the audible range, far less distortion than the program source, comparable power capabilities, and exactly the same output level, they should sound almost exactly alike in an A-B test. In my experience, they do. I

say "almost" only to allow for the effects of widely differing damping factors (unlikely, but possible) on the overall system frequency response—and because I admit the possibility of there being certain forms of distortion whose existence and audible effects have not been adequately documented as yet.

Let us suppose that the Sono-Blast 1000 has a gain 0.5 dB greater than that of the Super-Brute 800 when Mr. Skeptical Audiophile makes his comparison. There is a high probability that he will be impressed by its more "lifelike" quality, especially if he knows that he is hearing this famous and highly regarded amplifier. However, if the gain were to be lowered by 1 dB, making the Sono-Blast 1000 some 0.5 dB *less* loud than the Super-Brute 800, the same listener might well pick the latter as "better."

In the past, I have referred to "double blind" tests in which neither the listener nor the person conducting the test knows which product is being heard at any given moment. One of the members of the Boston Audio Society (an exceptionally knowledgeable and enthusiastic group of audio hobbyists) presented a well-reasoned treatment of the question of A-B testing in the November 1974 issue of their publication *The B.A.S. Speaker* (Box 7, Boston, Mass. 02215). It described a basic double-blind testing circuit using a whimsically titled "Witch-or-Glitch" switch to make the A-B transfer largely a random matter (with some switch combinations, the switch actually gives an A-A or B-B comparison). Although I have made limited use of such techniques, one of the things I learned when I first tried them was that a person will tend to hear what he *expects* to hear. If A is a very expensive, highly praised amplifier such as the Sono-Blast 1000, and B is a much less pretentious model (or even the much-maligned Super-Brute 800), and if the listener is aware of which is playing at any time, he is very likely to believe that A

sounds better (especially if he has just invested a sizable sum in one). As a matter of fact, he will probably choose A even if the switching is reversed, so that he is hearing B while he thinks he is hearing A, or even if the same amplifier is used in both switch positions. If you firmly believe that one of two similar products sounds better, then—for you—it does! If, in addition, the favorite is playing a fraction of a decibel louder, your judgment is further reinforced.

I used the example of a 0.5-dB difference in the output level as being significant in respect to making judgments. If that seems exaggerated, let me assure you that it is not. Some of the Boston Audio Society researchers, as well as Technical Editor Larry Klein, have confirmed my own conclusion that a level mismatch of 0.5 dB *can* influence a comparison, and I would suggest that even a 0.25-dB mismatch might be detectable under some conditions. It is not easy to match levels with such precision. In fact, with any given pair of components, it may even be impossible. Consider, if you will, two amplifiers whose individual frequency responses may vary by no more than ± 0.25 dB from 20 to 20,000 Hz. However, amplifier A has a rising response over that range, while amplifier B has a complementary falling response. Fine—but at what frequency do you adjust for equal output levels? If they are matched at 1,000 Hz, amplifier B will have slightly more output at 20 Hz and will be down somewhat at 20,000 Hz

relative to amplifier A. Under some test conditions, it is easy to imagine a listener's concluding that B is a bit warmer sounding as well as somewhat "soft" at the extreme top end. Matching the levels at any other frequency might lead to a variety of conclusions regarding the relative sound qualities of the two amplifiers, and in all probability none of them would be "correct."

The situation with FM tuners is quite similar. To make matters worse, unless you are providing your own FM programming through a high-quality signal generator, you are at the mercy of a very uncertain and usually inferior source of program material. (I'm referring, of course, to the quality of the broadcast signal.) An off-the-air A-B test can, however, reveal some important characteristics of a tuner. If a good antenna splitter is used, delivering identical signal strengths to both tuners, small differences in quieting can be heard during pauses in the program, as well as any "birdies" from SCA or other interfering signals. If you hear—or think you hear—differences in frequency response between tuners, there are at least two possible explanations: (1) there may actually *be* a difference, since some tuners are not perfectly flat down to the lowest frequencies, and tolerances in the de-emphasis networks or the multiplex filter can easily give a ± 1 -dB variation at the high-frequency end, even on good tuners; (2) a small amount of residual noise (hiss) can make a tuner (or am-

plifier or tape deck) *seem* to have better highs, for, paradoxically, a superior tuner with a very low noise level may sound slightly "dead" compared with one that has a trace of hiss.

It is easy to infer from the critical nature of A-B testing with nearly perfect *electronic* components that A-B speaker comparisons are far more difficult. This is certainly true. However, the relatively gross aberrations of speakers makes it quite easy to distinguish one from another. Any reasonably skilled listener would probably not be fooled by a Witch-or-Glitch switch—at least not for long.

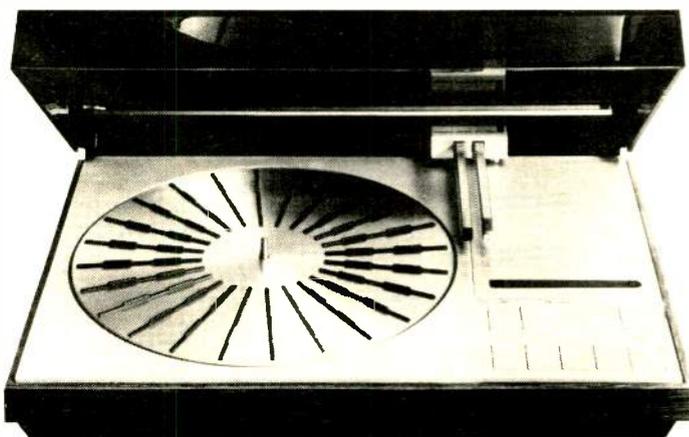
With subjective speaker comparisons, it may be easy to decide which of two speakers you prefer, but be sure to make the comparison with a wide variety of music, since many speakers may seem to favor one type of music to the detriment of others. (The question of objective superiority is much more difficult to settle. I will go into that matter in more detail in a future column.)

Summing up, when you compare two amplifiers (never try to compare more than two items at a time), be sure that no factor is changed but the amplifiers themselves, and if you think that one sounds better, try adjusting their relative gain settings slightly. Things may sound very different when that is done. If this happens, you can reasonably conclude that the two amplifiers are very much alike, that neither is really "better sounding" than the other, no matter what some "expert" says.

EQUIPMENT TEST REPORTS

By Hirsch-Houck Laboratories

B&O Beogram 4002 Record Player



● IN spite of the recognized advantages, both theoretical and practical, of radial tone arms, very few have reached the market, and fewer have survived the test of time. One like-

ly candidate for success is the Danish-made Bang & Olufsen Beogram 4002. The Beogram 4002 combines a unique servo-driven radial tone arm integrated with the B&O MMC6000

cartridge (reported on in *STEREO REVIEW* in September of 1974) and an electronically driven, servo-controlled two-speed turntable.

It is imprecise to consider the Beogram 4002 as though it were merely a combination of a turntable, an arm, and a cartridge, for it is far more than that—one of the most sophisticated and thoroughly engineered home record players ever made. Furthermore (and this is important for a component that will be in plain view as a part of one's home furnishings), the styling of the Beogram 4002 is as special as its technical features. In fact, it is a permanent part of an exhibit of contemporary design at New York's Museum of Modern Art.

The Beogram 4002 is quite large, measuring 19 $\frac{1}{4}$ inches wide and 15 inches deep. It is only 4 inches high, including the hinged tinted plastic cover, but 18 inches of vertical clearance must be allowed for raising the cover. The slim appearance of the unit belies its considerable weight of 28 pounds. A narrow wood-trim strip decorates the front and sides

(rosewood is standard, teak and oak trim strips are optional).

The control and operating surfaces, including the full-size platter, are finished in satin aluminum. The platter is flush with the control panel but has twenty-four radial spokes of black plastic that support the record with a minimum of contact area. The arm carriage at the rear of the unit travels on concealed rails, and it has what appears to be two slim tone arms, of square cross section, spaced about half an inch apart. A tracking-force scale, reading from 0 to 1.5 grams, is on top of the carriage cover, and it is adjustable by screwdriver through a hole in the side of the cover.

The "inner" arm carries a lamp and photocell that sense the presence of a record on the turntable, and the "outer" arm, which is pivoted to permit a slight horizontal movement, carries the tiny plug-in MMC6000 cartridge

of the travelling-lamp's light beam from the platter to the photocell), the carriage stops and the arm is lowered to the record. Since the indexing is determined by actual record size, it is automatic for 10- or 12-inch discs. If the arm moves inside a 5-inch radius without detecting a record, the control system assumes that any record present must be a 45-rpm, 7-inch disc, and the speed automatically changes to 45 rpm. At the end of play, or if no record is found on the turntable, the arm lifts and the carriage returns to its rest position outside the turntable diameter, shutting off the player.

If the ON button is pressed with no record on the turntable, the arm travels across the platter, finds no record, returns to its rest position, and shuts off the unit. B&O has gone to great pains to make the 4002 as foolproof as possible, with a number of logic interlock sys-

the ON and OFF buttons can be used in the same manner, but the arm moves at twice the rate ($\frac{1}{2}$ inch per second). Pressing any of the other controls stops the arm movement.

Although the motor is fastened rigidly to the base, the arm and turntable system floats as a unit on three cantilever leaf springs. A sophisticated damping system is used on the suspension, which has a resonant frequency of 4.5 Hz and makes the unit relatively insensitive to external shock or vibration.

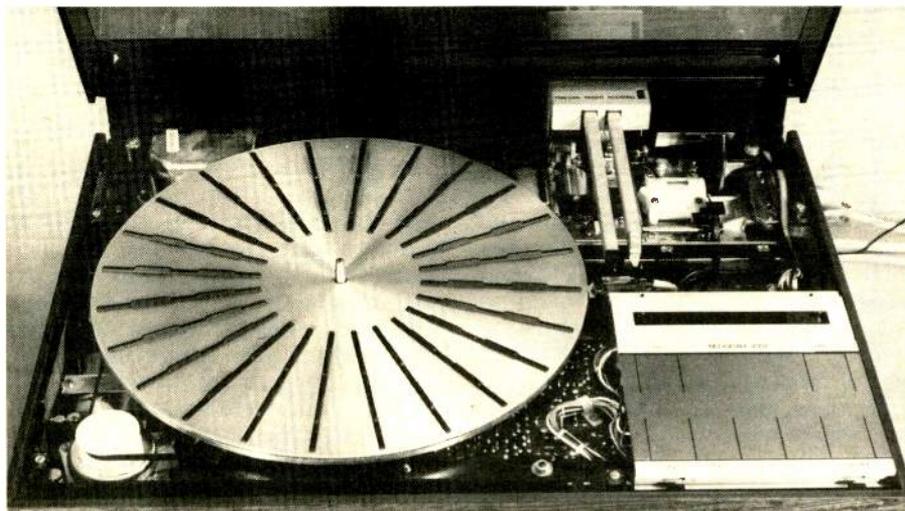
The MMC6000 cartridge is designed for playing either CD-4 or stereo records. The signal output cable, fitted with DIN plugs at both ends, has an adapter with four conventional phono plugs, marked for the four quadrasonic channels. Normally, only the two front outputs are used. However, B&O makes a CD-4 demodulator that can be installed within the Beogram 4002, which then supplies a four-channel output through the signal cable. A slide switch on the side of the base selects either stereo or CD-4 operation. The price of the complete Beogram 4002 (stereo version) is \$650.

● **Laboratory Measurements.** The Beogram 4002 starts up very quickly compared with most automatic record players. Only three seconds after the ON button is pressed, the pickup contacts the record and un-mutes (the audio outputs are muted at all times *except* when the stylus is on the record surface). Shut-off is almost as rapid, with eight seconds needed for the arm to return to its rest position and shut off the player. With the speed dials set to "0," both speeds were exactly correct, as measured with a frequency counter. The vernier control range was +3.3 to -2.8 per cent at 33 $\frac{1}{3}$ rpm and +4.6 to -3.7 per cent at 45 rpm. The speeds did not change in the least over a line-voltage range of 95 to 135 volts. Below 95 volts, the reduction in sensing-lamp output causes the arm to lift. The unweighted rms wow was 0.025 per cent and the flutter was 0.035 per cent. To the best of our knowledge, these are the residual readings of our test records and instruments, since we have never measured lower levels on any turntable.

No measurements were made on the cartridge. We did, however, measure the arm/cartridge resonance: 13 Hz, with an amplitude of 7 to 8 dB. This shows that the effective mass of the B&O arm is about one-fourth that of the high-quality record-changer arm in which we had previously tested an MMC6000 (with a resonance at 6.5 Hz). The 13-Hz resonance is well above the range where it might be excited by record warps. However, when we measured the rumble, the unweighted measurement (including both lateral and vertical components) was an unexceptional -30 dB. Canceling the vertical component improved this to -38 dB, indicating that most of the rumble was in the vertical plane. This rumble was largely in the vicinity of 13 Hz, evidently resulting from excitation of the arm resonance by the very slight motor vibration. With RRLI audibility weighting, the rumble was -60 dB.

Note that although these figures are numerically not quite as good as B&O's specifications, they do not really conflict with them. The DIN standards used by B&O are based on a higher reference level than the NAB or RRLI measurements. They also have different weighting curves (which would also reduce the apparent rumble), but the difference

(Continued on page 34)



The inside story of the Beogram 4002 is exposed by removal of the top plate when the wood side panels are slid forward. All electronic and mechanical elements are easily accessible. Note the belt-drive pulley at lower left and the sophisticated control panel at lower right.

at its tip. The arm is *never* moved by hand or even touched in operation. The arm carriage cannot, in fact, be positioned manually, since it is driven by a d.c. servo-motor turning a threaded lead screw.

At the front right of the control panel is a single thin metal plate, slotted to form seven sections that can be pressed to operate the record player. Only moderate pressure is required, and the control sections move almost imperceptibly. They are marked with arrows indicating the resulting direction of arm movement. The front controls include ON, OFF, two arm-movement controls for cueing the pickup to any part of a record, and one that alternately raises and lowers the pickup. To their rear are two speed controls, one for 33 $\frac{1}{3}$ and one for 45 rpm. Behind them is a black strip covering individual scales that light up to show the operating speed. Each scale is calibrated over a range of ± 3 per cent relative to the nominal speed, and next to each is a small vernier speed-adjustment wheel. The speed scales are not stroboscopic indicators, but are actually more accurate than stroboscopes, which depend ultimately on the a.c. power-line frequency for their accuracy.

In normal operation, a record is placed on the platter and the ON button is pressed. The platter starts to turn, and the arm assembly travels inward. When the photocell senses the edge of the record (which interrupts the reflec-

tion of the travelling-lamp's light beam from the platter to the photocell), the carriage stops and the arm is lowered to the record. Since the indexing is determined by actual record size, it is automatic for 10- or 12-inch discs. If the arm moves inside a 5-inch radius without detecting a record, the control system assumes that any record present must be a 45-rpm, 7-inch disc, and the speed automatically changes to 45 rpm. At the end of play, or if no record is found on the turntable, the arm lifts and the carriage returns to its rest position outside the turntable diameter, shutting off the player.

If the ON button is pressed with no record on the turntable, the arm travels across the platter, finds no record, returns to its rest position, and shuts off the unit. B&O has gone to great pains to make the 4002 as foolproof as possible, with a number of logic interlock systems that make incorrect operation virtually impossible. If the power is shut off or is interrupted while the player is operating, the arm instantly lifts. When power is restored, the turntable can be placed in operation only by pushing the ON button. Even a burned-out lamp in the sensing arm (which could lead the photocell to "think" that a record is on the turntable since it receives no reflected light) is interlocked to stop the arm from lowering.

The black spokes on the platter are a key part of the automatic sensing system. As the lamp and photocell pass over them, they "chop" the reflected light to generate an a.c. signal at 13 Hz or 18 Hz, depending on the turntable speed. As long as this frequency is present, the arm continues its search and the pickup cannot be lowered. When a record is on the platter, it blocks the a.c. light modulation and the system goes into its playing mode. Touching the center control section energizes a solenoid that instantly raises the pickup from the record. Another touch lowers it, over a 1-second period, under air-damped control. To cue the pickup, either of the slewing controls is touched. The pickup lifts from the record and the arm moves in the indicated direction at a rate of $\frac{1}{4}$ inch per second. It stops instantly when the pressure is released. Touching the lift control then lowers the pickup to the record surface. For faster slewing,

INTRODUCING TDK SUPER AVILYN. IT OUTSOUNDS CHROME. AND THE #1 FERRICHROME.

INDEPENDENT LAB TEST RESULTS

| | TDK SA | A | B | C | D |
|----------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Signal-to-Noise Ratio | 1 st | 4 th | 1 st | 6 th | 7 th |
| Distortion (I.M.) | 1 st | 2 nd | 3 rd | 7 th | 6 th |
| Low-Frequency Response Accuracy | 1 st |
| Mid-Frequency Response Accuracy | 1 st | 2 nd | 5 th | 5 th | 2 nd |
| High-Frequency Response Accuracy | 2 nd | 2 nd | 6 th | 5 th | 1 st |
| Maximum Output Level (3% thd) | 1 st | 2 nd | 4 th | 6 th | 5 th |
| Output (0 VU) | 1 st | 4 th | 5 th | 2 nd | 2 nd |
| Surface Abrasiveness | low | high | high | high | low |



Seven tapes were tested (TDK SA, TDK KR, Scotch Chrome, BASF Chromdioxid, Advent Chrome, Scotch Classic, and Maxell UD) and ranked 1st to 7th. The chart shows the results for 5 representative tapes tested.

The following tape decks were selected for use in the tests: Nakamichi 500 & 1000, Advent 201, and TEAC 450.

SA now available in C 90.

You want the best sound you can get from your cassette recorder without worrying about headwear. And until now, chrome and ferrichrome had the sound — they outperformed ferric oxide tapes in extended high frequency response with lower noise.

Well, TDK has advanced cassette recording to a new standard of high fidelity. It's new Super Avilyn, the cassette that outsounds chrome, the best-selling ferrichrome, and the top-ranked ferric oxide tapes.

Its magnetic particle is new. It soaks up more sound and plays it back with less distortion. That's power and clarity you can hear.

Super Avilyn doesn't require special bias/eq. setting for optimum performance. It is compatible with any tape deck that has the standard CrO₂ bias/eq. setting.

Distortion — that's the big story. Look at these lab test figures.

LEAST DISTORTION — CLEAREST SOUND.

| RECORD INPUT LEVEL | TDK SA | A | B | C | D |
|--------------------|--------|------|------|-------|------|
| 0 VU | 11% | 13% | 26% | 50% | 32% |
| -5VU | 4.5% | 5.4% | 11% | 17.5% | 5.4% |
| -10VU | 4.2% | 4.5% | 8.5% | 7.8% | 4.8% |
| -20VU | 4.9% | 5.0% | 8.0% | 5.2% | 6.0% |

SMPTE METHOD: I.M. DISTORTION — 7000 Hz — 60Hz, 4:1 ratio.

There's just no contest. Super Avilyn delivered the clearest, cleanest sound. More lifelike sound — and to a discriminating ear, that's the ultimate test. Fact is, Super Avilyn is the new state of the art.

TDK Electronics Corp.
755 Eastgate Blvd., Garden City,
N.Y. 11530. Also available in Canada.



Wait till you hear
what you've been missing.

To honor the 200th birthday
of all time" TIME-LIFE RECORDS

BEETHOVEN BICENTEN



Beethoven's achievements are a reflection of the man himself, for his music is like a diary into which he poured his life, his desires, his regrets, his furies, his melancholies and his loves. Beethoven was at constant odds with his society—a society shaken by the opposing forces of repression and revolution. He transposed his own personal struggle to the scale of the whole human race, and dreamed of bringing to it joy and universal brotherhood.

Over the years there have been many record albums devoted to various works of the immortal Ludwig van Beethoven. But there has never been a truly comprehensive collection of his works. That is why TIME-LIFE RECORDS assembled this magnificent collection that contains every important work the master ever wrote—even some rare vocal pieces never before available! It's the BEE-THOVEN BICENTENNIAL COLLECTION, recorded by the famous Deutsche Grammophon Company of Germany.

10-day free audition: To introduce you to this incomparable collection we invite you to audition Volume I, the first six symphonies plus the popular LEONORE OVERTURE NO. 3 for 10 days FREE. These selections were performed by the renowned Berlin Philharmonic Orchestra under the direction of Herbert von Karajan. Highlighted in Volume I are: SYMPHONY NO. 3 IN E FLAT MAJOR—the "Eroica." This was Beethoven's first symphony on the "new" road—a decisive break from the eighteenth century school. SYMPHONY NO. 5 IN C MINOR—The opening is probably Beethoven's most well-known theme. It is merely

Start your collection with the first six symphonies, recorded by the Berlin Philharmonic Orchestra under the direction of Herbert von Karajan. All six symphonies are yours to audition for 10 days free.

four notes but those four notes color and characterize the entire work, a work filled with violence and muscle, struggle, anger—and triumph. SYMPHONY NO. 6 IN F MAJOR—the "Pastoral," a musical evocation of nature's changing moods—from serene to tempestuous, from lush green to black stormy skies.

Only the beginning: If you decide to keep Volume I for just \$19.95 plus shipping and handling, you become a subscriber, entitled to audition approximately every other month, other albums in the collection for the same low price. Some of the magnificent works contained here are:

THE 9TH SYMPHONY—the first choral symphony composed is a resplendent setting of Schiller's "Ode to Joy," a celebration of the brotherhood of man. MISSA SOLEMNIS—a synthesis of symphony, opera, church music—ending with a prayer for inner and outer peace. 5 PIANO CONCERTOS—including *The Emperor*, one of the most original, imaginative, effective of all.

CELEBRATED PIANO SONATAS—like the famous *Moonlight*, the turbulent *Appassionata* and the vast and difficult *Hammerklavier*.

VIOLIN CONCERTO and KREUTZER SONATA—two of the mainstays of every great violinist's repertory.

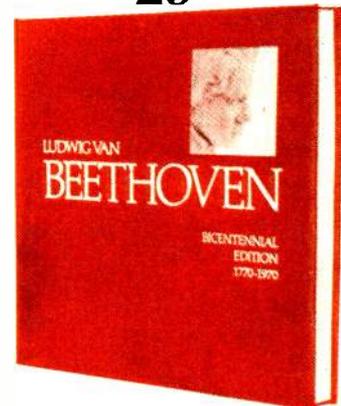
THE 16 QUARTETS—reflecting Beethoven's evolution from the elegant 18th century style to prophetic genius of the future.

FIDELIO—complete recording of his only opera, a heart-stirring drama of love, courage and the universal struggle against oppression.

Herbert von Karajan, Conductor



YOURS FREE
with purchase of Album 1
this \$29⁵⁰ book



What a feast of reading and looking awaits you in this big, exquisitely designed and printed book! It has been carefully prepared in cooperation with the famed Beethoven Archive in Germany to enable you to explore both the life and the work of the master in fascinating detail. In this one lifetime volume, as a companion to your Beethoven albums, you enjoy an absorbing chronicle of Beethoven's life and times—essays and discussions of every aspect of his work by noted musicologists—reproductions of his manuscripts and much, much more!

These are just a few examples of the excitement you will discover in this monumental series. It includes every major work Beethoven ever wrote.

No risk or obligation: If you are as delighted with Volume I as we think you will be, you may keep the five-record set for only \$19.95 plus shipping and handling. We will include, free with your purchase, the giant book on Beethoven described above—a \$29.50 value. You are under no obligation to purchase any minimum number of volumes and you may cancel your subscription at any time. Mail the postpaid card today—and reward yourself and your family with this truly remarkable collection.

If card is missing write: TIME-LIFE RECORDS, Dept. RBA932, Time & Life Building, Chicago, Ill. 60611.

of "the great musician
created this magnificent

NIAL COLLECTION



**TIME
LIFE
RECORDS**

THE BEETHOVEN BICENTENNIAL COLLECTION

Think what it will mean to families that care about serious music, to young people just discovering the pleasure of meaningful music. Imagine this series of LP recordings on your shelf, always at hand to bring the enchantment of Beethoven to your home—his power, his ability to inspire, to confirm hope and make you laugh and rage and dream.

World-Renowned Artists Perform this Feast of Beethoven

HERBERT VON KARAJAN

Conductor, supreme interpreter of the Beethoven symphonic *oeuvre*.

YEHUDI MENUHIN

One of the world's most acclaimed violinists with a profound insight into Beethoven's work.

BIRGIT NILSSON

Opera's greatest dramatic soprano.

WILHELM KEMPF

Dean of European pianists; searching, insightful, powerful.

DIETRICH FISCHER-DIESKAU

Baritone, acknowledged master of German lieder.

PIERRE FOURNIER

Silken-toned cellist who brings his superb technique to the service of Beethoven's five cello sonatas.

THE AMADEUS QUARTET

The brilliant British ensemble which probes the depths of Beethoven's string quartets.

KARL RICHTER

Masterful choral conductor who leads the less frequently heard but stirring Mass in C Major.

THE BERLIN PHILHARMONIC ORCHESTRA

Brings a profound and moving interpretation to a number of Beethoven's major orchestral works.

in reference level alone would convert our -60-dB measurement to -69 dB, compared with the B&O rating of -65 dB. By our measurement standards, the Beogram 4002 has state-of-the-art wow and flutter performance, with rumble comparable to that of the better contemporary belt-driven turntables and many of the direct-drive turntables. In other words, it is inaudible at any reasonable playing level.

We found the Beogram 4002 to be remarkably solid and free of any tendency to respond to the kind of jarring that often causes pickup "bounce" with conventionally suspended turntables. However, when we mounted it directly in front of the speakers and turned up the volume, it was easy to induce acoustic feedback, which we judged to be in the vicinity of 13 Hz (the arm-resonance frequency). When it is installed with reasonable attention to good practice, the Beogram is completely free of such effects.

● **Comment.** It is difficult to describe the performance of the Beogram 4002 in purely objective terms without being grossly unfair to the product. To say that it functioned flaw-

lessly in every respect, that it performed at least on a par with the best of today's record players, though accurate, does not begin to convey our reaction to this beautiful product, which is perhaps the most effective wedding of form and function we have seen in many years.

For example, although not a screw or other fastener is visible on its outside, it can be disassembled in moments without tools. Pulling the wooden trim strip forward slightly permits the two cover plates to be removed, exposing its impressive internal mechanism. Some idea of the electronic-circuit complexity of this player can be gained from our count of its transistors—thirty-five in all, plus a vast number of diodes and other components. When the covers are snapped back into place, one would never suspect what lies beneath them.

The basic virtues of a radial tone arm, augmented by the exceptionally low mass of this one, made it possible for the Beogram 4002 to track the most grotesquely warped records in our Chamber of Horrors collection, discs which have been unplayable on any other record player we have tried up to now. Not

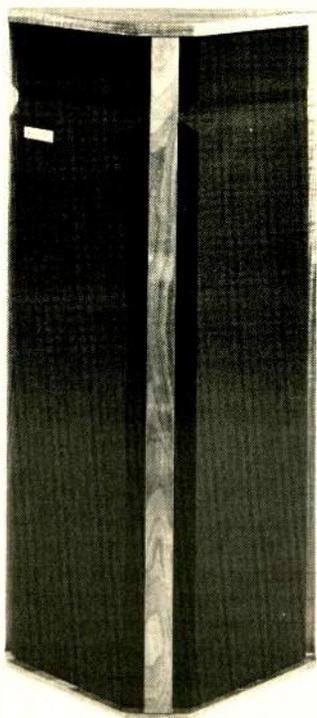
only did the stylus stay in contact with the groove at all times, but in most cases we could not even tell by ear when it was playing the warp.

One might think that the arm-positioning system would be less precise than conventional manual pickup cueing. Quite the contrary—we could pinpoint the stylus to almost the exact groove by operating the controls, and both the lift and descent of the pickup were completely free of side drift.

We were almost relieved to find that the Beogram 4002 *could* be made to feed back acoustically, even though only through grossly improper installation. Otherwise, we would have been tempted to call it a perfect design, which we know does not exist! Even if it is not "perfect," it is far and away the most refined and totally engineered record-playing product we have yet seen. Try as we might to make it misbehave functionally, we could not. The Beogram 4002 is one of the most expensive record players in the world. No one who examines and uses it can doubt that it is worth every cent of its price.

Circle 105 on reader service card

Allison:One Speaker System



Allison to the conclusion that the most predictable and flattest output over a woofer's operating range is obtained when its cone is kept as close as possible to the intersection of two room surfaces and at least several feet from the third boundary. Conventional boxes are physically not well suited to meeting these conditions, at least not with optimum results.

The new Allison:One speaker system has been designed from the outset to provide the flattest possible power/frequency response in a practical home installation, using the criteria established by the investigations of Mr. Allison and others. It is a three-sided column, 19 inches wide, 10 $\frac{3}{4}$ inches deep, and standing 40 inches high. Each of the two front surfaces, angled at 45 degrees to the back wall and the front, has a woofer, mid-range, and tweeter.

At the bottom of each side is a 10-inch acoustic-suspension woofer, placed as closely as possible to a wall/floor intersection. The two mid-ranges and the two tweeters, with newly designed convex diaphragms, are located near the top of the column. The mid-range, which operates from 350 to 3,750 Hz, has an effective cone diameter of 3 $\frac{1}{2}$ inches and a 1 $\frac{1}{2}$ -inch voice coil. The high-frequency driver, similar in design, has a 1-inch cone and a $\frac{1}{2}$ -inch voice coil. Both drivers have good efficiency, exceptional power-handling ability, and wide dispersion.

A three-position lever switch near the top of the cabinet's rear surface, where it can be reached easily from the front, provides the system with its flattest power response at one limit and introduces different amounts of mid- and high-frequency attenuation at the other settings. In effect, there are three frequency/power-response slopes, one of which is selected by the user to provide the most pleasing sound balance in a particular room.

The Allison:One is rated to have at least 8 ohms impedance at any audio frequency and

at any switch setting. A minimum amplifier power of 30 watts is suggested to produce a sound-pressure level (SPL) of 100 dB in a typical home environment. Price: \$360. (A slightly smaller version, the Allison:Two, with 8-inch woofers but otherwise essentially identical to the One, is \$295.)

● **Laboratory Measurements.** The averaged frequency response in the reverberant field of our test room, with the speakers installed as recommended, was within approximately ± 2 dB from 35 to 15,000 Hz, with the slope switch set for flattest response. The woofer response matched Allison's published curves within better than 0.5 dB over its operating range, and its overall response was a startling—and excellent— ± 1 dB from 40 to 400 Hz.

The slope switch had the stated effect, with a maximum roll-off starting at about 300 Hz and reaching about 3.5 dB at the highest frequencies. The speaker impedance was a minimum of 8 ohms at 3,000 Hz, with maximums of 18 ohms at 40 Hz and 20 ohms at 600 Hz. The bass distortion was exceptionally low. With a 1-watt constant-drive level it was nearly constant at approximately 1 per cent down to 35 Hz, increasing to 2.5 at 30, 5 at 25, and 11 per cent at 20 Hz. With a 10-watt input the distortion above 30 Hz increased slightly, but there was no change at the lower frequencies. Both the very low level of its bass distortion and the relative lack of breakup with a high drive level mark the Allison:One as an exceptionally fine performer. A 1-watt input in the octave centered at 1,000 Hz produced a 90-dB SPL measured at a 1-meter distance in front of the speaker. The tone-burst response in the operating range of each driver was good, with minor ringing at 1,000 and 5,000 Hz, but a near-perfect response at 100 Hz.

(Continued on page 36)

● It is widely recognized that the interaction of a loudspeaker with the boundaries of the room in which it is installed can have an appreciable effect on its acoustic output, especially at bass frequencies. Since most loudspeakers have a box-like shape, the user has considerable latitude in their placement, with a correspondingly uncertain ultimate performance. Extensive research into the effects of room boundaries on the power output of a typical low-frequency cone radiator led Roy

60% of BOSE Owners Changed Our Mind

While we enjoy talking about the technology that distinguishes the BOSE 901[®], and about the unprecedented series of rave reviews by leading critics, the purpose of an advertisement is to increase sales by introducing more people to the product.

A surprising result of a customer survey changed our mind as to the most effective use of advertising funds. It revealed that 60% of the people who select the BOSE 901 do so at the recommendation of a 901 owner! This told us that the best advertisement is the product, and the best salesman is the enthusiastic owner.

We concluded that an excellent use of advertising funds would be to help set up an absolutely phenomenal music system in as many owners' homes as possible. Known as the SUPER BOSE SYSTEM, it consists of the 1801[™] power amplifier and two pairs of 901 speakers. One pair of 901s is placed to reflect sound off a front wall, and the second pair reflects off side walls, producing sound with spatial realism and presence that is simply astounding.



Our program in setting up these systems in owners' homes is to provide the **SECOND PAIR OF 901s FREE** to all those serious enough to purchase a component system consisting of the 1801 amplifier and a pair of 901s. We have allocated sufficient advertising funds to cover all purchases made from October 15, 1975 to January 15, 1976.

We believe that the SUPER BOSE SYSTEM is the best music system available today.

And we believe that its owners will be the best BOSE salesmen tomorrow.

One equalizer is required for the Super Bose system, and accordingly the second pair is supplied without equalizer.

This offer is good in continental U.S.A., Alaska and Hawaii only. 901 cabinet is walnut veneer.

BOSE[®]

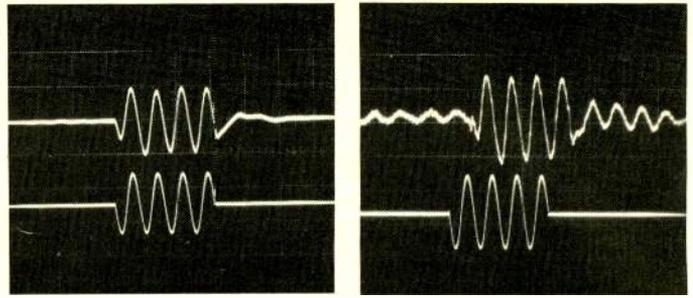
The Mountain, Framingham, MA 01701

● *Comment.* In the simulated live-vs.-re-recorded test, which excludes frequencies below about 200 Hz, the Allison:One was a nearly ideal imitator of our recorded "live" material. Its energy balance throughout the middles and highs, and its dispersion in these ranges, were practically perfect in this critical listening test. As compared with the original material, the Allison's lower middle/upper bass seemed a trifle "warm"—probably as a result of the improved room coupling of the Allison compared with the reference system.

We listened to a wide variety of program material, for extended periods, and aside from their smooth, uncolored sound and extended frequency range, the most salient characteristic of these speakers was an extremely powerful and clean low-bass response. This is not surprising, perhaps, in view of the fact that the cone area of two 10-inch woofers is about 40 per cent greater than that of the single 12-inch woofer used in the better conventional acoustic-suspension speaker systems.

The tweeters and mid-range drivers of the Allison:One are much more rugged in de-

These oscilloscope photos show the fine tone-burst performance of the Allison:One at (left to right) 100 and 1,000 Hz.



sign than the typical dome radiators of other speakers, which often have to be used in clusters to withstand the power levels commonly employed to drive their woofers. Although our listening room is fairly bright, we preferred the "flat," unsloped response setting of the speaker-control switch, but its effects are rather subtle and no doubt others will find a reduction of high-frequency output to their liking.

Judging only from its sound and the meas-

urements we made, the Allison:One easily merits a place among today's finest speaker systems. Although its size and weight prevented us from moving it to different rooms to evaluate its independence from room-boundary effects, we have heard Mr. Allison's public demonstrations of the validity of his findings, and we have no doubt that this speaker will perform at its best in almost any home listening environment.

Circle 106 on reader service card

Yamaha CR-800 AM/FM Stereo Receiver



● YAMAHA's CR-800 stereo receiver shares the clean, almost stark styling that characterizes the company's line of electronic components. A large rectangular dial cutout occupies most of the upper half of the satin-finish aluminum panel, although the dial scales themselves account for only a fraction of that width. In contrast to the "blackout" dials that have appeared on most tuners and receivers in recent years, the CR-800 dial has a light silver finish matching that of the panel, and it is protected by a clear glass window. The FM tuning scale is calibrated in linearly spaced intervals of 0.5 MHz, and it employs a wide illuminated clear plastic "pointer" with a thin hairline for precise station setting.

The tuning meters (a signal-strength indicator for AM and FM and a zero-center FM meter) are at the left of the dial, and at its right are three red indicator lights marked POWER, STEREO, and AFC/STATION. The latter glows dimly when a station is tuned in (the AFC is disabled when the large tuning knob is touched), and a couple of seconds after the knob is released the AFC comes on gradually and automatically, with the light simultaneously coming to full brilliance.

Below the dial area are five smaller control knobs for the BASS and TREBLE tone controls,

MIC (microphone) VOL, LOUDNESS, and VOLUME (the latter is concentric with a slim ring for BALANCE adjustment). The TONE and LOUDNESS controls have eleven detented step positions, and the BALANCE control is detented at its center. Yamaha's loudness-compensation system is unlike most others, since by the use of two controls it permits the degree of compensation to be matched to the actual listening level (a rarely provided necessity for effective loudness compensation). With the LOUDNESS knob fully clockwise, the VOLUME control is set for the loudest listening level one is likely to use. Subsequent level adjustment is made with the LOUDNESS control, which then provides fixed and repeatable contours for each of its positions as it reduces the audio level.

The MIC VOL control, which has an OFF position, adjusts the level of any dynamic microphone plugged into an adjacent jack. The microphone signal mixes with the normal program but does not appear at the tape-recording outputs. Below the microphone jack is a stereo-headphone jack.

Three bar-knob switches select the two pairs of speakers (A, B, A + B, and OFF), the input function (AUX, two magnetic phono inputs, FM with and without muting, and AM),

and the tape-monitoring functions. The last of these connects the amplifier circuits to the source or to the playback output of either of two tape decks, or it interconnects the tape decks for dubbing from either machine to the other. Lever switches control a.c. POWER, MUTING (a 20-dB level reduction), MONO/STEREO mode, and the low- and high-cut filters. The filter switches are three-position "center-off" switches. The LOW FILTER provides cutoff frequencies of 70 or 20 Hz with a 12-dB-per-octave slope. The HIGH FILTER has an 8,000-Hz (6-dB-per-octave slope) position and a HIGH BLEND mode which reduces channel separation at the higher audio frequencies to lessen hiss on stereo programs without affecting frequency response. Although other receivers have a similar function for their FM tuner sections, the Yamaha CR-800 makes it available for all stereo program sources.

The various input and output connections in the rear of the CR-800 are supplemented by separate preamplifier outputs and main amplifier inputs normally coupled through a nearby slide switch. An IF OUT jack supplies a signal before de-emphasis for use with a future discrete four-channel decoder should a suitable FM quadrasonic broadcast system be approved by the FCC. The speaker terminals are insulated spring clips. There is a pivoted ferrite-rod AM antenna in addition to the usual AM and FM antenna terminals. Two of the four a.c. outlets are switched. The Yamaha CR-800 comes in a handsomely finished wooden cabinet 17 $\frac{3}{4}$ inches wide, 6 $\frac{1}{4}$ inches high, and 11 $\frac{3}{4}$ inches deep. It weighs 31 pounds. Price: \$580.

● *Laboratory Measurements.* Yamaha supplies exceptionally complete performance ratings for the CR-800 which are too numerous to list here. For the most part, our tests

(Continued on page 38)



BOSE ON INNOVATION

Multiple Acoustically Coupled Drivers

There is one, and only one, reason for innovation in loudspeaker design...to produce a better musical experience. If the innovations are based on thorough research and executed with exceptional skill, they can produce truly dramatic results.

The Bose 901[®] eliminates woofers, tweeters and crossover networks by using nine matched full range drivers in each enclosure. The close spacing of the drivers results in acoustic coupling which causes the resonant frequencies of each driver to diverge from those of every other driver. This means that only one driver out of nine can be in resonance at a time—a proportion which is inaudible and which effectively smooths the frequency response. The result of

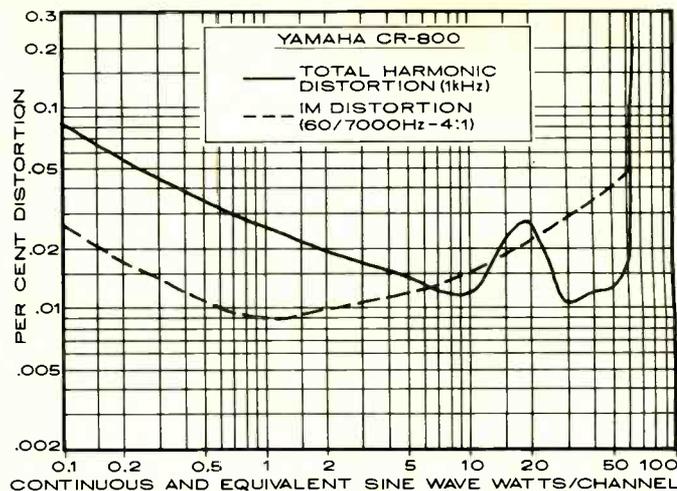
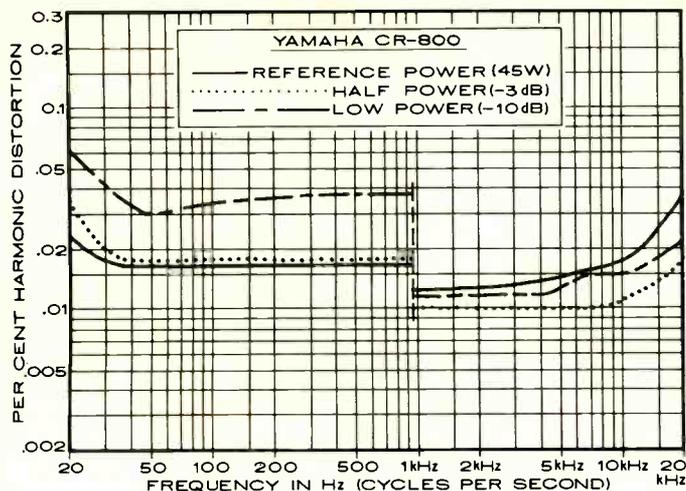
this patented design is a freedom from audible coloration and extreme clarity of reproduction. Listen to the 901 in comparison to any speaker of your choosing...and understand how Bose innovation has produced the most highly reviewed speaker...regardless of size or price.

The Direct/Reflecting[®] 901. By Bose.

BOSE

The Mountain, Framingham, MA 01701

Please write us for the complete story of the 901.
901 cabinet is walnut veneer on particle board.



showed that the published figures were extremely conservative. The power output at clipping with a 1,000-Hz input signal into 8-ohm loads, both channels driven, was 61 watts per channel. It was 79 watts into 4 ohms and 41 watts into 16 ohms. The total harmonic distortion (THD) was lower than the noise level up to several watts output and less than 0.03 per cent up to 60 watts output. The intermodulation distortion (IM) was under 0.03 per cent from 0.1 to 30 watts, reaching 0.05 per cent at 60 watts.

At Yamaha's rated 45 watts output and at lower power levels, the THD was less than 0.035 per cent from 20 to 20,000 Hz and typically less than 0.015 per cent. At one-tenth power, the THD reading was 0.03 to 0.06 per cent at frequencies below 1,000 Hz, but much of this was inaudible power-line noise our test equipment could filter out when measuring above 1,000 Hz. At higher outputs it was masked by the distortion components. Incidentally, the CR-800 proved its ruggedness by surviving without mishap an accidental 30 minutes of severe overload, with both channels driven into hard clipping.

To develop a reference power of 10 watts, the required inputs were 57 millivolts (mV) at the AUX terminals, 1.2 mV at the phono inputs, and 1.1 mV at the MIC jack. The respective unweighted signal-to-noise (S/N) measurements were 80, 78, and 74 dB—all of them outstandingly good. The phono preamplifier did not overload until a very high 250-mV input signal was applied. The micro-

phone-input overload level of 700 mV was the highest we have yet measured on an amplifier or receiver.

The RIAA phono equalization was within ± 0.5 dB from 30 to 20,000 Hz. Cartridge inductance affected it only slightly, reducing the 15,000-Hz response by one or two decibels (typical of most good amplifiers, and not audibly significant). The bass tone control had a sliding turnover frequency with a maximum boost of almost 20 dB. The treble control had a hinged response characteristic with a maximum range of about ± 12 dB. The filter characteristics were as rated—excellent at the low frequencies but too gradual to be really effective at high frequencies. However, the "high-blend" system did an excellent job of noise reduction, on stereo records as well as FM, without sacrificing high-frequency response.

The loudness-compensation system impressed us as one of the best we have used. Over much of its range, one was not really aware of its action, since the program's frequency balance remained seemingly unaffected as the level dropped (but if it was disabled by setting the LOUDNESS knob to maximum, and the output level was adjusted only with the volume knob, the difference was striking). Only at lower settings did the loudness compensation produce the rather heavy quality typical of most such circuits throughout their range.

The FM tuner section had an IHF sensitivity of 2 microvolts (close enough to the rating to be considered within normal measurement

tolerances) and reached 50 dB quieting at only 3 microvolts (μ V) input in mono and 43 μ V in stereo. The stereo switching and muting thresholds were the same, between 15 and 22 μ V, which was somewhat higher than we would think necessary for a tuner as good as this one. (Yamaha tells us that it will be re-adjusted.) However, the muting action was as nearly perfect as we have ever heard, with absolutely no transient noise evident during its operation.

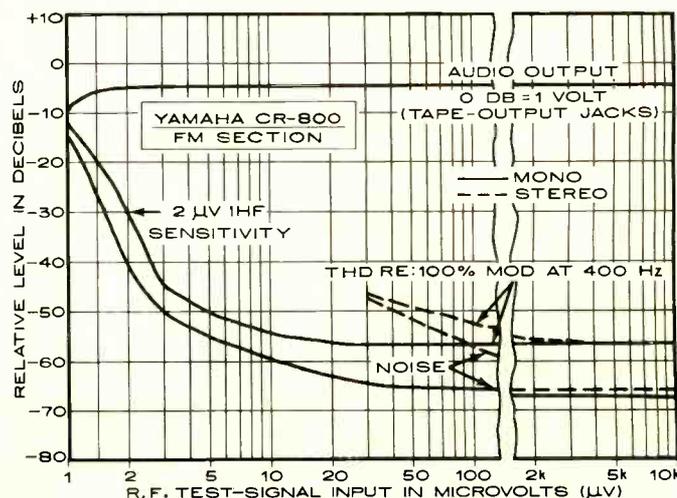
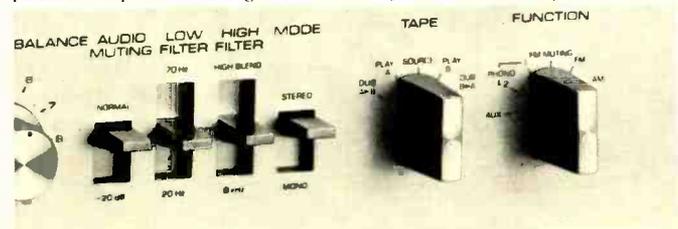
The ultimate S/N ratio (unweighted) was 67 dB in mono and 66 dB in stereo. At a 1,000- μ V input, the harmonic distortion was 0.15 per cent in both mono and stereo. The capture ratio of 0.9 dB was outstanding, as was the AM rejection of 70 dB. The alternate-channel selectivity measured a fine 88 dB, while the image rejection was 79 dB.

The stereo FM frequency response was as flat as our test instruments, within ± 0.3 dB from 30 to 15,000 Hz. This flatness at the highest transmitted audio frequencies suggests that the usual 15,000-Hz low-pass filter is *not* used in this receiver to remove 19-kHz multiplex pilot-carrier leakage. This makes the lack of 19 kHz-signal leakage into the audio outputs quite remarkable—it was literally undetectable, being suppressed to better than 85 dB below a 100 per cent modulation level. Stereo channel separation was better than 40 dB from 30 to 7,500 Hz, exceeded 50 dB between 150 and 1,500 Hz, and was a strong 33 dB at 15,000 Hz.

(Continued on page 42)

The levels of both random noise and total harmonic distortion (which includes noise) are compared with the audio-output level as input-signal strength increases. Both mono and stereo are shown.

Some of the Yamaha's many front-panel lever switches and rotary controls are shown in this close-up view. The very flexible, five-position tape-monitoring switch is adjacent to the input selector.



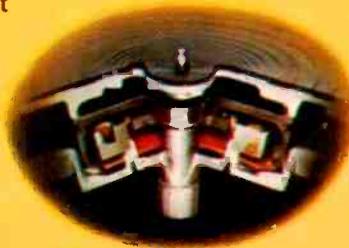
Introducing the changer that outperforms all others. The direct drive SL-1350.

Introducing the world's first and only direct-drive changer. The SL-1350. The first changer with the Technics direct-drive system. A system so superior many radio stations now use it.

No other changer, and only a handful of manuals, can equal its 0.04% wow and flutter. And because the motor spins at the exact speed of the record, any rumble is an inaudible -70dB (DIN B).

Two pairs of pivot bearings ensure the rotational sensitivity of the SL-1350's gimbal-suspended tone arm. And for precise tracking, its effective pivot to stylus length is $9\frac{1}{16}$ ".

With the Technics Memo Gram dial control, the SL-1350 can play up to six records in sequence. Or repeat-play any disc up to six times. You can even use it as a manual turntable.



Direct Drive System

But any way you use it, the SL-1350 gives you everything you need. Like viscous damped cueing and variable pitch controls. A 13" platter. An easy view prism strobe. CD-4 phono cables. Even a hinged detachable dust cover and base are included.

So if you've been sacrificing the convenience of a changer for the performance of a manual, take a look at the Technics SL-1350.

It'll change your mind about changers.

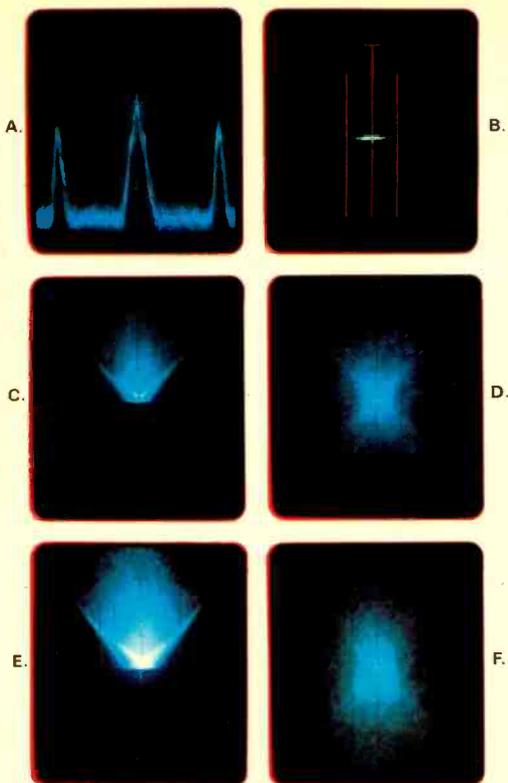
The concept is simple. The execution is precise. The performance is outstanding. The name is Technics.

FOR YOUR TECHNICS DEALER, CALL FREE 800 447-4700.
IN ILLINOIS, 800 322-4400.

Technics

by Panasonic



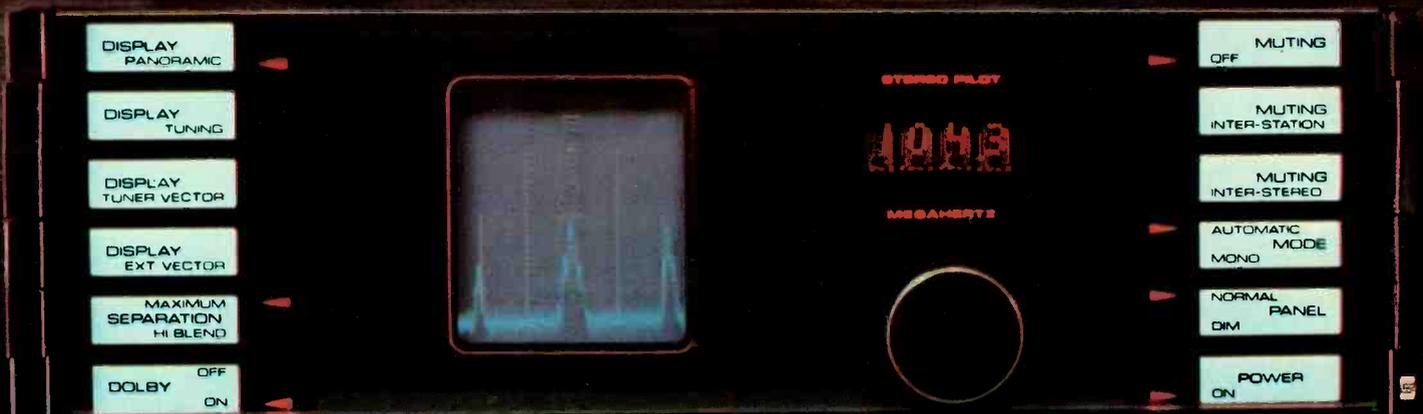


A benchful of instrumentation at your fingertips.

A. Panoramic spectrum analysis: a horizontal, 2 mHz-wide panoramic display of all signals (shown as "pips"), and FM stations located 1 mHz above and below tuned FM carrier frequency centered. **B.** Tuning, signal analysis: a thin, straight, centered horizontal display, minimum AM product of multi-path, instantaneous peak deviation, modulation and signal level. **C.** Internal vector separation analysis: instantaneous peak deviation of L+R stereo information and separation. R-front vector at 45° L-front vector at 135° **D.** External vector separation analysis: Same as C, but quadrasonic information, with L-rear vector at 225° and R-rear vector at 315° **E.** Internal vector phase analysis: stereo mode L+R front vector. Base line horizontal displacement indicating phase relationships at center of X axis. **F.** External vector phase analysis: same as E, but quadrasonic mode with front-to-rear phase relationship at center of Y axis.

To appreciate the
SEQUERRA
 forget everything
 you know or assume
 about tuners.

Then you will begin
 to understand why it may be
 difficult to acquire.



THE SEQUERRA MODEL 1.

PHOTOGRAPHS BY OWEN BROWN



Four-digit LED readout is frequency-controlled (not synthesized). Accurate to 0.1mHz.

By the end of this year, about five hundred Sequerras will have been built and purchased. Most of these are used professionally, such as at FM stations, by those who require its unique capabilities as a multi-function program monitor and as an extraordinary high-performance FM tuner.

Only 100 units per month.

Because of the nearly five thousand separate parts required by its design, the complex assembly, ninety-three test adjustments and hundreds of inspections, monthly production is currently limited to approximately one hundred units. This, plus its price of \$2500, is likely to continue restricting the ownership of Sequerras in the foreseeable future.

We're trying to be fair to all.

To accommodate those who will settle for nothing less than the Sequerra, we have instituted a special procedure. When an order is placed with a Sequerra dealer who does not have a unit in stock, a sequential serial number is reserved for that purchaser who then receives a certificate of ownership. When this unit has been produced and has successfully passed our validation procedures it is shipped directly to the

address requested: home, lab, or studio. Should you desire, Collins Radio Broadcast Field Engineers are available to assist you.

Those who already know of the Sequerra's technical capabilities need only one more bit of information: the names and addresses of our carefully selected dealers. A request for the list will be promptly fulfilled. Those who want more technical data will also be sent a brochure and a selection of reprints from the more than twenty test reports published world-wide.

Evaluations of monitoring functions.

Considerable space in these reports is devoted to the Sequerra's monitoring functions. As *Audio* reported: "We have just seen a four-quadrant oscilloscope capable of visually depicting stereo and quadrasonic signal separation and phase relationships." A portion of *High Fidelity's* report described additional information revealed by the scope: "The vector display can be used to check relative amplitude and placement in any signal source: quad, stereo, or mono. Where adjacent channels interfere with each other, the display can be used as gauge of antenna positioning to minimize the interference."

And from *Stereo Review*: "Unlike most such oscilloscopes (tuning and multipath-distortion indication), this one is accurately calibrated in signal levels over a range of more than 100 dB. In other words, it is now possible to estimate the number of microvolts of any signal reaching the tuner's antenna terminals from any tuned-in station."

Evaluations as "just" an FM tuner.

As for the Sequerra's performance as "just" an FM tuner, the following comments are also from the test reports. *Audio*: "...the world's best performing tuner...at least a whole order of magnitude better than anything else around." *High Fidelity*: "...so superlative that (it) can, with justice, be called 'best'." *Stereo Review*: "...may be a godsend...if it won't do the job, nothing else will..." *Radio-Electronics*: "\$2500. it's worth the price!...masterpiece..." *Absolute Sound*: "...in a class by itself...state-of-the-art tuner."

Even if your present requirements and personal situation don't yet call for the ownership of a Sequerra, we hope you will visit one of our dealers for a demonstration. As *High Fidelity* also said: "We guarantee you'll be fascinated by it."

THE SEQUERRA  COMPANY, INC.
A MEMBER OF THE BARRETT GROUP

143-11 ARCHER AVENUE, JAMAICA, N.Y. 11435

● *Comment.* The resemblance of the Yamaha CR-800 FM tuner section to the \$1,200 Model CT-7000 FM tuner (reviewed in *STEREO REVIEW* for January 1975) is apparently more than skin deep. Clearly, many of the design concepts and performance goals of the CT-7000 have been carried over into the CR-800. In a point-by-point comparison, the FM performance of the CR-800 comes remarkably close to matching that of the CT-7000, which ranks with the most advanced FM tuner designs we have seen.

We were pleased to find that the ultra-

smooth "feel" of the CT-7000 is also built into the CR-800. The operation of its controls conveys a strong impression of precision, which is completely consistent with the measured performance of the receiver. For example, the dial-scale calibrations were accurate enough that one could set the dial to a predetermined frequency, turn on the receiver, and find the desired station tuned in "on the nose." Even the signal-strength meter, frequently a less-than-perfect feature of tuners and receivers, has a logarithmic scale that provides useful readings on signals too weak

to be received with full quieting, yet is not driven off-scale by thousands of microvolts.

There are many fine receivers on the market, especially at the price level of the Yamaha CR-800. Obviously, some of them have features not present in the CR-800, and vice versa. Some are more powerful, although we doubt that many people will find the CR-800 underpowered. However, if there is a significantly *better* receiver in any of the respects that really matter to the user, we haven't seen it.

Circle 107 on reader service card

Uher CR 134 Stereo Cassette Recorder



● THE Uher CR 134 is an extremely compact portable battery/a.c.-operated stereo cassette recorder whose performance compares favorably with (and in some respects surpasses) that of many of today's typical good-quality home cassette decks. The CR 134 features automatic tape reversal in playback, a built-in capacitor microphone, and inputs for external stereo microphones. There are inputs for high-level signals from a tuner or similar source, and the line-level playback outputs are suitable for connection to home amplifier inputs. A small monitoring speaker is built in, and there are outputs for external speakers or headphones (the amplifiers of the CR 134 can deliver about 1 watt per channel to 4-ohm loads).

The Uher CR 134 is approximately 7 $\frac{1}{8}$ inches square and 2 $\frac{3}{4}$ inches high; it weighs 5 $\frac{1}{2}$ pounds with its optional internal, rechargeable NiCad battery pack. An a.c. line-operated battery-charger/power-supply is available, and this can be installed within the recorder case if desired, or the unit can be operated from six "C" cells or from a 12-volt automobile battery. The operating controls are located on the recorder's front edge, along with the cassette insertion slot. The cassette is drawn into place by a spring-loaded claw when partially inserted, and pressing down on a locking key places the machine in readiness for use. A button underneath the key serves to eject the cassette after use.

The CR 134 records in one direction and plays back in both directions. The principal transport control is a small T-bar lever. Pushing it down turns on the electronics of the recorder, and a momentary push to right or left puts the tape in motion in either the forward or reverse direction, with automatic head switching to contact the appropriate pair of

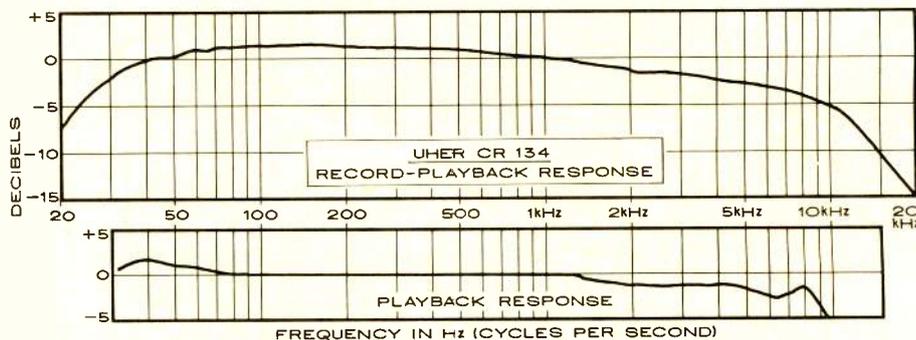
tracks. The transport is solenoid-operated, with a self-latching mechanism, so that the lever returns to its neutral position when released. A small meter indicates the direction of tape travel, and there is a three-digit push-button-reset index counter. A separate lever controls the fast-forward and rewind operations; this must be returned manually to its center position to stop the tape.

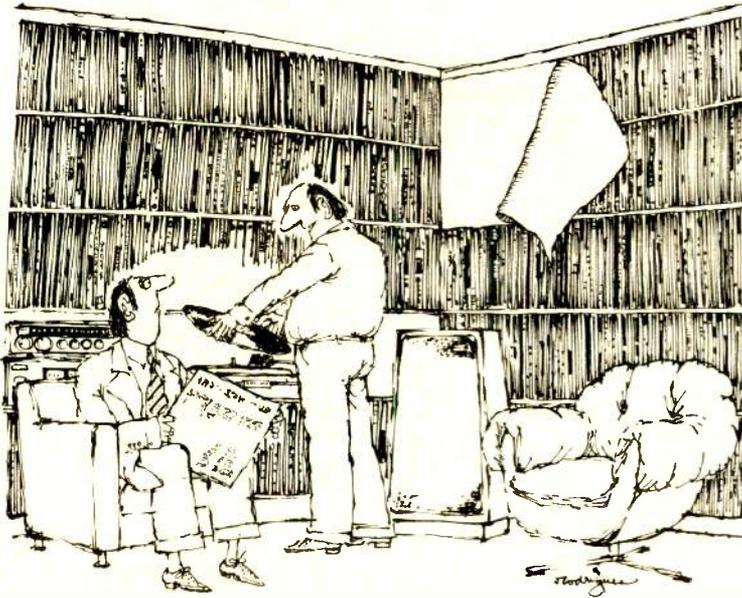
The brushless d.c. motor is electronically controlled, and a photoelectric sensor automatically reverses the tape, in either direction, at the end of play. Recording can be done (only in the forward direction) by pushing a red button while moving the transport lever to its operating position. At any time during recording or playback, the lever can be pressed down to stop the tape without releasing the recording interlock if it is engaged. A small meter with a horizontally moving red indicator bar monitors the battery voltage during playback and the program level during recording. Its response is quite fast, with a much slower decay, and it is calibrated from -20 to +2 dB. As a voltmeter, its expanded

scale covers 6 to 8 volts (the latter is the normal voltage of a fully charged battery). Proper operation of the recorder is maintained down to a 6.5-volt battery level.

To the left of the meter is a $\frac{1}{4}$ -inch opening for the built-in capacitor microphone (which Uher says is really a low-voltage capacitor microphone, *not* an electret type). The volume control sets both recording and playback (monitor) levels, but the line outputs to an external amplifier are at a fixed level. A DIN socket below the volume control accepts external stereo microphones. Other pushbuttons on the panel shut off the internal monitoring speaker (which is on the top surface of the recorder), switch between internal and external microphones, and activate the recording ALC (automatic level-control system). Along the side of the metal-cased CR 134 are three DIN sockets—for high-level inputs and line outputs, external speakers or headphones, or remote-control accessories which can control all tape-transport functions. A separate monitor volume control adjusts the level through the speaker or headphone outputs while recording (when the volume control is in the recording inputs). A DIN socket in the rear of the unit interconnects it with an automobile radio. A small hinged panel opens for access to the battery/power-supply compartment.

The basic specifications of the CR 134 include a frequency response of 20 to 13,000 Hz, an "A" weighted signal-to-noise ratio of better than 56 dB, and wow and flutter of less than 0.12 per cent. Price: the Uher CR 134 with carrying case is \$378; a NiCad battery pack is \$67.65, a power-supply/charger \$38.85, and a stereo microphone \$60.70. Other accessories, including special adapter plugs and cables, are also available.





● **Laboratory Measurements.** The Uher CR 134 was tested with TDK SD tape. The record-playback frequency response was within ± 5 dB from 20 to 13,000 Hz. A hotter tape would doubtless have flattened the high-end response. The playback frequency response, with a Nortronic AT 200 tape, varied $+1.5$, -2.5 dB from 31.5 to 9,000 Hz, and it was down 7 dB at 10,000 Hz. This is probably the result of an equalization mismatch rather than any inherent fault of the machine.

For a 0-dB recording-level indication, an input of 4 millivolts (mV) was required at the RADIO inputs and 0.2 mV at the microphone inputs. The corresponding playback output level was 670 mV. When a standard Dolby-level tape was played it provided a 580-mV output level, which is equivalent to -1 dB. The harmonic distortion was 2.4 per cent at 0 dB and reached the standard 3 per cent level at a $+1$ -dB recording input. The signal-to-noise ratio (S/N) referred to that level was 49 dB unweighted, 59 dB with IEC "A" weighting.

The wow and flutter (combined record-playback) were 0.02 per cent and 0.12 per cent and measured the same in both directions of tape travel. The operating speed was slightly fast (we would estimate the error as somewhat less than 1 per cent, and there was a difference of 0.4 per cent in speed between forward and reverse operation). A C-60 cassette ran through in 116 seconds in fast forward or rewind.

We checked the battery capacity by playing C-60 cassettes, in both directions, at the rate of two or three a day and monitoring the voltage indications on the recorder's meter, starting with a fully charged battery. In seven hours of play the voltage dropped from 8 to 7 volts, and during the next half-hour it suddenly fell to less than 6 volts and the recorder stopped. We would consider this to be a very satisfactory amount of service on a charge, although the sudden drop suggests that one should not let the voltage go below 7 volts when in the field. About twelve hours is required to fully recharge the battery (the recorder can be used during the charge period with the a.c. supply connected).

● **Comment.** Although the frequency response of the Uher CR 134 does not quite

match the performance of the better cassette decks in range or flatness, it nevertheless needs no apologies. We were impressed by the low flutter, which is on a par with many of the best a.c.-operated cassette machines and the low noise level, which is about as low as one can get with a non-Dolby machine.

The CR 134 was developed originally for the European market, where DIN connectors are commonplace; however, adapters are needed for equipment to be found in this country. And as with most DIN-equipped devices, the high-level line-input sensitivity is far too high for direct interface with conventional components, although suitable attenuators are built into some DIN adapters. Uher's instruction manual states that recording can be accomplished only with cassettes whose knockout tabs have not been removed. Unfortunately, at least in our test sample, this is not so. And if one does not realize that an already recorded cassette is in the machine (it cannot be seen when in place), it is perfectly possible to accidentally erase a valued recording.

The tape reversal is so fast and smooth as to be virtually imperceptible, requiring perhaps a second. Connected to a stereo receiver, the CR 134 delivered a sound quality on off-the-air FM recordings that compared in every way to what one would expect from a fine component cassette deck. As Uher points out, the built-in microphone is not recommended for high-quality music recording, but it produced clean and wide-range voice recordings. The ALC goes into action rapidly at levels exceeding 0 dB and allows inputs up to $+30$ dB before distortion sets in. However, its release time is very long—many minutes—so that low-level sounds coming after loud ones may not be recorded with sufficient level unless the ALC button is momentarily released and re-engaged to clear the circuits (there is no mention of this in the otherwise complete instruction manual).

Summarizing, the Uher CR 134 is a very versatile, high-performance miniature portable stereo cassette recorder that has much of the quality of a good home machine, yet is smaller than most mono portables. While it is not inexpensive, it appears to be very well made, and its price can surely be justified for those people who need its special qualities.

Circle 108 on reader service card

FREE

details... **A DIFFERENT KIND OF RECORD CLUB**

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

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

Look at these benefits:

TREMENDOUS SAVINGS

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

DISCOUNTS OF 43% TO 73% off mfg. suggested list . . . special catalog features hundreds of titles and artists.

ALL LABELS AVAILABLE

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

SCHWANN CATALOG

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

DISCOUNT DIVIDEND CERTIFICATES

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

NEWSLETTERS

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

DISCOUNT ACCESSORY GUIDE

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

QUICK SERVICE

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

100% IRON-CLAD GUARANTEES

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

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

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

dmc DISCOUNT MUSIC CLUB, INC. DEPT. 9-115
650 Main Street, New Rochelle, N.Y. 10801

NAME

ADDRESS

CITY

STATE

ZIP

CIRCLE NO. 16 ON READER SERVICE CARD

THE SILENCER

Your ears are burning with amplified noise. Even though your system is delivering sound accurately, it's also doing an efficient job of pumping out noise . . . accurately. Ideally, music should be recreated against a dead silent background. The Phase Linear 1000 accomplishes just that with two unique systems: The Auto Correlator Noise Reduction and the Dynamic Range Recovery Systems.

★ It improves the overall effective dynamic range and signal/noise ratio 17.5 dB in any stereo system with any stereo source.

★ The Auto Correlator reduces hiss and noise 10 dB without the loss of high frequencies and without pre-encoding.

★ The Dynamic Range Recovery System restores 7.5 dB of dynamic range without pumping and swishing.

★ Plus, it removes hum, rumble and low frequency noises, without the loss of low frequency music.

★ WARRANTY: 3 years, parts and labor

Even the finest stereo systems are limited in performance by the quality and nature of the recording. With the Phase Linear 1000, these limitations are overcome. Added to any receiver or preamplifier, it gives you the most significant improvement in sound reproduction for the money . . . more than any other single piece of equipment you could add to your system. Ask your dealer for an audition. The silence is deafening.



Phase Linear 1000

Phase Linear Corporation,
20121 48th Avenue W.
Lynnwood, Washington 98036

CIRCLE NO. 47 ON READER SERVICE CARD

THE OPERA FILE

By WILLIAM LIVINGSTONE



TURN YOUR RADIO ON

As a result of a brief spare-time course I took years ago in the army, I have retained a Russian vocabulary of perhaps a hundred words. And when the Bolshoi Opera visited New York last summer I think I heard every one of them at one performance or another except the words for match (*spichka*) and railroad station (*vogzal*). The Bolshoi singers' diction was so marvelous that the words just leapt out at you. You might not think Russian an ideal language for singing—all those consonants—but they made it sound so beautiful that I wanted to learn it.

The Berlitz language schools tell me I could quickly become proficient in reading, writing, and speaking Russian in their "Total Immersion" course. In T.I. one works with a team of three Russian teachers from 8:15 a.m. to 5:15 p.m., Monday through Friday, with two hours of homework every evening, for only five weeks, and it costs \$4,300, including lunch.

Frankly, that seemed a bit strenuous and rather costly, even considering that you'd save a month's lunch money. And how much would I use Russian even now that the Met's policy is to sing *Boris Godunov*, *Eugene Onegin*, and *Pique Dame* in that language?

Well, there are all those fine Melodiya records to listen to. And as I mulled this over, I decided that before going for broke at Berlitz, I'd try to learn a bit of Russian from opera records—a sort of discreet Presbyterian Sprinkling rather than Total Immersion—and I thought I'd memorize the words to an aria or scene from a Russian opera I particularly like. After all, that's the way I learned most of the Italian I know. As a result, in speaking Italian I'm much better at announcing my intention to overthrow the impious altar of the Druids or telling a girl she is not my daughter but a slave of the Pharaohs than at making plane reservations or ordering meals.

Anyway, the Russian scene I chose was Act I, Scene 1 from Prokofiev's *War and Peace*, and I'm learning it with the Columbia/Melodiya recording. (If you haven't bought that one yet, start saving your lunch money. It's worth it.) I had found the scene rather difficult to sing along with before, but knowing the words, even imperfectly, helps a lot.

Next I'm going to attack the big seduction scene from Tchaikovsky's *Pique Dame* (*The Queen of Spades*). The Melodiya/Angel recording of this opera doesn't satisfy me. Galina Vishnevskaya is good enough, but I can't

stand the tenor, conductor Boris Khaikin sets some very odd tempos, and his symphonic approach deprives the big climactic scenes of dramatic impact. Columbia Records is going to release a new Bolshoi *Pique Dame* with artists who performed it in New York last summer. I'm so curious about it that I've tried to wheedle a copy of the master tape out of Columbia. No luck.

I got hooked on this opera (again back in my army days) when I sent away for a batch



Hermann Prey, the Barber on TV

of operatic records offered cheaply by the Musical Masterworks Society. Most of them were bad, but *Il Trovatore* sung by a Dutch company was good for laughs, and a disc of highlights from *Pique Dame* was excellent. It featured Georgi Nelepp, Eugenia Smolenskaya, Pavel Lisitsian (one of my all-time favorite baritones), and Alexander Melik-Pashayev, who conducts the Columbia *War and Peace*. The sound, early-Fifties mono, is still acceptable.

My heart leapt up when I beheld the whole recording of the Melik-Pashayev performance complete on three records for \$13.50 recently at the Four Continent Book Corporation (156 Fifth Avenue, New York, N.Y. 10010). The store specializes in imports from Russia—such fascinating things as "Vocal Cycles" (Continued on page 46)



When a good friend tells you "I can't afford Interface:A," tell her about the new Interface:B.

Our new Interface:B is a way of acquiring most of the excellence of our vented, equalized Interface:A speaker system for much less money. Interface:B is friendly advice in another way too: we designed it to work with lower powered electronics and still provide superior sound at satisfying levels.

Flat, accurate response here. Less than 2¢ a Hz.

Below the lowest reach of a bass guitar is a whole acoustical world that's costly to reproduce. And most speakers miss it. Yet down there, Interface:B responds with startling accuracy to a 36-Hz tone. We used an Interface:A technique to achieve this; it is not unlike squeezing a 16-foot organ pipe into a box of true bookshelf size. The device that enables this is the same vent substitute we developed to meet the design goals of the Interface:A. It looks like an extra woofer, but it duplicates the function of a column of air ten inches in diameter and nearly 20 feet long.

Highs the way the composers wrote them.

In the midrange, most high-efficiency bookshelf speakers in the Interface:B price class come on strong. Overly so, we think. On top

Dept. 1154F, 616 Cecil Street
Buchanan, Michigan 49107

of that, many don't disperse their high-frequency output uniformly, either. We haven't resorted to these design tradeoffs in Interface:B. Interface:B puts out an earful of uncommonly uniform acoustic power because, first, its midrange is radiated by a relatively small diameter driver, plus it has a simple but effective acoustic lens on the tweeter combined with a compensating amount of high-frequency boost from the equalizer.

We mixed the equation so that B equals A, nearly.

So that lower powered receivers could be used with Interface:B, we altered the mathematics of Interface:A's enclosure. About an inch increase in size all around permits, with only a 4-Hz change in low-frequency limit, a conversion efficiency fully 3 dB higher than Interface:A. So it takes half the power to drive Interface:B's to the same volume level.

And so that subsonic signals such as record rumble don't distort the flat response of Interface:B, we designed the equalizer to roll off sharply below 36 Hz.

A-B our new Interface:B against the higher priced systems.

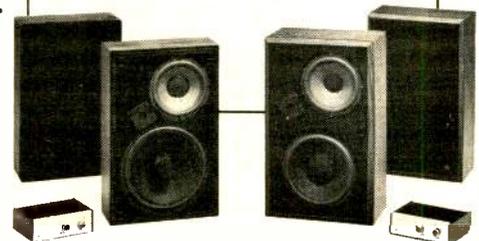
For accurate response, superior dispersion, and deeply satisfying

levels, we think practically nothing beats our Interface:B (except our Interface:A). Give us a hearing.

Free manual.

Send for our free Interface information package. It includes an Interface:B Owner's Manual that is practically an education in vented speaker design and application.

| Specifications | Interface:A | Interface:B |
|--|---|--|
| Response, On Axis | 32-18,000 Hz, ±3 dB | 36-18,000 Hz, ±3 dB |
| Total Acoustic Power Output Sound Pressure Level (1 Meter, 1-W In) | 32-18,000 Hz, ±3 dB | 36-18,000 Hz, ±4½ dB |
| Suggested Amplifier Power Rating (RMS per channel at 8 ohms) | 89 dB | 92 dB |
| Long-term average power handling capacity (midband) | Minimum: 10 Watts Maximum: 250 Watts | Minimum: 5 Watts Maximum: 180 Watts |
| Peak Power Handling Capacity (midband) (10 milliseconds) | 25 Watts | 18 Watts |
| Dimensions | 14" x 22" x 7¾" deep | 14" x 23" x 9¼" deep |
| Suggested Retail Price (Slightly Higher in Western States) | \$450.00 per pair including equalizer | \$325 per pair including equalizer |



Interface:A

Interface:B

Electro-Voice®
INC.
a gulton company

SIBLING RIVALRY



Which one you like best depends on what you want to do with it.

Our Ultra Dynamic cassette can play back every note your system can record.

Or, for a few Hertz less and a lot of cents less, you can have quality almost as good in our Low Noise cassettes. (It's so good, many people compare it to our competitors' top-line products.)

However, both cassettes feature Maxell "tensitized" tape strength to pre-

vent stretching. Both Maxell cassettes feature the strongest shells made to prevent warping and popping. Both cassettes come in 120 minute lengths that really work.

So, while our two cassettes have a few differences, they're all in your favor.

Maxell Corporation of America, Moonachie, New Jersey 07074. Also available in Canada

maxell
For professional recordings
at home.



by Lettish Composers"—and if you're at all interested in out-of-the-way Russian items, I suggest you order their free catalog. I also recommend anything by the great Russian tenors Ivan Kozlovsky and Georgi Vinogradov.

WHILE the Bolshoi Opera company was in this country, I heard a rumor that Exxon was going to underwrite the taping of one of their productions to broadcast on television. The rumor turned out to be totally false, but an opera that Exxon is presenting in its Great Performances Series on the Public Broadcasting System is *Il Barbiere di Siviglia*, a La Scala production with Teresa Berganza, Hermann Prey, Luigi Alva, and Paolo Montarsolo, conducted by Claudio Abbado—the same cast as on the Deutsche Grammophon recording. A separate soundtrack was made for TV, but the performances should be about the same as on the records. Although the DG set is not ideal in every respect, the telecast will give us a welcome chance to see Berganza, who no longer performs in this country. It is scheduled for January 7.

There will be some other operatic offerings on PBS this season, and radio continues to be a good friend to operaphiles. Those who live within the range of WFMT in Chicago can hear the entire repertoire of the Lyric Opera of Chicago, and in four-channel sound, no less! That company's season runs from September 19 through December 13 and includes *Otello*, *La Traviata*, *Elektra*, *Le Nozze di Figaro*, *Fidelio*, *Lucia di Lammermoor*, and *Orfeo ed Euridice*.

Station KKKH in San Francisco broadcasts performances by that city's opera company live and in four-channel. The San Francisco season (September 12 to November 30) includes the following works: *Il Trovatore*, *L'Incoronazione di Poppea*, *Der Fliegende Holländer*, *L'Elisir d'Amore*, *Norma*, *Pique Dame* (in Russian), *Werther*, *Simon Boccanegra*, *Andrea Chenier*, *Il Tabarro* and *Gianni Schicchi*, and *The Magic Flute*.

I wish a sponsor could be found to make some of these Chicago and San Francisco broadcasts available nationally. I really hanker for Joan Sutherland and Luciano Pavarotti's first *Trovatores*, which they are singing in San Francisco, and in November Renata Scotto takes over for Sutherland. San Franciscans are also getting Josella Ligi's American debut, along with many other treats. And there are some fascinating operatic doings in Houston, Dallas, Seattle, Boston, and Kansas City that are worth broadcasting nationwide.

BUT as long as we have Texaco presenting the Metropolitan Opera, we shouldn't complain about what we *haven't* got. This will be Texaco's thirty-sixth consecutive season of live broadcasts of Saturday matinees directly from the stage of the Met. The broadcast season runs from December 6 through April 17, and the operas will be presented in the following order: *Un Ballo in Maschera*, *Carmen*, *Così Fan Tutte*, *Hansel and Gretel*, Puccini's *Trittico*, *Elektra*, *The Siege of Corinth*, *Boris Godunov*, *Il Barbiere di Siviglia*, *Fidelio*, *La Traviata*, *Le Nozze di Figaro*, *Norma*, *Aida*, *I Puritani*, *Ariadne auf Naxos*, *Der Rosenkavalier*, *Madama Butterfly*, *La Gioconda*, and *Die Meistersinger*. Two of these will be Met broadcast "firsts": Puccini's *Trittico* (January 3), which has not been performed by the company since 1920, and *I Puritani* (March 13), which has been out of the Met repertoire since the season of 1917-1918.



Introducing one of the finest collections of stereo receivers in the world: the MX1580.

Power* of the Sony 7065. FM Sensitivity* of the Pioneer 838. Selectivity* of the Sherwood 7900A. Capture ratio* of the Marantz 2270. Total Harmonic Distortion* of the JVC VR-5660.

With so many excellent AM/FM stereo receivers around these days, who needs another? So instead of making just "another," we collected the most significant specs and useful features of five of the best, and "combined" them in one: the MX 1580.

Of course, some of these five receivers have features our one doesn't have (we think you can manage without two phono inputs).

But then, ours has features they don't have; features you shouldn't do without.

You pay for — and get — what you really need.

The MX 1580 has exclusive ASNC, which automatically reduces the noise level on weak stereo stations without reducing separation on strong ones.

And special thermal protection for output transistors and the power transformer.

Plus lots more we were able to include and, at \$475.95,** save you a few bucks in the bargain.

How? It wasn't easy. But we had help.

The oldest new company in the business.

Although we're a completely separate group, we were able to draw on the resources of a company that's been a leader in the industry since 1915. So we could afford to wait until we had the MX 1580 right.

And now it's so right, we insist that every single one be inspected twice before it's shipped. After all, we have one of the world's finest stereo collections to protect.

Features and Specs*

- Sensitive front-end with three dual gate MOSFET's and 4-gang tuning capacitor.
- Two 5-pole 1 near phase filters for improved selectivity and phase response.
- High gain IC quadrature FM detector.
- Switchable signal-strength/center-tuned meter.
- Phase lock loop IC circuit for FM stereo multiplex.
- Computer-designed low pass audio filters for suppression of ultrasonic frequencies.

- OCL direct-coupled differential amplifier for extended frequency response and wide bandwidth.

Power 60 watts per channel, min. RMS

Power Bandwidth 20Hz-20kHz

Total Harmonic Distortion 0.5%

Load 8 ohms

IM distortion 0.8%

Frequency response 20Hz-25kHz

Usable sensitivity (IHF) 1.8uV

Selectivity (IHF) 75dB

Capture ratio (IHF) 1.5dB

50dB signal to noise mono 2.5uV

Stereo separation @ 1kHz 50dB

@ 10kHz 40dB

All specs subject to change without notice. Specs of competitive receivers taken from manufacturer's own published data sheets. **Manufacturer's suggested retail price; optional with dealer.



We're being heard from.

MX High Fidelity Components, Ft. Wayne, Indiana 46804

THE SIMELS REPORT

By STEVE SIMELS



SPRINGSTEEN: BORN TO SING

I ALMOST don't know *what* to say about Bruce Springsteen, his recent five-day stint at New York's Bottom Line, or his new album, "Born to Run." I *could* say that you read it all here first (and you did—you may recall that Bruce's first album won a STEREO REVIEW Best of the Year award in 1973) except we don't want to appear self-important, now do we? Or I could say that I find myself listening to him the way I used to listen to Dylan, the Beatles, and Chuck Berry—as though a life depended on it—only I can't, because Michael Watts has *already* said that in *Melody Maker*. In fact, there's the basic problem in a nutshell. I don't know what to say about Bruce because other people (and I myself, at various times in these pages) have already shot off all the superlatives.

That being the case, all I can offer are some more personal observations, and I'll *try* to avoid telling you again that Bruce is the greatest thing since blah blah blah even though he is. May I indulge in this much hyperbole, however: there is absolutely no doubt in my mind that he is in the same league as The Most Significant Figures in Rock History, and when that book is written, I'm certain he'll rate higher and longer than, say, a genial and entertaining May fly like Elton John.

I saw three of Springsteen's Bottom Line shows, heard a fourth on the radio, and then received an advance of his new album, all in the space of a week, so my reactions have had ample opportunity to jell. The first thing I'd like to bring up is the prevailing critical cant

that his previous records have been poorly produced, and that they *all* fail to convey the excitement and power of his live show. Well, yes and no. "Born to Run" is very cleanly produced (as pure sound, it reminds me more than anything else of "Who's Next," which is high praise indeed), and I hold that the productions on the previous two, though admittedly vastly different, were totally appropriate to the music—frankly, I can't imagine a song like *Incident on 57th Street* (from "E Street") being done much better under any circumstances. The latest one, however, will likely be more accessible to most people simply because of the nature of the songs. Bruce is editing himself more tightly these days, and so the stories he tells are easier to follow.

As for the records' effectiveness paling before the heavy impact of the live show, I think that's simply a matter of apples and oranges. Examples: live, Bruce did the new album's opening track, *Thunder Road*, as a solo—just him and the piano, and it was really quite poignant. You got the feeling that the girl the song is addressed to was coming along for the ride with him. But on record the song has an entirely different effect, with the band rocking along like mad, and when Bruce sings the final line ("This is a town full of losers and I'm pulling out of here to win") there's real triumph in his voice—you know that he's right and the girl is almost irrelevant. Either way, it's a stunning number. On the other hand, though *Spirit in the Night*, from the first album, is a blistering rock-and-roll showstop-

per when Bruce does it live, it never takes on one iota of the haunting, late-night-romantic feel of the recorded version. The point I'm trying to make is that you win either way: Springsteen is a stupendous performer who also happens to make great records.

The second thing I'd like to call attention to is one of his greatest gifts: his ability as an interpreter. The oldies (hate that word) I've seen him perform over the last three years—Spector material, songs by the Stones, Beatles, Searchers, even Manfred Mann—were never nostalgia exercises à la Sha-Na-Na, or attempts to prove how groovy he is à la Bryan Ferry or Bowie's "Pin Ups," but simply songs that he loves and sings with the same conviction he brings to his own. That's only natural, because they do indeed spring from the same impulse that powers his own music, and probably the greatest compliment I can pay him is to say that when he sandwiches *Route 66* or *Then She Kissed Me* in between his own numbers, they sound like *his* songs, as if *he* wrote them. That, friends, is the mark of someone who *really* understands rock.

Finally, there is the question of what happens now. Was this set of appearances our last chance to see Bruce in such intimate surroundings? (The Bottom Line audience seemed to sense it; the experience was remarkably like, as one friend remarked, "seeing the Beatles' last show at the Cavern in 1963.") Some folks are already beginning to say that the Big Time will spell the end for him as a creative force; I very much doubt it. I suspect that he's just beginning to do his best work, that his basic honesty, lack of pretension, and love of music are going to get him very nicely through the superstardom that is his inevitable due. At the moment, Bruce is simply state-of-the-art for rock, and that means he's bound to raise everybody's standards, even his own.

As for "Born to Run," well, there's not a dud cut on it. *Jungleland* may be his best song to date, and I think you're going to see lines from the title track scribbled on walls very soon. But, as I said, we've already exhausted the superlatives. I'll merely paraphrase Lester Bangs (who was talking about McLean's *American Pie*, which, ironically enough, is about the *death* of rock) and say that if you've ever cried because of a rock-and-roll band or album; if you've ever lain awake nights wondering or talking through to the dawn about the music and what it means; if you've ever kicked off your shoes to dance; or if you've ever *believed* in rock-and-roll, then you absolutely have to have "Born to Run."

★ ★ ★

While I've got your attention, the following addenda: the English version of the Stones' "Metamorphosis" has two extra cuts on it (shades of the old days): Eric Clapton's new studio single, a predictably dull reggae workout of Dylan's *Knocking on Heaven's Door*, has a B-side, a slow gospel blues, on which he burns as he hasn't in years—you should get it immediately; and, finally, I chanced across a very high-quality stereo bootleg of David Bowie recorded somewhere during his first American tour (probably Santa Monica) that has forced me to re-evaluate somewhat. He and the Spiders, at least when they were into no more than guitars and an *occasional* costume change, were a pretty good little rock band. If nothing else, it cuts the official RCA "David Live" by miles. So, belatedly, good show, Dave.



In the development of our \$4000 state-of-the-art Servo Statik 1A we came across new principles which we determined to incorporate into less expensive speakers—principles concerning crossovers, and particularly the phase relationships of component drivers in a system. By properly balancing the phase leads and lags of each driver, and by scrupulous design of the drivers themselves, we are able to reproduce recorded temporal information absolutely accurately in a speaker of modest size and price.

Stated simply—there's a depth perception about the Monitor Jr. that is much like being in an acoustically perfect concert hall.

Listen to other speakers—even

very expensive ones. In any one microsonic moment, generally the tweeter will speak first; then the midrange; then the woofer.

Listen to the Monitor Jr. It delivers the temporal information precisely *in phase*: first the transient attack, then the first echo, the second echo and the subsequent reverberation. You hear the natural, undistorted depth and ambience of the concert hall!

And note the spatial relationships of the instruments. If the tymps were on a riser to the left rear, they sound that way. If the clarinet soloist was in the second row just to the right of the podium, she sounds that way.

Our crossovers are greatly responsible for this dimensionality.

Each of the six drivers of the Monitor Jr. system—our two sets of 12" transmission line woofers, our 1½" dome midranges and 1" dome tweeters—speaks with a temporal integrity and an individual accuracy of depth-information in a way that can only be called startling.

And note the optional \$25 set of pedestals. They position the Monitor Jr. off of the floor for optimum reproduction; yet it functions beautifully on the bookshelf.

Our Monitor Jr. brings you the life-like warmth and accuracy of our Monitor II. And its price is roughly half—about \$225.

Not a bad investment—to own your own concert hall.

Step into Infinity's little concert hall: The Monitor Jr.



 Infinity

We get you back to what it's all about. Music.

GOING ON RECORD

By JAMES GOODFRIEND
Music Editor



REALITY REVEALED

CONFIDENTIAL information comes out in the damndest ways. The facts most difficult of access in the record business have traditionally been sales figures (of anything but a runaway hit) and break-even points. It's a tossup as to whether companies are ashamed of low sales and convinced that everyone else must be doing better, or whether they think that general knowledge of their successes would provoke damaging competition. But the most open and honest record executive (there are such things) becomes positively tongue-tied when asked how many discs of so-and-so have been sold.

How strange it is, then, to find that the Congressional hearings in Washington on the subject of performing rights for sound recordings elicited a veritable host of facts and figures about record sales and profits—not whispered about under the rubric of “off the record, of course,” but available for public consumption and digestion. There has been an awful lot of animosity expressed against the record business in recent years caused by a general lack of understanding of how—and how well—the business works. I think some of these figures may tend to straighten things out in people's minds, so that even though some practices may still be considered inexcusable, they will at least no longer be totally inexplicable.

According to a report of the hearings published in *Billboard* magazine, an analysis was done by the Cambridge Research Institute of a sample of the releases of those eight major record companies which in 1972 (the year surveyed) accounted for 53 per cent of the record industry's sales. Presumably, only domestic sales were considered. The first things established were the break-even points (which, for those totally unfamiliar with sales practices, means the number of units that must be sold to recoup all production costs, advance payments, and applicable overhead, after which any profit may be calculated on the difference between manufacturing and royalty costs and the actual selling price). Those break-even points are as follows: pop singles, 46,000 records; popular LP's, 61,000 records; popular tapes, 24,000 units; classical LP's, 22,000 records; classical tapes, 34,000 units.

These are averages, of course: the break-even point for every individual record is different. And those familiar to some extent with

record economics know that the break-even points of the other 47 per cent of the industry are quite likely to be considerably lower than those of the major companies (lower overhead being the major difference). Furthermore, I am myself unable to comprehend what seems to me like an excessively high break-even figure for classical tapes. Still, these numbers have to be taken with at least a congressional seriousness.

Accepting them as they are and concentrating for the moment on classical releases, we find the following sales figures. Of classical discs released, 11 per cent sold 0 to 2,000; 22 per cent sold 2,000 to 4,000; 40 per cent, 4,000 to 8,000; 10 per cent, 8,000 to 10,000;



12 per cent, 10,000 to 20,000; 3 per cent, 20,000 to 50,000; 1 per cent, 50,000 to 100,000; and 1 per cent, 100,000 to 300,000, which was the top figure.

Matching up sales and break-even points is all too easy and all too revealing: 95 per cent of all classical albums in 1972 lost money. The tape situation is even less promising: only 1 per cent of classical tapes sold more than 8,000 copies, meaning that something over 99 per cent of releases lost money.

Of course, we have been talking about 1972, which was just a year after STEREO REVIEW published its own analysis of the “Classical Crisis.” Things have improved since then. But I have had access myself to a few specific sales figures for 1974 since reading about the Cambridge Research report, and I can tell you that, based on the same break-even points, at least one successful major

company could count precisely three money-makers among its ten top best-selling classical LP's. To call the classical record business a “marginal” operation, then, would seem the most reckless of understatements.

A little perspective on the matter is furnished by figures on popular records. As regards pop singles, 81 per cent of them, in 1972, failed to break even. Among the albums, 77 per cent lost money, while the figure was 80 per cent for tapes. What keeps the pop market from being a marginal operation as well is that of those 23 per cent of popular albums whose sales exceeded their (rather high) break-even point (61,000), better than one-quarter sold in excess of 300,000—and “in excess of” can mean several million. Among singles, 5 per cent of the total went over 300,000, to Lord only knows what stratospheric heights.

One can define the popular album business, then, as a horse race in which the odds are slightly more than fifteen to one against the bettor's winning big. But the payoff can be astronomical. And even if he does not hit it big, the odds are only about three to one against the bettor's making a reasonable profit or at least recouping his money. The singles market is similar, but with somewhat lower stakes, since both the costs and the profits of singles are smaller.

BUT the classical market—oh, the classical market! It is not a horse race, for no self-respecting horse player would take such horrendous odds against such a small potential payoff. It is, rather, a business of men devoted to trying to *stay* in business; playing the game conservatively to try to make a *little* profit, or at least not to lose too much, on the standard items; taking penny-ante gambles in the hope

of hitting it big only *in relation to* the original costs. Classical records are saved (to some degree) by their sales over a period of years, but when sales of a disc amount to no more than about three hundred over a twelve-month period, even the best will in the world can't justify its remaining long in the catalog.

And that is why so many musically wonderful records are no longer available to be bought; why recording artists groan when their fans tell them they have just “taped” their latest record; why the industry seems so impervious to new, exciting ideas that will produce prestige but not profits; and why classical producers sadly throw up their hands when they are criticized for the low quality of pressings the plant has inflicted upon them. There is little money, and where there is little money, there is little power, and eventually there is little enthusiasm. Help!?

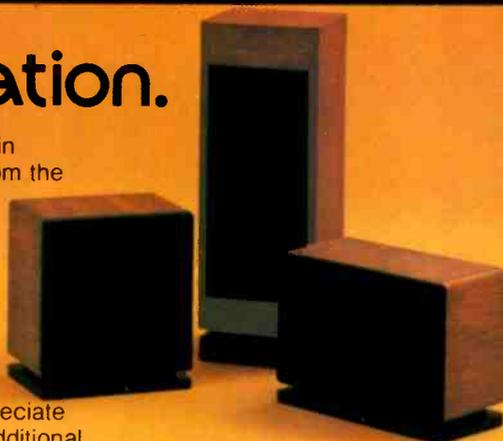
A tribute to appreciation.

Music appreciation. Art appreciation. Appreciation for excellence in performance. A fulfillment that comes from the experience, not from the parameters by which it was created.

The Contrara Group of loudspeakers is a tribute to that appreciation. We should not deliberate how Amilio Contrara has sculpted the walnut, blended it with cloth and merged it with technology to bring visual satisfaction. Nor, how he has balanced the electronics with physics to provide audible gratification.

Ours is only to enjoy. To appreciate. To savor. Something only our ears and eyes can savor for themselves.

If you enjoy your music and quality craftsmanship, you'll appreciate the Contrara Group; it's a tribute to your sensitivity. Write us for additional information. We'll send you a booklet on appreciation and a list of locations where you can enjoy Contrara.



CONTRARA GROUP

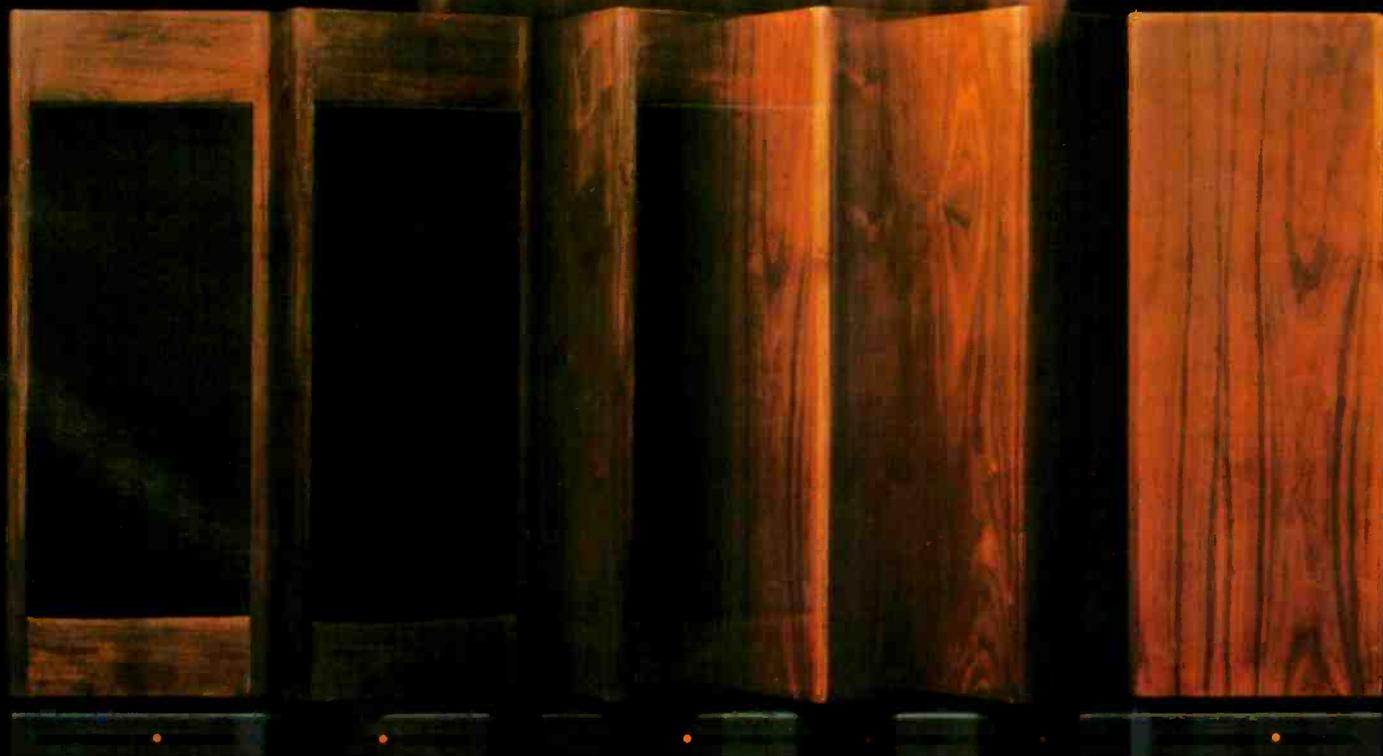
JENNINGS RESEARCH INC.

64 N. Fair Oaks Ave., Pasadena, Calif. 91103

Canadian Distributors - THE AUDIO GROUP INC., Ontario

For the name of the nearest dealer, call toll-free [800]-447-4700. In Illinois, [800]-322-4400.

CIRCLE 5 ON READER-SERVICE CARD



Now you can have Dual precision any way you like.

Every Dual, from the 1225 to the CS701, is designed to fulfill one basic concept: to provide more precision than you are ever likely to need.

Perhaps this is why more component owners—audio experts, hifi editors, record reviewers and readers of the music/equipment magazines—own Duals than any other turntable. These serious music lovers, whose investment in records typically exceeds their investment in equipment, prefer Dual for only one reason. Quality.

Until recently, Dual quality has been available only with fully automatic turntables with both single-play and multi-play facility. Now the choice is much broader. Of the seven Dual models, three are single-play only. Two of these are fully automatic; one is semi-automatic. Dual turntables also use all three types of drive systems: belt, rim and direct.

The way a tonearm is moved to and from the record is not critical. Nor is the type of drive system. What is critical is how faithfully the tonearm permits the stylus to follow the contours of the groove and how accurately and quietly the platter rotates.

If precision performance and reliability are of primary importance to you—as they should be—you'll find them in every Dual.

Dual 1225
\$139.95, less base



...with the 1225,
the lowest priced Dual... all the
turntable you may ever need.

The Dual 1225 is a perfect example of Dual's basic concept: to build every Dual turntable with more precision than you are ever likely to need.

The 1225's vernier adjustable low-mass counterbalanced tonearm can track flawlessly at as low as one gram. Stylus pressure is applied exactly as in every Dual, around the vertical pivot and perpendicular to the groove, maintaining perfect balance in all planes. Anti-skating force is also applied exactly as in every Dual, with separate calibrations for conical, elliptical and CD-4 styli.

Other features the 1225 shares with all other Duals include pitch control variable over a 6% range (one semitone) and cue-control viscous-damped in both directions to prevent bounce. The powerful hi-torque motor maintains speed within 0.1% even when line voltage varies as much as 20%. The hefty 3¾ pound, 10⅝" diameter platter provides effective flywheel action to minimize the audible effect of any possible speed variation.

There are two other models in this series, each with additional refinements. The 1226, priced at \$169.95, has a one-piece, die-cast platter and a single-play spindle that rotates with the record. The 1228, priced at \$199.95, has—in addition to these—a tonearm mounted in a four-point gimbals suspension, synchronous motor, built-in illuminated strobe and adjustable stylus angle to provide perfect vertical tracking in both single and multi play.

Dual 1249
\$279.95, less base



Dual CS701,
\$400, including base and cover



**... with the new Dual 1249,
which will give you more reasons
than ever to own a Dual.**

The new 1249, successor to the 1229Q, provides every feature, innovation and refinement of that highly-acclaimed model, plus some new ones. The 8 $\frac{3}{4}$ " tubular tonearm pivots in a newly designed four-point gyroscopic gimbal, suspended within a rigid frame. In single play, the tonearm parallels the record to provide perfect tracking; in multi play, the Mode Selector lifts the entire tonearm to parallel the center of the stack. The tonearm can be set on the record manually or by using the viscous-damped cue-control or by simply pressing the automatic switch. In addition to single play and multiple play there is also the option of continuous repeat.

The dynamically-balanced cast platter and flywheel are driven by an 8-pole synchronous motor via a precision-ground belt. Pitch is variable over a 6% range and can be set to exact speed by means of an illuminated strobe, read directly off the rim of the platter.

A similar model, the 601, is available at lower cost (\$249.95), without multi-play facility. A third Dual in this series, the 510 (\$199.95) has a semi-automatic tonearm with a mechanical sensor that indicates when the tonearm is positioned precisely over the lead-in groove of a 12" or 7" record. At the end of play, the tonearm is automatically lifted by the cue-control and the motor shuts off.

**...with the CS701,
the quietest turntable ever made.**

Independent test reports on the electronic direct-drive Dual CS701 have been extraordinary. One reason is that all reviewers acknowledge the CS701's performance to be superior to the measuring capabilities of test instruments. For example:

Hirsch-Houck Labs in Stereo Review found the wow level of the CS701 "Essentially at the residual level of our test record—about 0.03 per cent." So did Popular Electronics. The Feldman Lab Report in FM Guide was able to detect "no flutter whatsoever." Stereo & HiFi Times said "arm friction was lower than my capability to measure reliably."

It takes very advanced engineering to achieve this level of performance. For example: the motor's unique double field coil produces a perfectly consistent rotating field with no magnetic flux irregularities. Another example: two specially tuned mechanical anti-resonance filters located within the tonearm counterbalance absorb resonant energy that would otherwise transmit acoustical feedback to the stylus. The result: cleaner and smoother frequency response.

The reviewers also reached unequivocal conclusions about the CS701 performance. Note the absence of such qualifiers as "one of the" or "among the." For example: High Fidelity said: "...The Dual 701 has placed itself in the select group of products against which we must measure the performance of others." And the highly conservative English publication, HiFi News & Record Review: "The experience of listening to records of the highest quality on this turntable is not likely to be forgotten...you will never again be satisfied with anything less perfect."

United Audio Products, 120 So. Columbus Ave., Mt. Vernon, N.Y. 10553

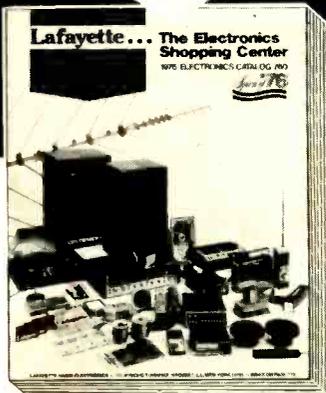
Exclusive U.S. Distribution Agency for Dual



CIRCLE NO. 50 ON READER SERVICE CARD

FREE!

the 1976 Lafayette Electronics Catalog



Offering the **FINEST** in
**Home Entertainment
Products**

Akai • Audio Technica • B.I.C. •
BSR • Burwen • dbx • Dokorder
• Dual • Dyna • Empire • ESS
• Garrard • Hitachi • Koss •
Meriton • Micro Acoustics •
Onkyo • Ortofon • Panasonic •
Philips • Pickering • Sanyo •
Sennheiser • Scotch • Shure •
Sony • Stanton • Teac • Techni-
cs • TDK • Venturi • Wollensak

Plus **EXCLUSIVE**
LAFAYETTE
AUDIO PRODUCTS

Lafayette

the electronics shopping center

Mail Coupon
Today!

FREE

Dept. 11115

Lafayette Radio Electronics
111 Jericho Turnpike
Syosset, L.I., N.Y. 11791

Send me your FREE 1976 Catalog.

Name Apt. ...

Street

City State

Zip

Send a 1976 Catalog to my friend.

Name Apt. ...

Street

City State

Zip

CIRCLE NO. 35 ON READER SERVICE CARD

THE BASIC REPERTOIRE

By MARTIN BOOKSPAN



RAVEL'S LE TOMBEAU DE COUPERIN

THE usual route to the orchestral music of Maurice Ravel is by way of *Boléro*, that 1928 phenomenon the composer himself called "orchestral tissue without music." *Boléro* was avowedly an experimental work designed to examine the effect of a long, very gradual crescendo. "There are no contrasts," Ravel wrote of the piece. "There is practically no invention except the plan and manner of execution. . . . I have carried out exactly what I intended and it is for the listener to take it or leave it."

Another introduction to the orchestral world of Ravel, one more rarefied and cer-

tainly more characteristic, is the suite *Le Tombeau de Couperin*, which began its existence—as did so many others of the composer's orchestral works—as a score for piano solo. Ravel began his piano suite in the summer of 1914, intending it as homage to François Couperin, a French composer of an earlier period. The English music historian Edwin Evans wrote that Ravel was "fond of looking at a style or a period, as it were, with his head on one side, and speculating what could be done with it." In *Le Tombeau de Couperin*, to borrow again from Evans, Ravel conjured up "the very spirit of the precise and ordered classicism of the eighteenth century."



MAURICE RAVEL

Work on the original piano version of the suite was interrupted by World War I, during the early years of which Ravel served as an ambulance driver. In 1916 he was medically discharged and sent to recuperate in a war hospital. On his release, he was able to resume his creative activity and returned almost immediately to his interrupted evocation of

the style and period of Couperin. Ultimately, the piano suite consisted of six movements: Prelude, Fugue, Forlane, Rigaudon, Minuet, and Toccata. When the music was published in 1918, it bore a dedication to the memory of Ravel's friends killed in the war. Then the composer took four of the movements (the Fugue and Toccata were omitted) and orchestrated them for a rather small orchestra. The resulting suite for orchestra is among the most cherishable of all Ravel's orchestral pieces. It has an elegance and grace that are perfectly evocative of a bygone era, and yet its perfumed perfection is the quintessence of Ravel's style and aesthetic.

AMONG the current crop of available recordings of the orchestral *Le Tombeau de Couperin*, my unhesitating recommendation is the performance conducted by Pierre Boulez (Columbia M 32159; cassette MT 32159). The carefully polished precision and meticulous attention to detail that are the hallmarks of Boulez's style generally find their perfect outlet in his Ravel interpretations. He has contributed some of the very best Ravel performances ever recorded, and surely his version of *Le Tombeau de Couperin* is one such. All the very special qualities of the music—those characteristics defined by Edwin Evans as reminding one "of the days when such things were said with a shake of a lace handkerchief and a wave of a porcelain snuffbox"—are delineated with the utmost sensitivity and perception. The solo oboe plays a crucial role in Ravel's orchestration, and in the Boulez recording the principal oboist of the New York Philharmonic, Harold Gomberg, plays his part to perfection—such technical ease, seductive tone, breath control, and speech-like phrasing are truly remarkable. Indeed, all the players involved in the performance are to be congratulated for their superb playing. And the recording team, under the supervision of producer Andrew Kazdin, has captured the whole in luminous, pellucid sound.

Once having made the acquaintance of *Le Tombeau de Couperin* in its version for orchestra, many collectors will want a recorded performance of the original piano version. Here, among currently available performances, my preference is for the one by the young French pianist Pascal Rogé (London CS 6873), who invests the music with a personality and flair that are quite convincing.



The Empire 598 III Turntable Created by concentrating our total effort on a single superb model.

The Motor

A self-cooling, hysteresis synchronous type with an inside out rotor, drives the platter with enough torque to reach full speed in one third of a revolution. It contributes to the almost immeasurable 0.04% average wow and flutter value in our specifications.

The Drive Belt

Every turntable is packaged only when zero error is achieved in its speed accuracy. To prevent any variations of speed we grind each belt to $\pm .0001$ inch.

The Platter

Every two piece, 7 lb., 3 inch thick, die cast aluminum platter is dynamically balanced. Once in motion, it acts as a massive flywheel to assure specified wow and flutter value even with the voltage varied from 105 to 127 volts AC.

The Main Bearing

The stainless steel shaft extending from the platter is aged, by alternate exposures to extreme changes in temperature, preventing it from ever warping. The tip is then precision ground and pol-

ished before lapping it into two oilite, self-lubricating bearings, reducing friction and reducing rumble to one of the lowest figures ever measured in a professional turntable; -63 dB CBS ARLL.*

The Suspension

Piston damped, 16 gauge steel coil springs cradle the arm and platter. You can dance without your stylus joining in.

The Tonearm

The aluminum tubular design boasts one of the lowest fundamental frequencies of any arm, an inaudible 6 Hz. Acoustic feedback is unheard of, even with gain and bass turned all the way up. The vertical and horizontal bearing friction is 1 milligram. This allows the arm to move effortlessly, imposing only the calibrated anti-skating and tracking force you select.

The Cartridge

Empire's best, the 4000D/III, wide response cartridge is a standard feature. The capabilities of this cartridge allow you to play any 4 channel or stereo record at 1 gram or less. And the frequency response is an extraordinary 5-50,000

Hz, with more than 35 dB channel separation.

The Controls

The coordinated anti-skating adjustment provides the necessary force for the horizontal plane. It is micrometer calibrated to eliminate channel imbalance or unnecessary record wear.

Stylus force is dialed with a calibrated clock mainspring more accurate than any commercially available stylus pressure gauge.

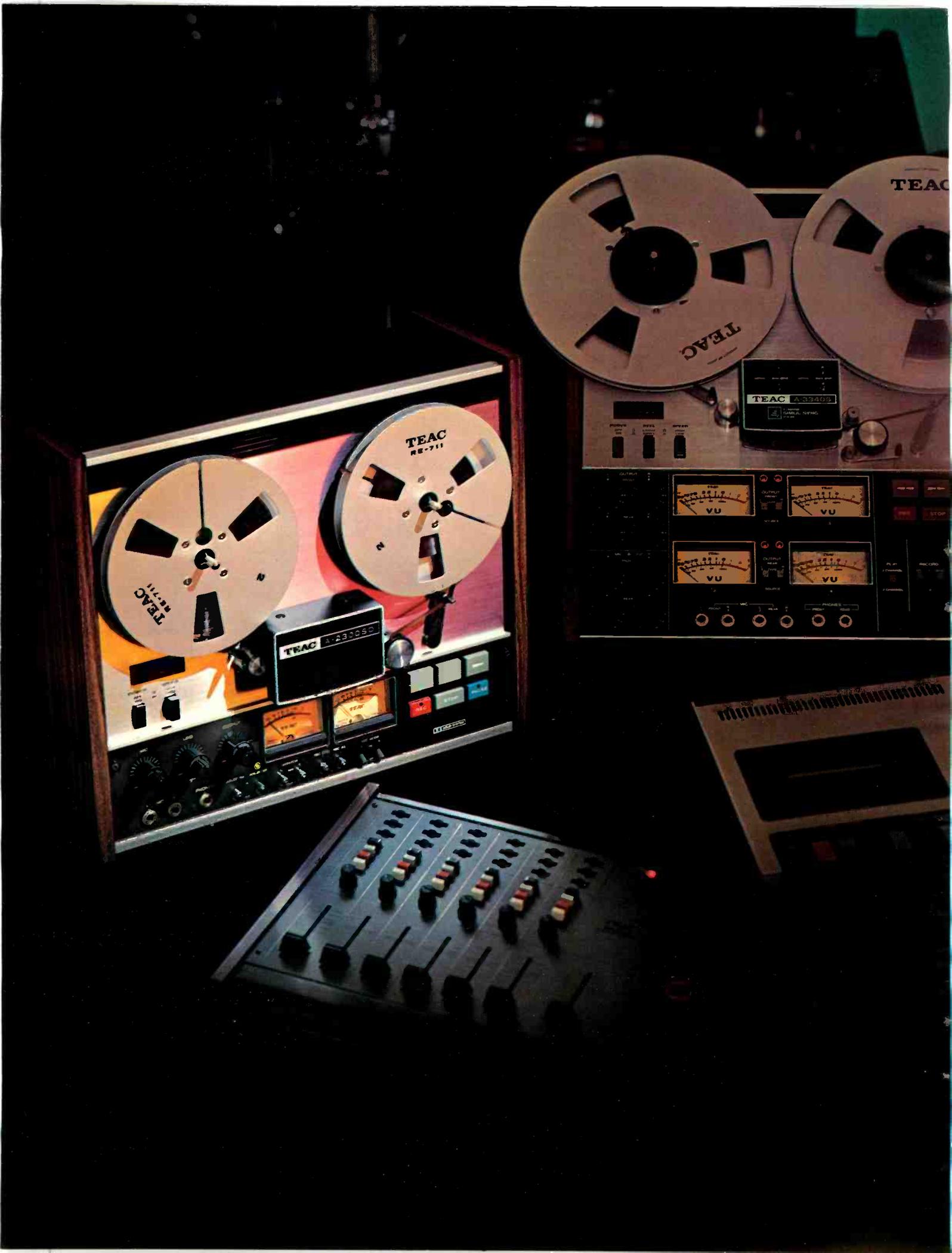
A true-vertical cueing control floats the tonearm up or down from a record surface bathed in light.

At Empire we make only one model turntable, the 598III, but with proper maintenance and care, the chances are very good it will be the only one you'll ever need.

*Independently tested and recorded in High Fidelity's 1974 Test Reports.

Write for your free catalogue:
EMPIRE SCIENTIFIC CORP.
Garden City, N.Y. 11530

Mfd. U.S.A. **EMPIRE**



TEAC

TEAC

TEAC
RE-711

TEAC
RE-711

TEAC A-93050

TEAC

TEAC A-93405

VU

TEAC

Musical Instruments don't play all by themselves. Neither do tape recorders. Unlike any other component in your system, a tape recorder needs your involvement to make it work properly.

The tapes you make will bear your personal imprint — not only in terms of sequencing the musical selections, but even the recordings themselves. You can control the artistic shaping of the audio signals... a function of your personal musical perceptions.

Your tape recorder becomes an extension of you. And just as in musical instruments, the quality differences between tape recorder brands will determine how good the music can sound. Buying a good one is worth it.

From our basic 3-motor 3-head A-2300S or A-2300SD (with Dolby) to the A-3300S (10½" reels) to the A-4300 (automatic reverse) to the top of the line A-7300... you'll find a TEAC recorder with just the right combination of features and functions to suit your specific needs.

We've been making superior recorders like these for over 20 years. If you'd like a demonstration of how that experience can benefit you, just call (800) 447-4700* toll free to find the name of your nearest TEAC retailer.

*In Illinois, call (800) 322-4400.

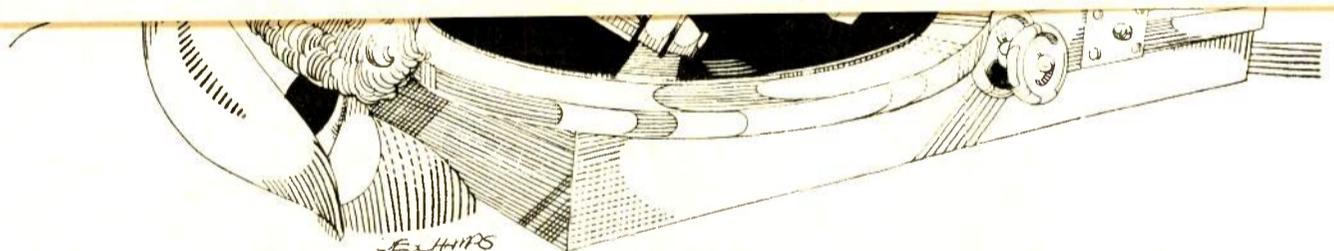
Hand crafted since 1954.

TEAC®

The leader. Always has been.

TEAC CORPORATION OF AMERICA:
7733 Telegraph Road, Montebello, California 90640

©TEAC 1975. Dolby is a trademark of Dolby Laboratory Inc.



tend to creep into the channel with the violins whenever they play together. Or suppose you do attain what seems to be adequate separation, but the matrix logic (if any) in the listener's playback system later becomes confused and causes the trumpets to shift from place to place. One can forestall this shifting during playback by mixing the trumpets with the violins *before* encoding (there will be no tendency for the trumpets to shift toward the violins if both instruments are already in the same place), but the best solution would of course have been to minimize leakage between the tracks during the original recording session.

There are two general approaches to mixing a matrixed disc. One is to go from the multitrack tape to the mixing console and then directly to the encoder (see Figure 1). This permits you to hear your encoded product immediately and to make any corrections needed to help the matrix along. One matrix manufacturer (CBS) even makes a special "black box" that permits "bending" of the matrix parameters for this purpose. Another approach

is to make a discrete four-channel submaster first and then encode that (see Figure 2). The advantage of this is that you can then use the same four-channel discrete master tape to encode in any matrix or to cut a CD-4 disc — a real time-saver if you are producing recordings in more than one format. The disadvantage is that you cannot then custom-tailor the mix for a *particular* matrix format. If the engineer and producer are really familiar with the idiosyncracies of each encoding system, however, they can probably make a compromise mix that will work quite well with all. Another problem with making a four-channel submaster, of course, is that you have added another generation of tape hiss, wow, flutter, phase shift, and so forth, all of which can cause difficulties during encoding.

Many of these mixdown upsets can be avoided if during the original recording session the producer has some rough idea of what he wants his final four-channel sound to be. If he can tell the recording engineer where certain groups of instruments will be placed

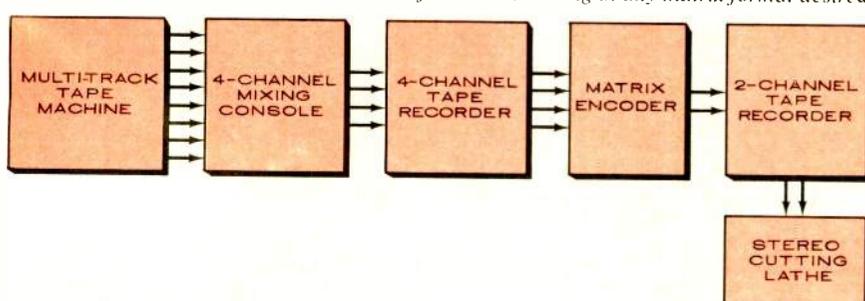
later in the mix (right front, left rear, etc.), the engineer can then choose a microphone placement that will make the mixdown engineer's job a lot easier.

Matrix Systems

The relative merits of the two major matrix systems (SQ and QS) have been debated endlessly over the past few years, but, in general, both systems work in the same way and encounter the same problems in the process of converting tape to disc. In both matrix systems, the encoding process consists of shifting the phase of the rear channels in a certain way and mixing them with the two front channels. The later decoding during playback involves circuitry that theoretically sorts out the signals according to their phase relationships and restores them to their proper position. This process can give very impressive results, particularly if the sound goes directly from four-channel tape to encoder to full-logic decoder. However, as soon as you introduce a tape recorder between the encoder and the decoder, strange things begin to happen.

One of the early experiments in producing matrix recordings involved making an encoded tape master, making a tape copy of that master, and then decoding the copy. The results were disastrous! None of the copies could be decoded properly, channel separation was poor, and the logic circuits turned on and off at all the wrong times. What went wrong? The encoder and decoder were checked and found to be working properly, as were the tape recorders. A closer investigation finally revealed the culprit to be *head azimuth differences* (see glossary) between the two tape machines used for the copying: they had "skewed" — sometimes severely — the phase relationships between the

Figure 2. Another recording scheme proceeds from mixing console to a four-channel recorder, where a quadrasonic master is made for later recording in any matrix format desired.



If you think the equipment manufacturers are having their problems with four-channel formats, consider the predicament of the man whose job it is to turn out

QUADRAPHONIC SOFTWARE

By Charles Repka

WE'RE now near the end of 1975, and quadrasonic sound, no doubt to the surprise of many skeptics, is still with us. Not only is it still with us, but it's here in at least eight existing or proposed forms. We have two major matrix systems (SQ and QS) and several minor ones, a "discrete" disc using an FM carrier system (CD-4), a disc using a combination of matrix and FM carrier (the UMX system), discrete four-channel open-reel tapes and four-channel eight-track cartridges, plus several proposed systems for four-channel cassettes involving matrixing, new track assignments, and even new tracks.

If you think all of this is confusing to the average audiophile, how about the poor recording engineer who has to get involved with one, two, or perhaps all of these available four-channel systems? Audiophiles, once they have acquired the proper decoder or demodulator along with the necessary amplifiers and speakers, can at least sit back and enjoy the first fruits of the quadrasonic era. For the recording engineer, however, whose business it is to bring those fruits into being, getting four-channel to work well can be an exercise in tooth-gnashing frustration. The successful fitting of a four-channel recording into any of the popular disc formats almost always requires a thorough understanding of not-always-compatible principles and equipment, considerable foresight, and more than a

first important step in producing that product. Here is where the various channels of audio information (from a minimum of four to as many as forty channels on a two-inch tape) are combined along with equalization, echo, and other special effects to come up with a finished master tape that will then be converted to disc, open-reel tape, tape cartridge, or what-have-you.

The introduction of four-channel has made even more complex what has always been a rather ticklish job, for the engineer has to try to satisfy the desires (and egos) of the producer and artist(s) and at the same time keep their aesthetic demands within the realm of engineering possibility. It isn't easy, but it can be done—is being done—and if you have a quadrasonic recording (of any type) that sounds like four channels of monophonic sound, the fault (it is a fault) may very likely lie not with your equipment but with a producer and engineer who haven't yet learned to think in four-channel terms or who were unable to work out their mutual problems.

Pages could be filled with the me-

chanics of mixing in general (spending several days on just *one* song on a pop album is not uncommon), but there are areas of the art that apply mostly to quadrasonics. First of all, it is helpful to the engineer to know in what format(s) (matrix or CD-4) the finished disc will be produced. This will enable him to tailor the mixing to get the best results by recognizing and allowing for the specific idiosyncrasies of each format. For example, certain combinations of channels won't always work in one or another of the matrix systems. This can be caused by some inherent limitation of the particular matrix design, but more often it results from the acoustic leakage of information from one track to another during the original recording session. Say, for instance, that there are trumpets on track twelve and trumpet sound leaks into the violins on track three. If, during the mix-down to produce a quadrasonic (four-track) master, it seems best to put the trumpets in the right rear and the violins in the left front, you may find it impossible to separate them adequately, with the result that the trumpets

Figure 1. A straightforward approach to matrix recording involves going from the mixing console directly to the matrix encoder, and then to the tape recorder that drives the lathe.



two encoded tracks. If a tape encoded on either machine was played back on the *same* machine, fine; but if the tape was played back on *any other* machine, decoding was strictly a hit-or-miss affair. (Incidentally, this is one of the reasons that we haven't been seeing any *matrixed* prerecorded tapes.) This result was naturally cause for great concern, because when a lacquer disc is cut (the first step in converting a master tape into a disc), the tape is always played on a machine other than the one on which it was made. The problem was gotten around somewhat by requiring that high-frequency test tones (usually 10,000 Hz) be recorded at the beginning of every encoded tape so that the head azimuth of the playback machine can be carefully aligned to these tones.

There are, of course, other sources of minor phase shift besides unmatched azimuths. One such source is simply the motion of the tape past the heads. Tape motion across the surface of a head, even on a professional studio

machine, is not really as uniform as it appears to be. The tape continually rides up and down on the head face because of variations in tape width, and it also proceeds in a subtle stick-slide manner because of friction. As a result, any single point on the surface of the tape, if tracked very closely, would be seen to follow a rather serpentine path across the heads, and such a path can be the cause of visible phase shift at high frequencies when observed with an oscilloscope.

The net effect of phase shift is a general blurring of the directional properties of the sound image, with the locations of instruments on the encoded tape never sounding as fixed and clearly focused as they were on the four-channel tape from which it was made. Also, it should be kept in mind that part of this loss in definition is inherent in the design of the matrix itself. When the original four channels are combined into two in the encoding process, some of the information is lost forever and can never be retrieved.

Once the playback machine that feeds the disc-cutting lathe has had its tape-head azimuths properly aligned, the cutting of the lacquer can begin. This is done with the same type of cutting lathe used for stereo discs. No special equipment is needed because all the processing (encoding) has been done on the tape. But even under the best of conditions, disc cutting is a tricky business. The cutting engineer, usually a patient, unexcitable type, has to trade off signal level on the tape against the playing time on the disc side and come up with the optimum groove-pitch and groove-depth settings for his equipment. Groove pitch is the spacing between adjacent grooves on the disc, and is usually expressed in lines per inch. If the pitch is too fine it can cause an "echo" from one groove to be heard faintly in another, and in severe cases where grooves touch or break into each other, it can cause the playback stylus to jump grooves. If the pitch is too coarse, there may not be enough space available to fit all the music on the disc.

GLOSSARY: QUADRAPHONIC TERMS

- **Azimuth:** the orientation of the gaps of a tape head relative to the tape's line of motion. Ideally, all the gaps should be exactly perpendicular (form a 90-degree angle) to the edge of the tape (see diagram). If the *record* head's gaps are not exactly parallel to the *playback* head's gaps, the high-frequency response of the tape machine is affected. Also, though a machine's azimuth setting may provide maximum high-frequency performance, it may still require further adjustment to achieve minimum phase shift. The phase differences between channels are introduced because one playback or record head gap actually lags behind the other in scanning the tape.

In adjusting azimuth, care is taken to orient the gaps of the record and playback heads properly (that is, make them precisely parallel) relative to each other and to a third outside standard by means of a precisely recorded alignment tape.

- **Lacquer:** the disc on which a recording is originally cut; also, the recording produced thereby. A lacquer is an aluminum disc sheathed in an optically smooth coating of cellulose acetate. The disc-cutting lathe, which is fed the signal from the master tape, employs its cutting stylus to physically inscribe on the lacquer the spiral groove that carries the audio information. The lacquer recording is then electroplated (the plating process men-

tioned in the text) to produce metal molds that will press the ultimate vinyl records.

- **Mixing/Mixdown:** it is customary today to record a musical performance in great detail, often using separate microphones for each voice or instrument and even devoting an entire tape track to one sound. Later, at their leisure, the producer and engineer can "assemble" the composite perform-



Azimuth misalignment results in time displacement *t* between two channels.

ance from the individual tracks in a process called the "mixdown." This entails mixing various tracks together—as well as balancing them in level and adding equalization, reverberation, and any other effects desired—to create what will be the different channels of the final recording. During mixdown the instruments are assigned to a "location," as represented by any given pair of channels, according to where the producer wishes them to appear when the recording is played back; any problems brought about by the mixing of tracks are dealt with as well.

- **Multitrack:** the term for the recording technique described above. A

modern multitrack tape machine, recording as a rule on 2-inch tape, usually has at least sixteen tracks that the engineer can utilize as he wishes to capture every sound that occurred during the musical performance. Then he mixes down from the sixteen channels to two or four, selecting as he goes along the material from the sixteen tracks he wishes to use.

- **Submaster:** in this context, a preliminary master recording from which the ultimate master will be prepared. When played on a four-channel tape machine, the submaster serves as a reference for what the engineer/producer wants the final recording to sound like, but it is not yet in the encoded form that will be used to cut the lacquer.

- **Phase shift:** a displacement in time of an audio waveform (or part of one) that may be too small to be significant audibly, but which can have a telling effect on the performance of an electronic device—such as a matrix decoder—that depends on phase accuracy for its operation. Matrix four-channel employs *deliberate* phase shifting as part of the encoding process. But further unintended phase shifts between the right and left encoded stereo signals, or between different frequencies in one channel, will cause the various waveforms to come together improperly when they are later added and subtracted in the matrix decoder (or in the adding and subtracting circuits of a CD-4 demodulator). The resulting complex interference brings about aberrations in the output signals and a loss of precise sound localization.

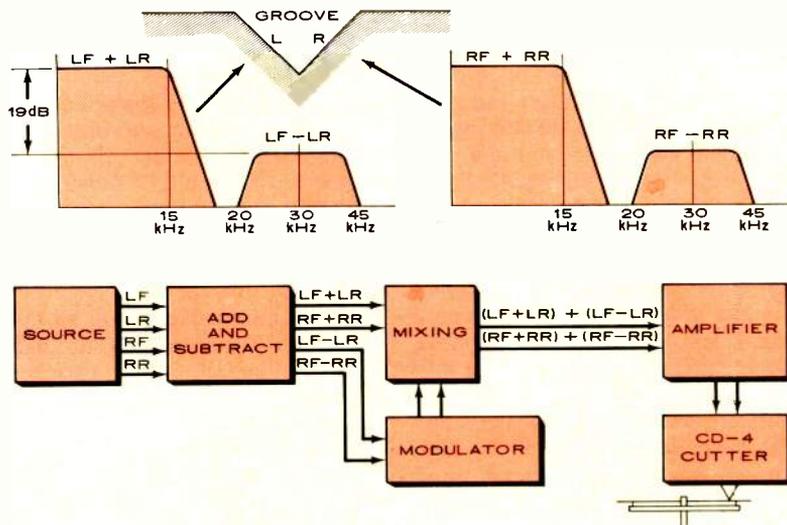


Figure 3. Two aspects of the CD-4 recording process. Top, the audio-frequency and carrier information for the two groove walls is shown. At bottom is a block diagram of the CD-4 recording chain from tape machine to disc cutter.

The allowable variation in groove depth is very limited in comparison to that allowed in groove pitch, because the acetate coating is only 5 mils (0.005 in.) thick. This limitation restricts the amount of signal that can be put on the lacquer in the vertical plane—a significant consideration, as we shall see, for a four-channel disc. The engineer must choose an average depth while cutting so that the stylus will not cut too deep (hitting the aluminum core of the lacquer and causing grievous harm to the cutting stylus and possibly the cutting head) or too shallow: the wrong choice can sometime cause the cutting stylus to lift entirely away from the lacquer surface.

It is important to know that the standard stereo cutting lathe places all in-phase ($L + R$ or "sum") information in the horizontal plane and all out-of-phase ($L - R$ or "difference") information in the vertical plane. Because of the way the matrix system works, an encoded tape contains a great deal more difference information than the average stereo tape, and this will be reflected in more vertical modulation on the disc. Over the years, various "tricks" have been developed to cope with high vertical groove excursions on stereo discs without affecting the stereo perspective and without audibly changing the sound level. Equivalent tricks have not yet been perfected for the four-channel disc. Most of the stereo tricks involve the use of equalizers or limiters on the difference signal, but this approach applied to an encoded tape can cause improper decoding. New techniques (or modifications of old ones) therefore still need to be de-

veloped so that a matrix disc can be cut as "easily" as a stereo disc. For now, the engineer usually gets around the vertical-modulation problem by reducing the overall level, which is fine as long as he doesn't lower it too much, for that will bring up background noise on playback when the volume is raised to provide an adequate sound level.

Vertical modulation poses another interesting challenge as well: distortion. One source of this distortion is simply the nature of the cutting process. Vertical cutting inherently has about twice as much second-harmonic distortion as lateral cutting, which is not necessarily an excessive figure if the cutting system is of high quality. Another source of distortion is the difference in the vertical cutting angle of the lathe and the vertical tracking angle of the playback cartridge. Analysis of test tones reveals that small differences between these angles can generate large distortion figures (as high as 30 per cent), but for reasons that are still unclear the distortion does not seem to be as bad with music.

ALL of this holds true for stereo discs as well, but when a disc (stereo or matrix) is played back through a matrix decoder, the distortion products tend to be decoded and interpreted as rear-channel information and to be amplified more than they would be under stereo playback conditions. This effect is also true of noise. Surface noise, mold grain, pops, and ticks are all exaggerated by the matrix decoding process. This means that extra care has to be taken during all the disc-manufacturing processes. This explains why a

disc can be perfectly acceptable in stereo playback but still sound objectionably noisy when played through a decoder.

Discrete System

The CD-4 system of quadraphonics is similar in principle to the multiplex system of stereo FM broadcasting, except that it involves twice as many channels. The two (left and right) front channels are mixed in-phase with their corresponding rear channels. These two "sum" signals get recorded normally on the left and right groove walls of the disc and make it possible to play the CD-4 disc on stereo systems. However, the front and rear channels are also added together out of phase, and these "difference" signals are superimposed, via frequency modulation (FM), on 30,000-Hz carrier signals that are cut into the groove walls along with the "sum" signals mentioned above. A conventional stereo playback system ignores the 30,000-Hz carriers, but a CD-4 system uses them to recover the difference signals which, when properly recombined with the sum signals, reconstitute the four channels we started with. Both the sum and difference signals are limited to an upper frequency limit of 15,000 Hz so that the disc has a total bandwidth (signal plus carrier) of 45,000 Hz (see Figure 3). The very wide bandwidth requirement was (and still is) a major difficulty in the development of the CD-4 disc because the best disc-cutting equipment made has a usable bandwidth of only 24,000 Hz. However, if the disc is cut at one half the normal rotational speed (current practice), the highest frequency is held to 22,500 Hz—well within the limitations of current equipment. Of course, this means that the tape machine used for cutting must also run at one-half speed, and its playback-equalization electronics must be modified to suit the characteristics of a tape recorded at normal speed, especially at the low frequencies, which now go below 15 Hz! If the master tape is Dolby encoded, the playback Dolby electronics must also be modified to respond properly at half speed. And the cutting-head drive amplifier has to be capable of producing full power at sub-audible frequencies.

Now, while none of this is impossible to do, it does add to the cost of producing a disc—and these items, furthermore, represent only some of the additional costs. A complete CD-4 cutting chain, including cutting lathe, amplifiers, special CD-4 modulation equipment, tape machine, and four channels' worth of accessories such as

Dolby, equalizers, limiters, etc., costs quite a bit. This cost is an important factor for independent record companies, studios, or cutting houses to consider before taking the plunge into the wonderful world of CD-4, for they must ask themselves whether their sales (of discs or services) will cover such a large investment in equipment.

Half-speed cutting has two additional drawbacks. The first and most obvious is that it takes at least twice as long to cut a lacquer—assuming, of course, that the lacquer is cut perfectly on the first try. Generally, the tape is monitored first at normal speed to spot any potential problem areas, with the result that the total time spent per side can be as much as three to four times as much as for a normal stereo disc. (One hopes this time factor will improve as engineers become more familiar with CD-4 equipment or when normal-speed cutting equipment is developed.)

The other drawback is a psychological one. Take your favorite Beethoven symphony (or Rolling Stone album, if you prefer) and play it back at half speed. Sounds just *great*, doesn't it?!? Well the cutting engineer either has to get used to those moans and drones, turn off the monitor, or give up and become a used-car salesman.

But we're not through yet. In the experience of many engineers who have worked with the system, CD-4 has several problems in common with matrix recording. First there is our old friend Phase Shift. The phase relationship between the sum and difference channels must be carefully maintained. There is an 80-microsecond time delay (or phase shift) deliberately applied to the right and left sum-channel information to compensate for time delays that take place in the FM-modulated difference channels during cutting and playback. If the playback-head azimuth is not properly aligned, or if there is signal leakage between channels, this phase relationship can be disturbed, resulting in loss of separation, creation of distortion, or both. Again, as with matrix recording, the engineer must minimize all unwanted phase shifts in his equipment and all improper signal leakage between channels on the master tape to avoid problems during the cutting process.

Another common problem is that of cutting level—except that with CD-4 the engineer has to watch *all* signals and not just those that wind up in the vertical plane. If the sum-signal level is too high, it can drive the cutting stylus so fast that its velocity, combined with the accelerations required for the 30,000-Hz carrier, can exceed the response capabilities of the cutter head, causing a momentary dropout of the

carrier. Further, an excessive level in any *one* channel can cause overmodulation of the carrier signal: remember, CD-4 involves the addition and *subtraction* of audio signals, and it is possible to add in more than you can ever subtract out. Fortunately, with CD-4 the engineer has freedom to modify each channel with limiting or equalization to minimize a cutting problem, though this freedom must be exercised with some moderation. Too great a change in level or frequency response in any one channel can also cause loss of separation.

There are several other sneaky kinds of distortion that are caused by high dynamic levels, so the general trend with CD-4 discs has been to keep the

“New processes and products do not spring totally perfected out of the lab . . .”

level down. The levels on early recordings were as much as 10 dB below the average stereo disc, but with improved equipment and cutting techniques, levels are now typically within 2 to 3 dB of the comparable stereo disc and may occasionally (usually on a Japanese pressing) exceed it.

The one remaining restriction facing the cutting engineer is the amount of space he can use on the lacquer while cutting. As the cutter approaches the center of the disc, it is subject to the so-called “scanning-loss” phenomenon which causes a loss of high frequencies. This is caused by the edge of the cutting stylus becoming, in effect, too blunt for the tiny undulations it is supposed to cut. Since the cutter has to inscribe signals as high as 45,000 Hz, the farther from the center it stays, the better. Typically, this means that the grooves will end $\frac{1}{2}$ to 1 inch farther from the center than on the ordinary stereo disc, and less space of course means less time and/or less level on the disc.

Noise has also been a nagging problem in CD-4 recording. Those tiny 30,000-Hz undulations have resulted in extremely meticulous procedures that must be followed in preparing molds and pressing the discs, as well as in the development of special vinyl compounds that reduce surface noise and improve the wear characteristics of CD-4 discs. There is even a separate

noise-reduction system built into every cutting system and demodulator. The JVC ANRS process (similar to the Dolby B system) is applied to the carrier signals during cutting and again during demodulation in playback. Without ANRS, a CD-4 disc would be about 10 to 15 dB noisier (at frequencies above 1,000 Hz) than a standard stereo disc.

IF you have looked upon all the preceding and despaired of four-channel's ever making it, look again. What we have been examining are simply those inherent problems that must be discovered, understood, and overcome. And as anyone who has recently heard a good four-channel recording well reproduced will tell you, the problems *are* being overcome.

New processes and products do not spring totally perfected out of the lab: all must go through a “wearing in” process, a polishing off of the rough edges through day-to-day use by intrepid early birds. It takes time, of course, and we should try not to let our insatiable appetite for sonic perfection makes us too impatient—there are, remember, any number of people who will tell you that even stereo, after close to twenty years on the market, can stand some improvement.

Four-channel reproduction is a valid new approach to both the art and the science of recorded music, which *does* sound better when played through four properly working channels. And let us not be too quick to dismiss all the positive developments quadraphonic sound has already brought to the recording industry:

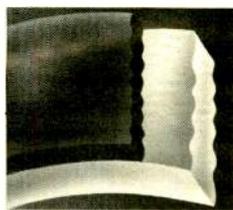
1. Extension of the bandwidth of the phonograph-disc system to 45,000 Hz.
2. The development of new vinyl compounds for improved wear and surface noise.
3. Higher standards of quality for the disc-manufacturing process.
4. Tightening of engineering practices and studio procedures.
5. New studies in psychoacoustics and the hearing process.
6. New phono-cartridge technology.

That's quite an impressive list. And the best part of it is that all these new techniques and procedures are filtering down to the production of ordinary stereo discs and bringing benefits to *all* recordings, and the effect of this technological “fallout” will continue as long as four-channel continues to grow and improve. □

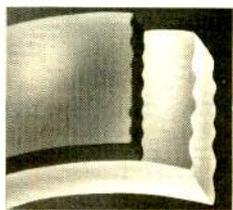
Charles Repka, a recording engineer with Vanguard, also has a background in aerospace work. He has been active in professional and amateur audio for fifteen years.

Up to now you've only been getting half the cassette tape performance you need.

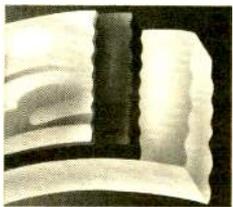
You may not have realized it, but it's true. For instance, when you record music with a lot of high frequencies you use chromium oxide tape. Right? But when you do that you sacrifice dynamic range at the lower frequencies.



FERRIC OXIDE



CHROMIUM OXIDE



MERITON FERRI-CHROME

And with ferric oxide tape it's just the reverse; you sacrifice dynamic range at the highs.

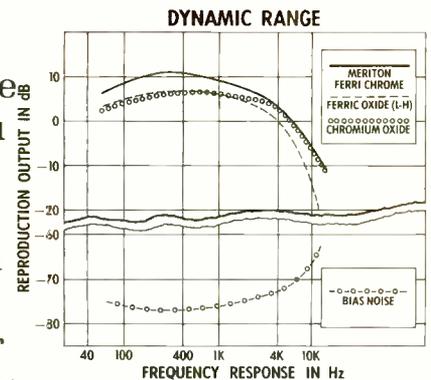
Either way, you're losing half the music. Extended frequency response without wide dynamic range is not, in itself, good sound. Well, at Meriton we don't like doing things by halves. So we put the lows and the highs together on one tape.

Notice how it's made. First, we have a polyester base. On that we put a layer of ferric oxide five microns thick for low frequency response. On top of that we put a layer of chromium oxide one micron thick, mirror polished for superior high frequency response. Of course, without our advanced coating technology that crucial one-micron layer

might not have been possible.

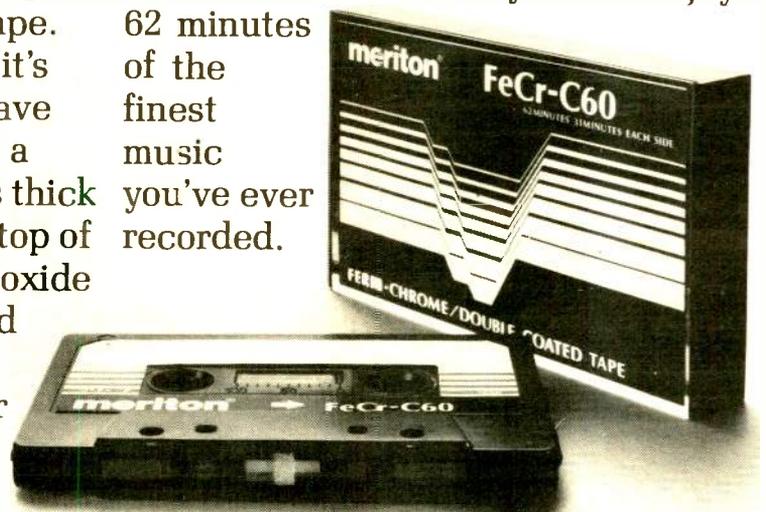
You can get an idea of the way it reproduces sound from this chart.

The top line is Meriton's Ferri-Chrome Tape. As you can see, it performs as well for high frequencies as it does for lows. Note its wide dynamic range as well as its low noise characteristics. At all frequencies its dynamic range is far superior to plain ferric oxide (L-H) tape, and it is better than chrome oxide at low and middle frequencies.



So you no longer have to sacrifice the bassoons for the violins, or vice versa. Instead, you can enjoy 62 minutes of the finest music you've ever recorded.

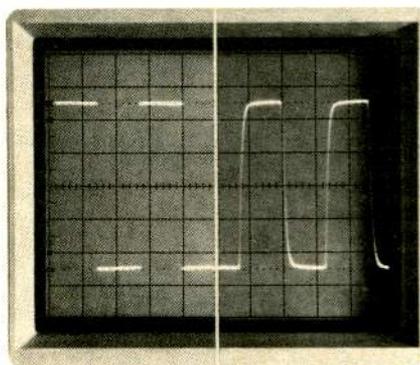
So you no longer have to sacrifice the bassoons for the violins, or vice versa. Instead, you can enjoy 62 minutes of the finest music you've ever recorded.



meriton® ferri-chrome
Trust your ears.

Fine amplifiers produce excellent square waves.

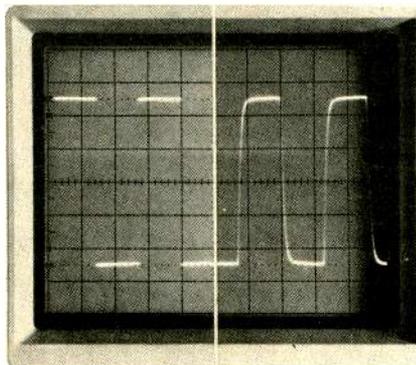
SAE Mark 3C



20 Hz

20 kHz

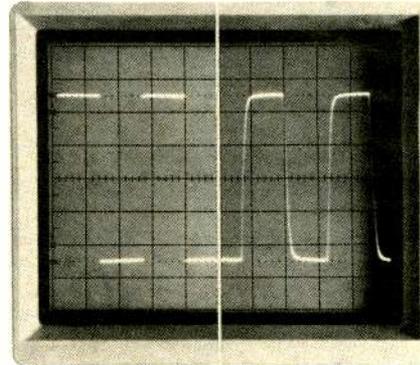
HARMAN KARDON CITATION 16



20 Hz

20 kHz

CROWN DC-300A



20 Hz

20 kHz

The finest separate power amplifiers produce excellent square waves. Quality oriented designers and engineers know that square wave response is profoundly useful because it is a precise projection of musical quality.

Not only does the square wave "mirror" the quality of

sound, but it is, in a unique way, sound itself. The square wave possesses the complexity of a musical wave form. Both have a fundamental and a series of harmonics that have a set relationship to one another. The square wave must be able to pass through the amplifier without damage

if the musical wave is to pass through undamaged.

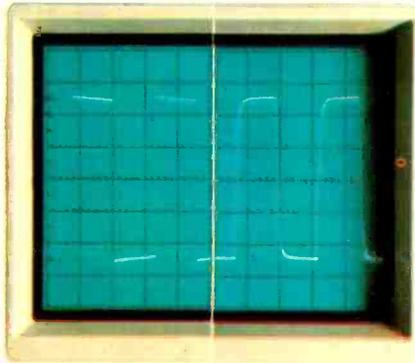
Square wave measurements do not replace conventional methods of testing components. Yet it can be said that an instrument which fails to produce excellent square waves is limited in musical authenticity.

All square wave measurements 10V peak to peak

harman/kardon

One receiver matches the square waves of fine amplifiers.

HARMAN KARDON 430



20 H. 20 kHz

The new Harman Kardon 430 receiver displays square wave response that is indistinguishable from the finest power amplifiers. A listening test will reveal that the 430, in all but absolute power levels, is the sonic equivalent of any individual component system your dealer can demonstrate.

The implication of a comparison with conventional receivers is obvious.

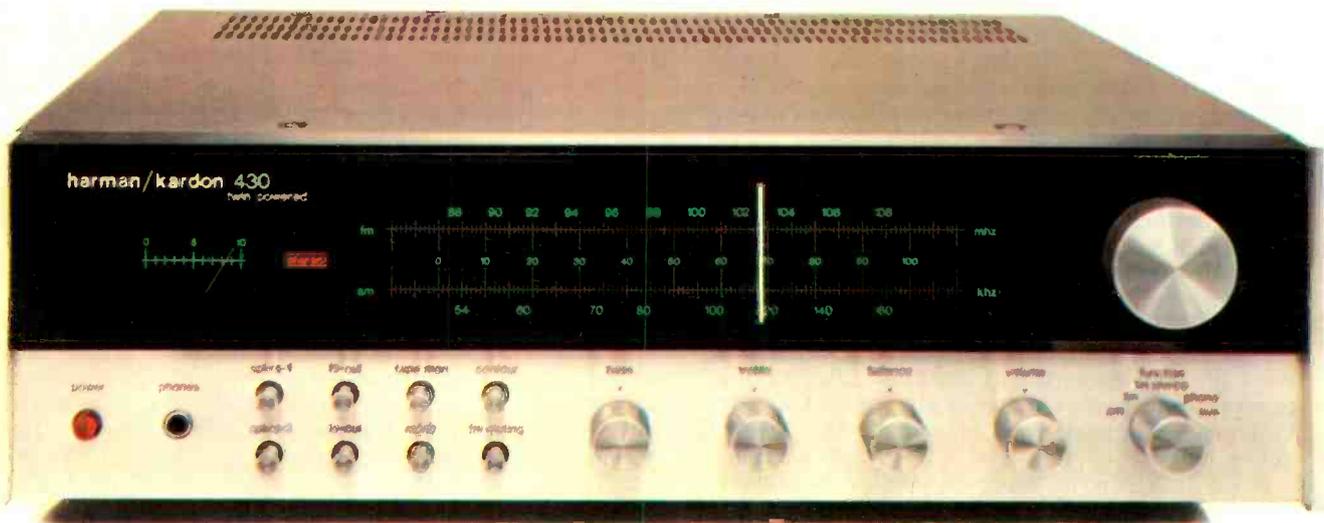
The square wave reproduced here is not that of the 430 power amplifier section alone. Amazingly, it is the square wave achieved by the 430 amplifier and preamplifier operating together!

The 430 AM/FM tuner is consistent with the outstanding performance quality of the amplifier and preamplifier. It is sensitive, receiving even distant stations with ease and without distortion. The tuner is also characterized by excellent selectivity and signal-to-noise ratio.

The 430 functions with two separate power supplies,

one for each channel—the Harman Kardon “twin-power” concept. No matter how much energy is called for by dynamic music passages, performance of one channel is not affected by the other.

At Harman Kardon, technical advances are pursued not for their own sake, but as methods of predicting and improving music quality. It is in this context that we have prepared our literature on the 430 as well as our booklet: Square Wave Analysis of Audio Amplifier Performance. Your Harman Kardon specialist dealer can supply both. Or write to us directly at Harman Kardon, 55 Ames Court, Plainview, N.Y. 11803.



MAURICE RAVEL

“. . . he is a great composer because he had the ability to translate an extraordinary power of imagination into very concrete musical terms.”

WHO, someone asked me recently, is the most influential composer of the twentieth century? Schoenberg or Stravinsky? Would you count Mahler? Or would it be Debussy? Varèse or Ives coming up fast? What did I think?

None of the above, I had to admit ruefully. The correct answer would have to be Ravel.

How a highly aesthetic, aristocratic, and reserved Frenchman of a rather elitist temperament and ambiguous outlook came to be not just the most influential but also the most outright popular composer of the century is one of the oddities in the history of modern taste. Even now, a century after his birth, Ravel's position in the stylistic canon is curiously unclear. Impressionist? Neo-Classical? Modernist *manqué*? Or what?

The one thing you will get everyone to agree on is that Ravel was a great orchestrator, perhaps the greatest of the century. Yet not a single one of his works was conceived as pure orchestral music. Paradox on paradox. We know his music, but not the man: as a personality, Ravel remains distant, an enigma. We know a great deal about the lives and personalities of most of the great pioneers of twentieth-century music. They have established public images, and a store of anecdotes embellishes their musical accomplishments. But Ravel, the sensual classicist who died in a madhouse, is still elusive and mysterious. There is a “lost-profile” sketch by the Diaghilev designer Benoit of Ravel at the seashore in his native Basque country; he is curiously—typically—looking away so we cannot see his glance. In all his pictures, the thin, bony, refined, quizzical features seem to hide rather than reveal; and so, in some ways, does the music.

Ravel's name and his music are associated in the popular mind with Claude Debussy and Impressionism. Certainly Ravel was, for a while, very much under the spell of the older master, but he began as a classicist with works like the

early *Menuet*, the ever-popular *Pavane pour une Infante Défunte*, and the String Quartet of 1902-1903. Here is one basic aspect of Ravel's musical personality: rich, modern (post-Wagner, post-Franck, that is) chord progressions; an original, supple melodic sense; great clarity of expression; and a very careful, even traditional sense of form. But beginning in 1901 with the famous *Jeux d'Eau* for piano, continuing with the *Miroirs* for piano, the one-act opera *L'Heure Espagnole*, and *Gaspard de la Nuit* for piano, and culminating in the Diaghilev ballet *Daphnis et Chloé* (1909-1911), Ravel entered on his Impressionist phase. Though a great deal is owed to Debussy, Ravel was always his own man. His piano style is quite independent and partly anterior to that of Debussy, and, ironically, it is his *Daphnis et Chloé* as much as any work of Debussy that provides the perfect model of musical Impressionism. No modern work of art has been more plundered; only in the last few years, since Hollywood composers stopped imitating Ravel and Debussy, have we been able to listen to it again with fresh ears. Of course, a man's work should not be judged by its crassly debased imitations, but it is easier to believe that in theory than to accept it in practice, for the bad often does debase the good—for a while, at least.

That Ravel's brand of Impressionism was singularly susceptible to cheap imitation must have come to the composer's attention rather quickly. At any rate, and for whatever reason, he abandoned an extraordinarily successful style quite early and returned to chamber music and classicism with the *Trois Poèmes de Stéphane Mallarmé* (voice, piano, string quartet, two flutes, and two clarinets), the Piano Trio, and the wonderful *Le Tombeau de Couperin*, originally written for piano but later orchestrated.

The products of the last ten years of Ravel's creative life contain more surprises: two popular dance works, *La Valse* (noisy, rousing waltz music) and

Boléro (his great and enormously successful flirtation with vulgarity); two dissonant-modern pieces (the Violin and Cello Sonata and the *Chansons Madécasses* for voice, piano, flute, and cello); an opera with Colette, *L'Enfant et les Sortilèges*; and two jazzy piano concertos. At this point it becomes difficult (if not impossible) to generalize about his music, for there is no real stylistic consistency—and yet, somehow, everything he wrote is unmistakably Ravel.

To understand Ravel better, we have to know a bit of history. The Debussyian revolution—make no mistake, it was as big an upheaval as the more scandalous Schoenbergian and Stravinskyian uproar that followed—was the first real challenge to the Italian-German tonal system since its codification (by a Frenchman named Rameau!) in the eighteenth century. Debussy freed chords from their tonal functions, dissonance from the necessity for resolution. At the same time, he departed significantly from the Germanic tradition of counterpoint and part writing. In short, he moved away from the linear, directional, hierarchical forms of older music toward a music based on symmetrical, floating patterns of harmonic and instrumental color.

In works like *La Mer*, the piano *Préludes*, and *Jeux*, Debussy let the new nature of his material generate new forms that are, in fact, much further from the tradition of fugues and sonatas than most of the work of Schoenberg and Stravinsky. Indeed, the fluidity, the nondirectional qualities, and the formal originality of Debussy's music made it perfect material for the movie-music composers who were to follow several decades later. Nevertheless (and in spite of the one or

Right, Alexandre Benoit's "lost profile" sketch of Ravel at Saint-Jean-de-Luz, near his native village of Ciboure on the Basque coast of France.

By Eric Salzman

"Ravel's brand of Impressionism was singularly susceptible to cheap imitation"



Meyer Collection, Paris

two overfamiliar Debussy numbers), there is a difficult and even forbidding aspect to Debussy's music. It is, to put it bluntly, very difficult to follow—I mean with real concentration, not just dreamy absorption—through his longer trains of thought; I know that I have succeeded myself only a few times.

Ravel? No such problem. Ravel is a classicist; everything is clarified, made to work for us. Debussy is mystical, profound; Ravel is charming, witty, a great conversationalist, a maker of beautiful things. Even when he is dead

lary became the *lingua franca* of the twentieth century. For if this much-maligned century has a common vocabulary, it is that brand of freely connected, nonlinear tonal sevenths, ninths, and elevenths—added tones, parallel chords, passing chromatics, and what not. Added to the tradition of modal folk melody, this came to be the harmonic language of American (and, eventually, world) popular music in its entire spectrum from Broadway to jazz. Even rock and soul music, with their primary modal triads, did not

tance, betrays a restlessness and a searching. In some sense, the externals of Ravel's work—the assurance, the wit, the high style, the cleverness, the parade of immense talent in various guises—is something of a façade. We are rarely *moved* very deeply by Ravel's work. Even the *Chansons Madécasses*, with their thrilling evocation of African folklore, the *Tombeau de Couperin*, with its glorious recall of French classicism, and the intensity of *Le Gibet* in *Gaspard de la Nuit* provide the pleasures that come from a kind of *intellectual* sensuality—something which is, indeed, very French. And through it all I hear too a vein of restlessness, of nervousness, of that search for identity which is so characteristic of our century. Ravel looks everywhere—to the antique, to Debussy, to Couperin, to Spain, to America, to childhood—for inspiration.

There are three basic positions in twentieth-century art: a composer may deal with the present (realism, political or *engagé* art), retreat inside (expressionism, surrealism), or escape (art for art's sake, formalism, exoticism, neo-Classicism). Ravel fundamentally belongs in the third category: his Impressionism, his flirtation with exoticism and picturesqueness, his neo-Classicism are all flights.

ALL of this somehow creates a rather negative impression, and in a way that is unfair. It is wrong to criticize an artist for what he did not do or could not be. Ravel was not unaware of the present—listen to his wonderful piano concertos and the avant-garde dissonance of some of his chamber music of the Twenties—and, if he never bared his soul, well, that is just not a very French thing to do. Yet he is a great composer because he had the ability to translate an extraordinary power of imagination into very concrete musical terms. In the end, it is the quality of fantasy that is Ravel's strong card. He is the fairy-tale composer *par excellence*, and, like all great fairy-tale creators, his wildest fantasies are cast in the most traditional forms. Here is the real essence of Ravel's popularity and greatness: when he reaches back, with that special quality of fantasy and rightness, to some essential simplicity—perhaps best of all, the images of childhood in *Mother Goose* or *L'Enfant et les Sortilèges*—he strikes some deeper chord of intensity, sincerity, and wonder that, for me, represents the finest aspects of his musical character. Ravel the aristocrat, Ravel the vulgarian, Ravel the classicist—all of these pale before Ravel the fantasist, the fairy-tale composer, the great musical escape artist. □

... Said Ravel to Gershwin. . .

ONE of the few well-known Ravel anecdotes (it has been told about others, but this *seems* to be the original) concerns an alleged meeting between the French composer and George Gershwin. The American, who was certainly influenced by the Frenchman, expressed a desire to study with him, and there was a discussion about what the fee might be. "Pardon me," asked Ravel, "but how much do you earn in a year?" After hearing Gershwin's answer, Ravel thought a moment. "In that case," he said, "I should study with you."



serious he is amusing. Ravel was a refined classicist who loved to be vulgar—but always in an aesthetic way. All those gorgeous, suspended, unresolved, floating, dreamy chords are only superficially like Debussy, for we always know where we're going, don't we, and we know we're going to be entertained all the way!

Perhaps Ravel's flirtation with banality, with dread vulgarity, is not so strange after all, but merely *noblesse oblige*. More recently we have learned to call it camp. Ravel's campiness is not the dry wit of a Satie or the rowdiness of Poulenc or Milhaud—it is more a wry smile and knowing wink than a horse laugh—but it is nonetheless for real. *Boléro* is, of course, its epitome: an entire orchestral piece written as a take-off on the old exotic-dancer routine. Even when Ravel hits you over the head, he does it with overwhelming style and finesse.

In short, Ravel stylized, popularized, even vulgarized the Debussyian revolution, and he did it with such facility and success that this musical vocabu-

knock out the other tradition, which has already returned in full force in a great deal of recent pop music.

Ravel's influence was not, of course, restricted merely to pop, movie, or show music. In fact, in the earlier twentieth century, many composers outside central Europe were looking for ways to escape from the hegemony of German music; the discovery of Debussy and Ravel was ear-opening for them. Composers as disparate as Vaughan Williams in England, Falla in Spain, and Bartók in Hungary were able to use the new harmonic techniques in conjunction with modal melodic ideas. While Debussy was a prime influence here, Ravel's clarity and precision were often the better—and certainly the easier—models.

Ravel's music is so assured and so masterly that it never seems to create any sense of doubt or despair—such as we find in, say, the music of Schoenberg. Yet Schoenberg fixed his path straight and true and pretty much followed it throughout his entire life, while Ravel's work, viewed from a dis-

the Classic

KENWOOD 700 Series

KENWOOD introduces three components of unsurpassed sophistication, created in the KENWOOD tradition of engineering excellence. The incomparable 700 Series carries state-of-the-art to a new plateau of performance in man's continuing endeavor to recreate the living sound of music. The 700 Series... a classic in its own time.

700T - Frequency Synthesizing Tuner
700C - Preamplifier-Control
700M - Power Amplifier



For complete information, write...

the sound approach to quality



KENWOOD

15777 S. Broadway, Gardena, CA 90248 • 72-02 Fifty-first Street, Woodside, N.Y. 11377 • In Canada: Magnasonic Canada, Ltd.
CIRCLE NO. 30 ON READER SERVICE CARD

CA-3000 Sarsui Preamplifier

The CA-3000 Preamplifier features a black faceplate with two meters at the top left, each with a scale from -40 to 0. The central section contains a 'Tone Tone Control' section with knobs for Bass, Midrange, and Treble. To the right is a large 'Volume' knob and a 'Muting' knob. Below these are various input and processing controls including 'Phonics', 'Filters' (Low, High), 'Tone Selector', 'Balance', 'Mode', 'Copy', 'Tape', 'Playback', 'Sensitivity', and 'Pickup Load'. The Sarsui logo is prominently displayed in the upper right.

BA-3000 Sarsui Power Amplifier

The BA-3000 Power Amplifier has a black faceplate with two 'Power' meters, each with a scale from -40 to 170W. On the left, there is a 'Power/Protector' indicator light and a 'Speakers' selector. The center features a 'Subonic Filter' control. On the right, there are 'Left Level' and 'Right Level' knobs. The Sarsui logo is centered at the top.

BA-5000 Sarsui Power Amplifier

The BA-5000 Power Amplifier features a black faceplate with two 'Power' meters, each with a scale from -40 to 300W. It includes a 'Power/Protector' indicator light on the left and 'Left Level' and 'Right Level' knobs at the bottom. The Sarsui logo is centered at the top.

Introducing Sansui's new Definition Series stereo amplifiers.

Each is the realization of a clearly defined and uncompromising approach to high-power component design. Each is definitive in its essential qualities and the accuracy of its audio reproduction. Each is endowed with high-performance capabilities that will not change significantly for the life of the unit.

But let's get specific: the BA-5000 power amplifier delivers 300 watts per channel into 2,4 and 8 ohms minimum RMS, both channels driven, from 20 to 20,000Hz, with no more than 0.1% total harmonic distortion. While the BA-3000 delivers 170 watts per channel RMS, under the same conditions, with less than 0.05% total harmonic distortion.

Sansui CA-3000 is the definitive control preamplifier: less than 0.03% total harmonic distortion at or below rated output level and a frequency response of 10 to 100,000Hz, at rated output.

For constant high-power performance, both power amplifiers feature expensive toroidal-coil power transformers to minimize magnetic flux leakage, plus multiple heavy-duty output transistors, and triple protection circuits for

total-system safety.

Our myriad-function preamplifier features two dual-FET phono-equalizer amplifier sections with one for treble frequencies and one for bass, which achieves incredibly accurate RIAA equalization for ultra low-distortion cartridge amplification.

All, of course, are totally free from audible distortion and provide effortless sound at any listening level... with absolute safety.

As you probably know, concert hall level music reproduction demands high output power to handle the crescendos and fortissimos in program material. And, as our power figures distinctly specify, Definition Series amplifiers are easily capable of a "live" listening experience.

But a word of caution: these are no-expenses-spared super-watt components. Handbuilt without any shortcuts. The kind you will buy only if your present fine audio set-up does not satisfy you any longer.

If you feel you are ready, visit your nearest Sansui dealer and ask him to demonstrate the finest quality in power today.

Sansui's new Definition Series.

The Sansui logo is a green rectangle with the word "Sansui" written in white, italicized, serif font.

A NEW DEFINITION COMES TO POWER.

Sansui. Dynamic audio answers.

SANSUI ELECTRONICS CORPORATION 55-11, Queens Blvd., Woodside, New York 11377, U.S.A. Tel: 212-779-5300
SANSUI AUDIO EUROPE S.A. Diacem Building, Vestingstraat 53-55, 2000 Antwerp, Belgium Tel: 315663
SANSUI ELECTRIC CO., LTD. 14-1, 2-chome, Izumi Suginami-ku, Tokyo 168, Japan Tel: 03-323-1111
CIRCLE NO. 56 ON READER SERVICE CARD

Ten years after the revolution.



1966

In 1966, Sony brought you the world's first commercially available turntable with a DC servo motor. This effectively slowed motor speeds from 1800 to 300 RPM, producing the lowest rumble figures measured till then. The servo system also drastically reduced wow and flutter, thus giving you a chance to hear what 33-1/3 records sound like at 33-1/3. Quite a revolution.

But we haven't been sitting on our laurels since then. Introducing the PS-475C.

Overlooking the fact that the PS-4750 is so pretty we could sell it through interior decorators, here are its technical innovations.

It has a direct drive servo motor that gives you incredibly low rumble, wow and flutter levels.

Plus total immunity from line voltage and frequency variations. That's because the PS-4750 has a unique system that, in essence,



1975

consists of a sensitive magnetic head (with eight gaps instead of the normal one) which monitors platter speed by picking up a magnetic coating on the outside of the platter. This speed data goes through a small computer connected to the motor, instantly compensating for variations.

The PS-4750 is also ultra insensitive to outside vibrations (which causes intermodulation distortion and acoustic feedback). Sensitivity to outside vibration shows as "Q". And the PS-4750 has a platter and case made of SBMC, a Sony developed compound which has one third the "Q" of aluminum or zinc.

We've even done something

about the resonance caused by warp in the record itself. Those round doohickies on the platter are rubber suction cups that actually provide greater contact surface, reducing the longitudinal vibration caused by warp. The end result is a cleaner sound.

So, all in all, our engineers think the PS-4750 is pretty nifty. But don't take our word for it. Just stop into your Sony dealer and show your independence by listening for yourself.

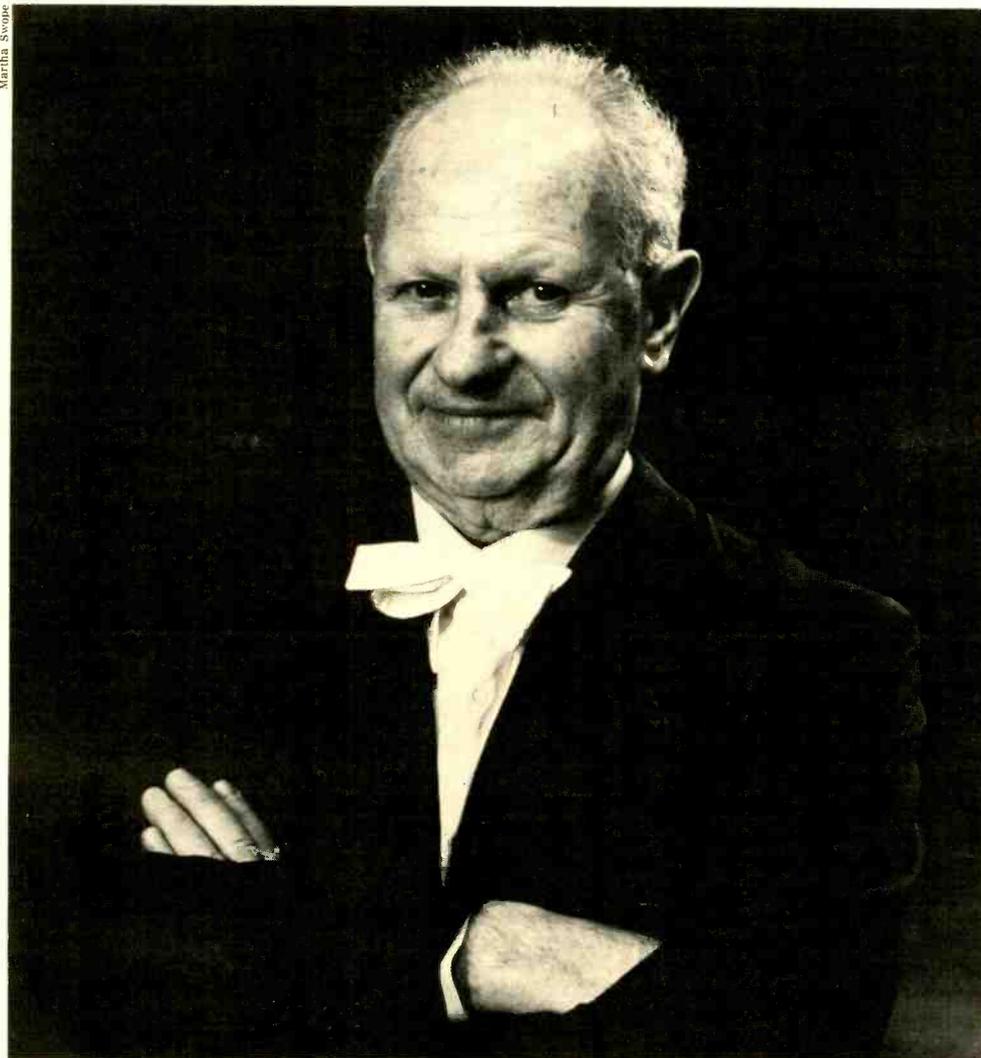
SONY

©1975 Sony Corp. of America, Sony, 9 W. 57 St., N.Y., N.Y. 10019.
SONY is a trademark of Sony Corp.

CIRCLE NO. 60 ON READER SERVICE CARD

Composer-Conductor
MANUEL ROSENTHAL

By Harold Lawrence



"I was the only one of Ravel's four pupils who was considerably younger than he—the others were Alexis Roland-Manuel, Maurice Delage, and Ralph Vaughan Williams."

RELAXING after an intensive three-week stint as guest conductor in the New York City Ballet's Ravel Centennial Festival, Manuel Rosenthal reminisced about his years with Maurice Ravel. He sat in an antique rocking chair in the small Manhattan apartment on upper Madison Avenue where he, his wife, and his artist-son were staying with friends.

A vigorous, clear-eyed, sharp-nosed man with the mellow, resonant voice of

a leading actor in a Sacha Guitry play, Rosenthal, at seventy-one, was clearly enjoying his success in New York. Referring to the New York City Ballet's "Hommage à Ravel," Rosenthal pointed out that it was the first major Ravel centennial celebration this year. "In December, the Paris Opéra will begin a big Ravel Festival. Rolf Liebermann (general manager of the Paris Opéra) is in New York to see which of the New York City Ballet works

should be brought to Paris. Liebermann is a close friend of Balanchine, and the three of us collaborated together when Liebermann took over the Paris Opéra. In fact, that's where I first met Balanchine. Our first production there was Gluck's *Orphée*. A year ago, Balanchine wrote to me about mounting a Ravel festival at the New York City Ballet and eventually asked me to conduct the first program."

To most Americans, Paris-born Manuel Rosenthal is chiefly associated with the music for the ballet *Gaîté Parisienne*, which he arranged and reorchestrated from the music of various Offenbach operettas. Record collectors remember him also as the conductor of what was probably the first integral recording of Ravel's orchestral works, released in 1959 on Westminster. Rosenthal has conducted orchestras in Europe and in America; he was music director of the Orchestre National in 1944-1947 and of the Seattle Symphony from 1949 to 1951, and he has, at one time or another, directed most of the leading orchestras in France. Just now, he devotes much of his time to the Paris Opéra.

"Last year it seems that I was working there every day for a three-month period, conducting performances of Schoenberg's *Moses und Aron*, *Le Sacre du Printemps*, the Prokofiev ballet *The Prodigal Son*, and an all-Stravinsky program." Clearly Rosenthal's interpretative sympathies are broad.

But Rosenthal has been a serious composer as well. A quarter of a century ago, Virgil Thomson was championing the Frenchman's works in the pages of the New York *Herald-Tribune*: "As always in the work of this composer, the orchestral score [of *Magic Manhattan*] is of an originality, an accuracy of effect, a virtuosity incomparable. . . . In these composers [Messiaen and Rosenthal], France has produced a new kind of music, beautiful, wonderfully expert, and, as always when there is novelty, a little shocking." Rosenthal is still a prolific creator and has just completed an orchestral work, in memory of Ravel, called *Le Temple de Mémoire*. "All during the composition of this piece," he said, "I kept hearing, so vividly, Ravel's voice."

I asked Rosenthal how he first met Ravel. "That is a complicated story. It all began when I was studying violin at the Paris Conservatoire. My teacher asked me to write a piece for 'first hearing' at the Société Musicale Indépendante, a prestigious organization whose members included Bartók, Ravel, Prokofiev, and Stravinsky. I was not then a composer, but it amused me to write

something. So I produced a sonatina for two violins and piano, which, incidentally, has been played many times in the United States.

"Much to my surprise, I received a note from the S.M.I. informing me that my sonatina had been selected for performance at the society's centenary concert. It appears that my teacher had shown my manuscript to some members of the society. Everyone was at the concert, including Ravel. Now, Ravel was a chain-smoker who could not go for more than half an hour without having some puffs. So while the stage was being prepared for my piece—attendants had to move the piano and set up the stands—Ravel took advan-

**"Ravel was no less
innovative than
Debussy, but he was
new in a much...
less obvious way."**

tage of the break to slip out of the hall. When the music started and the doors shut, Ravel found himself trapped in the lobby. At intermission he asked his friend Alexis Roland-Manuel about the work he had just missed. Manuel spoke well of my sonatina and later praised it highly in an article he wrote on the concert.

"Two years passed," Rosenthal continued. "Shortly after I left for my military service, some piano works of mine, Eight Bagatelles, were published. I sent the sheet music to Milhaud, Roussel, and Ravel, asking them for their opinions. The first two replied, saying nice things. But from Ravel, nothing.

"Another year went by. I was still in the army, in Saarbrücken. The year was 1925: I was twenty-one. I went to Paris on a two-day leave and traveled to a friend's home for dinner on my first night out. My friend had just returned from a visit to Ravel in Montfort-L'Amaury where she told the composer she couldn't dine with him because she had an appointment with a young musician, mentioning my name. Ravel instantly remembered that he

had received some piano pieces from me and had wanted to tell me how much he admired them. 'Tell him I lost his address and didn't know how to reach him,' he said.

"At a song recital a few weeks later, I finally met Maurice Ravel." Rosenthal grinned: "He offered to take me as a pupil, but he warned me that composing was no easy matter. His words were strong for such a fastidious person: '*Vous allez voir comme c'est emmerdant d'écrire la musique.*'"

For the next eleven years, until Ravel's death in 1937, Rosenthal commuted almost daily between Paris and Montfort-L'Amaury. "Sometimes I would spend weekends at Ravel's house where I had a little room in the attic all to myself. I believe I had a special relationship with him since I was the only one of his four pupils who was considerably younger than he—the others were Roland-Manuel, Maurice Delage, and Ralph Vaughan Williams—and, being so much younger, I was privy to some of his more private thoughts. He often talked more openly with me than with his contemporaries."

What sort of teacher was Ravel? "He was much more than a professor, he was a real *master*," Rosenthal said. "But he was also terrible, so stern. He reduced me to tears many times. One day, when I was twenty-two, he was so harsh with me that I left early without saying good-bye, vowing never to return. In those days, one took a *diligence* (stagecoach) to the railroad station. It was a windy, rainy November day. Suddenly I saw a kind of shadow moving behind the glass partition in the *diligence*. Some knocking followed. I opened the door and there was Ravel, without a coat, shivering and thoroughly drenched. 'Why did you leave without saying good-bye?' he asked me. 'I know that I am awfully severe, but it's for your own good. You should know that I am just as hard on myself.'"

Later Rosenthal learned personally of Ravel's self-critical approach: "One day I arrived for my lesson and found Ravel in a foul mood. 'What's wrong, *Maitre*?' I asked. 'Look there,' he said, pointing to a wastebasket filled with manuscript paper. 'All of that's going into the fireplace: it's the last movement of my sonata for violin and piano.' I protested: 'But that's ravishing music.' 'Yes, it's not bad,' Ravel said, 'but it does not fit with the rest of the sonata. And it's the *form* that counts.'"

Ravel sometimes confided in Rosenthal about other works he had destroyed. One of the more intriguing of these was a piano piece originally composed for *Le Tombeau de Couperin*: "Rejected for military service in World

War II because of his height, Ravel enlisted in the auxiliary corps and drove ambulances in the front lines. One day he came upon what looked like a moon-scape: everything in sight had been destroyed except for a lone tree with a single branch. Perched on the branch was—amazingly—a nightingale. And the nightingale was singing! Inspired by this dramatic scene, Ravel later wrote a piano piece called *Le Rossignol Indifférent*. He never explained why he discarded the work.”

There were times when Ravel relented and kept a doubtful work. When his teacher, Fauré, expressed doubts about the finale of his string quartet, Ravel thought of rewriting it or drop-

S.M.I. with the composer's identity withheld from the audience, it was “unanimously booed; people laughed, screamed. Even Ravel's closest friends sneered at and scorned this delightful work.” *L'Enfant et les Sortilèges* suffered the same fate at its première, with the result that Ravel asked Rosenthal to give a concert performance of the work so that he (the composer) could hear his own music “undisturbed by noisy demonstrations.”

Critics, too, joined in the attack. Following the first performance of the Sonata for Violin and Cello, whose first movement is dedicated to the memory of Debussy, Émile Vuillermoz, who was a close friend of Ravel, went so far

berg, but they never led him down the road to twelve-tone composition. Rosenthal recalled that Ravel compared Schoenberg's music to “a beautiful sunset, a marvelous sunset, but only a sunset. And what follows a sunset? Darkness, night.”

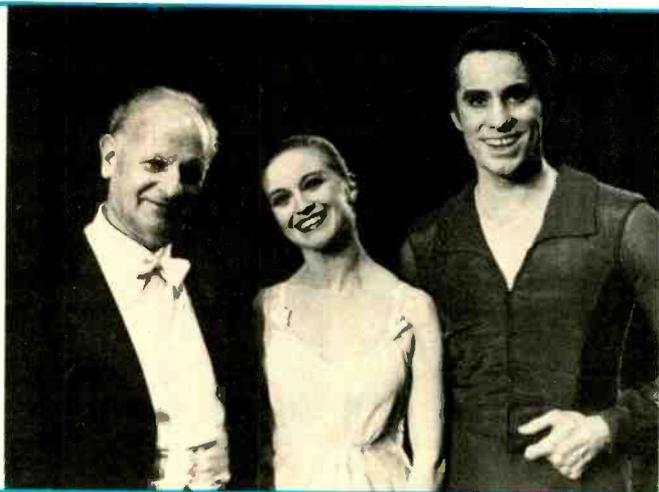
How well did you get to know Ravel? “He was a very reticent man,” Rosenthal said. “If he had lived during the time of Louis XIV, I suppose he would have been called an ‘*honnête homme*.’ In those days, that expression was used to describe someone who preferred not to talk about himself. Ravel was such a person. But sometimes he spoke his mind freely to me. I remember one time in 1928—Ravel had just returned from a trip to the United States—we walked for a while together and he was completely silent. I always respected his silences. Suddenly he began to speak about marriage. ‘It is so difficult to live with someone,’ he said. ‘When you are an artist, you never know how difficult it is for the companion of your life to live with *you*.’ That’s all he said. Ravel never married. He had asked the violinist Hélène Jourdan-Morhange to marry him, but she preferred a painter. In musical matters, however, Ravel revealed a great deal to me over those years.”

Who were his influences? “In orchestration we all know how important Rimsky-Korsakov was to Ravel. Less well known is how much he admired Bellini, Puccini, and Weber for their ability to float long-lined melodies. Ravel knew *Norma*, *Tosca*, *Euryanthe*, and *Freischütz* by heart and played the scores for me at the piano. As a pianist, he was greatly influenced by Chopin and by Liszt. Other influences were Hayden, Couperin, and, above all, Mozart.”

WHAT about Debussy?, I asked. Rosenthal smiled and touched my arm. “I will tell you a story. In the last year of Ravel's life, I often tried to distract my master. I once suggested that he think of writing his will and preparing the musical program for his funeral.” Rosenthal winced. “It was a very bad joke, but you must remember that I was young and tactless and thought this would amuse him. To my surprise, Ravel took it quite seriously and said, ‘That’s simple. I would play the *Prélude à l’Après-midi d’un Faune*, the only perfect piece of music ever written. Even my dear Mozart did not achieve that.’” □

Harold Lawrence, formerly manager of the New York Philharmonic and the London Symphony and classical director of Mercury Records, is now president and general manager of the Buffalo Philharmonic.

Rosenthal with
Violette Verdy
and Pierre
Bonnefous of the
New York City
Ballet.



Martha Swone

ping it altogether (he had dedicated the work to Fauré). In a letter to Ravel, Debussy urged the young composer “not to touch a single note of what you have written.”

Debussy's open support of Ravel was unusual. Journalists and hangers-on encouraged a split between the two composers, and for a while the Parisian musical world was in fact divided between the *Debussystes* and *Raveliens*. Passions have long since cooled, although critics continue to debate the respective merits of Ravel and Debussy. The general belief is that Debussy is the more revolutionary of the two and therefore the more “important.” Rosenthal bridled at this description: “Ravel was no less innovative than Debussy, but he was new in a much more *secret*, less obvious way. His music does not go up to you like this [Rosenthal leaned forward suddenly and spread his arms]. It's very . . . tactful. You must meet it halfway to understand it.”

But the public was not prepared to meet Ravel halfway. Rosenthal recalled that when *Valses Nobles et Sentimentales* was first performed by the

as to accuse him of “disrespect toward Debussy for having deposited such ugly music on the master's grave.”

Why did so many of Ravel's works provoke catcalls from the audience and the critics? Was it because of their innovative qualities, and, if so, how would you describe them? “I will give you a few examples from *L'Enfant*,” Rosenthal said. “When the Child gets furious and says, ‘What do I care . . .’ etc., tonality is resolutely put aside and all the chords are very daring for their time (1924-1925). In the same work, during the duet between the Tea Pot and the Chinese Cup (a fox-trot) where the orchestra alone plays the theme, there is a wonderful play of ‘polytonality’ which, for some time, created noisy scandals in Paris. The duet between the Frog and the Squirrel, a delightful mixture of chords and tonalities and quite advanced for Ravel's time, is another case in point. The same goes for the use of ‘*sprechgesang*’ before the final chorus.”

Ravel's limited excursions into the world of atonality—for example, the *Trois Poèmes de Stéphane Mallarmé*—were directly influenced by Schoen-

JACKSON BROWNE first came to our attentions as a songwriter. The response to his first album was "Wow, what beautiful songs," not "Hey, what a great, great singer." His first hit song was not his, but the *Eagles'* version of his *Take It Easy*. But times are changing. Through three major tours in the last couple of years, Browne has built up an audience that comes to see *him*: Jackson Browne the Performer. And the price he has paid for it is that the songwriting comes harder now.

"When I finally feel comfortable, when I feel like I can write, is when I find a comfortable place—which is *not* out on the road—and when I sort of disconnect myself from the world. I take myself off the hook, and that's

comedy records, like Stan Freberg. And so I grew up thinking that I never listened to rock-and-roll. But when I sit down to write, I hear myself coming out with all these old rock-and-roll lines. So on some deep level, I was absorbing it, whatever it was.

"By the late Fifties I had come around for a while. I remember the first rock-and-roll record I bought. It was *Big Boy Pete* by the Olympics. I was getting more interested in rock. By the Sixties, though, the time I was in high school, I was a folkie. That was my scene. I think I am still very much influenced by the AM radio I heard in high school, but I sure wouldn't have admitted it then! I thought rock wouldn't last, and that folk music

By Josh Mills

JACKSON BROWNE: THE PERFORMER



"I have a Polish rhythm section from Detroit, a bluegrass harmony section, and a jazz pianist"

when I write. I even stop answering the phone. My wife picks it up and says, 'Hello. No.' and I know it was for me."

Browne has gained something of a reputation as the poet laureate of Southern California, an Orange County boy who has lived in that area most of his life and whose life style and music reflect the "mellowness" of the laid-back West Coast. But while the facts are right, the interpretation is wrong. His music is far too eclectic to be labeled simply "Southern Californian." *Take It Easy* was a country-style rocker. His best rock-and-roll song, *Doctor My Eyes*, had both melody and lyrics that might have come from the Who or the Kinks. Browne is not so much a child of Southern California as he is a child of the Fifties and Sixties, a child of the Pop Radio Generation who was weaned on rock-and-roll even though he didn't know it.

"I *hated* the radio and the music that was on it, you know. There was my younger brother, and he'd walk around with a transistor radio just glued to his temple. I mean, it was just *always* there. And my sister, who was older, had another one stuck in *her* ear. I didn't like it.

"What I got into at the time was

would. But I find it's the doo-ron-ron that's had the longest-lasting effect on me as a songwriter."

Part of being a folkie in the Sixties was the civil rights movement. Every week, it seemed, there was a benefit concert somewhere with Pete Seeger or Joan Baez or Judy Collins or Tom Paxton or Phil Ochs or Gil Turner or Dave Van Ronk. Browne was not an activist, but it was the civil rights music that introduced him to blues, to gospel.

"Mississippi John Hurt and Dave Van Ronk were probably my two greatest musical influences in the mid-Sixties," he says. The old and the new—the gentle old man from the South and the gruff, cranky, New York City eccentric—they were the two most distinctive blues pickers of the decade. And they spurred Browne on, so that he worked his way from folk strums to complex finger-picking blues. It's hard to look now into his current music and see a hard-core blues influence there, but he probably came out of the blues scene the same way Dylan did.

"Dylan was the second-generation influence of the civil rights movement," he says. "He showed me what could be done with a simple tune if the lyrics

were right. He made me more of a songwriter.” Browne, along with Bruce Springsteen and Loudon Wainwright III, was one of several “Young Dylans” around when the label was in vogue two years ago. Of course, when Dylan threw off his recluse act and re-emerged, the media needed no replacements: the Original Thing was back, so “Young Dylan” hasn’t been heard for a while. Just as well, for Browne certainly doesn’t need the tag; his songs stand by themselves.

Some people disagree. They would say his songs stand by *itself*: that his melodies are far too similar from song to song, from album to album. And so, when his current album “Late for the Sky” came out, some critics—and

of these days and a hit single will come out. I sure wouldn’t mind.

“There’s quite a bit I feel I have to say. I mean, that I haven’t said, haven’t been *able* to say yet. I’m really pretty far from it, from being able to design a vehicle for myself that will allow more of what’s inside of me to come out. For example, there are two or three ideas I’ve had for quite a while, since I was about twenty [he’s thirty now]. Songs I wanted to write, but couldn’t. Songs I want to write, but can’t, because I don’t know how.

“It’s hard to put into words. The music in these things would be less accessible to people, more subtle. Let me give you an example. I used to love the Incredible String Band. They were

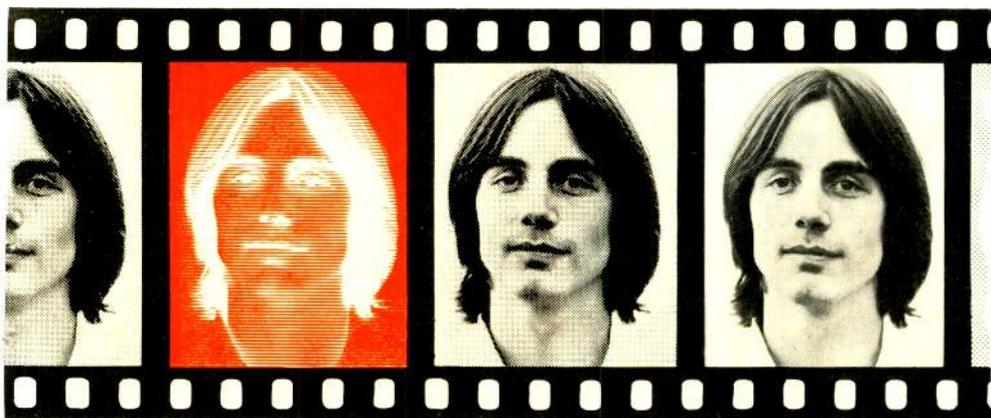
“I would sit around and he would be telling me about progressions and fifths, and I didn’t care. I just wanted to learn to cop other people’s solos. I just didn’t understand. I never understood that jazz was a system of people digging one another. I didn’t understand until I was in a band myself—and I mean that. I didn’t understand what it meant to be in a band, to dig on and cooperate with the other musicians, until just about two years ago when I started having a regular group to play with.

“So, anyway, I got totally fed up and frustrated as a kid. I wanted to trade in the trumpet. I wanted a piano. But my folks wouldn’t let me. It was ‘play the trumpet, play the trumpet.’ So eventually, I just felt trapped with it, and I gave it up. It faded right out of my life—and I don’t mean just the trumpet, but music too.”

So it was a difficult road. That early ambivalence—was he doing the right thing, could he get away with doing what he wanted, did it look good, did it sound right, was he doing what was expected of him?—left a mark. Jackson Browne is a star today, an acclaimed songwriter, an exciting performer who has assembled the driving band he leads, and a moving singer. But he’s always doubting it, sometimes just a bit, sometimes a lot.

Recently, during the last song of his set one night, he reached down and disconnected his electric guitar from the phaser (a distortion device) that he had been using occasionally. “Every once in a while,” he said after the show, “the guitar pulls the cord out of the phaser while I’m playing. It’s because the damn cord is too short, not because I’m doing anything wrong. But each time it happens, I feel exposed. I feel like a dope, like a fool, standing there in front of a crowd with my guitar unhooked, with no sound coming out. And it’s more than an embarrassment, it’s a reminder that I’m still learning my way around here, that I’m still just an initiate.”

AN initiate, yes, but a veteran, too, caught between the success of what he’s doing and the need to do more. But just how, in a practical sense? Well, Browne’s got a few ideas. First of all, there’s his band, which gives him lots of opportunities to experiment. “I have a Polish rhythm section from Detroit, a bluegrass harmony section that plays banjo, acoustic guitar, and pedal steel, and a jazz pianist. And I’m really interested in seeing what happens, say, to bluegrass people when they fall in love with reggae. That’s starting to happen, and that’s only *one* way music could be changing.” □



some fans, too—said, “Oh yeah, this one’s the *Doctor My Eyes* cut, and that one’s the *Take It Easy* cut.” And yes, it’s true; the melodies *are* similar. If his band were not so full of punch, so tight and precise, so entertaining, if his lyrics were not so direct, his concerts might just be boring. But they’re not. Each time Browne has toured, the crowds have been bigger, the screams louder, the calling out of requests a little more demanding.

A second criticism of his music comes from within the music industry: *no hit singles!* Browne doesn’t feel that as any kind of pressure, though. “A lot of people in the business—at the company [Elektra-Asylum], my manager, my publicist, session men, friends—they say, ‘Hey, man, I love your music. Imagine how well it would do with a hit single! Okay. That’s straight. I feel that way too sometimes. My last album went gold. It was my first gold album. So I’m doing okay. But I’ll wake up some morning in some hotel in some city and I’ll think, if I had a hit single, where would this album be now? *Could* I be Number One? I’d like to find out. But what can I do? I don’t think in hit-single terms. Maybe the AM-radio part of me will pop something into place one

marvelous musicians, they had great ideas. And they started going into different places musically, they went places nobody could follow. . . and they kind of faded out. I want to go to those places too, though they might be different places for me than for the String Band, but I *don’t* want to just fade away.”

No, when you’ve worked as hard as Brown has worked, you don’t just want to fade away. It was too difficult getting there in the first place, particularly the early years. The first instrument Jackson Browne played was trumpet—Dixieland trumpet.

“See, my folks were really into Dixieland, and my dad wanted me to be able to play it like I would in a band. So I used to sit around—I was about eight years old—and he would play me a record, and I would cop the licks. I used to cop Red Nichols’ licks all the time, and Louis Armstrong’s. I had Louis Armstrong solos down to the note. Of course, it was more like a *Reader’s Digest* version of his solos. But listen, where all this broke down, where my father and I couldn’t communicate, was around what it *meant*. Jazz . . . well, I just missed the whole point!

Some notes on the future of

JENNIE TOUREL

"...hard to believe that Ravel, or indeed French music, ever had a greater friend."



All photographs by the author

RECENTLY I had occasion to revisit Ravel's two great exotic landscapes—the alternately sultry, violent, and languorous *Chansons Madécasses* and that even more spacious and turbulent conception for an enormous orchestra and a solo voice, the *Shéhérazade* song cycle based on poems by Tristan Klingsor. The soloist in each was the late Jennie Tourel, and, as with infinite subtlety she made real song out of poetic speech (and the most persuasive speech imaginable out of song), it was hard to believe that Ravel, or indeed French music, ever had a greater friend.

Vocally, of course—the recordings I refer to date from 1950 and 1951—Tourel had coloristic resources that were simply not to be matched elsewhere. In the same sensuously radiant song she could give you the velvet depths and distances of the desert night and the delicate nasality of a Bedouin flute. But I think even more important was her refusal to approach Ravel with the narrowed perspectives of a specialist. It is amusing now to recall that back in those days it was not fashionable to *sing* a French art song. You were supposed to “speak” it, and at least one critic thought that perhaps Tourel had “too much voice” for French music. It was therefore nice, recently, to hear the distinguished French baritone Gérard Souzay remembering Tourel with admiration because “she really *sang*.”

She did indeed, on the biggest possible scale—she was never a miniaturist—a scale that was consonant with a sovereign musicality. What this meant, given her stylistic range and her emotional resources, can be heard on the *Odyssey* memorial album (Y2 32880) that appeared last fall, just a year after

By Robert Offergeld

the singer's death. Titled "A Tribute to Jennie Tourel," the album is a four-sided anthology of the great mezzo's earlier recordings (Ravel's *Chansons Madécasses* and *Vocalise* among them), and insofar as any such selection can be said to represent a career so fruitfully prolonged and a musicality so grandly venturesome, this one does so handsomely.

The album does not go into Tourel's recorded orchestral Berlioz, Mahler, Ravel, or Offenbach—or, indeed, into any of the more recent things. It omits the great scene from Prokofiev's *Alexander Nevsky* with which in 1945 she first electrified a postwar record-collecting generation (this writer included) who had never before heard of her. Absent also are the opera arias with orchestra and the French songs with piano that she recorded in London for English Columbia. And, of course, this album cannot represent at all certain historic performances of still other Berlioz and Mahler, a sumptuous Bach *Trauer-Ode*, some resplendent Purcell opera arias (plus a complete concert *Dido*), and a fairly staggering complete Hindemith *Marienleben*, none of which were ever legally recorded (though I am pretty sure some of them will eventually turn up somewhere on pirated tapes).

However, barring these and other possible underground examples, and barring too Tourel's long-celebrated *Mignon*, Columbia's memorial album represents just about everything else of importance, including four *Carmen* arias (recorded in 1952) which, simply as examples of histrionic vocalism, recall in the context of a modern and very different vocal art the legendary dramatic force of singers like Emma Calvé, Mary Garden, and the great Spanish mezzo Conchita Supervia. Here too are the big-scale Debussy that Tourel recorded with piano in 1951, the vivid South American songs with which from 1945 on she gave a welcome new dimension to our concert life, and the Moussorgsky *Songs and Dances of Death* in a somber and monumental interpretation some consider not only the height of Tourel's art but a milestone in the vocal history of the period.

Altogether, what with its dazzling stylistic variety and its incredible linguistic virtuosity, the album restores to us as a permanent possession that exhilarating time of twenty-five years ago when any of Tourel's appearances might (and most did) turn out to be a triumphant invasion-with-banners of some previously unconquered and even perilous musical territory. The fans of other and less intrepid divas were often quite upset about this as-



to a question: What, when she isn't actually queening it away up there on stage, does a Queen of Song do?



I began photographing Tourel at the end of the Forties, and the first pictures simply tried to document some of the answers



Well, for one thing she spends a lot of time being totally unrecognized in cavernous terminals, waiting for planes, trains, buses, boats, and taxis. Weather permitting, she takes walks near her hotel, also mostly



unrecognized. She tries out the acoustics of unfamiliar, empty, and unheated auditoriums.

(Continued on page 81)

pect of Tourel's success. "Really, now," I recall one of them wanting sniffily to know, "who does she think she is—Maria Malibran?"

As it happened, Tourel did *not* think that, even though no other contender for that particular honor came anywhere near her. On the other hand, neither did she afflict us all with false modesty. "You see," she once remarked helpfully to a reporter from a newsmagazine who wasn't quite sure what all the commotion was about, "it isn't just boiled potatoes, what I do."

There is really no comparing singers a century apart—there won't be, at least, until a hundred years or so after the perfection of high-fidelity recording—but we may guess that the traits wherein Tourel most resembled Malibran were not her phenomenal sight-reading, or her interest in the piano, or her voracious absorption of languages, or her expressive sorcery, but her fantastic capacity for work and her systematic preference for challenging projects. I have an idea that Tourel's early determination to master Rossini's coloratura in the original mezzo register (as both Malibran and Tourel's friend and idol Supervia had done) established habits of mind and work that were conclusive for her later career, and in this context I find especially moving the four delicious Rossini arias that open the Columbia memorial album.

These arias were recorded almost thirty years ago, and on the evidence it was at the second Rossini session (July 17, 1946) that Columbia's engineers, in an apparent fit of inspiration, discovered what to do about the characteristic Tourel *sound*. The "*Non più mesta*" from *Cenerentola* had been very fine, and in fact the "*Una voce poco fa*" from *Il Barbiere* may well remain a classic nonsoprano version for generations to come. But it is the "*Cruda sorte!*" from *L'Italiana in Algeri* that really sets us back on our heels. It is like suddenly rounding a corner onto a big and brilliantly lighted Veronese painting—the sumptuous coloration, the heroic outlines, the superb theatricality, the thrilling immediacy.

Around 1949 all this was right up my alley. I was out to prove that Tourel had as much sheer *voice* as anybody going (she hadn't, of course, though she could make it seem so), and I was once going on about her Rossini in much these terms when she overheard me. "Ah!" said she, all bright-eyed amiability. "So you think *Cruda sorte!*" is the best?"

The only wise reply to a question like that from a diva, even an enlightened one, is to profess yourself unable to choose between three or four of her equally celestial performances—

ignoring which axiom I sailed happily on about "*Cruda sorte!*". I was quite emphatic until I noticed just a touch of frost and paused inquiringly.

"Hmmm," said Tourel, not exactly noncommittally.

"Well, then," I countered, "which do you prefer?"

As well ask Medea which of her children she preferred to destroy first. I got a faint flicker of the vivid Tourel brows, a faint shrug of the eloquent Tourel shoulders, but no confidential disclosure, then or later.

And of course she was right to be impatient, for the terms of my rave

"You see, it isn't just
boiled potatoes,
what I do."

evaluation were not the really relevant ones. I know now what miracles of mobilized will and conscious art—no other terms will do, and with Tourel one keeps reverting to them as critics of an earlier day did with Malibran and Pauline Viardot-García—are involved in her conquest of Rossini, and most particularly "*Non più mesta*" and "*Una voce poco fa*." What took the most nerve of all was to emulate Supervia, of all possible models, in just these great virtuoso set-pieces. Supervia not only possessed a big glittering voice of hair-raising agility, but a timbre of a peculiar and unforgettable plangency. There are moments, on the other hand, when Tourel, particularly in Rossini's more florid measures, not so much sings the passage out as she lightly—and, in fact, wittily—sketches it. Which is *not* to say that she fakes it, for the music is all there, spun out swiftly before us with wonderful verve and spontaneity in delicate lines of ravishing, silky sound. But in place of glitter and force there is glow and intensity, so that presently, as so often with Tourel, we wind up convinced that we have understood the composer's expressive intention as never before.

The upshot is that I find myself thinking of Tourel's Rossini almost as if it were something she had invented herself (Virgil Thomson felt exactly the same way about her Moussorgsky *Songs and Dances of Death*). I remember also her remarking to somebody that it was after she heard Supervia in *Cenerentola* that she went home and began really to work. And when she added "I made up my mind not to be discouraged," it is clear that she knew even then how long and tough and pe-

culiarly lonely the road ahead of her would be.

NOT the least interesting reaction to Columbia's *Odyssey* album was a perceptible sense in musical circles that this recording could scarcely be bettered as providing instant musical documentation for Tourel's new—which is to say her historical—future. Important niches in vocal history are not come by automatically, particularly in the case of singers more celebrated for their art than their decibel count. But it begins to seem likely that Tourel will occupy one. Probing biographical questions have been asked in reviews, articles, and liner notes. The singer's peers seem inclined to reminisce. Substantial updatings are in preparation for the standard musical reference works, and a book is being talked of. People involved with Tourel's life and work have expressed to investigators a due responsibility with regard to their own recollections and the singer's papers, music, and iconography. It is to be hoped that these and other aspects of Tourel's story will go forward promptly. With the best will in the world, people still forget, and the initial reports as published already contain many factual discrepancies.

Some of the more serious of these are noted herewith. In addition to my own recollections, I have consulted those of a member of Tourel's family, those of many of her friends, early and late, and those of her long-time personal manager and confidante Friede Rothe (the last named, particularly, has been and necessarily will continue to be a reference of first importance to any realistic account of Tourel's career). None of these persons are to be held responsible for the dates, questions, or conjectures advanced below, which are in any case not offered as being anything but the most tentative kind of biographical sketch, and one gladly subject to whatever corrections can be substantiated.

When she died, the obituaries gave Tourel's age as sixty-three, stating that she was born in 1910 in Montreal, during the alleged Canadian travels of her parents. The genesis of this curious tale is noted below, and astonishing though it may be to those who heard her sing just a few weeks before her last illness, Tourel was actually seventy-three. Those with special knowledge of her passports place her birth in the year 1900 in Russia, the country in which she resided in 1918, the year she and her family left it as refugees from the Revolution.

Thereafter the family lived for a time in or near Danzig, and Tourel's early friends recall her accounts of girlhood

summers spent on the Baltic at Sopot (since 1945, Zoppot, and part of Poland), a summer resort with a fashionable gambling casino. The fact that Tourel's family could manage such summers after their flight from Russia would seem to indicate they were not in want. Sopot was then part of the Danzig Free City territory, which was virtually a German city, and Tourel's flawless German probably derives from those years.

At this time, encouraged by a proud father, she had begun her study of both voice and piano (not violin, apparently, although one source mentions it). But to date the names of her early teachers have not been discovered. The first teacher officially credited so far is Anna El-Tour in Paris, in the Thirties, and there is some doubt whether that association was the unalloyed satisfaction for Tourel that El-Tour later alleged it to be. In at least one account Tourel reportedly denies the widely circulated tale that her own professional name was invented as an anagram for El-Tour. The professional association Tourel appears to have found most rewarding came many years later with the lieder singer Maria Freund, for whom she reportedly had a respect amounting to veneration. There is no evidence that she worked with Supervia or Madeleine Grey or her friend Eva Gauthier.

We also come upon early references to Berlin and Switzerland at the age of "fourteen or fifteen," but until we know which chronology was involved (the real or the assumed one), they remain impenetrable. If Tourel's parents actually took her to Switzerland and Germany at fifteen, it could only have been in the course of a pre-Revolutionary visit. But if we apply the ten-year correction noted above, she would have been twenty-four or twenty-five and the year would have been 1924 or 1925.

These dates seem in a general way to suit the provisional picture of her early career, for after "many" concert appearances in Paris and elsewhere (she already programmed songs in many languages, and liked to open with early Italian things by Monteverdi and Stradella), her first known operatic appearance in Paris came with her 1931 debut at the Opéra Russe, singing the Polovtsian Maiden in *Prince Igor*. Here also she heard Feodor Chaliapin, and her impression of his overwhelming communicative power deeply influenced her own subsequent conception of the art of song.

The conductor of the Opéra Russe was Emil Cooper (eventually heard at the Met from 1943 to 1947, a capable if not incendiary conductor of everything



She also pays visits of respect to eminent composers and conductors, and sometimes when she entertains her own friendly peers informally, professional give-and-take unexpectedly turns into a real work session

at the piano, crackling with the excitement of unrehearsed and venturesome music-making.

Necessarily, too, she spends much time fitting high-fashion gowns, training them at the mirror to her own posture and movement. And then there are the strangest moments of all when, dressed and coiffed and made up far beyond or outside her quotidian self, she is alone in her dressing room just before her performance. It was only with reluctance that she permitted herself to be photographed at one such moment, and then both the photographer and the camera noted that in a sense she had become a stranger—a stranger perhaps even to herself, for she seemed to search her mirrors a little desperately, demanding from them something more than simple reassurance about her appearance.

Then this strange inquiry ended as she walked on stage, where for almost half



a century she found the strength to give her audiences answers, not questions. —R.O.

In a review deliberate, measured, and unequivocal, the most distinguished critic since Berlioz hailed the most distinguished concert singer since Malibran: "...an honest-to-God Queen of Song."

from *Pelléas* to *Parsifal* to *Aïda* and *Gioconda*). It was Cooper who in 1931 was instrumental in bringing Tourel to Chicago for the 1930-1931 season where she appeared first in Ernest Moret's *Lorenzaccio*. Subsequently she sang Lola in *Cavalleria Rusticana* and appeared with both Mary Garden and Claudia Muzio. Amusingly enough, in Chicago Tourel also made an unscheduled appearance in *Die Walküre*, of all unlikely things. Her costume, and especially her helmet, was much too large for her, and one critic noted the odd little misfit among the hefty sisterhood as "an unidentified pony Valkyrie."

It appears to have been at this point in her career, certainly with the knowledge of Cooper and possibly with his advice, that Tourel decided to establish her birthplace as Montreal, for it was so reported in the Chicago papers. It is not now known whether as a Russian refugee she was traveling with a so-called "Nansen passport." If she was not, this expedient may have simplified her entry into the United States. Once she established the Montreal story, however—and for whatever reason—Tourel was stuck with it, and today those loyal to her are understandably reluctant to submit it to the correction of history. "That is the way Jennie wanted it," a long-time friend objected recently. Of course, but that was then, and to perpetuate fictions that no longer serve any useful purpose will simply detract from the real monument she now deserves to have.

AFTER 1931, Tourel's operatic career, although never fully documented, is increasingly accessible to review, and I sketch it briefly only to dispel the notion that she was an opera singer failed or flawed. Her operatic successes were, in fact, many, and her distinction was from the beginning noted everywhere. What mainly was lacking (and perhaps happily so, in view of our subsequent delight in her special achievements as a concert star) was the snowballing popular success that creates a readily identified operatic figure of international dimensions.

Following her Chicago experience in 1931, Tourel's great success as Carmen came at the Opéra-Comique in 1933, and thereafter until World War II she sang regularly and with stellar rank at the Comique and other European houses. Her principal roles other than Carmen included Cherubino, Mignon, Charlotte (in *Werther*), and the title role in Bizet's *Djamileh*.

Tourel's Metropolitan Opera debut came earlier than many people suppose. While she was still based in Paris she sang Mignon for the Met's anomalous spring season in 1937. Her next New York appearance came in 1941-1942 when she sang Lisa in *Pique Dame* with the New Opera Company, and in 1944 she sang Carmen for the New York City Opera's pilot season.

Her second appearance at the Met came on March 16, 1944, in *Mignon*, just seven years after her debut with the company in the same opera. But the Tourel who returned was not the one who had left, for her career meanwhile had undergone a transformation as remarkable as any known in our times.

In 1942, Toscanini chose Tourel as soloist in the Berlioz *Roméo et Juliette* for the centenary of the New York Philharmonic, and in short order Koussevitzky chose her for Debussy's *La Damoiselle Éluë* and Stokowski for the American première of Prokofiev's *Alexander Nevsky*.

In 1943, Tourel made her concert debut at Town Hall, singing her early Italian things, Mozart, Rossini, Debussy, some Russian songs, plus an unprecedented assortment of North and South American composers. And it was at this point that career lightning struck. In a review deliberate, measured, and unequivocal, the most distinguished critic since Berlioz hailed the most distinguished concert singer since Malibran with a rave that became a classic. Tourel and Kirsten Flagstad, wrote Virgil Thomson, belonged together "in the top category of living vocal musicians—together and virtually alone." He concluded by finding Tourel "unequaled among living singers for the high concentration in one artist of vocal skill, sound musician-

ship, and stylistic flexibility," and on a subsequent occasion he proposed that we recognize Tourel for what she obviously was—"an honest-to-God Queen of Song."

And it was *this* Tourel who returned to the Met. There, in the years 1944 and 1945, she sang four Mignons (succeeding Risé Stevens), two Carmens (succeeding Lily Djanel), two Adalgisas (succeeding Bruna Castagna), and a Rosina (succeeding Lily Pons). By the time she gave the Met a final Carmen on April 3, 1947, everyone in the house knew who and what she really was. She was the concert soloist of choice, insofar as anyone might be, for the world's ranking conductors and composers, from Toscanini to Koussevitzky to Stokowski to Beecham—and, as time went on, to Bernstein to Hindemith to Poulenc to Stravinsky.

Tourel was not a very big person, and even people who knew her well sometimes found it hard to reconcile the unaffectedly simple (and often mischievously funny) little woman she privately was with the towering artist she turned into when she sang. It helped of course that *all* the noises she made, including her speech and laughter, were unavoidably musical ones, so that even a phone conversation with her was a kind of musical event.

The bells never pealed more merrily in her voice—and anyone hearing her sing "*Ah, quel diner!*" from *La Périchole* will know what I mean by "pealed"—than when, relaxing among close friends after a concert, she told naughty stories, which she could do in several languages. You didn't have to understand the language, and the story didn't have to be very good or particularly new. What made it irresistible was her own hilarity, which mixed in the funniest way the propriety of a perfect lady and the earthiness of a sort of half-pint Rabelaisian comedienne.

Once in Philadelphia as she was about to go on stage (as Adalgisa to Stella Roman's Norma), I told her all she had to do was sing like an angel "just a little bit fallen." I was rewarded with a delighted giggle, for the allusion was to one of her own stories—a long dialect classic that originated back in the great days of burlesque. Everybody knew the tag line, and all the art was therefore in the telling. It concerned the old Jewish merchant trying to marry off his youngest and most beautiful daughter, and a problem has arisen because she happens to be "just a little bit pregnant." There are many lost performances I yearn for, but I'd give a lot to have a tape of Tourel's performance in *that*. □

The proud smoke

Product of a proud land.

Tobacco. It's as proud a part of the American tradition as the Grand Canyon. At Liggett & Myers, we've made tobacco into a cigarette worthy of that tradition. The rich, mellow, distinctively smooth L&M. Smoke it proudly.



Warning: The Surgeon General Has Determined That Cigarette Smoking is Dangerous to Your Health.

Filter King: 16 mg. "tar", 1.2 mg. nicotine, av. per cigarette, by FTC Method.

Three years ago ESS introduced the revolutionary Heil air-motion transformer to high fidelity sound reproduction in the unprecedented AMT 1 which rapidly received world-wide acclaim as the first really new development in loudspeaker technology in over 50 years. In nine months 20,000 units were sold. Now after two years' research and extensive tooling, this extraordinary loudspeaker classic has been further perfected to achieve virtually flawless accuracy over a substantially increased range with:

A NEW Heil air-motion transformer configuration that achieves greater vertical sound dispersion and permits penetrating, unified magnetization of each transformer with special equipment designed and built by ESS expressly for this purpose.

A NEW 12 inch high acceleration woofer manufactured by ESS under the strictest quality control, incorporates a 7.4 pound magnet assembly mounted on a newly designed open backed, rigid, cast aluminum frame. Its cone is made of a newly developed rubber impregnated pulp and is contoured to provide extreme definition and clarity through the critical midrange crossover point with dynamic overhang-free bass. Its high temperature voice coil assembly allows massive power handling.

A NEW aluminum frame 12 inch passive radiator, with a diaphragm of laminated styrofoam and neoprene suspended by a compliant half-roll foam surround, operates in conjunction with the woofer to provide useful output in the typical listening environment, extending as low as 25 Hz.

The ESS amt 1a reaches a level of performance impossible to achieve without full manufacturing control over all system elements. Its incredible accuracy and definition are the result of a unified design uncompromised by the necessity for adapting to commercially available components.

Now you can recreate the excitement, immediacy and grandeur of a live performance with a clarity and dynamic power never before experienced.

Hear the AMT 1a, the new ESS standard of excellence, yourself. Visit a franchised ESS dealer, one of the handful perceptive enough to bypass the conventional and premier the most advanced state-of-the-art designs in high fidelity, a dealer who understands the loudspeaker of tomorrow—the ESS Heil air-motion transformer. Listen to the ESS amt 1a, you'll experience a new excitement in sound as clear as light.



Beneath its grille cover the ESS amt 1a features all new components. On its front panel is the powerful new 12 inch woofer and above it the latest configuration of the revolutionary Heil air-motion transformer. The rear panel mounts the flat surfaced neoprene and styrofoam passive radiator. On the top surface, behind the Heil air-motion transformer, is the recessed panel with controls for midrange and treble response that adjust for differing room characteristics.

a brilliant new achievement
in Heil air-motion transformer
technology



the new

ES5 amt 1a

Heil air-motion transformer system

**Rare taste.
Either you have it.
Or you don't.**

Yes, the whiskies in J & B are rare indeed. But the essence of J & B Rare Scotch is in our uncompromising quest for perfection. For more than 100 years, no one has ever matched the rare taste of J & B. And never will. That's why J & B has it. And always will.

86 Proof Blended Scotch Whisky ©1975 Paddington Corp., N.Y.

**J&B
RARE
SCOTCH**



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



LAMBERTO GARDELLI: distinguished service in the cause of Verdi

Verdi's *I Masnadieri*: Where Has This Prize Operatic Package Been All Our Lives?

FEW of Giuseppe Verdi's operas (there are a couple dozen of them) remain still unrecorded at this writing, and, to make this encouraging state of affairs even more pleasing, the newly discovered early operas have been reaching us in recorded performances of exceptional quality. Recent years have brought us stirring versions of *I Lombardi*, *Attila*, and *Un Giorno di Regno*, all on the Philips label and all conducted by Lamberto Gardelli. We now have *I Masnadieri* (*The Bandits*) from the same source, and—why beat around the bush?—it may be the prize package of them all.

The opera was written in 1847, the year Verdi's friend, the poet Andrea

Maffei, turned the composer's dramatic attention to Shakespeare and Schiller. *Macbeth* and *I Masnadieri* were the results of those new and important explorations, and just as English critics have long maintained a patronizing attitude toward the former, Germans are likely to be condescending about the latter for being a necessarily compressed treatment of the broader dramatic view contained in Schiller's classic *Die Räuber*. No matter: both are striking examples of Verdi's maturing powers, and *I Masnadieri*, with its tighter and more unified musical outlook, may even be the better of the two.

Musical riches abound: the vocal writing is superb, with arias of first-rate inspiration for all the principals, and ensembles written with an expertness rarely matched in Verdi's earlier operas. Indeed, the quartet that ends the first act is not far behind the celebrated one from *Rigoletto*. Aside from the richness of melodic invention, Verdi hardly ever fails to give us here the kind of music that sketches a character

or defines a situation. Some of the choral numbers, though undeniably effective, are not terribly distinguished, but the orchestral writing is remarkable, from the melancholy Prelude with its melting cello solo to the turbulent music accompanying the villainous Francesco's terrified vision in Act III.

In short, this is *quite* an opera, and it has received quite a performance. Lamberto Gardelli should long since have been awarded a Grand Order of something or other for his distinguished services in the cause of Verdi, and this time he has outdone himself with a performance that cannot be overpraised. Furthermore, his felicitous musical leadership is supported by a cast of outstanding singers. Carlo Bergonzi is ideally cast as the melancholy, Robin Hood-like, Plutarch-reading nobleman-turned-bandit. His tones may have lost some of their old luster, but they are delivered with sensitivity, refinement, and a touching elegiac expression. As his evil brother Francesco—for whom Verdi wrote the kind of magnificent



COUNTENORS ALFRED AND MARK DELLER: *living up to Purcell's demands*

music such dastards do not deserve—Piero Cappuccilli summons tones saturated with stylistic rightness and dripping with appropriate venom. Montserrat Caballé has some pitch problems in the recitative of her first aria, but handles the aria itself (“*Lo sguardo avea degli angeli*”), with its difficult coloratura writing, exquisitely, just as she does the exciting “*Carlo vive!*” outburst in the second act. Ruggero Raimondi is also superb in the role of the old Count, the father of the warring brothers. His duet with the heroine in Act I is one of the score’s many gems.

Maurizio Mazzieri’s Priest (his duet with Francesco in the last act foreshadows the Grand Inquisitor scene of *Don Carlo*) is the best characterization among the supporting singers. The others are adequate, and the redoubtable Ambrosian Singers manage to deliver their choral music without making it sound too much like anticipated Gilbert and Sullivan.

“A noble and sincere work with moments of genuine greatness,” sums up Julian Budden in his excellent annotations. I concur, adding only a special bow toward Philips, Gardelli, and the singing principals. Where has this opera been all our lives? *George Jellinek*

VERDI: *I Masnadieri*. Ruggero Raimondi (bass), Massimiliano; Carlo Bergonzi (tenor), Carlo; Piero Cappuccilli (baritone), Francesco; Montserrat Caballé (soprano), Amalia; John Sandor (tenor), Arminio; Maurizio Mazzieri (bass), Moser; William Elvin (baritone), Rolla. Ambrosian Singers; New Philharmonia Orchestra, Lamberto Gardelli cond. PHILIPS 6703 three discs \$23.94.

Henry Purcell’s *The Fairy Queen*: A Fine Recording Of a Superb Work

DURING the early years of the seventeenth century, when the Italians and the French were developing opera, English composers were having a rough time of it because of the Commonwealth’s extreme distaste for theater and church music. In fact, the doors to both of these important cultural institutions were clapped firmly shut and were not reopened until the monarchy was restored in 1660. Although several attempts were made to devise an all-sung type of entertainment, London audiences firmly rejected them, not because they disliked music (quite the contrary, they adored it), but rather because they distrusted recitative as a vehicle for dramatic expression and because they found singers lacking in the histrionic ability a century’s tradition of acting in English had taught them to expect. They therefore developed a unique type of opera in which actors spoke but never sang and singers sang but never spoke. Perhaps the summit of this genre was reached in Elkanah Settle’s *The Fairy Queen*, with music by Henry Purcell, just now available on Vanguard’s Everyman label in a recording by the Alfred Deller Consort and other forces.

Although the music of *The Fairy Queen* is incidental in that it does not

further the telling of the story (that is left up to the actors) but merely serves as diversion, the score is substantial in itself and reveals Purcell’s genius to the fullest. Basically, the music consists of five masques, one for each act. The masques vary in their content, and two are comic: the Masque of the Drunken Poet, in which three versifiers blunder into Titania’s private bowers and are tormented and ultimately driven out by a group of pinching fairies, and the outrageous masque in Act III in which Mopsa (an early drag role) and Corydon make a mockery of courtship. The three other masques are of a more serious nature. The Masque of the Seasons, with its massive choruses and use of trumpets, presents us with the Purcell who so influenced Handel. The Masque of Night, however, is very intimate with its solos for Mystery, Secrecy, and Sleep. The final chorus is a miracle of rests—one of the less-appreciated materials of music—designed to signify the silence Titania wishes for her repose. The last-act masque is a strange mixture of Juno’s Epithalamium and a utopian scene laid in China. Each of these splendid productions contains solos, ensembles, choruses, and contagious dances as well as magnificent symphonies and descriptive music. Purcell’s greatest utterances are to be found in his theater music, and *The Fairy Queen* is undoubtedly his most splendid score.

Until the issue of the new Vanguard recording, the only *complete* recording of this work available was a three-disc album on L’Oiseau-Lyre (OL 50139/41, later available in electronic

stereo as OLS 121/3). There is also a well-sung abridged version, much modified, conducted by Benjamin Britten. Although the new recording consists of only two discs and omits the First and Second Music and two songs Purcell added for a revival, it has the advantage of brilliant stereo sound. One remembers the beautiful performances of Jennifer Vyvyan, Elsie Morison, and Peter Pears on the older recording, but these were offset, alas, by some rather poor performances by the lesser singers. Although the singing on the Everyman issue does not reach the heights of the best of the older set, all of it is extremely good; further, the advantage of having a vocal ensemble that has worked together for some time is apparent in the precise ensemble work.

Another feature to recommend the album is the imaginative instrumentation employed. As was typical of the Baroque composer, Purcell did not always specify what instruments were to play in many numbers. In such cases, the Oiseau-Lyre performance resorted safely to strings and always

used the cello for continuo. Research has taught us that this was not always the case, and Deller has therefore given us a great variety of timbres with his use of recorders (especially effective in the descriptive Bird Music of Act II), oboes, and an alternation of bassoon and cello for continuo work. Also, Deller's tempos are well chosen so that nothing drags and nothing is frantic either—the performance is well paced throughout. My only complaint is that there should be a little more support from the harpsichord. In short, this is a fine recording of a superb work. The music is the very essence of Purcell's theatrical genius, ranging from the lowest comedy to the highest reaches of rhetorical magnificence. The performance lives up to these demands and brings to the listener a concept of theater music that he will probably never have the opportunity of experiencing in the theater itself. *Stoddard Lincoln*

PURCELL: *The Fairy Queen*. The Deller Consort; Stour Music Festival Chorus and Orchestra, Alfred Deller cond. VANGUARD/EVERYMAN SRV 311/12 SD two discs \$7.96.

Another Display Of Questionable Taste from the Monty Python Group

IF five men and one woman in dogged pursuit of the nonsensical, the unedifying, and the absurd week after week on TV are not your cup of Oolong, then please switch to another review. Do so because I am in a highly contagious state, having suffered from Pythonomania now for over a year, and you might catch it. If you do, then you too will be glued to your television set every Sunday watching the veritable dregs of society, in antic merriment, engaged in acts that defy reason, confound common sense, and outrage our most sacred notions of what we know to be adult good taste.

John Cleese, Michael Palin, Grahame Chapman, Eric Idle, Terry Jones (he seldom appears, but he is responsible for the wildly imaginative, improb-

Something totally different, usual order: Jones, Chapman, Cleese, Idle, Gilliam, Palin





Island Records

GEORGIE FAME:
a justified confidence

ably grotesque animations that so firmly pin the show down in a post-Orwell world long since gone completely bananas), and Carol Cleveland are the Python's "perpetrators," as the tin ear of the law would so quaintly have it, and their targets are our oft-times puncture-proof pomposity and fetid sentimentality. There's *The Pet Shop* skit, for example, in which the store's owner blandly denies having sold a dead parrot, suggesting instead several other possibilities: the bird is resting; it has had an attack of homesickness; it has been terrified by the new owner's frantic efforts to wake it up. One doesn't, of course, generally *joke* about any kind of animal suffering in England, where these Pythonomaniacs reside, much less about the *death* of anyone's "dear little Polly." But the Python crew could not, apparently, care less about what offends or what doesn't, as witness their hilarious parody of one of those flatulent BBC documentaries addressing itself to a pressing "social issue" entitled *The Mouse Problem*. It seems that all over England there are men who . . . sshhh! . . . secretly want to be *mice*. They all know each other by means of some nasty underground network, and they often gather in one another's houses to indulge their sickening vice. Not quite as funny here on records as it was on TV, where tantalizing glimpses of a mousy bachanal could be seen as flickering shadows, all ears and tails, on discreetly drawn curtains. And not what you would call a conventional comic routine either, but funnier by far, to my mind, than anything short of Elizabeth Regina herself reading *morceaux choisis* from the

Wolfenden Report to the assembled chaps in Parliament.

There are seventeen such pieces of disgusting impertinence included in this Pye Python disc, and among them you will surely discover a favorite. You may then be grateful, as I am, to Pye Records for making these glorious recorded graffiti available to us hapless foreigners.

Peter Reilly

MONTY PYTHON'S FLYING CIRCUS. Original material from the TV series. John Cleese, Michael Palin, Grahame Chapman, Eric Idle, Terry Jones, and Carol Cleveland (performers). PYE 12116 \$6.98.

Georgie Fame: The Right Approach, The Right Songs, The Right Time

DURING the early Sixties, English singer Georgie Fame started doing lead vocals with the Blue Flames, an experienced rock back-up band which became a British sensation once he assumed its captaincy and started injecting some yeasty ideas about jazz-rock fusion. In January of 1965, for example, his *Yeh Yeh* was so big a single that it displaced even the Beatles on the English record charts. The Blue Flames burned brightly until 1967, when the band broke up amicably,

Fame's last wheeze with the group being *The Ballad of Bonnie & Clyde*—sadly untypical of his best work, but spurred to chart success nonetheless by the popularity of the movie.

Georgie Fame moved on to what, for want of a better name, might be called the middle of the road, active, popular, and successful whether singing with a big band (Count Basic's), on TV, or in clubs. "Survival," a new album on the Island label, represents his return, freighted with a good deal of valuable experience, to the jazz-rock-pop style that first established him. It is not, however, in any way intended as a "comeback" album; it is rather like the recent "Today" collection from Elvis Presley, no less than a *recital* by a craftsman, a seasoned, confident, professional entertainer.

It takes a lot of earned and justified confidence to be as good as Fame is here. Everything about the album—the high-polish arrangements, the instrumental (augmented Blue Flames) and vocal performances, and the material itself (mostly Fame's)—is just about perfect. The disc is therefore timeless; good today, it will be as good twenty years from now. It is a model of taste, discretion, and judgment in the field of popular music, the right approach to the right songs at the right time. Absolutely beautiful. *Joel Vance*

GEORGIE FAME: *Survival*. Georgie Fame (vocals); instrumental accompaniment. *Everlovin' Woman; Don't 'B' Movie Me; Donut Man; Ozone; Leaving the City Behind; Country Morning; Johnny Too Bad; That Ol' Rock & Roll; Survival*. ISLAND ILPS 9293 \$6.98.

Some speakers are more equal than others.

Over the years, Rectilinear engineers have created a number of fine speakers. Some have even gone on to become classics.

Indeed, for a great many knowledgeable enthusiasts, Rectilinear has virtually redefined the listening experience.

Now, with a new generation of speakers, the Contemporary Laboratory Series, we have developed a family of speakers that are so clearly superior to anything that has gone before, that conventional comparisons no longer apply.

A case in point is the new Rectilinear 5.

Listening to this remarkable speaker is, quite simply, a revelation. It produces completely natural, uncolored sound of extraordinary clarity and subtlety. Yet, it is capable of generating very high sound pressure levels with only moderate power input.

The outstanding performance of the Rectilinear 5 is directly traceable to its comparatively simple, but highly refined design.

Flat, flatter, flattest.

Though nominally a four-way speaker system, the Rectilinear 5 differs from conventional multiple driver systems in some very fundamental respects.

In most systems, the individual drivers are operated over a restricted portion of their actual frequency range with the unwanted or undesirable

frequency extremes "dumped" into elaborate crossover networks to maintain some semblance of smooth response.

By contrast, we take a simpler, but far more effective approach. We painstakingly design each driver for exceptionally smooth response over its entire operating range with the top end rolling off naturally, both mechanically and acoustically. Thus, we come very close to attaining that most elusive of all speaker characteristics, an apparently seamless transition from driver to driver.

Because the individual driver characteristics and their interrelationships have been so carefully worked out, the use of complicated crossovers with all their attendant problems is largely avoided. Instead, sophisticated lead-

ing edge filters are employed allowing a much smoother transfer of energy. But of equal importance, phase integrity is maintained and transient response greatly improved.

Another dividend of this innovative approach to speaker design is the enormous power handling built-in to the Rectilinear 5.

The final touch.

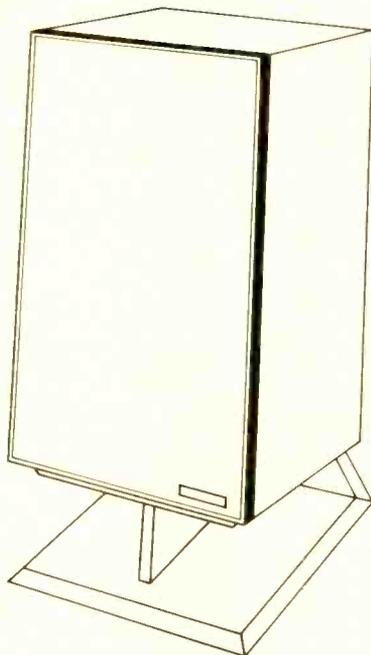
Obviously, we've invested a great deal of time and effort to make the Rectilinear 5 the most accurate speaker current technology permits.

Moreover, to insure unvarying excellence from unit to unit, we have instituted a new quality control program that may well be the most stringent in the industry.

One last thought. At a time when all too many companies have opted for exotic designs (read expensive), we have deliberately sought to create a clearly superior speaker system at a price that would still be within the reach of the discriminating enthusiast.

We think that alone makes us a little bit more equal than all the rest.

For complete information on the Rectilinear 5 and the rest of the Contemporary Laboratory Series write: Rectilinear Research Corporation, 107 Bruckner Boulevard, Bronx, N.Y. 10454. Canada: H. Roy Gray, Markham, Ont. Military and International inquiries: Rectilinear International Corp.



Rectilinear Dispersion Base optional

The Rectilinear[®] 5

CIRCLE NO. 53 ON READER SERVICE CARD



POPULAR DISCS AND TAPES

Reviewed by CHRIS ALBERTSON • NOEL COPPAGE • PAUL KRESH • PETER REILLY • JOEL VANCE

LAURIE BOGIN: *The Exceptional Laurie Bogin*. Laurie Bogin (vocals, guitars, celeste, bass, piano, recorder, autoharp); instrumental accompaniment. *All I Want to Do Is Dance; I Love to Love You; The Song Makes Me Crazy; Take Me Down Again; Standing Still; To Give You a Smile*; and five others. BUDDAH BDS 5633 \$6.98, Ⓡ 8320-5633H \$7.98.

Performance: **Good**
Recording: **Muddy**

Ms. Bogin is not exceptional, but she is pretty good. Her songs are all hard rock, female division, which means they express one of two sentiments: "Let's boogie and get it on, you hunk o' beef" or "My dolly lost her shoe, goddammit." She displays much skill in her guitar work, which owes something to almost everyone after Jimi Hendrix. Her vocals are screechy but controlled. Beyond that, nothing else to report. J.V.

FELIX CAVALIERE: *Destiny*. Felix Cavaliere (vocals and piano); orchestra. *Destiny; Light of My Life; Love Came; I Can Remember; Hit and Run*; and five others. BEARSVILLE BR 6958 \$6.98, Ⓡ M8 6958 \$7.98, Ⓢ MS 6958 \$7.98.

Performance: **Fair**
Recording: **Good**

Felix Cavaliere sounds a bit like Tony Orlando. Well, perhaps not *that* bad, and the songs he composes are better than anything in Orlando's moth-eaten repertoire. But still there lingers that faint touch of con artist on the loose no matter how intense or "feeling"

his performing manner. Your Gullibility Quotient will be an important factor here. P.R.

RECORDING OF SPECIAL MERIT

ODIA COATES. Odia Coates (vocals); orchestra. *Showdown; The Charmer; Heaven and Hell; Do I Love You*; and seven others. UNITED ARTISTS UA-LA228-G \$6.98.

Performance: **Excellent**
Recording: **Excellent**

At last, here's a newcomer who lives up to the hype being given her. Odia Coates has a big, free-floating voice, secure from top to bottom, and a dynamite commercial style. Paul Anka, whose company coproduced (glitteringly) this album, and who has contributed six of the eleven songs, has a thoroughbred here. She possesses a fiery musical attack and the kind of concentrated poise in her lyric readings that marks the performer who can heat an audience up or cool it down at will. She's at her best in two Anka songs, *Don't Leave Me in the Morning* and *The Woman's Song*. Neither one is much above the level of the typical Anka potboiler, but both tracks are irresistible in the sense that they are such splendid examples of the kind of super-professional, commercial record-making there will always be room for in pop music. In what can only be thought of as an excess of loyalty or a temporary loss of reason, Coates also performs Anka's dreadful hit of last year, *I'm Having Your Baby*, which would defeat even a Peggy Lee. Otherwise, it's "Curtain up!/Light the lights!/You've got nothin' to hit but the heights. . ." for Odia Coates. P.R.

ROGER DALTRY: *Ride a Rock Horse*. Roger Daltrey (vocals); Russ Ballard (piano, organ, guitar); Dave Wintour (bass); Stuart Francis (drums); other musicians. *Come and Get Your Love; Heart-S Right; Oceans Away; Proud; World Over; Near to Surrender*; and four others. MCA MCA-2147 \$6.98, Ⓡ MCAT-2147 \$7.98, Ⓢ MCAC-2147 \$7.98.

Performance: **Off the pace**
Recording: **Average**

It must do someone some good, this practice of stepping out of a famous band to do "solo"

albums, but that someone is seldom one of us listeners. Roger Daltrey cannot, of course, really solo, since he is a lead singer and not an instrumentalist or much of a songwriter; what he does here, one supposes, is run things his own way. He comes off better letting Pete Townshend run things and the Who do the playing—which is hardly surprising, since the Who may be the best rock band there is. This is rather dull by comparison; the (temporary) rock-band backing is just too usual, and most of the tunes are worse than that. The one cut that strikes me as out of the ordinary is *Milk Train*, which uses the undertone of violence in Daltrey's straining, rangy voice a little differently from how Townshend might have used it. The rest is Daltrey's trip, perhaps a necessary one for him, but it isn't mine. N.C.

YVONNE ELLIMAN: *Rising Sun*. Yvonne Elliman (vocals); orchestra. *Walk Right In; Best of My Love; Bad Weather; Sweeter Memories; Small Town Talk*; and five others. RSO SO 4808 \$6.98, Ⓡ TP 4808 \$7.98, Ⓢ CS 4808 \$7.98.

Performance: **Spotty, but often very good**
Recording: **Good**

Yvonne Elliman could be a lot better than she often is—but then again, couldn't we all? What she does accomplish here is to rough in the outlines of a personal style. It's a style that mixes intensity, a languorous serenity, and a tendency to belt it out vigorously whenever the mood strikes her. When it all comes together, as it does in *From the Inside* or *Steady As You Go*, you can feel the excitement of an artist about ready to break through. She's still very tentative in some areas, particularly in the matter of lyric shadings, but it all seems to be there just waiting to blossom with the aid of the right song. P.R.

RECORDING OF SPECIAL MERIT

FAIRPORT CONVENTION: *Rising for the Moon*. Sandy Denny (vocals, guitar, piano); Dave Swarbrick (vocals, fiddle, mandolin, autoharp, guitar, dulcimer); Dave Pegg (guitar, bass, vocals); Jerry Donahue (guitar); Trevor Lucas (vocals, guitar, harmonica); Dave Mattacks (drums); Bruce Rowland

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.

(percussion). *Rising for the Moon; Restless; White Dress; Let It Go; Stranger to Himself; What Is True; Iron Lion; Dawn; After Halloween; Night-time Girl; One More Chance.* ISLAND ILPS 9313 \$6.98, Ⓢ Y81-9313 \$7.98.

Performance: **Lovely**
Recording: **Very good**

Sandy Denny (sigh) is back (exclamation point) with Fairport Convention, so don't go calling the middle Seventies a total loss. Better still, the Fairport personnel shuffle seems to have quieted down without the exit of the first-class male vocalist the band had landed in Trevor Lucas. Sandy's husband and a member of her fine and defunct band, Fotheringay. Anything approaching a decent song is going to get the very dickens sung out of it is what all this means, and that's what this album demonstrates. It begins so well, with the charming title song written and sung by Sandy, that it isn't until the fourth track—*Let It Go*, with an irritating tune and a vocal (by Dave Swarbrick, the one who always stayed a member of Fairport) just a little messy around the edges—that the idea of human fallibility gets any consideration at all. Eventually you may, as I did, settle into the notion that the songs aren't really super, just better than the average—it's the vocals of Denny and Lucas that are technically and (especially) emotionally tuned up to make the songs *seem* super. And the arrangements are good, as Fairport arrangements usually are: Swarbrick in particular deserves credit for hanging in there and seeing to the fiddling and the mandolins and other little things that mean a lot. The album is a fine one, but if this band can hold together for longer than the usual few weeks, you ought to hear the *next* one! *N.C.*

GEORGIE FAME: *Survival* (see Best of the Month, page 90)

RACHEL FARO: *Rachel Faro—II.* Rachel Faro (vocals, piano, guitar): orchestra. *Wonderous Love; Free Grace; Greyhound Bus; Ridin' High; Jambalaya;* and seven others. RCA APL1-1105 \$6.98, Ⓢ APS1-1105 \$7.98, Ⓢ APK1-1105 \$7.98.

Performance: **Muted**
Recording: **Good**

Rachel Faro projects a world weariness that sometimes slips into plain exhaustion as she flicks through a collection of her own and other people's songs here. She can be quite affecting, in her dead-pan way, in such things as *I Will Love You More*, for which she has provided French lyrics, or in guiding that rickety old tugboat of pop, *Jambalaya*, around the bend and into the Seventies. Too often, however, her muted approach turns the mood to taupe, the material to interior dialogue, and the listener's patience off. Production and arrangements are by John Simon, who should do more albums of his own. *P.R.*

JOSÉ FELICIANO: *Just Wanna Rock 'n' Roll.* José Feliciano (vocals and guitar); orchestra. *No Jive; Twilight Time; Suspicious; Ain't That Peculiar; Marie;* and six others. RCA APL1-1005 \$6.98, Ⓢ APS1-1005 \$7.98, Ⓢ APK1-1005 \$7.98.

Performance: **Poor**
Recording: **Overdone**

José Feliciano's been slipping downhill for so long now that it may be hard to remember the

time when he was a spectacular new talent whose guitar work was enthralling and whose vocals were urgent and exciting. For the last several years he's been releasing a series of really poor recordings, most of them overloaded with gimmicks and ham-fistedly overproduced. This newest, no exception, is a grandiose exercise in vacuity. All that remains is his amazing facility on guitar, and it's *only* that these days: facility. Another disappointment from an artist whose career has apparently lost direction for good. *P.R.*

FLASH FEARLESS: *Versus the Zorg Women, Parts 5 and 6.* Alice Cooper, Elkie Brooks, Jim Dandy, and others (vocals); orchestra. *Trapped; I'm Flash; Sacrifice; To the Chop; Supersnatch;* and five others. CHRYSALIS CHR 1072 \$6.98.

Performance: **Forget it, Flash**
Recording: **Good**

This is a dimwitted collection of songs that presumably fit some sort of libretto for a pop

Vie (vocals, keyboards); Lindsey Buckingham (vocals, guitar); Stevie Nicks (vocals). *Monday Morning; Warm Ways; Blue Letter; Rhiannon; Over My Head; Crystal; Say You Love Me;* and four others. REPRIS MS 2225 \$6.98, Ⓢ M8 2225 \$7.98, Ⓢ M5 2225 \$7.98.

Performance: **Soft and nice**
Recording: **Very good**

Fleetwood Mac now has two female vocalists (Christine McVie and Stevie Nicks) up front and a male vocalist (Lindsey Buckingham) who plays the guitar as well, so the emphasis clearly has shifted to the singing. In this album, it makes for a pleasant impression that doesn't last too long, possibly because the singing has a smooth, low profile, as the instrumentation now has—but more likely because the songs have a lighter-than-meringue quality that attracts but doesn't satisfy. They're nicely constructed, but if you really concentrate, they sound like inconsequential banter between lovers or would-be lovers or have-been lovers or some people like that. It



SANDY DENNY:
*saving the Seventies
with a glorious return to
Fairport Convention*

space opera assembled and written primarily by Steve Hammond and Dave Pierce (and apparently anyone else who dropped by the studio that day) and performed by such luminaries as Alice Cooper and Jim Dandy. Even Alice can't do much with the material and would have been better advised to stay home. The package includes a large and elaborate comic book that is even more weak-minded and unamusing than the songs. A total waste of time, money, and, in Alice Cooper's case, talent. *P.R.*

FLEETWOOD MAC. Mick Fleetwood (drums); John McVie (bass); Christine Mc-

all sounds rather austere, needing more highlights. It's tasteful, though, and after a few adjustments you may be able to profit by listening to vocal and other textures instead of the words and chord changes. *N.C.*

RECORDING OF SPECIAL MERIT

JEFFERSON STARSHIP: *Red Octopus.* Grace Slick (vocals, piano); Paul Kantner (vocals, guitar); Marty Balin (vocals); John Barbata (drums, vocals); Craig Chaquico (guitar, vocals); Papa John Creach (violin); Pete Sears (bass, keyboards, vocals); David

(Continued on page 98)

THE NEW PHASE-LINKTM SPEAKERS BY BANG & OLUFSEN PUT MUSICIANS IN THEIR PLACE.



When music is well-recorded, it is not too much to expect that, during playback, your loudspeakers will reflect the same dynamics and ambience that were present at the original event. Re-creating the placement of instruments as well as they re-create the character of each note.

If your loudspeakers can't do all that, there's a very legitimate reason: audible phase distortion.

After years of research, Bang & Olufsen has created a speaker system that provides the missing link in speaker engineering by virtually eliminating audible phase distortion.

The Beovox[®] Phase-Link[™] loudspeaker.

Now you can hear musicians on your stereo sound stage (your listening area) as they were recorded: from front to back, as well as from side to side. With excellent transient response, definition and clarity.

But let's backtrack and see exactly how Bang & Olufsen got so far ahead.

The problem of phase distortion.

Phase distortion occurs in multiway conventional speakers at the crossover point when the same note is being reproduced simultaneously by two drivers. It is most noticeable at lower frequencies and during tran-

sients (sudden variations in volume). What you hear is a blurred sound picture, lacking definition.

There are two characteristics to phase distortion: one is fixed, the other is variable. In conventional crossover filters, alternating driver units are fixed mechanically and electrically 180 degrees out-of-phase (to compensate for amplitude "suck out"). (See Diagram A.) Variables in phase shift are due to passive filter components.

Today's high-quality loudspeakers have virtually solved the problems of frequency response, as well as harmonic and intermodulation distortion.

Which makes the study and correction of phase distortion, the final hurdle in speaker perfection, all the more important and meaningful.

A discovery we really listened to.

At the 1973 AES convention in Rotterdam, two Bang & Olufsen engineers, Madsen and Hansen presented a paper on audible phase distortion that represented three years of research.

They had created an electronic crossover, tri-amplified speaker which totally eliminated phase distortion. From it, they concluded that phase distortion is the remaining main source for sound coloration in conventional speakers.

That it is, indeed, audible at lower frequencies and higher volume levels.

The solution: the Phase-Link method.

Madsen and Hansen's electronic crossover speaker was, of course, cost-prohibitive to the consumer. So Bang & Olufsen set about creating a practical solution.

E. Baekgaard, head of the Bang & Olufsen electrical engineering department, developed a mathematical computer simulation of the loudspeaker's electro-acoustic

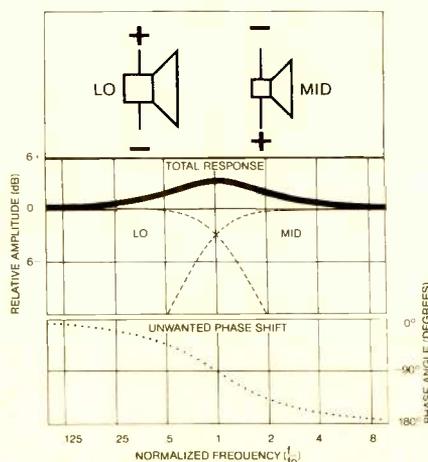


Diagram A: Conventional 12dB/oct. crossover filter.

transfer function. And he began experimenting.

Instead of placing alternating drivers 180 degrees out of phase, he put them all in the same phase, "curing" the fixed phase shift. This created an audible amplitude "suck out;" (See Diagram B) which led to the discovery of the missing link.

An additional narrow band filler driver at the crossover point. It "cured" both the amplitude "suck out" and the variable phase shift by providing a compensating signal between the woofer and midrange.

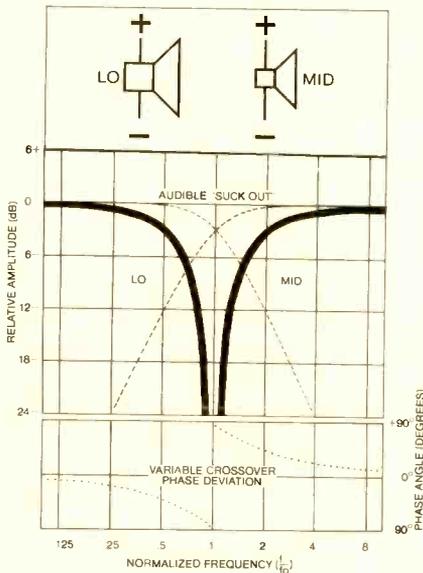


Diagram B.



Because the ear is sensitive to phase distortion mainly in the lower frequencies, phase link is only used between the low-frequency driver and the midrange unit in the high-power, 3-way (M70, S60) systems and not between the midrange and the tweeter. In medium-power, 2-way speaker systems, one phase link is used in 12dB/oct. (S45, P45) filter combinations. Low-power, 2-way speaker systems can be made without phase distortion through a sophisticated 6dB/oct. filter technique (S30).

Cabinets are supplied in genuine rosewood, teak and oak veneers or white lacquer over birch applied to tough, rigid particle board.



Diagram C: The Bang & Olufsen new dynamic filler driver eliminates phase distortion.

And it made the audible output identical to the electrical input. (See Diagram C.)

Today, our Beovox Phase-Link loudspeakers have even further refinements. The drivers are mounted to form a common, angled baffle, acoustic axis to ensure that the sound generated from each driver will reach the ear simultaneously.

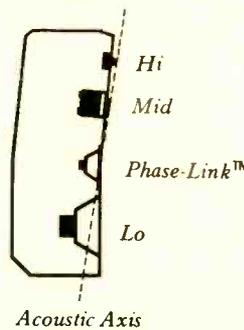


Diagram D.

(See Diagram D.) These speakers are so acoustically accurate, they can reproduce an electronic square wave signal. Proof that they have excellent frequency response, low distortion, and are free of audible phase distortion as well. (See Diagram E.)

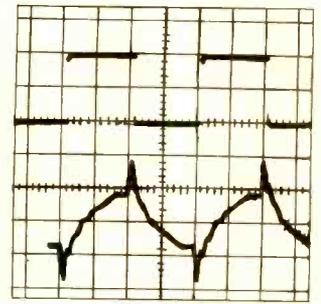
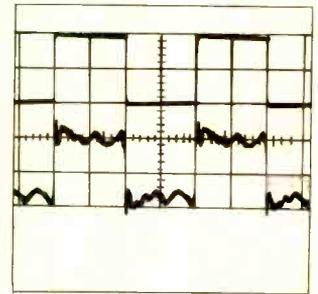


Diagram E: 1. A good conventional speaker with wide, flat frequency response and low distortion still cannot reproduce the original square wave signal.



2. Beovox Phase-Link loudspeakers can reproduce square wave accurately by virtually eliminating phase distortion.

Your Stereo Sound Stage.

More than stereo separation, Beovox Phase-Link loudspeakers produce a total stereo sound picture. With notes retaining their clarity, free from hangover because of excellent transient response. Which means that in a fine recording, you'll be able to sense where every instrument and section is located.

Now you need real proof. So take a favorite recording to your authorized Bang & Olufsen dealer.

He'll be happy to put your musicians in their place.

Bang & Olufsen®

Narrowing the gap between man and music.

Write to Bang & Olufsen of America, Inc., 2271 Devon Avenue, Elk Grove Village, Illinois 60007, for more information and a listing of our audio specialist dealers.

Mr. Ms.

Address

City

State

Zip

SR-4S

What happened in the pink house in West Saugerties eight years ago?



The Basement Tapes

"THEM old days are gone forever," Bob Dylan scribbled on the "Planet Waves" album jacket. "and the new ones ain't far behind." Them old days included times when, as Tom Wolfe was saying, one hardly knew what was journalism and what was art, when we became so involved in either the current events or the media turning events into prime entertainment that all our reference points got equalized, memories got too crowded, and our feeling for the passage of time grew increasingly vague and subjective.

In pure, abstract, objective, meaningless, geophysical fact, it was only ten years ago that they booed Dylan for appearing with an electric band known then as the Hawks and later as the Band and saying, in effect, so much for protest songs. It could have been a century ago, if your perspective has you looking back at it against a splay of happenings more historically significant, or, if your viewpoint is in the thick of feelings people continuously express about Dylan, it could have been last month.

By 1967, in any case, Dylan had regained part of the folkie audience and had found a new one that liked electric guitars, and by then he and the Band had toured much of the world. As critic Greil Marcus has it, they had pushed their thing together to a certain limit. That summer and fall, Dylan and the group experimented with possible new frontiers in some home-taped sessions in the basement of the Band's now-famous pink house in West Saugerties, New York, and now, eight years later (whatever that means), we have the product; Columbia calls it "The Basement Tapes."

These aren't just any old tapes. The earlier (or, in a sense, later) Columbia adventure,

"Dylan," is an example of what just any old tapes coming from Dylan sound like. Those came from Dylan in studios and other corporate or formal settings; "The Basement Tapes" came from home, which can make a big difference. Singing in the kitchen, as country troubadour Bobby Bare recently recognized (and capitalized on, recording a song by that very name), can be a very special thing—even if it is usually a thing in dire need of editing. When you go electric, you move to the basement or the garage, but it's still home, and it's still music you are making for yourselves and no one else, and there's no need to worry about little compromises that might please this or that audience.

THE eight selections by the Band without Dylan (Dylan sings sixteen times here) are new to us too—new to me, anyway—and in some of those you'll hear what the Band is supposed to be all about: notice particularly Levon Helm's rock-singer's rock singing in *Yazoo Street Scandal*, Robbie Robertson's electric guitar just about everywhere, and the way the whole group plays like a small army with a single consciousness in *Ain't No More Cane*. But the group seemed even better at backing Dylan in those days, and the performances of three of his standards, *Tears of Rage*, *You Ain't Goin' Nowhere*, and *This Wheel's On Fire*, are particularly moving. "Timeless," Marcus says of these two discs—I suppose that means they still sound up-to-date—and I agree with that assessment of the two-thirds or so of it where the songs are strong. Even one that took a chance on dating itself—the hilarious *Clothes Line Saga*, which seems to be a parody of Bobbie Gentry's *Ode to Billy Joe* (in Dylan's story only the most

mundane things happen, except a neighbor does happen by to say the Vice President has gone nuts)—remains sly enough and wry enough to work now.

The other thing about jamming at home, though, is that it can get awfully sloppy, undisciplined, even silly as the night wears on. You tend to play a song for ten minutes, you get so engrossed trying to fan a little spark, and, while a few of those minutes are very exciting indeed, some of them grow pretty corny before someone leads the way to an ending. That, in the case of "The Basement Tapes," was where Columbia's engineers came in, perhaps, for *someone* kept these tunes tight and concentrated. The endings are abrupt in many cases, a bit frizzled in others, and I wouldn't be surprised to learn that someone just cut away some junk and threw it out. There are a few songs here of questionable worth, mostly emanating from Dylan's freakier-than-thou absurdist streak (but notice, if you haven't already, that Dylan's freaks are more like circus freaks than hippie freaks, and notice too that Dylan didn't stop being topical when he stopped protesting), songs that have a tired sound to them, mostly, such as *Yea Heavy and a Bottle of Bread* and *Nothing Was Delivered*. Playing with feelings slops over into melodrama only once when it involves a pretty good song: *Too Much of Nothing* is separated from too much of its melody at too young an age.

THIS old music is not gone forever the way them old days are, though; the sound of this should put the final touches on anyone's feeling for the passage of time. Best, perhaps, to just give up and rely upon devices, start writing things down on the calendar instead of keeping it in our heads—if something like this album can happen the way this album seems to have happened, we're never going to keep it straight anyway. The past is just a story, and none of us ever tells it the same way twice. You can play this thing on your turntable right now and confirm that musicians in the act of surrendering to the music are living in the present, whenever that may be.

—Noel Coppage

BOB DYLAN AND THE BAND: *The Basement Tapes*. Bob Dylan (vocals, guitar, piano); Rick Danko (bass, mandolin, vocals); Garth Hudson (organ, saxophone, accordion); Richard Manuel (vocals, piano, drums); Robbie Robertson (guitar, vocals); Levon Helm (vocals, drums, mandolin, bass). *Odds and Ends; Orange Juice Blues; Million Dollar Bash; Yazoo Street Scandal; Goin' to Acapulco; Katie's Been Gone; Lo and Behold!; Bessie Smith; Clothes Line Saga; Apple Suckling Tree; Please Mrs. Henry; Tears of Rage; Too Much of Nothing; Yea Heavy and a Bottle of Bread; Ain't No More Cane; Crash on the Levee; Ruben Remus; Tiny Montgomery; You Ain't Goin' Nowhere; Don't Ya Tell Henry; Nothing Was Delivered; Open the Door, Homer; Long Distance Operator; This Wheel's On Fire.* COLUMBIA C2A-33682 two discs \$7.98, © C2A-33682 \$9.98, © C2T-33682 \$9.98.

Celebrate Christmas with John Denver.



And don't forget
The John Denver Christmas Special,
December 10th
on the ABC-TV Network.

RCA

Records and Tapes

CIRCLE NO. 52 ON READER SERVICE CARD

Freiberg (bass, keyboards, vocals). *Fast Buck Freddie*; *Miracles*; *Git Fiddler*; *Al Garimasu (There Is Love)*; *Sweeter Than Honey*; *Play on Love*; and four others. GRUNT BFL1-0999 \$6.98, (B) BFS1-0999 \$7.98, (C) BFK1-0999 \$7.98, (D) BFT1-0999 \$8.98.

Performance: **Sparkling**
Recording: **Excellent**

It is difficult now to *care* who's the Best Rock Band in America, but you can sit back with the new Jefferson Starship album and temporarily forget how difficult it is. Although it is somewhat late for the Airplane regrouped as the Starship to be getting it together again (this is far and away the best album committed in the name of Starship, is among the things I'm saying), I've been having a good

time returning to those thrilling days of yesteryear, even if I can't stay in them. Grace Slick and Marty Balin are among the most gifted vocalists ever to mess with rock (*strangely* gifted, too), and their odd interweavings with an occasional burst of textural variety from Paul Kantner or one or two of the other fellows make it seem like the old heyday is still going on. The subject matter is, of course, updated (there's not a single threat here to get the rascals by first taking over outer space) and concentrates, as we do, on complex personal relationships. Still, the lyrics may be a little vague at times: Grace's *Fast Buck Freddie*, for example, seems to hint at dabbling in the real politics of *this* time (simplified, as it must be if rock is ever to deal with it, it amounts to the rich being much more blatant

in how they exploit the poor), but it only hints and dabbles before turning refrain-happy. The material is pretty strong, though, by and large, and Slick's touchy throat is in great shape, and her strange vocal lines soar without the self-consciousness that harmed them in her solo album. Having Balin back in the group probably was catalytic; neither Slick nor Kantner plays off anyone else as well. Craig Chaquico seems to have found himself as a lead guitarist here, too, flashing the same kind of whacked-out feeling for harmony that Slick does vocally. The selections I particularly like include Slick's *Al Garimasu (There Is Love)*, Balin's *Miracles* (which sounds like something from another planet, speaking of outer space), and the Kantner-dominated *There Will Be Love*. Ah, if rock bands had written and played like this all along. . . . But later, of course, the Seventies do creep back in: I suppose much of the charm of this is anachronistic—it doesn't answer the question of what it's doing here now. N.C.

VAN MCCOY: *From Disco to Love*. Van McCoy (piano, arranger): instrumental accompaniment. *I'm in Love with You Baby*; *Now That You're Gone*; *Don't Rock the Boat*; *Let Me Down Easy*; and four others. BUDDAH BDS 5648 \$6.98.

Performance: **Slick**
Recording: **Good**

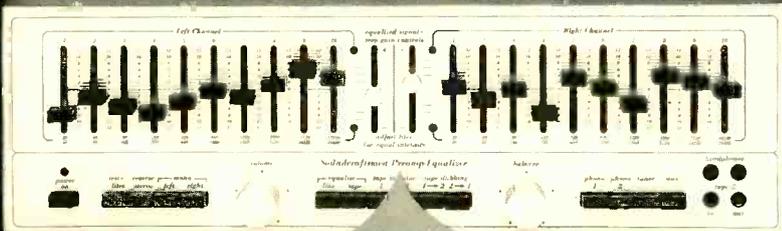
Van McCoy is a pianist-arranger-producer who has had scattered success over the years in the soul music field. His most recent success is *The Hustle*, a disco-soul record. In an attempt to skim some sales from McCoy's current notoriety, Buddah has reissued this album, which is at least two years old. There is nothing startling on it, although it is well made within its limits—the usual ooo-baby stuff with sighing strings and ghetto guitar rhythm. Unless you are a Van McCoy idolizer, there is no reason to listen to or purchase this album. J.V.

RECORDING OF SPECIAL MERIT
RALPH McTELL: *Streets*. Ralph McTell (vocals, guitar, harmonica, marimba); Danny Lane (drums); Dave Pegg (bass); the Gold-rushers (backing vocals); other musicians. *Streets of London*; *You Make Me Feel Good*; *Grande Affaire*; *Seeds of Heaven*; *El Progresso*; *Red Apple Juice*; and five others. 20TH CENTURY T-486 \$6.98.

Performance: **Smashing**
Recording: **Very good**

The difference between the number of coffeehouse habitués who know *Streets of London* by heart and the number who know who *wrote* the song (in 1970) is the kind of thing Pogo used to call a cry and shame—and it somehow seems slightly worse when you consider how many of those same habitués are young women too attractive for my own good. Perhaps this new Ralph McTell album, leading off with that (speaking pop-world language) underground classic, will make the needed correction. McTell does a stunning job of singing it, as if he just came in off those streets himself, and maybe now those lovely habitués will realize the versions they've been hearing were 'way too sweet. Maybe. Actually, I don't know *what* it will take to make America notice McTell if the whole "Streets" album doesn't do the trick. All it (Continued on page 100)

Soundcraftsmen THE PERFECT PRE-AMP



FOR THE GREAT NEW SUPER POWER AMPS!
For a SUPER-SYSTEM, match the 2217 with any of these TRUE "State-of-the-Art" amps—

- PHASE LINEAR • SAE • CROWN • DYNACO • AUDIO RESEARCH • CITATION •
- ESS • MARANTZ • SONY • KENWOOD • BOSE • QUATRE • BGW •

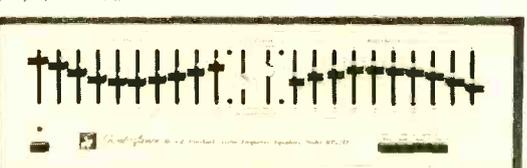
"FANTASTIC! I CAN HARDLY BELIEVE MY EARS... VERY VERSATILE & CLEAN-SOUNDING AND I REALLY LIKE THE SWITCHABLE PATCHING."

SPECIAL FEATURES

- ALL PUSHBUTTONS INTERLOCKED to prevent inadvertent program destruction
- DISCRETE-OCTAVE EQUALIZATION CONTROL of ten octaves on each channel, ± 12 db each octave
- FULL-SPECTRUM LEVEL CONTROL for each channel
- AUTOMATIC CONTINUOUS MONITORING by light-emitting diodes for visual warning of overload in output circuits
- VISUAL ZERO-GAIN EQUALIZATION BALANCING on music, white noise or pink noise
- SELECTION OF TEST LITES on or off
- TAPE DUBBING BETWEEN TWO MACHINES, with optional simultaneous equalizing and monitoring
- DOUBLE-DUBBING into two recorders simultaneously
- SEPARATE SYSTEM-SELECTION enables full use of all other functions during the dubbing operation
- LINE OR TAPE equalization selector
- AUTOMATIC EQUALIZER-DEFEAT when line or tape equalizer is not in use
- FRONT PANEL TAPE input-output jacks for easy 2nd and 3rd tape recorder hookup access
- TAPE MONITORING of either tape at any time
- TWO stereo headphone jacks
- MONG SELECTOR for left, right or both channels to both outputs
- REVERSE-STEREO mode
- TWO low-level phono inputs
- FOUR independent phono preamps
- SIX A/C outlets, 4 switched, 2 unswitched
- ELECTRO-PLATED FERROUS CHASSIS — (eight sections) — provides optimum shielding to minimize magnetic field-coupling
- SINGLE-POINT system ground connector minimizes ground-loops
- TWO REGULATED power supplies

Soundcraftsmen EQUALIZERS

NOW YOU CAN MAKE YOUR SYSTEM SOUND EXACTLY THE WAY YOU WANT IT TO SOUND! In a few minutes, YOU can accurately "tune" the frequency response of YOUR stereo system and room environment to a flat ± 2 db! All you need are YOUR OWN EARS and the Soundcraftsmen Equalizer (WITH ITS STEP-BY-STEP INSTRUCTION RECORD) to transform any stereo system and room environment into an acoustically perfect concert hall! Or, to provide any special acoustical effects you desire! The Soundcraftsmen Equalizer enables YOU to instantly compensate for frequency response variations. IN SYSTEM AND ROOM.



GUARANTEED to enhance and improve any fine system!

2212 Illustrated above **\$349.50**

20-12 Same specs as RP2212, except no L.E.D.'s, no Tape Equalize on front **\$299.50**

Both models include cabinet or rack mounts.

GUARANTEED SPECIFICATIONS

FREQ. RESPONSE — Hi-level: $\pm 1/2$ db, 5 Hz to 100 KHz
FREQ. RESPONSE — Phono: $\pm 1/2$ db, 20 Hz to 20 KHz
THD: less than .05% at 1 volt (Typ. .01% at 1 volt)
IM: less than .05% at 1 volt (Typ. .01% at 1 volt)
PHONO INPUT CAPABILITY: 105mv
SIGNAL-TO-NOISE — Hi-level: 100 db below full output
SIGNAL-TO-NOISE — Phono: 84 db below a 10mv input
SIGNAL-TO-NOISE — Equalizer: 90 db below a 1 volt input
GAIN — Phono: 63 db
GAIN — Hi-level: 21 db
OUTPUT IMPEDANCE: 600 ohms
EQUALIZER LEVEL: Zero gain controls for left and right continuously variable, for unity gain compensation
EQUALIZER RANGE: 12 db boost and 12 db cut, each octave at 30, 60, 120, 240, 480, 960, 1920, 3840, 7680 and 15,360 Hz
MAX. OUTPUT SIGNAL: Variable master volume control allows adjustment of optimum output to match amplifier
GOLD SWITCHES: All contacts are gold plated for low noise, long life, and resistance to oxidation and corrosion
CIRCUIT BOARDS: Military grade G-10 glass epoxy RESISTORS: Low noise selected carbon film
CABINET SIZE: 7 1/2" x 20" x 11 1/2" deep
SHIPPING WEIGHT: 28 lbs.
MADE IN U.S.A. includes cabinet or rack mounts.

PE2217 — \$499.50

FREE!

THE "WHY'S AND HOW'S OF EQUALIZATION," an easy to understand explanation of the relationship of acoustics to your environment. This 8 page booklet also contains many unique ideas on "How the Soundcraftsmen Equalizer can measurably enhance your listening pleasures." How typical room problems are eliminated by Equalization, and a 10-point self-ratio Equalization Evaluation Check-List.

Soundcraftsmen
1721 NEWPORT CIRCLE, SANTA ANA, CA 92705

You can't experience today's high fidelity with yesterday's record changer.

Most high fidelity manufacturers watch each other to find out what's new. At Pioneer, we keep our eye on the audio enthusiast to find out what he wants. That's what keeps us ahead of all the others who are watching all of the others.

If you look at the sale of record playing devices — and we have — you'll see that sales of manual turntables are increasing four times faster than the sale of record changers. The reasons are clear: Record changers were designed a generation ago — for another generation. Designed for hours of uninterrupted background music at cocktail parties.

Today, your needs are probably different. When you listen to music, you listen to music. You're involved with the sound — and with your equipment. And only a manual turntable can offer you this level of involvement.

It's part of Pioneer's responsibility to understand and anticipate your changing needs. As a result, we now offer you the most complete line of professional manual turntables available. Each one of them delivers the highest level of performance, the most sophisticated features and the greatest value in its price category. And all of them have the precision engineering and quality that are part

of the Pioneer legend.

When you buy your next record player, shop smart. Consider what you want — and what you need. If you need performance, precision and quality — and want the involvement that only a professional turntable can provide — you'll get a Pioneer.

It's as simple as that.

U.S. Pioneer Electronics Corp.,
75 Oxford Drive, Morristown, New Jersey 07074.

West: 13300 S. Estrella, Los Angeles 90248 / Midwest: 1500 Greenleaf,

Elk Grove Village, Ill 60007 /

Canada: S. H. Parker Co.

 **PIONEER**[®]
when you want something better



PL-71 Direct-Drive Turntable

CIRCLE NO. 70 ON READER SERVICE CARD

You can fall in love again with an electronic Minolta.



An electronic Minolta 35mm reflex makes it easy to capture the pictures that are everywhere. Its unique shutter sets itself instantly, automatically and with uncanny accuracy. So instead of worrying about exposure, you can concentrate on the picture. You can use the camera automatically or make the adjustments yourself. Either way, the finder shows exactly what's happening for total creative control.

There's an electronic Minolta reflex that fills your needs. And fits your budget. Each accepts interchangeable Rokkor-X and Celtic lenses, ranging from "fisheye" wide-angle to super-telephoto.

For information, see your dealer or write to Minolta Corp., 101 Williams Dr., Ramsey, N.J. 07446. In Canada: Anglophoto Ltd., P.Q.



Minolta XK/Minolta XE-7/Minolta XE-5

More camera for your money.

CIRCLE NO. 43 ON READER SERVICE CARD

offers is a small passel of truly outstanding songs and a voice that's strong, romantic, compassionate, and not likely to be confused with anyone else's.

Grande Affaire deserves considerable attention all by itself, being an excellent treatment of how wistful you can remain even after you become jaded (the Seventies in a nutshell, if you ask me), but neither is it easy to resist McTell's beautifully crafted tongue-in-cheek Latin fling, *El Progreso*, or the wonderful arrangement and singing of *Red Apple Juice* (the one song here that is, as people thought *Streets* was, "traditional"), or the stark, black-and-white cinematography he puts into your head with *Heron Song*. Through all this the acoustic instrumental backing does its job, stays out of the way so the singer can do his, and conveys the sense that nobody is being so careful as to create tension in the wrong places. McTell's voice is miked closely for a strong one, but all that does is make the recording even better with headphones. This is the kind of thing that keeps me betting on troubadours. N.C.

POCO: *Head Over Heels*. Poco (vocals and instrumentals); other musicians. *Keep On Tryin'*; *Lovin' Arms*; *Let Me Turn Back to You*; *Makin' Love*; *Down in the Quarter*; *Georgia Bind My Ties*; *Us*; and four others. ABC ABCD-890 \$6.98, ⑧ 8022-890 H \$7.98, ③ 5022-890 H \$7.98.

Performance: **Drab**
Recording: **Very good**

Occasionally there comes a Poco recording whose flesh is willing but whose spirit is bleak, and it's like having nothing in the house to drink but water. It ought to happen more often than it does, considering how much better the Poco men perform than they write. Their lyrics slide toward moon-June rhymes in the best of times, and their tunes tend to be flat. But they *have* turned out some of the best country-flavored rock albums of recent years; usually there are just enough exceptions to what I said about their writing to inspire *them*, if not me, and they're the ones who have to play it. This time, though, I don't think they managed to do anything but bore themselves. The lyrics here aren't terrible, they just lack emphasis and contrast. The tunes are a little flatter than usual. Small wonder that the performances, while they remain technically more than most rock bands could manage, seem clinically disinterested. N.C.

THE POINTER SISTERS: *Steppin*. The Pointer Sisters (vocals); Pointer Sisters Band. *How Long*; *Sleeping Alone*; *Easy Days*; *Chainey Do*; *I Ain't Got Nothin' But the Blues*; and three others. BLUE THUMB BTSD-6021 \$6.98, ⑧ 8307-6021 H \$7.98, ③ 5307-6021 H \$7.98.

Performance: **Energetic**
Recording: **Very good**

The Pointer Sisters—Anita, Ruth, Bonnie, and Jane—are the latest in the long series of siblings whose close harmonies have crowded the airwaves through the years, supplemented by those inevitable appearances on TV variety shows and by record albums that sell like hotcakes and are sluiced over with just as much syrup. This is their third album for Blue Thumb. Much of it glitters like junk jewelry, but occasionally a real gem gleams amid the rhinestones. The Pointers certainly

(Continued on page 102)

FREE McIntosh CATALOG and FM DIRECTORY

Get all the newest and latest information on the new McIntosh Solid State equipment in the McIntosh catalog. In addition you will receive an FM station directory that covers all of North America.



MX 113

FM/FM STEREO - AM TUNER AND PREAMPLIFIER

**SEND
TODAY!**

McIntosh Laboratory, Inc.
East Side Station P.O. Box 96
Binghamton, N.Y. 13904
Dept. SR

NAME _____
ADDRESS _____
CITY _____ STATE _____ ZIP _____

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

CIRCLE NO. 39 ON READER SERVICE CARD

DC servo control is about the only feature better turntable manufacturers agree on. You could spend more than \$400 for it.

Or you could spend under \$200 for a Philips 212. And get a manual turntable that spins out all the top quality you want.

DC servo control is responsible for most of this quality. It means your 212 will run at the calibrated speed you select even with the power fluctuations we live with. Cleaning-brush drag, cartridge tracking force and stylus friction can't cause slow-down, wow or flutter either.

Our DC servo control/tacho generator motor gives you mechanical silence during operation. And the motor runs at a low speed so the uncomplicated drive-belt can filter out flutter and motor rumble.

The 212 is a manual turntable. But it's also a very sophisticated electronic machine. For example, the tone arm and platter are isolated, free-floating from the main chassis. This guards against speaker induced feedback and shock. You can play at any volume level without loss of fidelity.

From the illuminated touch controls to the automatic stop: if there's a quality reason for a turntable to have it, including DC servo control, you can find it on the Philips 212. And you can find the 212 at better audio shops everywhere. For under \$200.

GA 212 Quality Specs

Controls: 3 electronic feather-touch lighted indicators for 33 $\frac{1}{3}$ and 45 rpm selection/start and stop.

Hydraulic Cueing:

rocker controlled up and down.

Speed calibration range: \pm 3%

Wow and flutter: less than 0.1% (typically 0.04%)

Rumble: -62 dB DIN B (ARLL)

Stylus force range: 0.75 to 4 grams

Anti-skate control: for elliptical or spherical styli.

Low Capacitance cables for CD-4

Includes:

Base and removable dust cover.

PHILIPS AUDIO VIDEO SYSTEMS CORP.
AUDIO DIVISION
91 McKee Drive, Mahwah, N.J. 07430

DC servo control.

The only turntable under \$200 that has it.
The Philips GA 212.



PHILIPS[®]
TM—N.V. Philips, Holland

FRAZIER... A DIFFERENCE YOU CAN HEAR



At Frazier, we build loudspeakers to deliver the very finest sound. Matchless sound. We've been designing speakers to deliver that kind of excellence for over 30 years.

We've learned the difference between good sound and superlative sound. That difference is incorporated into every Frazier loudspeaker. It began as a matter of pride, now it's a matter of practice.

Because through the years, more and more people who care about a better sound, have come to Frazier to find it. And they keep coming back, year after year.

We have a unique line of loudspeakers to suit your every mood, and every decor. From the Concerto, with smooth as silk reproduction with a 10" heavy duty woofer and special high frequency horn, to the Seven, with a 12" woofer, two 4" midrange speakers and two special high-frequency horns. Frazier also offers the incomparable Super Midget, Monte Carlo, Mark IV-A, Mark V and Mark VI.

Whichever you choose, you have found the most outstanding reproduction possible. If it were anything less, we wouldn't call it Frazier.

For a demonstration on the loudspeaker with the difference, see your nearest Frazier dealer today.

FRAZIER

INCORPORATED

1930 Valley View Lane
Dallas, Texas 75234
Phone 214-241-3441

CIRCLE NO. 20 ON READER SERVICE CARD



Blue Thumb Records

THE POINTER SISTERS:
those are real gems
among the rhinestones

have energy. Too much of it, I began to feel, as *Going Down Slowly* (the Pointer Sisters' answer to Ravel's *Boléro*) seemed to take forever to sink into the silence. But there's a medley in tribute to Duke Ellington called *I Ain't Got Nothin' But the Blues* which comes over as a real tour de force and shows off the sisters at their charged-up best. There's also a comic eating song named *Save the Bones for Henry Jones* that's a delight. Most of the time, though, the sisters just take turns as lead vocalists in routines that are saved from routine-ness only by Tom Salisbury's orchestrations and the terrific soloists in the "Pointer Sisters Band" — which just happens to include Stevie Wonder on electric piano on one track and Herbie Hancock's clavinet on another. *P.K.*

MALVINA REYNOLDS: *Malvina Held Over.* Malvina Reynolds (vocals, guitar); instrumental accompaniment. *If You Love Me; On the Rim of the World; Rosie Jane; World in Their Pocket; Look on the Sunny Side; Magic Penny; The Whale;* and five others. **CASSANDRA CFS-3688 \$5.50** (from Schroder Music Co., 2027 Parker St., Berkeley, Calif. 94704).

Performance: **Perplexing**
Recording: **Good**

The enthusiasm of protest singers who go back to the Thirties often reminds me of the disgusting, clammy enthusiasm of sing-out leaders at 4-H meetings, vacation Bible schools, and summer camps. Not only that, but there is sometimes the same kind of forced, phony naïveté in their songs; their melodies are really quite interesting sometimes, so craftily childlike are they — and so, one grudgingly admits, were the tunes to some of those certified-wholesome fun songs back at camp. Malvina Reynolds, known to comparative youngsters as the writer of *Little Boxes* and to all Joan Baez fans as the writer of *What Have They Done to the Rain* (included here), is still writing that kind of melody, apparently, and still getting that quality into her words — but always putting that little twist in them ("God bless the grass . . . that grows through cement"), always producing the mealy-mouthed to think a little about

toughening up their minds. In my left-handed way, I consider her a songwriter to be reckoned with beyond the three or so generations with which she somehow manages simultaneously to identify. I doubt that her stuff will often be admired for the best reasons, but I do like the irony she has contrived to add to it by giving most of her songs the sound of antiques. She is not, however, a *singer* that ought to have to be reckoned with right now. Her vocal range can't cover the notes she writes: she repeatedly botches the highs and lows and can't stay on many that need to be held. I have disproportionate regard for the act of singing, perhaps, but I wouldn't like paying to have this sort of mess made of it, even by a sweet little old lady. Maybe I'm similarly hung up on good writing, so I do appreciate the knack Malvina has, and the cool, calm way she goes on with her work. *N.C.*

TODD RUNDGREN: *Initiation.* Todd Rundgren (vocals, keyboards, synthesizer, guitar, sitar, percussion, keyboard computer); instrumental accompaniment. *Real Man; Born to Synthesize; The Death of Rock and Roll; A Treatise on Cosmic Fire;* and three others. **BEARSVILLE BR 6957 \$6.98. © M8 6957 \$7.98. © M5 6957 \$7.98.**

Performance: **Socko boffo**
Recording: **Good**

As writer, performer, musician (several instruments), engineer, and producer, Todd Rundgren has won a not undeserved reputation as a rock whiz kid. But whither all this whiz? Rundgren is a master of teenage music, which today is much more sophisticated and has more recording-studio gimmickry available to it than at any other time. But I don't see any real difference between what he is doing and things from the early and middle Sixties like *Woo-Hoo* by the Rock-A-Teens and *Psychotic Reaction* by the Count Five.

Rundgren's showmanship camouflages the shallowness of most of his writing, but his sense of melody is fitful at best. It takes a while to catch on that there really isn't much

(Continued on page 104)

Introducing the BSR Silent Performer

The only rumble from this belt-drive turntable comes from our competitors.

For years most expensive manual record-playing devices have used belt-drive as a smooth, trouble-free—and most important—silent method for transmission of power. Now, our engineers have succeeded in integrating a highly-refined belt-drive system into more affordably-priced turntables. They offer a combination of features and performance not yet available in even more expensive competitive models. We call them the Silent Performers.

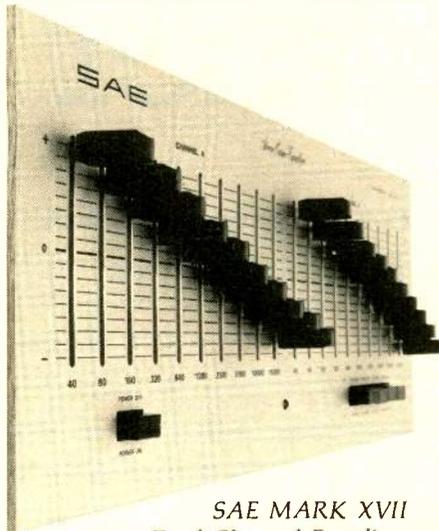
Our Model 20 BPX is a fully automated single-play turntable with a precision machined platter, high-torque multi-pole synchronous motor, tubular "S" shaped adjustable counter-weighted tone arm in gimbal mount, viscous cueing, quiet Delrin cam gear, automatic arm lock, dual-range anti-skate and much more. It is packaged with base, hinged tinted dust cover, and ADC K6E cartridge. See your audio dealer for more information, or write to us.



BSR

Consumer Products Group
BSR (USA) Ltd.
Blauvelt, N.Y. 10913

The \$300 alternative.



SAE MARK XVII
Dual-Channel Equalizer

Your tone controls are just not designed to compensate for

- Room acoustics
- Speaker placement
- Old or bad recordings

We built the Mark XVII Equalizer to solve these problems and more.

These are some of the ways:

- Individual Octave Control for each channel
- Long throw, oil-damped linear slide pots for greater accuracy
- Dual range operation (controls operate over either $\pm 8\text{dB}$ or $\pm 16\text{dB}$)

Plus

- Capable of driving any system
- Low distortion—less than 0.03% THD and IM
- Low noise—greater than 90dB
- 5-year parts and labor service contract
- SAE's reputation as the finest manufacturer in the audio field

You'd have to look a long time to find an EQ that delivers this much value. SAE innovation has done it.

Components for the connoisseur.



Scientific Audio Electronics, Inc. SR-11-75,
P.O. Box 60271, Terminal Annex
Los Angeles, California 90060
Please send me the reasons (including available literature) why the SAE MARK XVII Dual-Channel Equalizer is the "\$300 Alternative."

NAME _____
ADDRESS _____
CITY _____ STATE _____ ZIP _____

CIRCLE NO. 55 ON READER SERVICE CARD

here, since his style of sounding busy and dazzling the listener with his expertise keeps things going at a rush. He probably is a prodigy of some kind, and it will be interesting to see what he does when he ages a bit. Until then, I pass. *J.V.*

SOUTHER-HILLMAN-FURAY BAND: *Trouble in Paradise*. Souther-Hillman-Furay Band (vocals and instrumentals). *Trouble in Paradise; Move Me Real Slow; For Someone I Love; Mexico; Love and Satisfy*; and four others. ASYLUM EQ-1036 \$7.98.

Performance: **Freeze-dried**
Recording: **Very good**

Well, there's no spontaneity in this at all, that's what's *wrong* with it, and there must be a reason. My guess is it's the songs. The material is crackly-dry indeed and wouldn't inspire *me* to come up with those little unplanned, unexpected, extra dabs of feeling in the middle of a phrase or thereabouts. But then there must be a reason why they chose these songs. The band wrote them, and perhaps they like being identified as songwriters too much to have considered anything else. You can't have your cake and eat it too, if I may be permitted to make about these songs the kind of deep and profound observation they make about life. *N.C.*

BRUCE SPRINGSTEEN: *Born to Run* (see *The Simels Report*, page 48)

RAY STEVENS: *Misty*. Ray Stevens (vocals and keyboards); orchestra. *Misty; Over the Rainbow; Lady of Spain; Sunshine; Deep Purple*; and six others. BARNABY BR 6012 \$6.98, 8190-6012 H \$7.98, 5190-6012 H \$7.98.

Performance: **Unusual, to say the least**
Recording: **Good**

Ray Stevens seems to possess a rather unusual talent. Just how unusual can be sampled in this album, in which he dismantles several pop classics with the glee of an Attila first glimpsing the Colosseum. *Misty*, for instance, may never recover from his version, which is taken at a tempo somewhere between a march and a rag and fitted out with a Hawaiian guitar background. *Indian Love Call*, Jeanette and Nelson's old mating call, really brings out the Mahler in Stevens: sylvan doo-whack-a-doo while he provides a throbbing "call" that starts with a grunt and ends with a scream. By the final track, *Lady of Spain*, his creative fires seem banked, so that he settles for a simple *notturmo* rendition by what sounds like a washboard and jug band. Hang in there, Ray; remember, Berlioz wasn't exactly a hot ticket in the beginning either. *P.R.*

SYNERGY: *Electronic Realizations for Rock Orchestra*. Larry Fast (synthesizer). *Legacy; Slaughter on Tenth Avenue; Synergy; Replay Breakdown; Warriors*. PASSPORT PPSD-98009 \$6.98, PST 8167-98009 H \$7.98.

Performance: **Amateurish**
Recording: **Okay**

Larry Fast, a young man who operates the synthesizer, decided to be an operator-performer after building some synthesizer equipment for Rick Wakeman. Mr. Fast has, to his credit, said of other synthesizer recordings that they were mostly technique and very little music. He inclines toward music, which is commendable. But the machine defeats him.

The proof is *Slaughter on Tenth Avenue*. This is a marvelous ballet score written by Richard Rodgers in 1936. It contains bitter-sweet, exhilarating melodies as well as harmonies and colorings which, when rendered by an orchestra of human beings—for which the piece was written to be played—make it a minor masterpiece. Filtered through Mr. Moog's invention, however, *Slaughter* is reduced to a flat, one-dimensional "showpiece" for a machine that is either very misunderstood or inherently incapable of reproducing anything more musical than a modern teenager's version of *Chopsticks*.

The rest of the album is made up of long, meandering pieces in which the operator latches onto any musical ideas he can remember from someplace else. It all sounds like a travelogue score. *J.V.*



RAY STEVENS
Gleefully dismantling pop classics

TANGERINE DREAM: *Rubycon*. Edgar Froese, Chris Franke, Peter Baumann (keyboards, synthesizers). *Rubycon, Parts I and II*. VIRGIN VR 13-116 \$6.98, TP 13-116 \$7.97, CS 13-116 \$7.97.

Performance: **What performance?**
Recording: **Good**

The squeaks, moans, coos, bellows, simperings, and assorted mechanical throat clearings it is possible to bring forth from the synthesizer prove it to be the Better Mousetrap of the age. That it catches few mice is politely overlooked—one mustn't say boo to anything modern. Many of those horrors of mechanization poets and social thinkers have been warning us of have come true, especially in music, where over the last two decades artists and promoters have been emphasizing form at the expense of content. How else explain the 90 per cent of rock that is phony, incompetent, and plain noisy?

Content gets easier and easier to disguise as form gets more and more attention, a lesson that seems to have been well learned by Tangerine Dream, three young Teutonic bloods who operate various types of synthesizers. They have given a long, rambling piece called *Rubycon* a slick, quasi-classical overlay, plucking phrases, half-themes, and harmonic ideas from the works of various composers. From time to time the piece slides into a

(Continued on page 106)

We're not afraid to turn our back on you.



The Sylvania RS 4744

We can afford to be very forward about our back.

Because the back of our RS 4744 stereo receiver is one of the most versatile you'll ever see. We've got phono inputs for two different turntables. And two sets of tape monitor input and output jacks. And terminals for main speakers, remote speakers, and PQ4 speakers. And three AC power outlets, one switched and two unswitched. The rest you can see for yourself in the picture above.

But what's behind our back is just as impressive as the back itself.

As *Popular Electronics** put it, the RS 4744 "met or surpassed all the published specifications we were able to test" and was



"...well above average in the important performance aspects."

Take power, for example. *Popular Electronics* found the RS 4744 "conservatively rated" at 60 watts per channel, min. RMS at 8 ohms from 20Hz to 20kHz with no more than .25% Total Harmonic Distortion. Which made it "outstanding for a receiver in the RS 4744's price range." FM 50 dB quieting sensitivity was equally impressive—"a very good $3\mu\text{v}$ in mono and $35\mu\text{v}$ in stereo."

But don't take our word for it. Or their word for it. Go see the RS 4744 for yourself.

Back or front, any way you look at it, the RS 4744 is one fine stereo receiver.

**Popular Electronics*, December 1974 Issue.

GTE SYLVANIA

CIRCLE NO. 24 ON READER SERVICE CARD

rhythmic riff that seems based on the sound a hydroelectric generator makes when it has just gotten oiled. The ideas are shabby, but the performance is efficient—a cross between Goethe and Rommel, between the *Ode to Joy* and *Deutschland uber Alles*. J.V.

RAY THOMAS: *From Mighty Oaks*. Ray Thomas (vocals, flute, harmonica); orchestra. *High Above My Head*; *Hey Mama Life*; *Adam and I*; *Play It Again*; and five others. THRESHOLD THS 16 \$6.98. © THS O-816 \$7.98. © THS O-516 \$7.98.

Performance: **Low-key and well done**
Recording: **Good**

Ray Thomas, of the Moody Blues, has his first solo album, and it is an interesting, well

thought-out effort. *High Above My Head* is the finest track here, and Thomas spins it out almost perfectly in his low-key, gentled style. Most of the songs were composed in collaboration with Nicky James, who, along with B. J. Cole, Richard Hewson, John and Trevor Jones, Mike Moran, Dave Potts, and Mike Silver, backs Thomas superbly. The main problem here is that the material has an eventually deadening sameness of conception and performance, no matter how beautifully it is done. Recommended—but in bits and pieces. P.R.

THE THREE DEGREES: *International*. The Three Degrees (vocals); orchestra. *Another Heartache*; *Together*; *Long Lost Lover*; *Here I Am*; *Distant Lover*; and five others. PHILA-

DELPHIA INTERNATIONAL KZ 33162 \$5.98, © ZA 33162 \$6.98, © ZT 33162 \$6.98.

Performance: **Blue-plate, not so special**
Recording: **Good**

Here's another steaming plate of goulash from the busy Philadelphia kitchens of Gamble-Huff. That mini-Motown production outfit found its basic recipe several years ago, and this new release is just another routine addition to the menu. The Three Degrees are three girls, who may or may not sing well since they are subjected to the standard overproduction that is a Gamble-Huff trademark, barging through mostly mediocre house-written material. *Lonelier Are Fools* is the best here: tacky and forgettable as the other songs, but performed with a kind of careless sincerity that is oddly touching. P.R.

THREE DOG NIGHT: *Coming Down Your Way*. Three Dog Night (vocals and instrumentals). *'Til the World Ends*; *You Can Leave Your Hat On*; *Good Old Feeling*; *Mind over Matter*; *Midnight Flyer*; and five others. ABC ABCD 888 \$6.98, © 8022-888 \$7.98, © 5022-888 \$7.98.

Performance: **Excellent**
Recording: **Very good**

Three Dog Night's average is slipping some: time was when almost every cut on an album was a gem, but these days we get only one or two sparklers. Here they are Randy Newman's *You Can Leave Your Hat On*—a funny, clammy song about a fetishist—and Allen Toussaint's *Mind over Matter*. Given first-class material, the group always turns in crack performances. They should pay a little bit more attention to what songs they are going to lavish their energy and talent on; lately they have been giving too many second-raters the royal treatment. J.V.

THE TROGGS. The Troggs (vocals and instrumentals). *I Got Lovin' If You Want It*; *Good Vibrations*; *No Particular Place to Go*; *Summertime*; *Full Blooded Band*; and five others. PYE 12112 \$6.98.

Performance: **Bare essentials**
Recording: **Good**

The Troggs were, and are, a definitively mediocre band whose old fame depended on their getting away with songs in which the hero expresses his desire to peel off the slight clothing of a bunny-bird and perform all kinds of groovy acts upon her. This is not a new or necessarily dishonorable tradition in song. But the Troggs' version of sensuality is so vulgar and so feeble that it cannot be taken seriously or sensually—a point made by Greg Shaw, editor of *Who Put the Bomb*, a California fanzine devoted to the minutiae of rock history. His intelligent and well-written liner notes to this, the Troggs' first LP since 1968, state the case for the band's existence as a deliberate joke on rock 'n' roll and the social styles associated with it. Shaw finds the Troggs hilarious, pointing out that they expose the works of such holies as the Rolling Stones and the Beach Boys for what they really are. In this I think he is absolutely right. Nobody but the steadfastly incompetent Troggs could show *Good Vibrations* for the patchwork, goony non-tune it is, or expose *Satisfaction* as the noisy, boring "anthem" of what he calls "a public whose appetite for tastelessness has yet to be overestimated."

(Continued on page 110)

INVISIBLE SOUND, CLEAN AND FAITHFUL.

Our two-way speaker systems ADS L400, L500 and L700 were developed right along with our more expensive studio speakers for the best possible reason: we wanted to create a coherent line of loudspeakers where every model, regardless of price, would have to reproduce musical sound with an optimum of clarity and a total absence of coloration.

When our engineers finally were able to meet these criteria, we called this remarkably open quality the 'Invisible Sound' of ADS. Since its introduction only two years ago, it has become the standard of excellence for many professionals and dedicated audiophiles.

Our lowest priced speaker, the ADS L400, costs less than \$100. Yet it shares with all other ADS systems the 'Invisible Sound' and the technical refinements that make this faithful response to the input signal possible. For instance, we install only one type of soft-dome tweeter, a masterpiece

in sophisticated audio design. Also, all ADS speakers utilize similar small-diameter woofers and the same computer-grade materials for the crossover networks. The craftsmanship and materials that go into every cabinet are of uniform, high quality.

When you listen to one of our two-way speakers for the first time, please note how the virtually massless tweeter meticulously renders every treble detail. Discover how smoothly the woofers take over the midrange frequencies, feel the strength and precision of their compliance to a sudden bass signal.

As a total value, we believe the ADS L400, L500, and L700 are without competition in their respective categories. Your local ADS dealer will proudly prove this claim in his sound studio. Take the time to test our speakers critically. Take the step beyond transparency. Experience 'Invisible Sound.' It will then be impossible for you to accept anything less.

Analog & Digital Systems, 64 Industrial Way, Wilmington, Massachusetts 01887. 400C-76 1SL

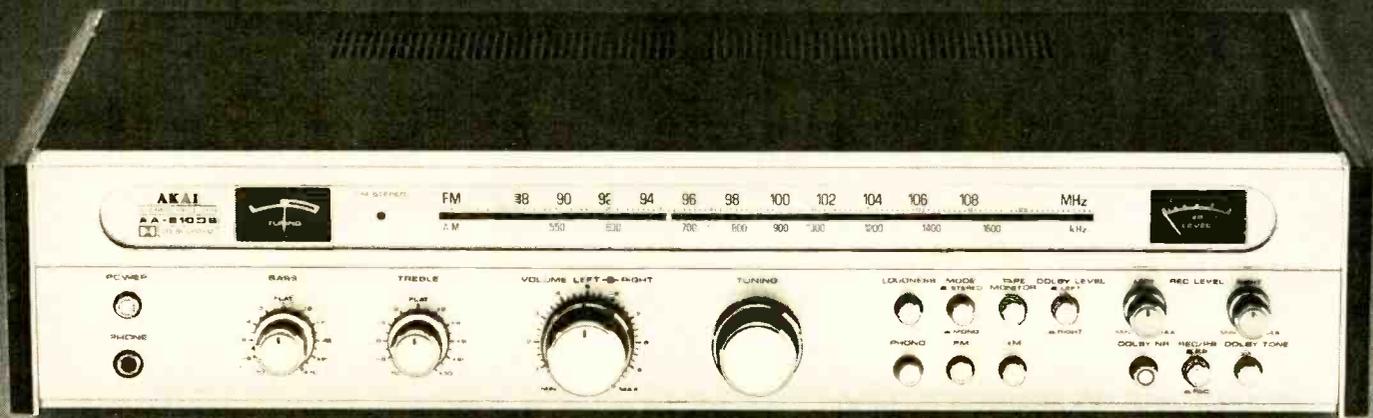
ADS L700

ADS L500

ADS L400



Akai announces the least amount of noise for the least amount of money.



Most stereo receivers with built-in Dolby* are going to cost you from \$350 on up.

But not this one — Akai's new AA-810 DB.

It costs under \$250 — with the same built-in Dolby noise reduction circuit the expensive ones have.

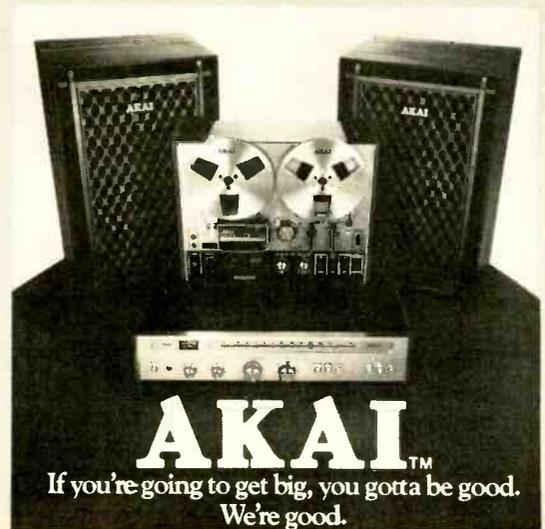
You see, we thought our 810DB was good enough for Dolby.

Its signal to noise ratio was already as high as a lot of higher priced receivers with Dolby.

Plus, its 10 watts of continuous power** was enough to drive two speakers about as loud as you'd ever want.

So we added Dolby.

We thought it was the least we could do.

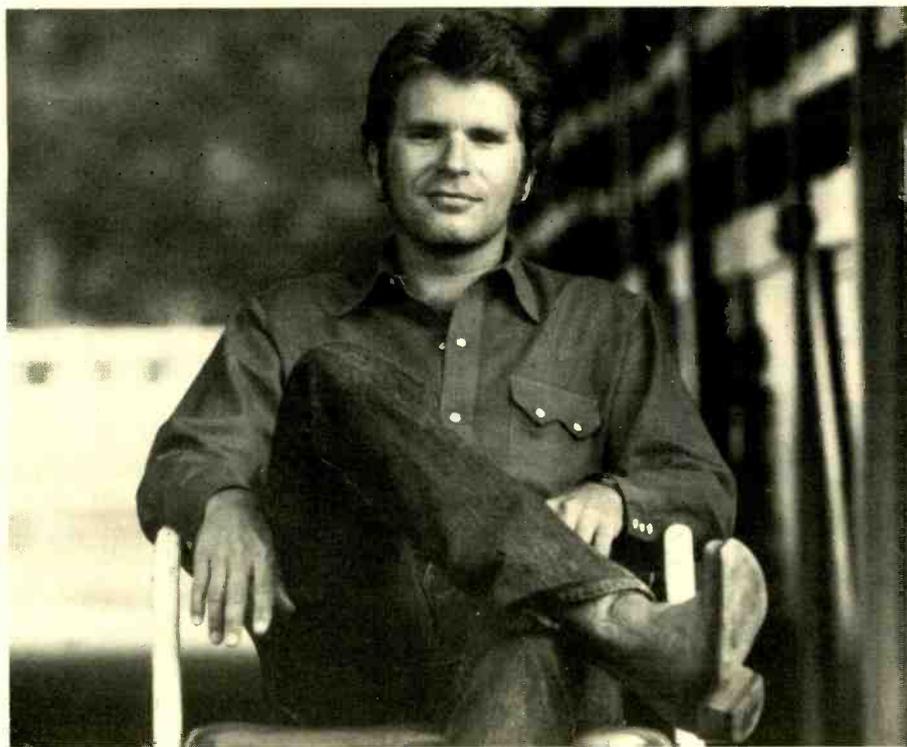


AKAI™

If you're going to get big, you gotta be good.
We're good.

*Trademark of Dolby Laboratories, Inc.
Akai receivers from \$199.95 to \$895.00.
For further information, write Akai America, Ltd., 2139 E. Del Amo Blvd., Compton, California 90220.
**10 Watts/Channel RMS at 8 ohms at 0.8% THD from 40 Hz to 20 KHz.

“...what we've got here... is a flawed record from a great talent.”



ASYLUM RECORDS

The Return of John Fogerty

JOHN FOGERTY is rock-and-roll's most prominent Invisible Man. For several years he led Creedence Clearwater Revival, which had an unbroken string of superb hit singles (many of them double-sided!), made some of the most vivid albums in American music, and was, at the time the group broke up (in the early Seventies), the biggest concert attraction in America. Nonetheless, hardly anybody knew who Fogerty was—this despite the fact that he wrote all the band's material, produced and arranged their records, and did all the lead guitar, keyboards, saxes, harmonicas, lead vocals, and (in most cases) the background vocals as well. Rumor had it he even swept out the studio at night.

But Creedence broke up at the height of their popularity, partly because the other three members of the band began to resent the fact that they were, basically, dispensable, mostly because none of them could reconcile their enormous success (they were beloved of critics and audience alike) with the fact that nobody seemed to take them as seriously as that level of success would seem to demand. Why, they wondered, didn't people treat them like the Beatles, or Bob Dylan? Why didn't people pore over their lyrics, and, more important, why didn't people *know their names*?

After the breakup, Fogerty's reaction was a retreat to total anonymity—an album entitled “The Blue Ridge Rangers,” in which he attempted to pass himself off as the producer of a mythical band of the same name doing country and rockabilly standards. Following the

surprise success of a couple of the tracks on AM radio (was *Jambalaya* really a hit at the same time David Bowie and the other Glam-Rockers were supposedly warping our children forever?), the secret leaked out; yes, it really was John Fogerty playing all those instruments, and a few people began to realize just what a talent he was. Then came another Rangers hit (this time with new Fogerty originals), and then, his courage apparently restored, he released *Coming Down the Road* under his own name. It bombed. Fogerty, blaming the record's failure on Fantasy, the label he and Creedence had singlehandedly turned into big business, packed up his bags and disappeared in a huff.

Until now, that is. Safely ensconced at Asylum Records, he has delivered his first official solo album to us, and, since it contains the same mix of oldies and originals as all his previous group productions, it can legitimately be looked upon as the first Creedence LP since early 1972. That should be about reason enough for dancing in the streets, and when he screams a Hello! to all of us at the beginning of the new album's first track, and when those familiar guitars ring out reassuringly, I for one am tempted to do just that. Unfortunately—and I've played the album over and over again in an attempt to figure out just where it goes wrong—it simply isn't the masterpiece I anticipated. In fact, I haven't had such ambivalent feelings about a record since “Goat's Head Soup.”

There are several ways of looking at it.

Could the album's dispirited lifelessness be the result of Fogerty's lack of interaction with the other musicians, of biting off more than he can chew? No, Creedence was always a one-man show, and frankly John plays bass and drums just as well as his departed colleagues Stu Cook and Doug Clifford did. Maybe better.

Is it—aha!—the Time Warp Factor? Given all that's gone on musically since Creedence bit the dust, is it simply that this stuff is out of date, old-fashioned? No again; I pulled out my favorite Creedence records for comparison, and they sound as vital as ever, and there's next to no *stylistic* difference between them and the 1975 model.

Is it that John has run out of ideas? Has he lost his songwriting chops? Well, maybe. With one or two exceptions, though most of these are very *good* songs, they don't exactly strike me as inspired. The opener, *Rockin' All Over the World*, is a perfect example. It's a catchy marriage of his own *Coming Down the Road* with the Stones' *It's Only Rock 'n' Roll*, and given the gunk cluttering up the airwaves lately it would be wonderful if it were a hit, but somehow it simply doesn't have that spark, that indefinable something that great rock has to have. The oldies don't work particularly well either, with the exception of a good-humored Fats Domino-ish *You Rascal You*. Though I'm sure John's always wanted to sing *Lonely Teardrops*, he can't, great a singer as he is, approach the Jackie Wilson original; and *Sea Cruise*, which should have been fun, is so faithful to *its* original as to be pedantic.

THERE are moments, of course. *Almost Saturday Night* and *Where the River Flows* are lovely, mournful, country-flavored things with real feeling, and *The Wall* is a nice Chicago blues workout in which John pays his respects to his most profound musical influence, Howling Wolf. And finally there is *Dream/Song*, the one unqualified triumph. It's the reason I keep returning to the album, hoping to find some avenue of approach I've missed. It's indescribably lovely, with a loping gospel feel, superb harmony singing, and, on one verse (as John re-creates New Orleans for you, complete with a Dixieland band appearing out of nowhere), it approaches the sublime—a kind of hymn, and a love song as well.

And that's it. Maybe I'll feel differently in a few weeks, but for the moment, what we've got here, I think, is a flawed record from a great talent. The flaws wouldn't have been so apparent if the wait hadn't been so long, but welcome back anyway, John... a lot of us have missed you. Let's have a sequel in short order. Creedence never waited a year between albums, and now that you're finally on your own, neither should you. — Steve Simels

JOHN FOGERTY. John Fogerty (vocals and instrumentals). *Rockin' All Over the World*; *You Rascal You*; *The Wall*; *Travelin' High*; *Lonely Teardrops*; *Almost Saturday Night*; *Where the River Flows*; *Sea Cruise*; *Dream/Song*; *Flyin' Away*. ASYLUM 7E-1046 \$6.98. Ⓢ ET 81046 \$7.98, Ⓒ TC 51046 \$7.98.

LUX offers three good reasons for the growing movement toward separate amplifiers and tuners.

Possibly the highest acclaim a receiver can be awarded is to have one or more of its elements compared favorably with its equivalent in a separate tuner, preamplifier, or power amplifier. Nevertheless, for most music lovers, a good receiver more than fulfills their requirements. But for a growing number of dedicated audiophiles, who are seeking the ultimate in music reproduction, nothing but separates will do.

They know what kind of power it takes to reproduce music's original wide dynamic range and high levels without peak clipping or distortion. (A barely detectable 3-dB increase in output level requires double the amplifier power.) A very powerful amplifier must have massive power-supply components to be able to deliver the large amounts of current demanded by high-level output circuits. The size and weight of the power transformers alone means receivers must leave off well below where really high power begins.

For those who want to hear their music at realistic sound levels, LUX audiophile engineers have designed products such as the M-4000 power amplifier. This unit is capable of 180 watts per channel, and even with both channels driven simultaneously to full output into 8-ohm loads, each channel has no more than 0.05% harmonic and intermodulation distortion at any frequency from 20 to 20,000 Hz.

Sophisticated protection circuits react to the electronically-subtle differences between normal high-level audio signals and abnormal voltage/current conditions. Hence, the M-4000 won't be fooled into producing unpredictable and audible distortions when operating with certain reactive

loudspeaker loads. Each of the stages—Class-B output and Class-A drive—has independent power-supply sections to minimize intermodulation effects. And fully independent power-supplies for each channel maintain full wattage potential under large-signal drive conditions.

Similar considerations went into the design of the C-1000 preamplifier. Every parameter that contributes to sonic differences, subtle as well as obvious, was examined anew. Among them: phase linearity, rise time and small-signal overload. One result: the magnetic-phono input circuits are virtually overload-proof—accepting almost half a volt at 1000 Hz! Another: the phono-preamplifier circuits have astonishingly low distortion of 0.006%, and the rest of the preamplifier circuits add only 0.001% more.

The Luxman T-310 AM/FM stereo tuner has everything from calibrated Dolby circuits for decoding Dolbyized FM broadcast and tapes to variable AM muting. Among its typical specifications: an IHF-ratio sensitivity of 1.7 microvolts and an exceptional 2.2 microvolts for 50 dB of quieting. And special five-pole phase-compensating filters in the IF section contribute to a 1.5-dB capture ratio and exceptionally low distortion levels (0.1% mono, 0.12% in stereo).

Of course, it takes some technical knowledge to fully appreciate the design approaches described above. But only your ears are required to hear the end result. In either case, you may soon be among those who own one or more of the thirteen LUX power amplifiers, preamplifiers, integrated amplifiers or tuners. You'll

find them at a select number of dealers who are dedicated audiophiles themselves.

Luxman M-4000
Power Amplifier, \$1,495.

Luxman T-310
AM/FM Tuner,
\$595.

Luxman C-1000
Preamplifier,
\$895.



Dolby is a trademark of Dolby Laboratories, Inc.

LUX Audio of America, Ltd.

200 Aerial Way, Syosset, New York 11791

NOVEMBER 1975

In Canada: AMX Sound Corp. Ltd., British Columbia, Gentronic Ltd., Quebec

109

The question is whether or not the joke is worth \$6.98. J.V.

RECORDING OF SPECIAL MERIT

WAR: *Why Can't We Be Friends?* War (vocals and instrumentals). *Don't Let No One Get You Down*; *Lotus Blossom*; *Hearbeat*; *Leroy's Latin Lament* (Medley); *Smile Happy*; and four others. UNITED ARTISTS UA-LA441-G \$6.98, ⑧ UA-EA441-H \$7.98, ⑥ UA-CA441-H \$7.98.

Performance: **Excellent**
Recording: **Clean**

War is a remarkable band, and it's good to hear them *sounding* remarkable again. They are generally more successful on the instrumental parts of their efforts than on the vocals except when the vocals are casual, as in the title tune here. The high point of the album is a treasurable seven minutes and twenty-two seconds of *Smile Happy*, in which the richness and variety of the arrangement match the eloquent performances. There's a lot of juicy, tasty music here. J.V.

RON WOOD: *Now Look*. Ron Wood (vocals, guitar); instrumental accompaniment. *I Got Lost When I Found You*; *Big Bayou*; *Breathe On Me*; *If You Don't Want My Love*; *I Can Say She's Alright*; *Caribbean Boogie*; and five others. WARNER BROS. BS 2872 \$6.98. ⑧ M8 2872 \$7.98. ⑥ M5 2872 \$7.98.

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

Ron Wood's solo album, like his playing with the Rolling Stones, seems mostly something



United Artists Records

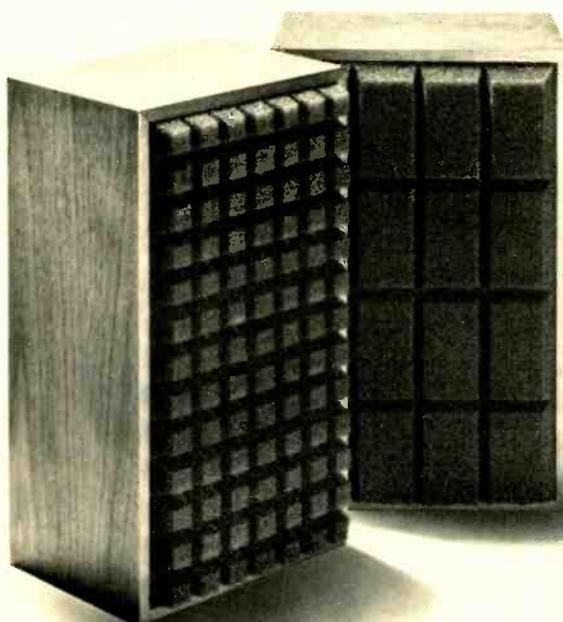
WAR: eloquent performances from a remarkable group

to promote in connection with the Stones' tour—his playing with them may have significance of some kind when the history of the band is told and studied, but I doubt that any significant musical history, or any other kind, was being made with this album. Wood's vocals, mixed down below the electric guitars, seem better than he and his co-writer and coproducer Bobby Womack realized—sounding a little like one of Dylan's gravelly voices—and the songs aren't particularly bad if you don't mind dead serious, straight-ahead rock

and nothing else. But "Now Look" is just another album, an average job on the same old material we've been hearing for ten years or longer. Wood's guitar is a little harsh for my taste, too, always has been, but he can move his hands around; it's just that the format has worn a little thin, and Wood is no Eric Clapton at the job of hiding the threadbare spots. There is a lot of mindless boogieing which I find as exciting as a vanilla milk shake. N.C.

(Continued on page 112)

Want to hear it all out front?



Look on the back.



If you see this label on a speaker system, you can be sure you'll hear all the sound the speaker is delivering. The label tells you the speaker grille is made from genuine SCOTT® Polycoustic® Foam, the 100% reticulated foam. And that means it's acoustically transparent... like having nothing between you and the speaker. Or, as acoustics experts put it, "as pure as having no grille at all."

More than fifty manufacturers use SCOTT Polycoustic Foam on their speaker systems. They know that good sound transmission is equivalent to air movement without distortion. Audible sound waves pass through SCOTT Polycoustic Foam virtually free of distortion, compared with other speaker grille materials. They know, too, that no ordinary grille cloth can match the

rich, sculptured good looks of a three-dimensional speaker grille made from SCOTT Polycoustic Foam.

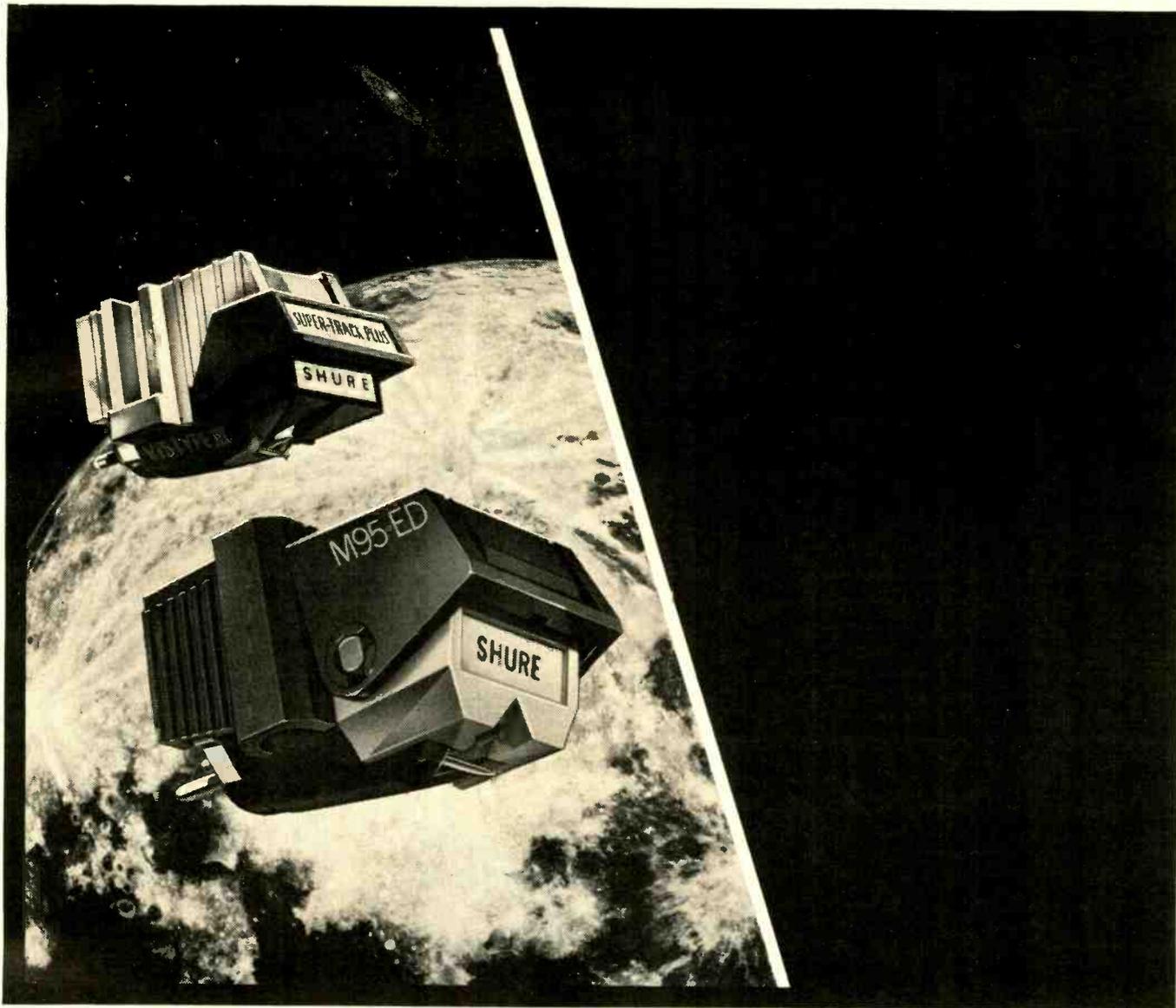
A free folder documents the acoustical transparency of SCOTT Polycoustic Foam in comparative tests with conventional grilles. Send for a copy.

And next time you look at speaker systems, look for our label on the back. Then listen to the pure, full sound out front.

Foam Division, Scott Paper Company, 1500 E. Second Street, Chester, Pa. 19013.

SCOTT
FOAM DIVISION
Innovators in acoustical foam technology.

CIRCLE NO. 58 ON READER SERVICE CARD



II'nd only to the III.



FREE!!
1976 Stereo
Directory &
Buying Guide if
you purchase this
cartridge before
December 31.
(see details
below)

The new Shure M95ED phono cartridge combines an ultra-flat 20-20,000 Hz frequency response and extraordinary trackability with an utterly affordable price tag! To achieve this remarkable feat, the same hi-fi engineering team that perfected the incomparable Shure V-15 Type III cartridge spent five years developing a revolutionary all-new interior pole piece structure for reducing magnetic losses. The trackability of the M95ED is second only to the Shure V-15 Type III. In fact, it is the new "Number 2" cartridge in *all* respects and surpasses much higher priced units that were considered "state of the art" only a few years ago. Where a temporary austerity budget is a pressing and practical consideration, the M95ED can deliver more performance per dollar than anything you've heard to date.

Shure Brothers Inc.
222 Hartrey Ave., Evanston, IL 60204
In Canada: A. C. Simmonds & Sons Limited



* FREE! 1976 Stereo Directory & Buying Guide with the purchase of a Shure V-15 Type III, or the M95 series, M75 Type II or M91 series of cartridges. Simply send us your warranty card with the notation "Send Free Buying Guide" before Dec. 31, 1975. (Offer subject to supply and may be withdrawn at any time.)

JAZZ



BILLY COBHAM: *Shabazz*. Billy Cobham (percussion); Randy Brecker (trumpet); Glenn Ferris (trombone); Michael Brecker (saxophone); Milcho Leviev (keyboards);

John Abercrombie (guitar); Alex Blake (bass). *Taurian Matador (Revised)*; *Red Baron (Revised)*; *Tenth Pinn*; *Shabazz*. ATLANTIC SD 18139 \$6.98, Ⓣ TP 18139 \$7.97, Ⓒ CS 18139 \$7.97.

Performance: **Dynamic**
Recording: **Very good remote**

This is drummer Billy Cobham's fourth album under his own name, and the first one to be recorded in public performance. The players are those who formed the basic personnel on Cobham's last album, "Total Eclipse," and two of the four selections are new and different versions of *Taurian Matador* and *Red Baron*, Cobham originals that first appeared on "Spectrum," his initial album. "Shabazz," recorded in July of last year at the Montreux

Music Festival and London's Rainbow Theatre, demonstrates that this remarkable drummer does not have to rely on overdubbing or other studio gimmicky to get his message across. If you like Cobham's previous offerings, this one will not disappoint you. **C.A.**

JESS STACY: *Stacy Still Swings*. Jess Stacy (piano). *Lover Man*; *Doll Face*; *Lookout Mountain Squirrel*; *I Would Do Anything for You*; *How Long Has This Been Going On*; and three others. CHIAROSCURO CR 133 \$6.98 (from Chiaroscuro Records, 173 Christopher St., New York, N.Y. 10014).

Performance: **Lithe and lovely**
Recording: **Good**

Pianist Jess Stacy was a veteran of seventeen years of professional playing in 1938 when he recorded his most memorable performance, the classic solo on *Sing, Sing, Sing* at Benny Goodman's historic Carnegie Hall concert. Originally from Missouri, Stacy became identified with the Chicago school of jazz before entering the swing era as a formidable band pianist; he eventually made California his home and all but disappeared from the scene until last year when he participated in the Newport Jazz Festival in New York. It was then, at the age of seventy, that he made this album, which marks a return to the recording studio after a fifteen-year absence.

Stacy's style is virtually intact, he is agile, and his technique seems unimpaired by the intervening years. This is a pleasant, relaxed set devoted evenly to standards and originals. Stacy suffers only from poor pressings, which seem to be the nemesis of small labels such as Chiaroscuro. Don't let those intermittent extraneous noises discourage you, though. They're annoying, but if you like good jazz piano, you won't let them deter you from adding this album to your collection. **C.A.**

BUDDY TATE: *Swinging Like Tate*. Buddy Tate (clarinet, tenor saxophone); Buck Clayton (trumpet); Dicky Wells, Eli Robinson (trombone); Earl Warren (alto and baritone saxophones); Everett Barksdale (guitar); Aaron Bell, Joe Benjamin (bass); Herbie Lovelle, Jo Jones (drums). *Bottle 1: Walk That Walk*; *Miss Sadie Brown*; and three others. MASTER JAZZ MJR 8127 \$6.98 (from Master Jazz Records, Box 579, Lenox Hill Station, New York, N.Y. 10021).

Performance: **Great Tate**
Recording: **Dated stereo**

Reed man Buddy Tate's style is steeped in the best swing tradition, and his background includes stints in the bands of Andy Kirk, Count Basie, Lucky Millinder, and Hot Lips Page. In more recent years, his own band has moved feet and stirred emotions at Harlem's Celebrity Club, and Tate himself has played numerous record dates, including the recent (and rather over-publicized) Helen Humes album.

This is another reissue from the generally excellent series of mainstream jazz produced for the Felsted label by Stanley Dance in the late Fifties. It consists of two 1958 sessions, one side with Tate's Celebrity Club band (except for pianist Skip Hall and drummer Herbie Lovelle, who replace regulars Sadik Hakim and Fats Donaldson), the other with a group that includes Tate's fellow Basie alumni Buck Clayton, Dicky Wells, Earle Warren, and Jo Jones. Skip Hall's piano gives both

(Continued on page 114)

HENRY'S CAMERA - HI FI & VIDEO



**BIG DISCOUNTS
HI-FI COMPONENTS
50 LINES
IN STOCK**

**CALL TOLL FREE
800-
421-8537**

EXCEPT FROM CALIF. ALASKA AND HAWAII

PIONEER
SX939 AM/FM Stereo Receiver
originally \$600.00
NOW... 372.00

PIONEER
SX636 AM/FM Stereo Receiver
originally \$350.00
NOW... 217.00

TEAC
450 Cassette Recorder
was \$449.50
NOW... 319.95

TEAC
3340 4 ch. Reel
was \$1149.50
NOW... 819.00

SONY
HQR600 4 ch. Am/FM Receiver
was \$199.95
NOW... 89.95

SONY
STR 7065 Receiver
was \$550.00
NOW... 359.00

SONY
PS2251LA Turntable
was \$350.00
NOW... 229.00

SONY
TC45 Mini Cassette
was \$140.00
NOW... 99.00

SONY
CF320 AM/FM Cassette
was \$160.00
NOW... 109.00

SONY
TC140 Deluxe Cassette
was \$149.00
NOW... 99.00

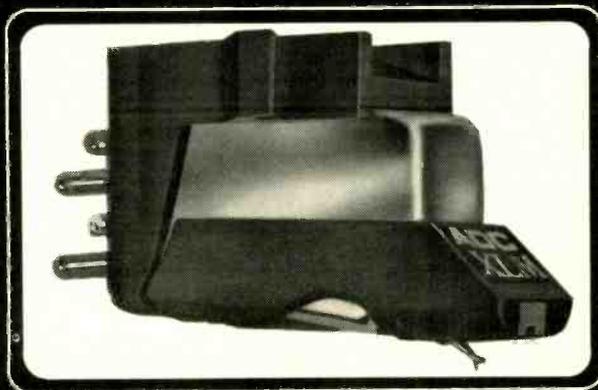
SONY
PS-5550 Turntable
was \$260.00
NOW... 175.00

CAMERA • HI-FI • VIDEO

516 W. 8th St., Downtown L.A. 488-0341
OPEN 7 DAYS—PHONE ORDERS ACCEPTED
POMONA BRANCH, 1654 Indian Hill, (714) 621-2716

CIRCLE NO. 26 ON READER SERVICE CARD

High praise for ADC MKII low mass cartridges.



"This cartridge (ADC XLM MKII) gave us some of the smoothest and cleanest high-end results we have heard from record reproduction. Heavily recorded difficult musical passages were handled with ease and overall musical accuracy was maintained."

*The Len Feldman Report
in FM Guide*

"Tracking ability at low and middle frequencies was exceptional... the high level required half the tracking force of most other cartridges... one of the best 2-channel stereo cartridges and better than most CD-4 types."
(ADC Super XLM MKII)

*Hi-Fi News and
Record Review*

ADC XLM MKII cartridges embody principles found in no other cartridges, as evidenced by our U.S. Patent. They feature a unique "induced magnet" whereby the magnet is fixed and the magnetism is induced into a tiny hollow soft-iron collar. This collar in turn moves between the pole pieces thereby allowing for a major reduction in the mass of the moving system. This LOW MASS permits the stylus to trace the most intricate modulations of the record grooves with a feather-light tracking force—as low as $\frac{3}{4}$ of a gram.

This results in super-linear pick up especially at the higher frequencies of the audible spectrum, which other cartridges either distort or fail to pick up at all. This low tracking force also assures minimal erosion and a longer playing life for the records.

This family of LOW MASS Cartridges is offered with Shibata type and elliptical diamond styli.

For detailed specifications, write ADC.



AUDIO DYNAMICS CORPORATION

A BSR Company • New Milford, Conn. 06776

CIRCLE NO. 8 ON READER SERVICE CARD

sides a Basic flavor, and there's some good swinging throughout. In the 1975 addenda to his notes, Mr. Dance regrets not having devoted the entire album to the Celebrity Club band and bemoans his decision to replace drummer Fats Donaldson (Hall had held the piano chair before Hakim); that would, of course, have made this a more interesting album from a historical standpoint, but no apologies are needed for what we have here. *C.A.*

CEDAR WALTON: *Mobius*. Cedar Walton (keyboards and synthesizer); other musicians. *Blue Trane*; *Soho*; *Off Minor*; *The Maestro*; *Road Island Red*. RCA APL1-1009 \$6.98.

Performance: **Peppery**
Recording: **Excellent**

Jazz has had to make certain concessions to rock over the last decade in order to find a new, larger audience. The concessions usually involve a rhythm section, or at least a guitarist, that plays rock. Such temporizing has often led to complete surrender, where the rhythm section overpowers the soloist and the main effort of the recordings is to sneak some jazz in without calling it such—don't want to alienate the kids, y'know. Then there is the quasi-jazz soloist, such as Herbie Mann, who uses various back-up musicians in the pop, rock, and jazz styles to come up with a music that is as lumpy and unappetizing as cooled porridge.

Still, jazz used to be (and this is almost always forgotten) a *popular* music. It was not only the Ethos of a People and all that: it was lively, funny, good to dance to, and exciting to hear. Only recently have jazz musicians—so hesitant to sell out to rock-and-roll



CEDAR WALTON

A delightful attempt to repopularize jazz

and then so caught up in the selling—found that there is a way to keep their consciences clear and still be “contemporary” in the popular sense.

That way is exemplified here: take a bona fide jazzman such as Cedar Walton and back him with experienced musicians who can, no doubt, play any style, but who know their jazz and can combine it with the higher achievements of rhythm-&-blues (as distinct from rock). Nobody is compromised that much, and there is room to get some good work

done. In “*Mobius*,” the horns and reeds blow lustily, lazily, and confidently in Thelonious Monk’s *Off Minor* and John Coltrane’s *Blue Trane* while Walton plugs up the holes neatly and cheerfully. Of the five numbers in the album, three are Walton’s. *Road Island Red* and *Soho* sound very much the same, but *The Maestro* is a bouncing, charming tribute to Duke Ellington with a delightful vocal.

Jazzmen get fewer recording dates than popsters or rockers do, and so they are more likely to insist on doing their own material. But, as in rock, the best performances seem to come from musicians applying themselves to the tunes of others: the ego is less likely to get in the way, and more music is likely to be made. I would like to hear a Walton album made up of material he admires by other jazzmen. From what he does here with Coltrane’s and Monk’s compositions, I think such an album is worth waiting for. *J.V.*

COLLECTIONS

RECORDING OF SPECIAL MERIT

THE GREATEST JAZZ CONCERT IN THE WORLD. The Oscar Peterson Trio: *Smedley*; *Some Day My Prince Will Come*; *Daytrain*. Coleman Hawkins with the Oscar Peterson Trio: *Moonglow*; *Sweet Georgia Brown*. Zoot Sims, Paul Gonsalves, Clark Terry, Benny Carter, the Oscar Peterson Trio (jam session): *Now's the Time*; *Wee*; *The Ballad Medley*; *Memories of You*; *Misty*; *I Can't Get Started*. Coleman Hawkins, Johnny Hodges, Benny Carter, Oscar Peterson, Sam Jones, Louis Hayes (jam session): *C-Jam Blues*. T-Bone
(Continued on page 116)

Shelving for buffs.

The Kirsch Entertainment Center is a versatile shelving unit that you assemble in minutes.

Exclusive Ring-Lock® design lets you twist components together to fit your needs. You can make dozens of other arrangements with the Kirsch Cranmere® kits and components. In a choice of stain-resistant, vinyl-laminated finishes.

At any store that carries Kirsch Shelving. Or write the Kirsch Co., Dept. DR-1175, Sturgis, Michigan 49091.

Kirsch

The name you trust in drapery hardware.



THE END OF THE DOUBLE STANDARD.

OUR LEAST EXPENSIVE RECEIVER HAS THE SAME LOW DISTORTION AS OUR MOST EXPENSIVE RECEIVER.

IM Distortion Comparison

| YAMAHA | Brand "A" | Brand "B" | Brand "C" |
|---------|-----------|-----------|-----------|
| CR-1000 | .1% | .15% | .3% |
| CR-800 | .1% | .3% | .5% |
| CR-600 | .1% | .5% | .8% |
| CR-400 | .1% | 1.0% | 1.0% |

With most manufacturers, price determines quality. However, in the above chart, you can see how Yamaha alone offers the same quality (low distortion) throughout our entire line, regardless of price.

At Yamaha, we make all our stereo receivers to a single standard of excellence.

A consistently low intermodulation distortion of just 0.1%!

A figure you might expect only from separate components. Maybe even from our \$850 receiver, the CR-1000.

But a figure you'll surely be surprised to find in our \$330 receiver, the CR-400.

So what's the catch?

There is no catch. Simply a different philosophy. Where high quality is spelled low distortion.

You'll find Yamaha's single-mindedness particularly gratifying when compared to the amount of distortion other manufacturers will tolerate throughout their product lines. (See chart.)

Particularly gratifying and easily explained.

Less of what irritates you most.

While other manufacturers are mostly concerned with more and more power, Yamaha's engineers have concentrated

on less and less distortion.

Particularly intermodulation (IM) distortion, the most irritating to your ears. By virtually eliminating IM's brittle dissonance, we've given back to music what it's been missing.

A clear natural richness and brilliant tonality that numbers alone cannot describe. A new purity in sound reproduction.

A musical heritage.

Our seeming preoccupation with low distortion, in general, and the resulting low IM distortion, in particular, stems from Yamaha's own unique musical heritage.

Since 1887, Yamaha has been making some of the finest musical instruments in the world. Pianos, organs, guitars, woodwinds, and brass.

You might say we're music people first.

With our musical instruments, we've defined the

standard in the *production* of fine sound. And now, with our entire line of receivers and other stereo components, we've defined the standard of its *reproduction*.

Four different receivers, built to one standard.

Between our \$330 CR-400 and our \$850 CR-1000, we have two other models.

The \$460 CR-600 and the \$580 CR-800.

Since all are built with the same high quality and the same low distortion, you're probably asking what's the difference.

The difference is, with Yamaha, you only pay for the power and features that you need.

Unless you have the largest, most inefficient speakers, plus a second pair of the same playing simultaneously in the next room, you probably won't need the abundant power of our

top-of-the-line receivers.

Unless you're a true audiophile, some of the features on our top-of-the-line receivers might seem a bit like gilding the lily. Selectable turnover tone controls, variable FM muting, two-position filters, even a special five-position tape monitor selector.

However, you don't have to pick one of Yamaha's most expensive receivers to get a full complement of functional features as well as our own exclusive Auto Touch tuning and ten-position variable loudness control.

The End of the Double Standard.

Just keep in mind that all Yamaha stereo receivers, from the most expensive to the least expensive, have the same high quality, the same low distortion, the same superlative tonality.

It's a demonstration of product integrity that no other manufacturer can make. And, an audio experience your local Yamaha dealer will be delighted to introduce you to.



International Corp., P.O. Box 6600, Buena Park, Calif. 90620
CIRCLE NO. 71 ON READER SERVICE CARD

Walker, Clark Terry, Johnny Hodges, Paul Gonsalves, the Oscar Peterson Trio: *Woman You Must Be Crazy; Stormy Monday*. Duke Ellington and His Orchestra (with guest soloists): *Swamp Goo; Hurdle Gurdle; Night Flock; Rue Bleu; Salome; Chromatic Love Affair; Maharissa; Blood Count; Rockin' in Rhythm; Very Tenor; Onions; Take the "A" Train; Satin Doll; Tutti for Cootie; Up Jump; Prelude to a Kiss; Medley—Mood Indigo! Got It Bad and That Ain't Good; Things Ain't What They Used to Be*. Ella Fitzgerald, Duke Ellington and His Orchestra, the Jimmy Jones Trio: *Don't Be That Way; You've Changed; Let's Do It; On the Sunny Side of the Street; Cotton Tail*. Ella Fitzgerald, the Jimmy Jones Trio: *It's Only a Paper Moon; Day-Dream; If I Could Be*

with You; Between the Devil and the Deep Blue Sea. PABLO 2625 704 four discs \$24.98.

Performance: **Uniformly excellent**
Recording: **Very good remotes**

This album is not dated, nor does the liner so much as hint at a location for this "concert"; annotator Benny Green carefully avoids giving any clues: and, indeed, "the greatest jazz concert in the world" never took place as such. It is a Norman Granz fantasy: more than three hours of splendid performances by a dazzling array of talent, assembled from various sources and skillfully edited into a believable whole. Actually, the Duke Ellington portions were recorded during 1967 in New York City and at the Hollywood Bowl, and it is possible that the entire set is

culled from the same two sources. So much for the where and when. The Ellington band is in good form, with Johnny Hodges still on hand, and, of course, the addition of such guest soloists as Benny Carter, Oscar Peterson, and Zoot Sims makes some of the Ellington selections particularly interesting.

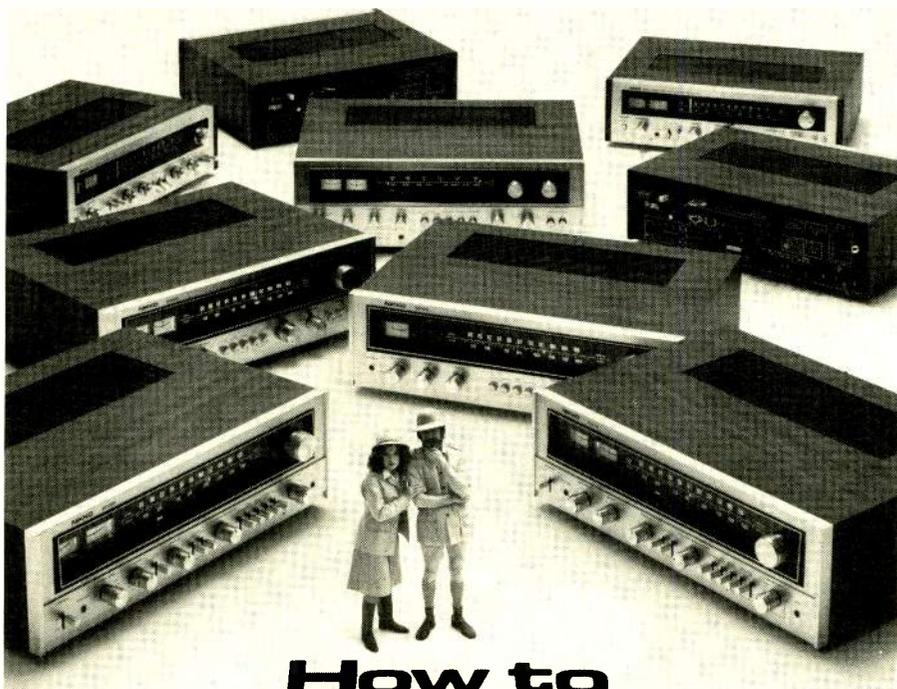
Ella Fitzgerald, who is on nine selections with either the Jimmy Jones Trio, the Ellington orchestra, or both, is in better form than in her more recent recordings. The Oscar Peterson Trio performs with characteristic excellence, and Peterson's accompaniment for blues singer T-Bone Walker makes up for that veteran's somewhat failing voice; Walker's guitar playing shows no signs of age, however. There are good moments in both jam-session segments, one of the highlights being Benny Carter's alto sax on *I Can't Get Started*. Coleman Hawkins, captured here before his sad deterioration, gives a truly fine performance with the Peterson trio on *Sweet Georgia Brown*, though he is somewhat disappointing with his slightly disjointed solo on the jam-session warhorse *C-Jam Blues*. But that is one of the very few weak spots in this collection of a truly great concert that never was. C.A.

JAZZ FROM OHIO, VOLUME 3: Ohio Theater Concert. Waldo's Gutbucket Syncopators: Edith Wilson, Terry Waldo, and Attorney General William Saxbe (vocals). *Some of These Days; How Could Red Riding Hood?; Am I Blue?; The Entertainer; I Would Do Anything for You*; and six others. BLACKBIRD C6002 \$5.98 (plus 50¢ postage and handling from Lakco Record Co., 3902 N. Ashland Ave., Chicago, Ill. 60613).

Performance: **Hot time in the old town**
Recording: **Very good**

Could any good come from a concert given by a group with a name like Waldo's Gutbucket Syncopators? You'd better believe it! Terry Waldo and his group were scheduled for a concert at the Ohio Theater in Columbus on April 13, 1974, with ninety-one-year-old ragtime composer and pianist Eubie Blake, Blake couldn't make it (he was sick), but Attorney General William Saxbe could, and what we have here is one terrific record put together from the tapes of that concert. The Gutbucket Syncopators turn out to be one of the liveliest Dixieland jazz groups you ever heard. Their vocalist, Edith Wilson, has been setting the rafters ringing since she started making phonograph records—which was a couple of years before Bessie Smith—and she can still match styles with any blues singer in the business. Mr. Waldo, whether he's playing master of ceremonies or disinterring some old number like *How Could Red Riding Hood* (once banned from the air because the lyrics were considered suggestive), is no slouch either. The program itself turns many an unexpected corner—from chestnuts like Sophie Tucker's hallmark *Some of These Days* in a carefree Dixieland treatment to a faithful transcription of Ellington's *The Mooche* to Joplin's *The Entertainer*, which still somehow manages to sound fresh. And Mr. Saxbe? Well, the former attorney general is on hand to greet the crowd and belt out an item called *Ace in the Hole*. He's a little flat here and there but right in the spirit of the occasion, and he deserves all the cheers and applause he gets—as does everyone else involved. P.K.

(Continued on page 120)



How to survive the receiver jungle.

It's a receiver jungle out there. Hundreds of receivers performing hundreds of functions. All priced differently. Most you have seen in hundreds of ads costing millions of dollars.

Not NIKKO. We put most of our money in our product, not advertising. The result: a great product and a better value.

Explore the others if you must. But if you get lost in the process—experience NIKKO. It will help you survive.

A NIKKO is everything other receivers are, more or less. More value. Less price. And money saving values are what survival is all about today. If you are looking for a receiver, read their ads, then compare a NIKKO—feature for feature, spec for spec and dollar for dollar and you'll find out what we mean when we say, "more value, less price."

If you're lost in the receiver jungle, write to NIKKO for a guide to the nearest dealer and a survival kit.

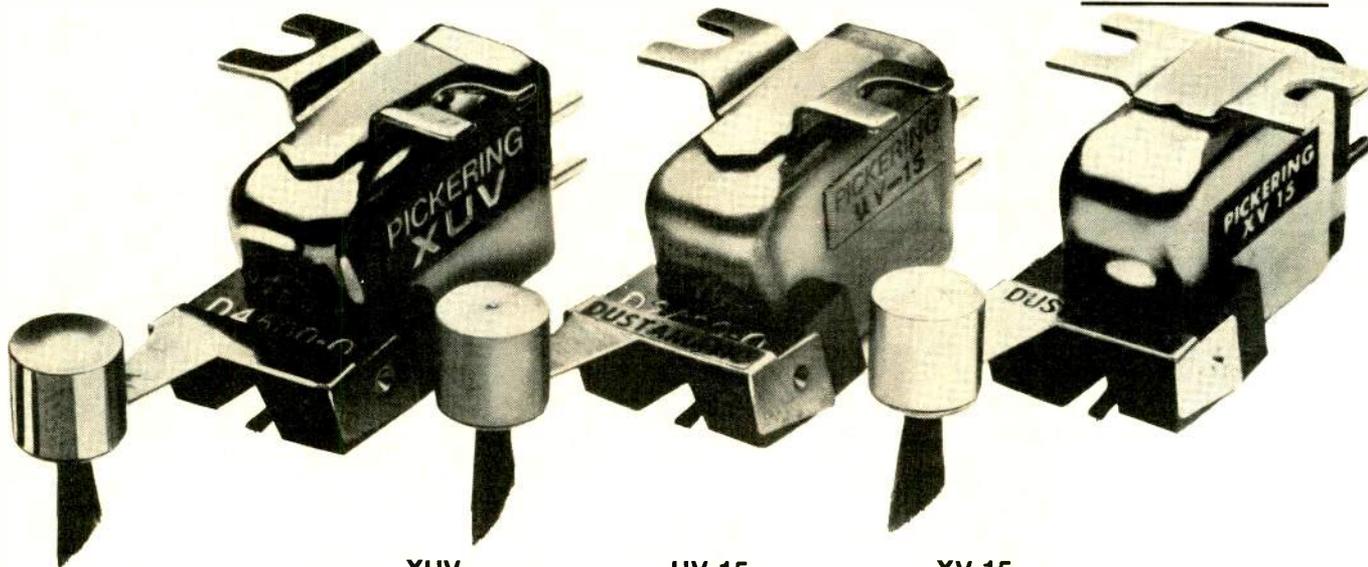


NIKKO ELECTRIC CORP. OF AMERICA 16270 Raymer St., Van Nuys, Calif. 91406

In Canada: Superior Electronics Inc., Quebec, Canada

The right Pickering cartridge for your equipment is the best cartridge money can buy!

They feature low frequency tracking and high frequency tracing ability!*



**XUV
STEREO &
DISCRETE**

**UV-15
DISCRETE
& STEREO**

**XV-15
STEREO
& MATRIX**

| | | | | |
|--------------------------------|-----------|-------------|---------------------------|---|
| Manual Transcription | XUV/4500Q | UV-15/2400Q | XV-15/1200E UV-15/750E |  |
| Automatic Transcription | XUV/4500Q | UV-15/2400Q | XV-15/1200E XV-15/750E |  |
| Manual | XUV/4500Q | UV-15/2400Q | XV-15/400E XV-15/350 |  |
| Automatic Turntables | | UV-15/2000Q | XV-15/400E XV-15/350 |  |
| Manual/Automatic | | UV-15/2000Q | XV-15/200E XV-15/100 |  |
| Changer | | | XV-15/200E XV-15/150 |  |

Pickering's cartridges have been specifically designed and engineered not only to peak specifications and performance characteristics, but also to achieve total compatibility with *your music system* to help you get the most out of it.

Only Pickering has developed a way for you to be absolutely certain you select the "right" cartridge for *your music system*. We did it first for stereo by developing our Dynamic Coupling Factor rating system—DCF for short—which identifies pick-up performance in terms of a quantitative measurement. The value of a DCF rating lies not only in its merit to define low frequency tracking ability but also in its measure as an index of **high frequency** (8 to 50 kHz)

tracing ability. Pickering's DCF-rated pick-ups have exceptional **high frequency tracing characteristics**, vital for both stereo and discrete 4-channel performance. The Pickering cartridge exactly "right" for maximum performance with your equipment is simple to select because of this rating method.

So, whether stereo or discrete (or both) is your preference, choose the Pickering cartridge exactly right for your equipment.

For further information write to Pickering & Co., Inc., Dept. SR, 101 Sunnyside Blvd., Plainview, N. Y. 11803

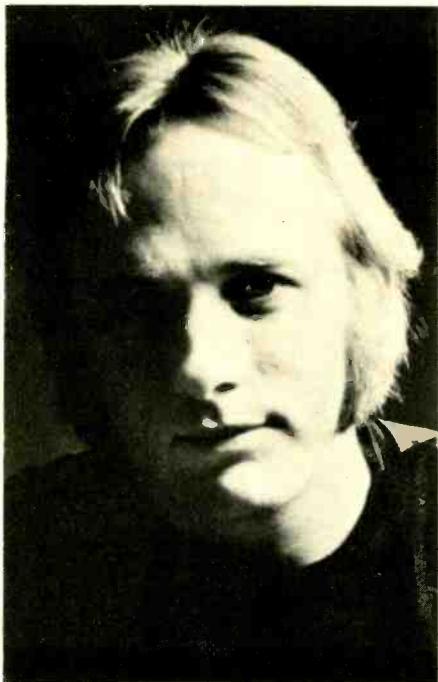
*** traceAbility™**



"for those who can hear the difference"

CIRCLE NO. 41 ON READER SERVICE CARD

Can pattering help you age more gracefully than marking time does?



Columbia Records

Stephen Stills And Neil Young: Separated Again



Warner Bros. Records

OLD friends, close friends, and, according to the ink spilled on the subject, also old rivals: Stephen Stills and Neil Young. Theirs was supposedly the ego clash that helped, as much as any single thing helped, determine what the Buffalo Springfield sounded like. The reports seemed to favor Young; it was always Stills—obviously the better musician—who seemed to be trying to catch up, or who seemed to want what Young had, or something. At first, Stills couldn't play the guitar very well and had to bide his time and thump along quietly while Young was out there swaying about in his fringed jacket and gathering in the glory. Boy, did that burn Steve (according to the reports), and he did do something about it; he quickly became a better guitarist than Young, not just faster but stylistically closer to purity. But then it *still* seemed to be Young who attracted all the attention. He could be in or out of a group and it didn't seem to matter: a definite personality came through—he had his own solo act going all the time and he had style. Stills opted to stay in a group, and probably deserves most of the credit for how Crosby, Stills, and Nash turned out. The difference between how they worked and how the Buffalo Springfield or any of Young's solo-with-back-up acts has worked can be heard again in their latest albums, Young's "Tonight's the Night" for Reprise and "Stills" on Columbia.

It seems easier now, though, to hear the difference in their methods, maybe even the difference in their personalities, than it used to seem. Stills works things out and figures and adjusts and corrects and plans and schemes, and Young simply cuts and tries. It says in the limited but useful jacket information that comes with "Stills" (almost no useful information comes with the Young album) that it

took twenty hours to get the vocal-harmony dubs right in *Love Story*, a song Stills kept around for four years before trying to record. Between the lines there it tells you why CS&N couldn't do on stage the things they had done in the studio, and why they loosened up for better (the stage act was livelier) or worse (the studio discipline eroded) when Young joined them. Young's work says, a little more strongly this time than it usually does, that it is more the result of being than of doing, that its perpetrator is instinctive, reflexive, and not much of a showman of any sort. Some have remarked that he seems to ignore the audience when he's in the middle of certain songs. I doubt that, but he does seem to be one of those who doesn't have to alter his off-stage behavior in order to make it suitable on-stage behavior. Stills' work, even if you didn't know about the twenty hours, strongly suggests it came from a mind that is analytical, meticulous, and, if need be, methodical. His songs turn into productions, and productions, of course, have to be staged.

Young dedicates his album to Danny Whitten and Bruce Berry, former associates who, he says, "lived and died for rock-and-roll," and he has put it in a black jacket and given it a black label and even included a version of *Come On Baby Let's Go Downtown* as he and Whitten sang it back at the old Fillmore East when Young was backed by Crazy Horse. But it is not a particularly mournful album compared to Young's other albums—they are all mournful to some degree. The main thing about it is how spontaneous it sounds. Aesthetically, this is not all to the good, for it keeps lapsing beyond Spontaneous into the area of Unrehearsed. The main thing about "Stills" is just the opposite—what a workmanlike finish it has!

Young has written more good songs than Stills has through the years, though these albums suggest he's not doing it now. There are a lot of contrivances in Stills' songs, even in a watershed piece like *Suite: Judy Blue Eyes*, possibly because Stills' tendency to try harder causes some overshoot in the songwriting end of it. Or perhaps Young has profited from a viewpoint that lets him quickly catch the silhouette of the thing Stills is up close to and studying the details of: Young, when he's up to it, can knock out a melodic line that *takes* you somewhere, while Stills' melodies seem to spring, though not very far, from a chord-change pattern that has him temporarily engrossed. Young's lyrics have the same kind of direct, unguarded, free spirit about them; Stills' lyrics, quality aside, are more nearly literary and rational. What their work suggests is that temperamentally Young is just that, compared to Stills: young. This may help explain why Stills, when he used to try the traditional rock-and-roll-brat antics on-stage, looked silly . . . maybe he was already old enough in his mind to regard it as silly.

Youth, of course, has had a lot of muscle in the marketplace and elsewhere in the culture (if there *is* any elsewhere in the culture) for a while, but Time always beats it. Today we have Young still making rock-and-roll for the kiddies and Stills at least able to roam a bit in the little pasture he has staked out for himself, still able to turn over a detail or two.

Stills' province is not far from where Crosby, Stills, and Nash ended, as fussy about the accented trills and so forth as the group was, but operating in a little more space and with an occasional female sound to some of the dubbed voices. The ambiance Stills created with *Change Partners* is still pretty much in-

tact in his work, but "Stills" stretches out in it a little, in spite of *Love Story*, which is structurally a contrivance that would look very ugly if you represented it with an Erector set. Stills is using his and other people's voices in inventive ways, shuffling those old overlays and overlaps in and out, and the hours it took don't really show all that much—an accomplishment in itself. He and his gang also use stereo separation well, while Young, like most rockers, seems to pay it little heed. Stills' songs remain weaker than his performances, and Stills' melodies still tend to be weaker than the chord changes he had such hopes for, but he is using the language with greater authority and he is not down-and-out tuneless the way he used to be sometimes. Young's new album is not bad, but it's too primitive-sounding for Young to want to be at this late date, and it is the second or third in a row that seems to catch him feeling not particularly passionate about something. But you expect him to be interesting, and he's still that, and you listen for the kind of lines you catch in *Roll Another Number*: "I'm not going back to Woodstock for a while/Though I long to hear that lonesome hippie's smile. . . ." Considering the charm of his better songs, though, he hasn't really turned it on for you here. When he isn't up to knocking out a melodic line that can soar, Young tends to settle for any damned thing—but he's candid enough that he'll tell you he has, as happens in *Borrowed Tune*.

COMPARING the albums and personalities naturally reinforces the idea that the old rivalry is still going on, but my guess is that both men outgrew it some time ago. Stills here does a respectful job of recording a new Young tune, *New Mama*, which is the kind Young always does better than Stills, and does again in his new album, but there's more friendship than rivalry in all that. Young seems to be between silhouettes, marking time and waiting for the next big peek, while Stills continues to putter with the details he gleaned from the last one. Each approach has its advantages, but when the interim between silhouettes is dragging on the way it is these days, puttering seems to help you age more gracefully than marking time does. —Noel Coppage

STEPHEN STILLS: *Stills*. Stephen Stills (vocals, guitar, bass, keyboards); Donnie Dacus (guitar, vocals); Leland Sklar (bass); Russ Kunkle (drums); other musicians. *Turn Back the Pages*; *My Favorite Changes*; *My Angel*; *In the Way*; *Love Story*; *To Mama from Christopher and the Old Man*; *First Things First*; *New Mama*; *As I Come of Age*; *Shuffle Just as Bad*; *Cold, Cold World*; *Myth of Sisyphus*. COLUMBIA PC 33575 \$6.98, Ⓢ PCA 33575 \$7.98, © PCT 33575 \$7.98.

NEIL YOUNG: *Tonight's the Night*. Neil Young (vocals, guitar, piano, harp); Nils Lofgren (guitar, keyboards); Ben Keith (steel guitar); Billy Talbot (bass); Ralph Molina (drums); other musicians. *Tonight's the Night*; *Speakin' Out*; *World on a String*; *Borrowed Tune*; *Come On Baby Let's Go Downtown*; *Mellow My Mind*; *Roll Another Number*; *Albuquerque*; *New Mama*; *Lookout Joe*; *Tired Eyes*. REPRIS MS 2221 \$6.98, Ⓢ M8 2221 \$7.97, © M5 2221 \$7.97.

controlled impedance

is an extra bonus advantage of every Scott loudspeaker system built since 1965. With **controlled impedance**, you are assured of compatibility between your speakers and your amplifier or receiver. Without **controlled impedance**, you can't be sure, for reasons we explain in our free brochure, "Controlled Impedance—Fact or Myth", which you may receive by circling reader service number or writing to us directly. Or visit your Scott dealer for a demonstration of **controlled impedance** loudspeaker systems priced from \$59.95 to \$349.95.



W SCOTT®

where innovation is a tradition

H. H. Scott, Inc., 111 Powdermill Road, Maynard, MA 01754
CIRCLE NO. 100 ON READER SERVICE CARD

Get your new Radio Shack catalog at one of our 3500 stores today!

Save! Our Prices Are Within 1% of Our July, 1974 Prices!

**Hi-Fi • CB • Kits • Parts
Phonos • Recorders • Tape
Radios • Antennas • Tubes
Auto Tuneup • Much More**

See what's *really* new. It's the most-wanted, most popular catalog in electronics, and loaded with our own exclusive nationally advertised brands: Realistic, Micronta, Archer, Science Fair, others — you've seen them advertised on TV. Come in for your free copy today!

AVAILABLE BY MAIL TOO — JUST SEND US THIS COUPON



To: **Radio Shack** 580
P.O. Box 1052, Ft. Worth, TX 76101
Rush me your 1976 catalog.
(Please Print)

Name _____ Apt. # _____
Street _____
City _____
State _____ ZIP _____

FOLK



HUNGARIAN SONGS. László Szalay (baritone); the Imre Magyari Jr., Lajos Boros, and Gyula Kóczé Gypsy Bands. *My Mother Is Angry; The Bird Called Three Times; My Love Wears Yellow Boots; I've Never Stolen in Life*; and twenty others. QUALITON LPX 10132 \$6.98.

Performance: **Lively and authentic**
Recording: **Very good**

Ostensibly to please the tourist trade, gypsy bands are a must in the better cafés and restaurants of Budapest. Many tourists indeed love them, and so do even occasionally returning ex-Hungarians, but I doubt that the omnipresence of gypsy music is really *insisted upon*. I found an elegant café on a recent visit, and I was assured that no gypsy music would intrude on my privacy. Indeed, there were no gypsies; their place was taken by a rock combo which left me yearning for the dulcet sounds of fiddles and cimbalom.

In any case, since gypsy music is inevitable, the next time you visit my native city I hope

you will be serenaded by one of the three bands featured on this record. They play some fine old songs and some new ones modeled on the traditional styles. There is good variety, and the performers take a heartwarming straightforward approach to the music: plenty of spirit without excessive frills. László Szalay, evidently an old hand in this repertoire, is also refreshingly unmannered and equally effective, whether in the fiery *csárdás* or the melancholy "listening songs."

George Jellinek

RECORDING OF SPECIAL MERIT

SALLI TERRI: *Songs of the American Land.* Salli Terri (vocals); Jack Halloran Quartet; instrumental accompaniment. *Bound for the Promised Land; On Springfield Mountain; My Old Kentucky Home; Sacramento; Erie Canal; Medley—Sourwood Mountain/Goin' to Back to Georgia; The Long Prairie*; and seven others. ANGEL S-36085 \$6.98.

Performance: **Fresh**
Recording: **Excellent**

Salli Terri may not have the biggest or the most beautiful voice in the world, but it's an ardent one of exceptional clarity, and she makes the most of it. For what she *does* have is a feeling for style and a sense of programming that have made each of her recordings a delight. Her three albums of "Duets with the Spanish Guitar" with Laurindo Almeida wear exceptionally well, and recently she turned her attention to another idiom when she teamed up with the Roger Wagner Chorale for a lively program of Stephen Foster songs. Now, in "Songs of the American Land," she

proves that American folk music, even though brutally subjected of late to bicentennial overexposure, need not be the dull, dimity stuff of those "authentic" folk records that tend to go on forever unrolling the same thin goods from start to finish. With the adroit Jack Halloran Quartet at her side, and surrounded by instrumentalists playing such apt items as the fiddle, guitar, banjo, harmonica, and accordion, she makes even *Dixie* sound like real music and transforms *America* into something much more than a school-auditorium exercise.

Miss Terri has chosen her material well and triumphs over any threat of drabness through taste and versatility. Moods and tempos shift intriguingly as the spiritual *Bound for the Promised Land* yields to the poignant strains of *Shenandoah* or the cowboy tones of *Colorado Trail* are replaced by the high-spirited "Low bridge—everybody down!" of *Erie Canal*. Even home on that tired old range turns out to be a less stifling place than it usually is, *Red River Valley* becomes a haunting tune instead of a grating accompaniment for a clumsy square dance, and the penultimate *Geography Lesson*, linking American towns to the rivers they're on, is absolutely painless pedagogy. Terri's way with an American song may seem a bit refined for the material as we're used to it, but the results are as fresh as a prairie breeze. The instrumental arrangements by Lyn Murray and Robert Thompson are particularly buoyant and agreeable. P.K.

VOODOO CEREMONY IN HAITI. *Voodoo Drums; Nibo Rhythms; Prayer to Shangó; Petro Rhythms; Nago Rhythms; Invocation to Papa Legba; Dahomey Rhythms; Maize* (Continued on page 122)

Gordon Miller Music
We've got a lot to offer the person who really knows stereo equipment.



AKG / AR / Avid /
Dual/United Audio /
Dynaco / Infinity /
Marantz / Phillips /
Pioneer / SAE / Sony /
Soundcraftsman /
Tandberg / TEAC /
Technics / And many
more brands.

Write for more detailed information and a personal quote.

Gordon Miller Music.

8802 Orchard Tree Lane
Towson, Maryland 21204
301-825-7333

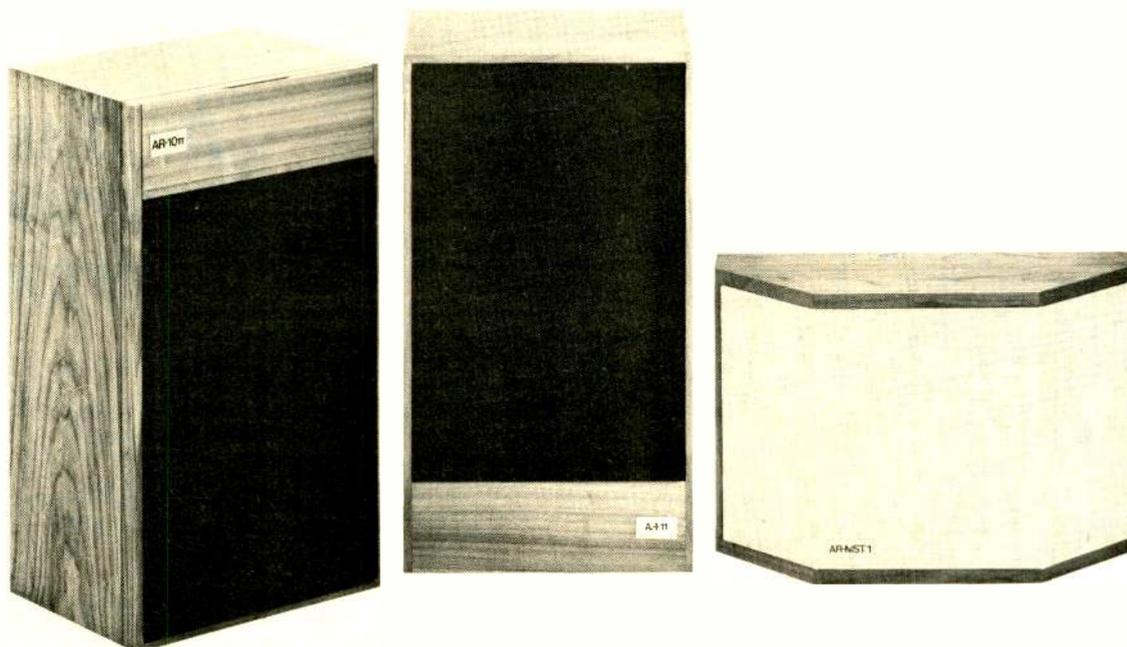
CIRCLE NO. 23 ON READER SERVICE CARD



BACK by popular demand and updated from its original (1966) printing, Music Editor James Goodfriend's *Calendar of Classical Composers* is a listing of the most important composers from the year 1400 to the present, grouped according to the stylistic periods—Renaissance, Baroque, Classic, Romantic, etc.—in which they worked. This 12 x 24-inch aid, guide, and complement to your music listening is printed in color on heavy, nonreflecting stock suitable, as they say, for framing. A key to the calendar, consisting of capsule accounts of the principal stylistic characteristics of each musical period, is included. The whole will be sent rolled in a mailing tube to prevent creases; we pay postage. All you do is send 25¢ to:

Calendar of Classical Composers
Stereo Review, 1 Park Avenue, New York, N.Y. 10016

Introducing A new family of loudspeakers from Acoustic Research



AR-10π

The AR-10π is the most accurate musical reproducer that Acoustic Research has ever made. It shares the characteristics of AR's previous speaker systems, smoothness of response, uniform dispersion, and low distortion. A significant additional feature of the AR-10π is its ability to deliver uniform flat energy response in most listening rooms.

Further, the designed-in performance of the AR-10π is preserved, whether the speaker is positioned against a wall, in a corner, or even in the middle of a room. Setting a single switch, called the 'Woofer Environmental Control', will ensure the correct level of bass energy for any of these positions. It is not possible to do this accurately with conventional loudspeaker designs or equalization techniques.

AR-11

The AR-11 is as accurate a loudspeaker as the AR-10π. Its performance, drivers, and crossover are identical to those of the AR-10π, except that the AR-11 does not incorporate a Woofer Environmental Control and the associated crossover components.

The AR-11 is designed for optimum performance when placed against a wall, as in the conventional bookshelf position, or slightly away from two adjoining room surfaces.

Both the AR-10π and the AR-11 use a 12 inch acoustic suspension woofer, a 1½ inch dome midrange, and a newly designed ¾ inch dome highrange.

AR-MST/1

The AR Miniature Studio Transducer offers at moderate cost the flat energy response of AR's other new speaker systems, together with the high power-handling capability required in many professional applications. Along with the AR-MST/1's small size, light weight, and shallow depth, these characteristics make the speaker especially appropriate for the monitoring of remote-location recordings as well as the accurate reproduction of music in the home, even at relatively high sound levels.

Guarantee

The workmanship and performance of all AR speaker systems are guaranteed for five years.

A complete description of the new family of AR speakers is available free. Mail us the coupon today.

Acoustic Research

10 American Drive
Norwood
Massachusetts 02062
Telephone 617 769 4200



Please send me a complete description of the AR-10π, AR-11, and AR-MST/1 speaker systems.

Please send me the AR demonstration record 'The Sound of Musical Instruments' (check for \$5 enclosed)

SR11

Name _____
Address _____

SAVE

TOP QUALITY GEAR
LOWEST PRICES
PROMPT DELIVERY
SAVE ON FREIGHT
SELECTION

GARRARD BSR
KENWOOD DYNACO
AR SANSUI
DUAL EPI
and more than 50 others

PLEASE REQUEST PRICE QUOTATIONS ON YOUR CHOICE OF QUALITY STEREO GEAR

Component Discounters

DEPT. 1117SR
24020 ONEIDA
OAK PARK, MICH. 48236
313-559-1270

CIRCLE NO. 13 ON READER SERVICE CARD

Save by mail on Music Systems. Our Big Catalog Shows How!

Send today for your **FREE** copy of our 68-page catalog. It's value-packed with complete music systems, top-brand components, accessories, plus hundreds of unique items—and more. There's a handy "Hifi Primer," feature articles, all to help



you have better sound. We have two big warehouses to serve you fast and keep freight low; and, your US and Canadian BankCharges are welcome.

Midwest Hifi[®] Wholesale and Mail Order Division

1626 OGDEN AVENUE (US 34)
DOWNERS GROVE, ILLINOIS 60515 (312) 852-5885
3309 EAST J. W. CARPENTER FREEWAY (Texas 183)
IRVING, TEXAS 75062 (214) 438-5272

Call for a quote. Lines open 1-4 p.m. C.T.
Mail this coupon for your **FREE** catalog.

Mail to: Midwest Hifi, P.O.Box 567, Downers Grove, Illinois 60515

NAME _____
ADDRESS _____
CITY/STATE _____ ZIP _____

Rhythm; Diouba Rhythm. OLYMPIC 6113 \$6.95.

Performance: **The real thing**
Recording: **Fair**

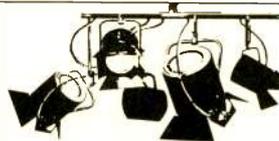
There are certain days in Haiti when the drums begin to pound in the mountains that look down on Port-au-Prince and you know it's time for a voodoo ceremony. Tonight the peasants in the hills will sing and dance to the throbbing rhythms of the drums until a god enters an initiate and he or she *becomes* the god. Here is a hut hung with red and gold flags where two gods fight to possess the same body. Elsewhere young women clad in white pound the mud with their feet, while a *hougan*—a priest—holds out a gourd filled with stones and seeds and the bones of snakes. The initiates pray to the god of fire, the god of virility, the goddess of love. The dancing grows more fevered as the dancers are possessed.

There are varying traditional rhythms and ceremonies in these rites that hark back to Africa, and with the permission of the local priests, Maurice Bitter has been able to record the actual sound of them on location in Haiti and on the island of La Tortue. Here are the moans and the throbbing of the drums, the songs of prayer to the gods, the cries of initiates in moments of possession. Compared to the descriptions of its ceremonies, the sound alone of voodoo is a bit of a letdown; they do these things more effectively when they hype them up for the movies. But this is the real thing, and after a while the trance-like rhythms, the poundings, the shouts, and the chants are indeed infectious, and the power of this sound and music becomes unmistakably evident. P.K.



The Basic Orchestral Repertoire

STEREO REVIEW again presents the annual revision of the Basic Repertoire. In pamphlet form, it includes 1975 disc and tape recommendations for 167 standard orchestral works. For your copy, send .25 in coin, plus a stamped, self-addressed #10 envelope, to Diane Nakamura, STEREO REVIEW, 1 Park Avenue, New York, N. Y. 10016.



THEATER • FILMS

RECORDING OF SPECIAL MERIT

BEN BAGLEY'S BALLET ON BROADWAY. Alice Ghostley, June Carroll (vocals): orchestra, Lehman Engel cond. *High Button Shoes: The Bathing Beauty Ballet. Jamaica: Beach Ballet. Look Ma, I'm Dancin': Mlle. Scandale Ballet. Shangri-La: Father Perrault Ballet. Can-Can: Garden of Eden Ballet. The Girl in Pink Tights: Pas de Deux. L'il Abner: Sadie Hawkins Ballet. Leonard Sillman's New Faces of 1952: Time for Tea.* PAINTED SMILES PS-1364 \$6.98 (from Painted Smiles Records, 1860 Broadway, New York, N.Y. 10023).

Performance: **On its toes**
Recording: **Excellent**

Some years ago the people who think up ideas for albums at RCA got the laudable notion of putting together a record made up of the big ballet numbers from Broadway musicals. Musical comedy's best Broadway conductor, Lehman Engel, was summoned for the job, a nameless orchestra assembled, and the whole

Now the most enjoyable,

do-it-yourself project of your

life—a Schober Electronic Organ!



You'll never reap greater reward, more fun and proud accomplishment, more benefit for the whole family, than by assembling your own Schober Electronic Organ.

You need no knowledge of electronics, woodwork or music. Schober's complete kits and crystal-clear instructions show you— whoever you are, whatever your skill (or lack of it)— how to turn the hundreds of quality parts into one of the world's most beautiful, most musical organs, worth up to twice the cost of the kit.

Five superb models, with kit prices from \$575 to around \$2,300, each an authentic musical instrument actually superior to most you see in stores.

Join the thousands of Schober Organ builder-owners who live in every state of the Union. Often starting without technical or music skills, they have the time of their lives—first assembling, then learning to play the modern King of Instruments through our superlative instructions and playing courses.

Get the full story **FREE** by mailing the coupon TODAY for the big Schober color catalog, with all the fascinating details!

The Schober Organ Corp., Dept. HR-53
43 West 61st Street, New York, N. Y. 10023

Please send me Schober Organ Catalog.
 Enclosed please find \$1.00 for 12-inch L.P. record of Schober Organ music.

NAME _____
ADDRESS _____
CITY _____ STATE _____ ZIP _____

CIRCLE NO. 57 ON READER SERVICE CARD

thing put on tape—where it languished in the vaults until Ben Bagley negotiated for the album he has just released on his own Painted Smiles label. One can immediately think of material conspicuously absent—the great ballets from Bernstein's *On the Town* and *West Side Story*, for instance, and *Slaughter on Tenth Avenue* from *On Your Toes*—but those have been available for some time on records: the material here has *not* been available up to now even on the original Broadway-cast recordings.

Not every band that is here is a winner. But the experience as a whole is exhilarating and brings back many a pleasant memory of dazzling production numbers and delightful dance interludes. Some of the music is played just as it was in the theater; a few pieces have been spruced up for the occasion by arranger Sid Ramin. For openers, there's the *Bathing Beauty Ballet* from *High Button Shoes*, a chase scene in which every tourist on the beach in Atlantic City sets out in dizzy pursuit of two crooks carrying a suitcase full of the green stuff. Here is the real sound of old Broadway at its musical-show-biz best! The *Sadie Hawkins Ballet* from *L'il Abner*, in which every girl pursues a man in the annual race in Dogpatch and is entitled to marry her captive, is big, bang-up, and brassy in the best tradition. In fact, the only downright dreary stretch is a pompous reconstruction of the narration that opened *Shangri-La*, a ghostly stage version of *Lost Horizon*, in which the story of the Dalai Lama of Tibet is introduced to music more suitable for a Charlie Chan movie.

As a bonus, the record offers a touching ballad about two spinster sisters remembering their "debut in 1902" from Leonard Sillman's *New Faces of 1952*, which Mr. Bagley has also been able to rescue from the RCA morgue. The singers are June Carroll and Alice Ghostley, and they're wonderful. *P.K.*

MONTY PYTHON'S FLYING CIRCUS (see Best of the Month, page 89)

RANCHO DELUXE (Jimmy Buffett). Original-soundtrack recording. Jimmy Buffett (vocals); instrumental accompaniment. UNITED ARTISTS UA-LA466-G \$6.98, © UA-EA 466-H \$7.98.

Performance: **Good**
Recording: **Good**

I thought *Rancho Deluxe* was a pretty good little movie; it did have an idea in it, but Frank Perry's direction was so loose and slaphappy that what survived was a fun flick with a lot of fine Montana scenery and Elizabeth Ashley in it. Jimmy Buffett's music had a specialized role of its own; it was supposed to be the kind of twangy stuff ranch hands were exposed to in saloons on Friday nights, and it was supposed to bear, where possible, on the theme. It was *not* supposed to represent Buffett's idea of the music that ought to go into an album. So it is a fairly successful soundtrack effort but not. Buffett's abilities and range considered, very successful as an album. There isn't enough variety in it when you remove it from the film, nor enough style when you know Buffett is the one who gets country harmonica, country steel, and Caribbean vibes to sound good in the same song. I'd sooner spend my album money on a real Buffett recording and shop around for a theater where *Rancho Deluxe* can be seen, and this stuff heard, for two dollars or so. *N.C.*

NOVEMBER 1975

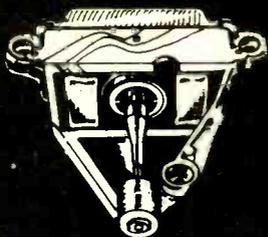


Swiss movement.

Introducing the Lenco L-85 IC transcription turntable. Finely crafted in Switzerland. Precise and simple—with all the things you need to accurately reproduce music and lyrics. A trouble-free, noise-free, belt-drive mechanism makes it all possible.

For the demanding listener, a complete modern technology IC electronics design brings unmatched specifications and features. Finely adjustable stylus pressure for any pick-up cartridge. A precision fully illuminated stroboscope for accurate speed. A 16-pole shielded synchronous motor for long life. Anti-skating device for proper tracking and distortionless performance. And, viscously damped spring suspension.

For convenience, the L-85 IC automatically switches off and raises the tone arm at the end of play. It comes complete with walnut base, dust cover and tone arm. The Lenco L-85 IC is truly built in the Swiss tradition.



A precision Idler Wheel provides extra-fine speed adjustment.

Continuous, fine-adjustment of turntable speed from 30 to 86 rpm's. Available on B-52, B-55, L-75 and L-78 Lenco studio and home turntables expertly crafted in Switzerland. See new standards in turntables at your Lenco dealer. Or write to us for complete details.

Lenco

Marketed by **UAI** Uher of America Inc.
621 S. Hindry Ave., Inglewood, Calif. 90301

CIRCLE NO. 69 ON READER SERVICE CARD

Walt Ostrander, Audioanalyst, As Seen Through The Eyes Of His A-100X Speaker



Stereo Review calls his product "Superb."

Walt Ostrander, Nice Guy



Our works get "the works" before they go into the case. This means each and every assembly. For that reason, Modern Hi-Fi & Stereo Guide can call our sound "deeply satisfying," and we can offer a Six Year Warranty on the entire line.

All the best speakers use quality components. It's the configuration in which they're used that makes the difference. Is our difference worth our overtime? To all concerned, it is. Listen to us. Write and we'll arrange a test. We invite you to show our speaker everything you've got. Except mercy.



Audioanalyst

P.O. Box 262, Brookfield, Conn. 06804
Monstrous About Perfection

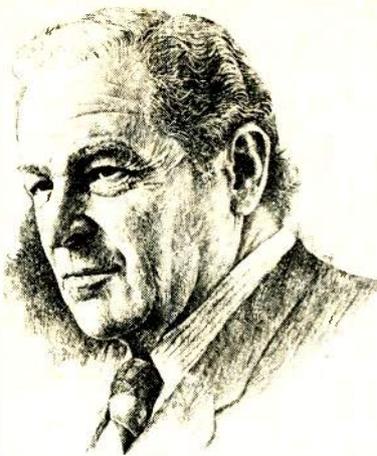
European and Mideastern Distributor:
MBH Frankfurt
6056 Huesen Stamm
44 Industrie Strasse
West Germany

Distributed in Canada by:
Superior Electronics, Inc.

CIRCLE NO. 7 ON READER SERVICE CARD

CHOOSING SIDES

By IRVING KOLODIN



EVERYBODY'S "PICTURES"

WHAT in the world, other than the common calling of musician, could affiliate Sir Henry Wood, Leopold Stokowski, Michael Tuschmalow, Leonidas Leonardi, and Maurice Ravel with Isao Tomita? The first two achieved great fame as conductors; the third and fourth were also conductors, though of modest fame; the fifth was a master composer; the sixth a contemporary Japanese just beginning to become known. The answer is that all, over a period now only fifteen years short of a century, have played a part in the orchestral stretching and reframing, the varnishing, hanging, and rehang of the *Pictures* at an Exhibition Modest Moussorgsky originally wrote for the piano.

The latest of the orchestrations in the sequence above to make its appearance on disc in America is, paradoxically, the earliest of them. This is the effort of Tuschmalow, a Rimsky-Korsakov pupil, to liberate through the medium of the orchestra the prismatic values of Moussorgsky that could not be realized on the piano. The Tuschmalow score has been known to exist for decades—Philip Hale, prince of annotators, mentions it in a program note he wrote for the first performance in America of the Ravel transcription of the *Pictures* in 1924—but it has remained for the enterprising BASF label to produce at long last a recording (BC 22128) by the Munich Philharmonic under the direction of Marc Andrae.

Tuschmalow was only thirty-six when he died in 1896 after a conducting career that had included appearances in Warsaw and Tiflis. Five years earlier he not only accomplished the orchestration of seven of the ten *Pictures* (omitting *Gnomus*, *Tuilleries*, *Bydlo*, and all of the *Promenades* after the first), but heard it in a performance in St. Petersburg conducted by his eminent instructor. The index of Rimsky-Korsakov's *My Musical Life* is bereft of references either to Tuschmalow's or to Moussorgsky's *Pictures*, but the record credits read "M. Tuschmalow/N. Rimsky-Korsakov."

Tuschmalow tends to retain a right-hand/left-hand separation of content in his orchestral disposition, with a recurrent use of low brass to reinforce the low strings, and high woodwinds to give the upper octaves another five fingers, so to speak. The combination of woodwinds and pizzicato strings in such fast-moving sections as the *Ballet des*

Poussins dans Leur Coques and *Limoges* has a good deal of the ballet-scherzo quality of Tchaikovsky. This is by no means a bad thing to have, especially when it is as well realized, orchestrally, as it is here under Andrae's



Sir Henry Wood heard Ravel's orchestration of Moussorgsky's *Pictures* --and promptly withdrew his own

direction. Indeed, had Tuschmalow expanded his idea to include the whole gallery tour originally laid out by Moussorgsky, it might have merit as a homespun, slightly tweedy alternative to Ravel's more subtly woven texture. As it stands, however, it is an absorbing treatment, from an 1891 viewpoint (when Impressionism was hardly yet in flower), of an original that had possibilities not wholly realized even by Moussorgsky. The general utility of

the disc is much enhanced by the inclusion on side two of such little-known examples of Moussorgskiana as a dancy Scherzo in B-flat (1858), which relates to later Moussorgsky in about the same way Stravinsky's E-flat Symphony does to *Petrouchka*; an *Intermezzo in modo classico* (1867) which is closer to the mature Moussorgsky but not much; and a march for the pageant *The Capture of Kars* (1880), a piece of exotica in the manner of Glinka's *Chernomor's March* from *Ruslan and Ludmila*. Individually and collectively they add depth to our total perspective of Moussorgsky, something not at all easy to attain.

TUSCHMALOW's version, for all its obscurity, is the first orchestral *Pictures* of which there is record of an American performance (by the Chicago Symphony in 1919). Sir Henry Wood's effort was initiated in 1915 at the urging of the celebrated English authority on Russian musical matters, Rosa Newmarch. We don't hear anything of this version today, and for a very good reason: Ravel. The mystery of how Serge Koussevitzky came to ask the one man perfectly suited and seemingly pre-ordained for the task to execute his orchestral transcription turns out on investigation to be no mystery at all. In the program commentary previously mentioned, Hale relates that Ravel, whose knowledge of Russian music was encyclopedic, was discoursing one day in 1922 on his admiration for the Moussorgsky *Pictures*. Koussevitzky, already a famous interpreter of Ravel, was prompted to ask if he would be interested in making a transcription of the work for him. The answer, "*Avec plaisir*," was the beginning of the making of the masterpiece with which we are all now familiar.

So familiar, indeed (there are more than twenty versions of it in the current Schwann catalog), that an appreciation of the conscientiousness as well as the craft with which Ravel fulfilled his task has all but vanished. He brought to it, in the first place, the special skills developed in converting into orchestral form not only piano works of his own, but those of Chabrier and Debussy. Next, he determined to avoid the swollen post-Straussian orchestra of the early Twenties and restrict himself (with a few deviations) to the ensemble utilized by Rimsky for *Boris*. He expended every effort to acquaint himself with Moussorgsky's own text, not one that had passed through the hands of some other arranger or editor. Finally, he set for himself the most difficult challenge of all: to leave the music exactly in the register in which Moussorgsky had written it (with negligible exceptions, he did so scrupulously).

The results, of course, have put the world's orchestras and conductors on their mettle ever since Koussevitzky made his own pioneering recording of it on October 28, 1930, a recording that can still be found, very clean and extraordinarily bright-sounding, on French RCA (731025). And there have been other results as well, both positive and negative. One of the positive ones was the amiable Wood's decision, immediately after he had heard Ravel's transcription, to have his own suppressed. Negative ones were a succession of other versions.

The first of these was commissioned by the music-publishing firm of Bessel, which claimed copyright to Moussorgsky material. They agreed to permit Koussevitzky to proceed with his Ravel project if he restricted

the results to his personal use. They then assigned a little-known conductor-arranger to make a transcription they would themselves publish. The result, by Leonidas Leonardi, when premiered in Paris in 1925, prompted the French composer and critic Gustave Samazeuilh to describe him as "temerarious"—a polite way of saying that he had a hell of a nerve. More recently, there has been a Stokowski version which might most accurately be described as the brother of "Fantasia," and which, in its newest incarnation (London Phase 4 21006) is the loudest of them all. It begins with a *Promenade* that sounds like the changing of the guard at Buckingham Palace, and it goes charging on from there. The Lucien Cailliet orchestration, made in the image of the Philadelphia Orchestra when Eugene Ormandy first began to conduct it (the sole recording dates from 1940) has gone the way of most of those who then played it: Ormandy now directs and records the Ravel.

Of the dozens of versions of the Ravel *Pictures* I have heard, the strongest competitor for the first Koussevitzky in imagery and orchestral virtuosity is the Reiner-Chicago Symphony recording of 1959 (RCA LSC 2201). I suggest that those still of a mind to look elsewhere arm themselves first with one infallible spot-check for fidelity to Ravel: listen closely to the opening brass solo in the low register in *Bydlo*. If it isn't the authentic, laboring wheeze of the tuba, which gave Ravel exactly the ponderous sound he wanted for the peasant cart of the title, but is instead the lighter baritone horn substituted by some conductors because it is easier to play and guarantees a quick tape in the recording studio, go no further. The guilty conductor is no man to be trusted with a work scored by a genius who knew precisely why he did everything he did.

Another who has a reason for what he does is Isao Tomita, who has put the *Pictures* through a synthesizer and brought out a collage of voices and electronics which cross a Japanese silk-screen painting with a tin can by Andy Warhol (RCA ARI 1-0838). There are "real" chick sounds in the *Ballet*, and a clatter of bells in *The Great Gate* that lacks only a trumpet fanfare to justify its being called *Carnival of Kiev*. The reason here would appear to be that such arrangements do sell records. I notice that the Japanese company that produced the original tape in its laboratories is called Plasma Music Inc. Some transfusion!

AND where does all this leave the original Moussorgsky *Pictures* for piano? Safe in the hands of Sviatoslav Richter, whose inimitably imaginative and spacious conception may be heard on *Odyssey Y 32223* precisely as it was played in Sofia, Bulgaria, on February 25, 1958. You might, from the very fast pace Richter adopts in the first *Promenade*, wonder what he is up to. But when he stops abruptly and goes into a very vivid *Gnomus*, you realize that one more picture has been added to Viktor Hartmann's original ten: it is a self-portrait of Richter himself as the peripatetic promenader, making the rounds of the exposition, now hurrying, now lingering, now studying. This is a highly sophisticated conception, one realized to perfection. Now, if Richter could only be persuaded to go back to his early passion for conducting and convert these pianistic insights into a fulfillment of Ravel's instrumental glorification.



IF YOU LIKE JACK DANIEL'S, you'll enjoy these old posters and signs from Herb Fanning.

Herb runs the general store right here in Lynchburg. So we're letting him sell some old tin signs reproduced from Mr. Jack Daniel's day. There's an advertising thermometer dating to 1894, a bar sign from the 1904 World's Fair, some turn-of-the-century posters, and a host of other things originally turned out by Mr. Jack. Of course, turning out advertising signs was only a sideline for our founder. You can find a better sample of his art wherever you buy whiskey.



CHARCOAL
MELLOWED
DROPS
BY DROP

Tennessee Whiskey • 90 Proof • Distilled and Bottled by Jack Daniel Distillery
Lem Motlow, Prop., Inc., Lynchburg (Pop. 361), Tennessee 37352
Placed in the National Register of Historic Places by the United States Government.



CLASSICAL DISCS AND TAPES

Reviewed by RICHARD FREED • DAVID HALL • GEORGE JELLINEK • PAUL KRESH
STODDARD LINCOLN • ERIC SALZMAN

BERG: *String Quartet, Op. 3; Lyric Suite.*
Alban Berg Quartet. TELEFUNKEN SAT
22549 \$6.98.

Performance: **Echt Wienerisch**
Recording: **Very good**

The history of the Alban Berg Quartet is of interest. In 1970, four Viennese musicians—on the young side but well established performers and professors in Viennese musical life—organized a quartet and obtained the permission of Berg's widow to use her husband's name. Subsequently, the group came to Cincinnati for a year to study with the La Salle Quartet, widely regarded in Europe as the outstanding protagonists of twentieth-century quartet music. The liner notes for this album even state that "it would be going too far at this stage to say that the musicians from Cincinnati have been surpassed," but that the new Quartet brings a special Viennese quality to their performances of this music. This is undoubtedly right. Of the three masters of the modern Viennese School—Schoenberg, Berg, and Webern—it is only Berg who commands real affection in his native town. Schoenberg wrote four string quartets and a string trio (as opposed to Berg's two quartets), but the name of this group is the Alban Berg Quartet, not the Arnold Schoenberg Quartet. (They do, however, perform Schoenberg, Berg, Webern, and other twentieth-century music in their concerts). One might well describe their playing as Bergian: rich, always on the verge of some kind of torment or ecstasy, but always in tight control.

E.S.

RECORDING OF SPECIAL MERIT

BLOW: *Coronation Anthems and Symphony Anthems. I was glad; God spake sometime in visions; Cry aloud, and spare not; O sing unto the Lord; Blessed is the man.* Choir of King's College, Cambridge; Academy of St. Martin-in-the-Fields, David Willcocks cond. ARGO ZRG 767 \$6.98.

Performance: **Very English**
Recording: **Resonant**

John Blow enjoys somewhat the same historical relationship to Purcell that Haydn had to Mozart: Blow was Purcell's senior, taught him the craft of music, and outlived him. Although the two younger men of this comparison turned out to be composers of genius, their older and longer-living contemporaries were giants in their own way. Haydn has finally come into his own, but Blow is only gradually being recognized as one of the top-ranking English composers. Unfortunately very little of his music has been recorded or, for that matter, issued in modern editions, but those who know his *Venus and Adonis* and *Ode on the Death of Henry Purcell* realize that they are dealing with a composer of passion and breadth. This Argo disc, then, is a welcome addition to the catalog; it offers us five splendid anthems written for such glamorous occasions as the coronation of James II and the opening service of Wren's St. Paul's Cathedral.

The symphony anthem as a form of music is a product of the Restoration. Music had been banished from the Chapel Royal during the Commonwealth. When Charles II returned to the throne in 1660, he not only reinstated music in the chapel, but he also profoundly changed the style by frowning on the old solemn contrapuntal manner of writing and insisting that his composers turn to the French grand motet as their model. He wished royal grandeur to be displayed in opulent choruses, brilliant solo singing, and, above all, in lively instrumental interludes or "symphonies" (hence the term "symphony anthem"). Blow served his king well: out of a hundred-plus anthems, some thirty use orchestral forces.

Typical of the Restoration, Blow's harmonies sound strange on first hearing. The music

is full of cross relations, unusual progressions, and wild experiments with chromaticism. The choral writing is massive and thick, while the solo passages, using combinations of counter-tenor, tenor, and bass, are ornate in their detail. The prosody is exquisite, and lavish care is given to underlining each word with its own particular musical expression. Thus this music is strong, full of surprises, varied in its textures, and never dull.

The Choir of King's College has a sound all its own, the product of boy sopranos, counter-tenors, and mature male voices in an echoey, resonant ambience. The soloists sing from their places in the choir, not from special places in front of the ensemble as in theater performances. This very English sound is perfectly caught on this record. Although one might wish for stronger soloists at times, the overall musical effect is one of splendor. S.L.

CHOPIN: *Twenty-four Preludes, Op. 28; Prelude in C-sharp Minor, Op. 45; Prelude in A-flat Major, Op. posth.; Barcarolle in F-sharp Major, Op. 60.* Garrick Ohlsson (piano). ANGEL S-37087 \$6.98.

Performance: **Restrained**
Recording: **Flawed**

RECORDING OF SPECIAL MERIT

CHOPIN: *Twenty-four Preludes, Op. 28; Prelude in C-sharp Minor, Op. 45; Prelude in A-flat Major, Op. posth.* Claudio Arrau (piano). PHILIPS 6500 622 \$7.98, © 7300 335 \$7.95.

Performance: **Marvelous**
Recording: **Excellent**

Garrick Ohlsson, as he has shown in earlier recordings, is a fine Chopin player, as sensitive as he is skilled, and also both knowledgeable and articulate as a commentator. In his annotation for his latest release he describes the barcarolle as "perhaps even my favorite in the whole piano literature," and he seems to offer an insightful performance of it: unfortunately, the entire second side of the Angel disc is disfigured by wavery tone—whether from tape stretch or off-center pressing I cannot tell, but it makes for uncomfortable listening. Side one is not so affected, but, even without the sonic distortion, I find Ohlsson's

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.

way with the music less fetching than I like: it is as if the pianist had consciously rebelled against the "salon" context in which the preludes are so often approached and sought to replace it with a somewhat dry, "scholarly" restraint and deliberate tempos, emphasizing (or striving for) a Bach-like quality. It is an interesting concept, but it dissipates the essential romanticism of the music—a quality transmitted with both power and eloquence in Ohlsson's splendid set of the polonaises. Angel, incidentally, has not put any separating scrolls between the numbers in Op. 28, which means that the only ones that can be spotted visually are No. 1, of course, and No. 17, which opens side two.

Claudio Arrau, unencumbered by any self-consciousness about the romantic nature of the preludes, plays with the natural expressiveness and unforced intensity that have always marked his Chopin, mellowed now by decades of affectionate familiarity. Some of his tempos may in fact be slower than Ohlsson's in the respective pieces, but I never feel that Arrau has too tight a rein: everything moves at a natural and apparently self-determined pace, and even the tiniest of the preludes are fully characterized—always with eloquence, frequently with poetry. Arrau's way of countering the "salon" image is a big, uninhibited tone which some listeners, I'm sure, will find a bit larger than life, but which I find agreeably consonant with the whole grandly proportioned approach. This is a simply marvelous revivification of thrice-familiar material, music-making on a level which, as so often with Arrau at his best, renders comparisons meaningless. The piano sound, rich and unrestricted, is about the most realistic Philips has yet provided for the instrument, and there *are* bands separating the pieces. R.F.

CRUMB: *Black Angels*. RAXACH: *String Quartet No. 2*. LEEUW: *String Quartet No. 2*. Gaudeamus String Quartet. PHILIPS 6500 881 \$7.98.

Performance: **Excellent**
Recording: **Excellent**

This recording has several interesting points, not the least of which is that it is one of the rare European recordings of an American work. George Crumb's *Black Angels*, for string quartet, is one of the most striking pieces in recent years for the medium, partly because Crumb really breaks the boundary lines. His quartet is amplified, plays percussion instruments, and vocalizes: Crumb specifies (if I'm not mistaken) that in live performance the players should be masked. The music, full of traditional rhythmic and melodic bits and pieces surrounded by Crumb sonic fantasies, is a series of morbid, obsessive, fascinating reflections on death. The subtitle gives the mood: "Thirteen Images from the Dark Land." Brrrrr!

Gaudeamus is the name of a Dutch foundation for contemporary music as well as of an excellent string quartet. The Dutch works by Enrique Raxach and Ton de Leeuw have a number of aspects in common with Crumb's music. The former subtly amplifies and alters the string sound with electronic extensions. The latter—which also exists in an electronically extended version *not* heard here—carries a motto from Dylan Thomas: "And death shall have no dominion." It has some of the dramatic concerns of the Crumb quartet (including the requisite references to the *Dies Irae*), although it is not as highly charged. E.S.

HILLER: *Quartet No. 6 for Strings* (see JOLAS)

JANÁČEK: *Suite for String Orchestra* (see SUK)

JOLAS: *Quatuor III*. HILLER: *Quartet No. 6 for Strings*. Concord String Quartet. COMPOSERS RECORDINGS INC. CRI SD 332 \$6.95.

Performance: **First-rate**
Recording: **Very good**

It may seem strange to find far-out composers still working in such a traditional medium as the string quartet, but when you have an ensemble as good and as dedicated as the Concord it must be irresistible to write for them.

Betsy Jolas, born and resident in Paris, is partly American by background and education. Her Third Quartet is a set of etudes on contemporary string playing. The Hiller piece is a set of etudes of a different sort. Its three movements are based on environmental sounds reworked by various methods into string-quartet music. At least that's what the composer tells us; I doubt that anyone could have figured it out from the music alone. Still, there is a crazy, disconnected quality that could, presumably, only stem from real life itself. This music (like real life) makes no sense to me whatever, but its insane humor has life's nutty appeal. E.S.

LEEUW: *String Quartet No. 2* (see CRUMB)

LISZT: *Piano Adaptations*. *Polonaise from Eugen Onegin*; *Illustration No. 2 ("The Skaters")* from *Le Prophète*; *Waltz from Faust*; *Reminiscences de Norma*. Michele Campanella (piano). PHILIPS 6500 310 \$7.98.

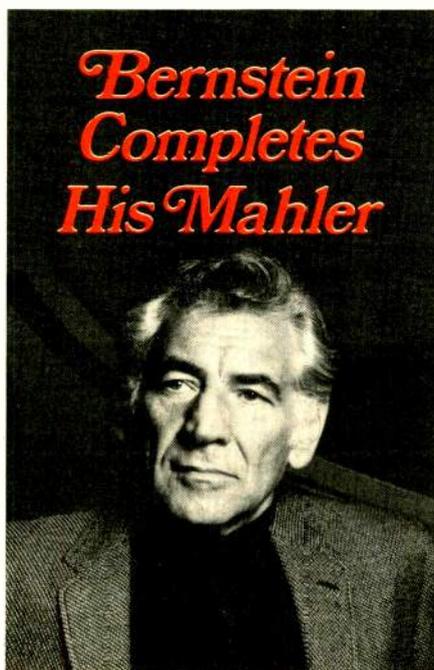
Performance: **Unexciting**
Recording: **Clear**

A Liszt pianist by the name of Campanella is

"a peak of almost unbearable intensity in the climactic passage..."

WITH his new Columbia recording of the opening Adagio movement of Mahler's unfinished Tenth Symphony (using the composer's own scoring in the authorized edition of Dr. Erwin Ratz), Leonard Bernstein has completed his recorded documentation of Mahler's symphonic works. This is heartrending music: its emotional impact is on the level of the famous Adagietto of the Fifth Symphony or the *Abschied* movement of *Das Lied von der Erde*. No stops are left unpulled in Bernstein's lovingly detailed and totally committed reading: it is passionate and eloquent and reaches a peak of almost unbearable intensity in the climactic passage near the end where the high trumpet is heard in searing dissonance over the orchestra. This is the only version of the Adagio that is currently available on a single disc. I have not heard *all* the others, but George Szell's musically faultless account (Columbia M2-31313) sounds quite unemotional by comparison.

If it is possible for a Mahlerite to remain unmoved by all this, he will surely surrender unconditionally to the absolutely irresistible *Kindertotenlieder* on the reverse side. Here the Israel Philharmonic Orchestra matches its New York counterpart in excellence, with



shining contributions from the French horn and English horn soloists in the first and third songs, respectively. Bernstein paces the music with leisurely solemnity, yet never without rhythmic animation, and Janet Baker's singing is a model of beautiful tone quality, superb legato, and clear diction. She reaches unexpected heights of emotion in the third song at the passage "*Wenn du freudenhelle trätest mir herein, wie sonst, mein Töchterlein,*" and delivers the opening phrases of the last song powerfully against the violent orchestral statement, retaining nonetheless a lovely tone quality. This is not only great singing, but simply inspired collaboration as well.

I noted a certain amount of "enhancement" in the recorded sound of the *Kindertotenlieder*; the Adagio is more natural and technically just about perfect.

—George Jellinek

MAHLER: *Symphony No. 10, Adagio*. New York Philharmonic, Leonard Bernstein cond. *Kindertotenlieder*. Janet Baker (mezzo-soprano); Israel Philharmonic Orchestra, Leonard Bernstein cond. COLUMBIA M 33532 \$6.98.

TRUE. BEST THINGS COME IN 2'S

BEST THINGS COME IN TWO'S

Victoria de los Angeles
Songs of the Auvergne
Poem of Love and the Sea
Lamoureux Concerto Orchestra
Jean-Pierre Jacquelin

S-36897

CANTELOUBE
Songs of the Auvergne
Album 2
De los Angeles
Lamoureux Concerto Orchestra - Jacquelin

S-36898*

DE LOS ANGELES is wonderfully irresistible in this repertoire. The poetic beauty of these folk songs has never been more movingly communicated. Sung in the original Auvergne dialect, the beloved soprano gives them a unique loveliness all her own.

Karajan Conducts Wagner
Album 1
TANHAUSER (Overture & Bacchanale)
LOHENGRIN (Prelude to Act 1)
TRISTAN UND ISOLDE (Prelude & Liebestod)
Berlin Philharmonic Orchestra

S-37097*

Karajan Conducts Wagner
Album 2
DIE MEISTER SINGER (Overture)
THE FLYING DUTCHMAN (Overture)
LOHENGRIN (Prelude to Act 3)
PARSIFAL (Prelude to Act 1 & 3)
Berlin Philharmonic Orchestra

S-37098*

KARAJAN has achieved the new standards of performance for these giant orchestral scores. Sensuous, dramatic and powerful, never have they been played so beautifully. Towering structures of sound, triumphantly engineered.

HAYDN
PIANO CONCERTOS IN D & G
MICHELANGELO
Zurich Chamber Orchestra - De Stolz

S-37136

SCHUMANN CARNAVAL OP. 9
THREE PIECES FROM
"ALBUM FÜR DIE JUGEND"
MICHELANGELO

S-37137

MICHELANGELO returns to LP after an absence of more than twelve years. Both newly recorded programs reveal the pianist's infinite technique and intense individual style; his drive for perfection superiorly realized. One of the century's greatest pianists, indeed!

Rachmaninoff
Symphony No. 1
London Symphony Orchestra
Previn

S-37120

Rachmaninoff
Symphony No. 2
Previn
London Symphony

S-36954*

PREVIN, orchestra and EMI/Angel engineers provide recordings of these highly contrasting works of award-winning caliber. The drama and toughness of the First is awesome; the sensuousness of the Second, achingly beautiful. Previn is regarded as today's foremost Rachmaninoff conductor. And for good reason.

Orchestral Music of Ravel
Album 1
BOLERO
Rhapsodie Espagnole - La Valse
Sheherazade overture
Orchestra de Paris
MARTINON

S-37147*

Orchestral Music of Ravel
Album 2
DAPHNIS AND CHLOE
L'heure d'été
Orchestra de Paris
MARTINON

S-37148*



MARTINON conducts the first two programs in his planned series of five albums devoted to the complete orchestral music of Ravel. Superb follow-up to his just completed Debussy and Saint-Saëns Cycles.
*Compatible Stereo/Quad

almost too good to be true: I will regretfully omit the obvious puns and repertoire recommendations. Here is still another set of Liszt arrangements—Tchaikovsky, Meyerbeer, Gounod, and Bellini testify to Liszt's incredibly catholic (and just wonderfully bad) taste—in very precise, dry, competent, unexciting performances. The playing is solid, but it never rises in spirit to any of those Lisztian Grand Moments. *E.S.*

RECORDING OF SPECIAL MERIT

LISZT: *Tasso, Lamento e Trionfo; From the Cradle to the Grave; Mephisto Waltz No. 1.* Orchestre de Paris, Sir Georg Solti cond. LONDON CS-6925 \$6.98.

Performance: **Sensational**
Recording: **Outstanding**

The combination of conductor and repertoire here is such a "natural" that one can only wonder why London/Decca didn't come up with it years ago. Georg Solti's Liszt is sensational in the best sense—incomparably brilliant and exciting, but also making the most of these works musically. Mawkishness and bathos are utterly banished; even the gondolier's tune in *Tasso* is invested with something reasonably close to nobility, and the whole piece comes off with incredible freshness. The initial statement of the *Mephisto Waltz* theme may not have the voluptuous lilt of the famous old Koussevitzky version, but Solti's eruptive drive is otherwise all-surpassing.

From the Cradle to the Grave, Liszt's very last work for orchestra, followed his other dozen symphonic poems by some twenty-five years and is probably the most original of the lot, with a stormy middle section framed by a quiet beginning and end. Solti brings such intensity and conviction to his performance as to persuade the listener that this is really great music; at the very least, it is unarguably beautiful in the extraordinary outer sections.

London's outstandingly rich sound compounds the irresistibility of this package. Now we must have more of Solti's Liszt—if not all the symphonic poems and the two symphonies, at least his revitalization of *Les Préludes* and *Hungaria*. *R.F.*

MOUSSORGSKY: *Pictures at an Exhibition* (see Choosing Sides, page 124)

MOZART: *Piano Concerto No. 20, in D Minor (K. 466); Piano Concerto No. 21, in C Major (K. 467).* Géza Anda (piano); Vienna Symphony Orchestra, Géza Anda cond. RCA ARL1-0610 \$6.98. © ARS1-0610 \$7.98. © ARK1-0610 \$7.98.

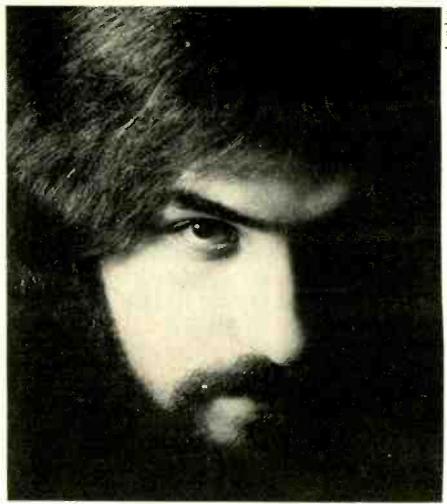
MOZART: *Piano Concerto No. 20, in D Minor (K. 466); Piano Concerto No. 21, in C Major (K. 467).* Géza Anda (piano); Vienna Symphony Orchestra, Géza Anda cond. EURODISC □ 86947 MK \$7.98.

RECORDING OF SPECIAL MERIT

MOZART: *Piano Concerto No. 12, in A Major (K. 414); Piano Concerto No. 21, in C Major (K. 467).* Radu Lupu (piano); English Chamber Orchestra, Uri Segal cond. LONDON CS 6894 \$6.98.

Performances: **Lupu more elegant**
Recordings: **London cleaner**

Back in the Sixties, Géza Anda, doubling as soloist and conductor, recorded all twenty-



RADU LUPU
Vital, warm Mozart concertos

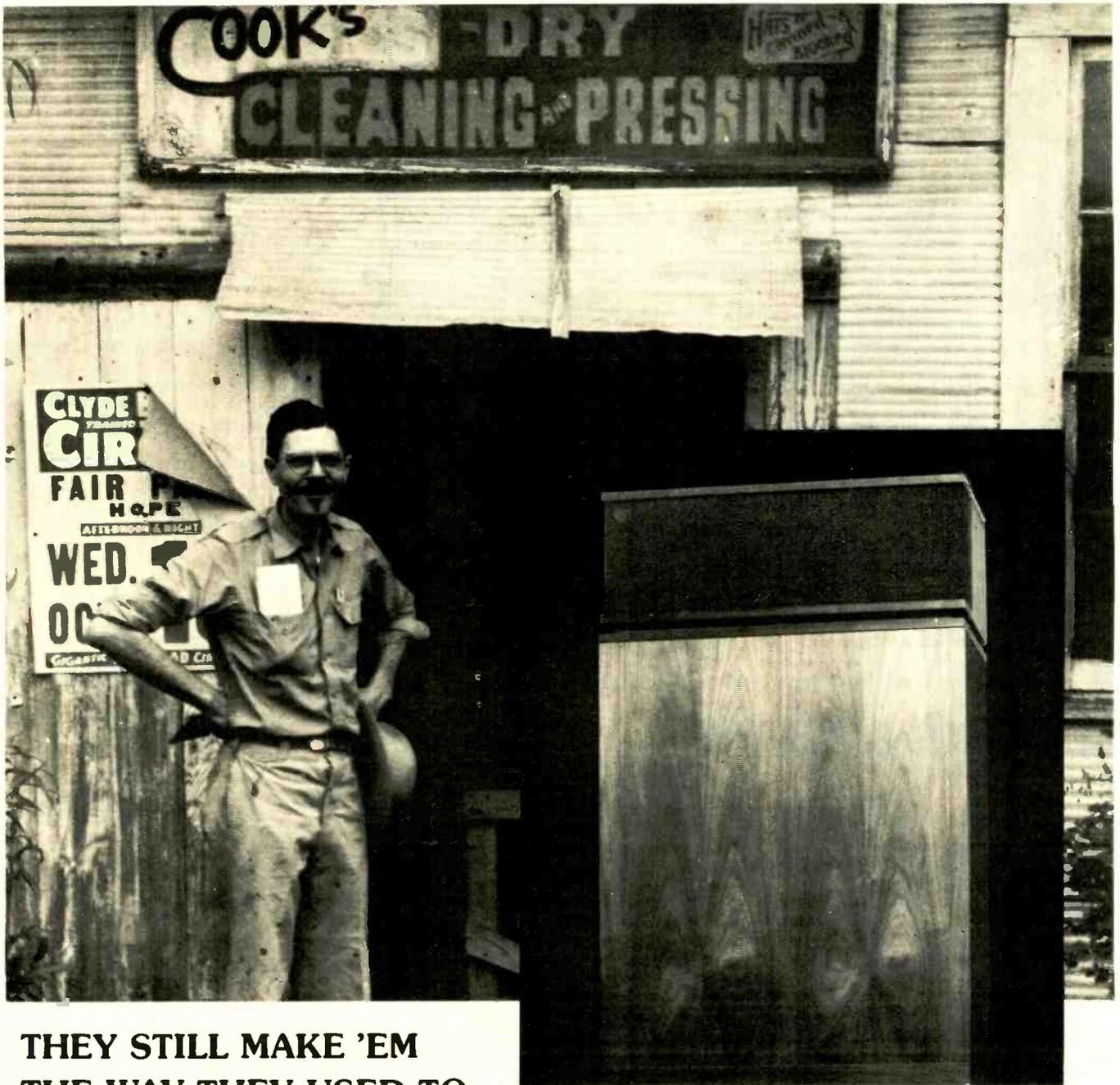
five Mozart piano concertos for Deutsche Grammophon, maintaining throughout a generally excellent standard of musicianship and backed by an orchestra of properly modest proportions and a knowledgeable recording crew. He fares less well, in my opinion, in the two concertos he has recorded anew for the German Eurodisc label, with RCA issuing an American mastering and pressing from the same sessions. The positive characteristics of Anda's solo performances remain essentially the same as those in the Salzburg series—at best endowed with rhythmic urgency in the fast movements and a nice singing line in the slow ones—but they are also afflicted occasionally by a curious woodenness of phrasing and a touch of mannerism, the latter evident in his handling of the lyrical subject in the first movement of K. 466. Anda's own cadenzas in K. 466 strike me as being on the perfunctory side.

I also find the Vienna Symphony, an apparently larger body than the Salzburg group, somewhat less responsive; the strings tend to overpower the woodwinds, and the piano is placed rather far forward of the orchestral ensemble. The recording was made in the reverberant Baumgarten Casino, just outside Vienna, which makes for a pleasant sonic ambiance, but not for the ultimate in crisp and clear textures called for in Mozart.

The difference in sound between the Eurodisc quadrasonic pressing (SQ matrix) and the RCA two-channel disc is marked—not because of the quadrasonics per se, which are of the ambient type, but because of equalization curves adhered to in tape-to-disc mastering: Eurodisc is distinctly bass-heavy, while RCA is lighter on the low end, brighter, and a bit cleaner.

For my taste, however, the Mozart of Radu Lupu and the English Chamber Orchestra is far preferable on every count. Crispness, elegance, vitality, and warmth characterize the performances. Lupu has a light hand, even in the symphony-dimensioned C Major, but never to the point of becoming precious. His finales are vibrant, his slow movements lyrical, and he has a truly luminous piano tone. The woodwind-string balance of the English Chamber Orchestra under Uri Segal's baton is ideal, and the sound reproduction is excellent. In short, this recording leaves almost nothing to be desired. *D.H.*

(Continued on page 130)



THEY STILL MAKE 'EM THE WAY THEY USED TO

Plywood construction

Not in the same \$10 a month shed where Klipsch started. Not with the same machinery. But KLIPSCHORN® loudspeakers, produced in the modern Klipsch plant, are still made from the same designs developed in the 1940's, utilizing the same basic principles of sound reproduction. The same quality of components has been maintained. And every

loudspeaker is still individually tested under Paul Klipsch's supervision.

That's why a KLIPSCHORN purchased thirty years ago can be updated with a few minor revisions. That's why the KLIPSCHORN you buy today will still be the finest available loudspeaker thirty years from now.

Klipsch and Associates, Inc. P.O. Box 688 S-11 Hope, Arkansas 71801



Please send me your latest brochure and list of dealers.

Name _____

Address _____

City _____ State _____ Zip _____

"What good is money if it can't buy music?" —John Dyer-Bennett, Puds Audio, Albany, Cal.

CIRCLE NO. 32 ON READER SERVICE CARD



Realistic STA-90
Stereo Receiver.
About \$360

Realistic? Pioneer? Marantz?

Who's got the most customers?

Ask a funny question — get a surprising answer. Realistic* wins hands-down in North America. Because our famous audio brand also goes onto other kinds of sound equipment. Such as Citizens Band and powerful radios. In 1974 over 3,000,000 units of Realistic gear got sold to customers who knew whom to bet on in a tough year.

But music lovers have been fed so many claims about quantity and quality, we'll just say this: it's obvious Realistic & Competition are great music machines. So if more people are coming our way there must be a reason. Come see if it's lower prices. Or exclusive features. Or both!

Radio Shack^{*} Great sound since 1923

Over 4000 Stores/Dealers in the USA, Canada, England, Australia, Belgium, Germany, Holland

^{*}Registered Trademark.

CIRCLE NO. 51 ON READER SERVICE CARD

Why any cartridge (even ours) with an elliptical stylus must be considered just a bit old-fashioned.

As a premium stylus, elliptical designs have only one real advantage over a Shibata stylus: lower cost. Which is why we still offer them.

But when it comes to performance, a Shibata stylus is far, far better. It provides the small scanning radius needed to track highs (up to 45 kHz for CD-4), but without the penalty of requiring extremely low stylus force settings.

In fact, even when tracking at up to 2

grams, a Shibata stylus is easier on your records than an elliptical stylus trying to track at 1/2-gram! New records last longer, old records sound better, and you can play every kind of two or four-channel record made.

All Audio-Technica Universal Series cartridges have genuine Shibata styli. Anything less would be false economy for you...and out-dated technology for us. Prove it to yourself today.



AT12S



AT145a



AT15Sa
AT20SLa



audio-technica INNOVATION / PRECISION / INTEGRITY

AUDIO-TECHNICA U.S., INC., Dept. 115F, 33 Shiawasssee Ave., Fairlawn, Ohio 44313
Available in Canada from Superior Electronics, Inc.

RECORDING OF SPECIAL MERIT

ORFF: *Catulli Carmina*. Ute Mai (soprano); Eberhard Büchner (tenor); Jutta Czapski, Günter Philipp, Wolfgang Wappler, Gerhard Erber (pianos); Leipzig Radio Chorus and Symphony Orchestra, Herbert Kegel cond. PHILIPS 6500815 \$7.98.

Performance: **Top-drawer**
Recording: **Very fine**

Some years ago, in comparing Ormandy's and Jochum's versions of Orff's *Catulli Carmina*, I noted the essentially theatrical quality of the German rendition as against the concert presentation style of Ormandy and his forces. I found the soloists on Jochum's Deutsche Grammophon disc superior, but I had reservations about both the chorus and the technical quality of the recording.

Now Philips, with this 1974 East German recording, seems to give us the best of everything, superb soloists, an absolutely wonderful chorus (which must bear a very heavy part of the musical load), and a quality of recorded sound remarkable in its sense of depth and lateral space as well as in its conveyance of every detail of solo and choral vocal timbre.

Like Jochum's, the Leipzig performance is played as *theater*; the voices assume primacy throughout, the four-piano/percussion ensemble providing support and vivid splashes of color but never taking the spotlight. The Rutgers Choir in Ormandy's version is full of zest and vigor, but the Leipzig Choir adds refinement, tonal luminescence, and subtlety of nuance quite beyond what I have heard elsewhere, on or off records, in this piece.

In the Orff scores succeeding *Carmina Burana*, theatrical and word-magic elements assume more importance than the musical content, which probably is what enrages a good many people. If you are among those responsive to a certain type of ritual magic theater, however, this recorded realization of the *Catulli Carmina* is well worth your while.

D.H.

PURCELL: *The Fairy Queen* (see Best of the Month, page 88)

RAVEL: *Gaspard de la Nuit; Prélude; Menuet sur le Nom d'Haydn; A la Manière de Borodin; Menuet Antique; Pavane pour une Infante Défunte; A la Manière de Emmanuel Chabrier*. Pascal Rogé (piano). LONDON CS-6895 \$6.98.

Performance: **Brilliant, but . . .**
Recording: **Excellent**

This is the second installment in Pascal Rogé's complete Ravel cycle. Like the first, issued about a year ago (on London CS-6873, comprising the *Sonatine, Le Tombeau de Couperin*, and the *Valses Nobles et Sentimentales*), it is an impressive package. Rogé, who is only twenty-four now, is a *musical* pianist, with power, taste, and a fine feeling for color, and the idea of coupling his brilliant *Gaspard* and sensitive *Pavane* with the four little pieces usually confined to three-disc packages of Ravel's piano music may be a further enticement to collectors trying to avoid duplications. These excellently recorded performances seem just a bit superficial to me, but there are many who regard that as quite in keeping with Ravel's alleged coolness. I find no less brilliance, and a good deal more inner fire, in the *Gaspard* of Vladimir Ashkenazy (London CS-6472), Ruth Laredo (Connois-
(Continued on page 134)

The difference between the Dokorder 7100 and Teac's 2300S is about two miles of tape.



The DOKORDER 7100 costs almost \$100 less than the TEAC 2300S. That's about ten reels of the finest tape you can buy, which will give you 12 hours of recording time, which is equivalent to some 24 albums.

That's an important advantage because, like anything else you drive these days, a tape recorder takes a lot of expensive fuel to get you where

you're going and it's no fun to start out empty.

Just as important, you won't have to give up anything important to get that tape. When you compare functions, features, specs and performance you'll see our tape recorder is as good as theirs.

But when you compare price you'll find us miles apart.

After you look at Teac listen to

DOKORDER



| | TEAC 2300S | DOKORDER 7100 |
|---------------------------------------|---------------------|---------------------|
| Motors | 3 | 3 |
| Heads | 3 | 3 |
| Frequency Response at 7½ ips | ±3 dB, 40-24,000 Hz | ±3 dB, 30-23,000 Hz |
| S/N | 58 dB | 58 dB |
| Wow and Flutter at 7½ ips | 0.08% | 0.08% |
| Manufacturer's suggested retail price | \$499.50 | \$399.95 |

Features and specifications as published by respective manufacturers in currently available literature.

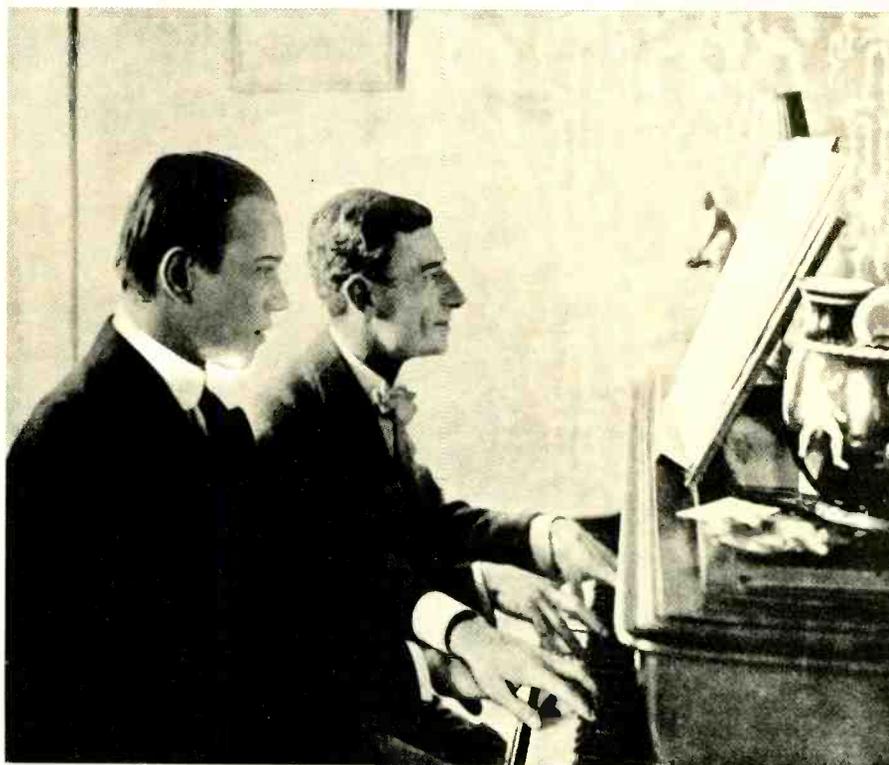
5430 Rosecrans Avenue, Lawndale, California 90260

CIRCLE NO. 17 ON READER SERVICE CARD

“the work sounds as if it had been composed only yesterday...”

Dancer Vaslav Nijinsky and composer Maurice Ravel play the score of *Daphnis et Chloé* four-handedly. Ravel wrote the ballet for Nijinsky and the Ballets Russes; it had its première in Paris in 1912.

Maurice Ravel's “Daphnis et Chloé”



RAVEL's magical choreographic symphony has had very distinguished recorded performances over the years, those of Munch, Monteux, and Dorati springing most immediately to mind. Lorin Maazel's new release with the Cleveland Orchestra belongs with the best of them, and it has the benefit of London's very finest recording. I find Maazel's traversal of the opening scene through Dorcon's dance a bit on the offhand side, but from that point on, performance and recorded sound are simply magical. There is no question that Maazel has kept the Cleveland Orchestra up to the level achieved under George Szell; all the old zing and precision are there, together with utterly dependable first-desk playing in the many treacherous passages Ravel wrote into the score (I think particularly of the French horn passages that come after Dorcon is laughed off the scene).

Particular plaudits are due the Cleveland Orchestra Chorus and its director Robert Page for the lovely phrasing and unerring intonation they bring to the *a cappella* episode that precedes the entrance of Bryaxis and his band of pirates. Here is exactly the disembodied quality I found lacking in the recent Minnesota Orchestra recording of the excerpts. The London recording engineers are to be praised, too, not only for the excellence of the orchestral sound achieved here, but especially for careful maintenance of the extremely critical choral-orchestral balances throughout.

—David Hall

RAVEL: *Daphnis et Chloé*. Cleveland Orchestra and Chorus, Lorin Maazel cond. LONDON CS 6898 \$6.98.

It should, in theory, be difficult, when one has just welcomed a superb new recording of a major masterpiece to the catalog, to summon up a comparable enthusiasm for another new recording of that work which follows hard on the heels of the first. In the present case, though, despite my agreement with everything David Hall says about the new Maazel recording of Ravel's *Daphnis et Chloé*, the even newer Pierre Boulez recording is something too special to let pass with only subdued praise.

Frankly, the Boulez simply does not sound like the same piece of music. I hasten to inform the reader, first of all, that I am reviewing the disc from a stereo acetate, pressings not yet being available; and second, that my reactions are to the overall impact of the disc, for I cannot in this instance separate out the impact of the performance from that of the recording. Just why Boulez's recording should sound totally different from any other of the work is difficult to say. He plays the same score, his tempos are not significantly different, the details at any given point in the score are not strikingly unusual. But the work sounds as if it had been composed only yesterday: that is to say, it sounds new and fresh and modern and important, not a work that is a known part of any tradition of composition or of performance but one that might well begin such a tradition.

In specifics, there is an enormous amount of low bass to be heard (performance or recording?) which adds an undercurrent of menace and a feeling of strength I have never experienced in this music before. There is no "Impressionist" haze over the work, but rather

er than gaining thereby in orchestral brilliance (the aim of conductors who prefer to conduct only the second suite and that as a virtuoso showpiece), the music simply takes on openness and clarity. The chorus is extraordinary, because at times it is so integrated into the total texture that it is unrecognizable as a chorus, and because at other times it adds just the precise touch of human involvement that the score seems to demand at that moment. Rather than being an *ad libitum* appendage, it has become the most subtle of musical instruments and very nearly the tonal core of the work.

I would not disparage other recordings of *Daphnis*. I got to know the piece through Ansermet's first recording and still admire both that and his later one: I found things in the Bernstein performance that I had not found elsewhere, and I fell totally in love with Monteux's marvellous rendition—as I did with Maazel's. But Boulez's is something very special: unique, powerful, and in a strange way disturbing. Like a number of his other recordings, it makes one wonder if one has ever really understood the music before. I only hope that the incredible sound that producer Andrew Kazdin has captured so brilliantly gets through to the final pressing. The disc will also be released in SQ quadrasonic format, and I look forward to hearing the additional sense of spaciousness that mode can provide.

—James Goodfriend

RAVEL: *Daphnis et Chloé*. Camarata Singers; New York Philharmonic, Pierre Boulez cond. COLUMBIA M 33523 \$6.98, □ MQ 33523 \$7.98.

How to keep the musical excellence you've already paid for:

Your tape system

The tape equipment of your system is your musical memory bank. It is the **one** area where only the best makes sense. Choose carefully, select a recording instrument that neither adds nor detracts from the sound you put into it. Few machines really meet this requirement. The Revox A77 does — and by a safe margin.

Your tape recorder and your money

A **truly** professional quality tape unit is your wisest audio investment. It will last for years and years.

Witness the number of Revox machines built more than 20 years ago that are still in service! It's hardly surprising then, that Revox recorders command very high prices second or third hand — if you can find them available!

Revox owners seldom change — other than to a later model Revox.

It's also interesting to note that our warranty records show that on average our users have bought 2 or 3 other makes before choosing Revox. Then we read the lament "I only wish I'd bought a Revox sooner."

When you play it later, will it still sound the same?

At first sight this could seem an unnecessary question. It's not though. In the course of time a high fidelity enthusiast upgrades one or more units in his system.

With time, rising affluence plus advancing technical innovation in all aspects of audio, will bring better reproduction within the scope of all.

The recordings that you make now could, therefore, sound even better in the future — when, as finances permit, you add a better amplifier or loudspeaker to your equipment.

Conversely, a poor recording made now will sound **really** inferior when exposed to more exacting playback.

With the Revox A77 you will **retain the excellence** of every recording to enjoy now — and perhaps appreciate **even more** in the future.

So visit your nearest Revox Dealer for full information and a demonstration.



Record it on a Revox A77

REVOX

Revox Corporation
155 Michael Drive
Syosset, New York
U.S.A. 11791

Revox International
Regensdorf 8105 ZH
Althardstrass 146
Switzerland

Revox
C.E. Hammond Co. Ltd.
Lamb House, Church Street
London, England W4 2PB

Revox Canada, Ltd.

The illustration contains optional extras.

© Admark International

Please tell me where I can see and buy

Revox A77
 Good used machines*

Name _____ Address _____ City _____ State _____ Zip _____

*As and when available from our dealers.

BHE

The Nakamichi Revolution.



The Cornerstone.

The Nakamichi 1000 Tri-Tracer Cassette System, an achievement of such significance that it created a virtual revolution in cassette recording.

The first cassette deck to employ a true three head configuration—separate erase, record and playback heads—the Nakamichi 1000 attains a level of performance that rivals that of professional reel-to-reel recorders.

In every important respect, except frequency response, wow and flutter, speed stability, distortion and signal-to-noise ratio, the Nakamichi 1000 sets new performance standards.

In fact, the performance capabilities of the 1000 are so awesome that High Fidelity (August 1973) characterized them as, "... well beyond the capability range of cassette decks as we've come to know them and into a range that makes possible professional applications that would be virtually unthinkable otherwise."

Get in the forefront of the revolution now.

For complete information and the name of your nearest dealer write: Nakamichi Research (U.S.A.) Inc., 220 Westbury Avenue, Carle Place, N.Y. 11514. In California: 1101 Colorado Avenue, Santa Monica 90404.



NAKAMICHI

seur Society CS-2005), or Abbey Simon (Turnabout TV-S 34397). Simon's, I think, may be the most magical of all, and is surely the one most enlivened with a sense of *involvement*. His budget-price three-disc set of *all* of Ravel's music for solo piano (Vox SVBX-5473) was justly extolled in these pages by Irving Kolodin last May. R.F.

RAVEL: *Le Tombeau de Couperin* (see The Basic Repertoire, page 54)

RECORDING OF SPECIAL MERIT

RAVEL: *Trio in A Minor; Sonata for Violin and Cello*. Ruth Laredo (piano); Jaime Laredo (violin); Jeffrey Solow (cello in Trio); Leslie Parnas (cello in Sonata). COLUMBIA M 33529 \$6.98.

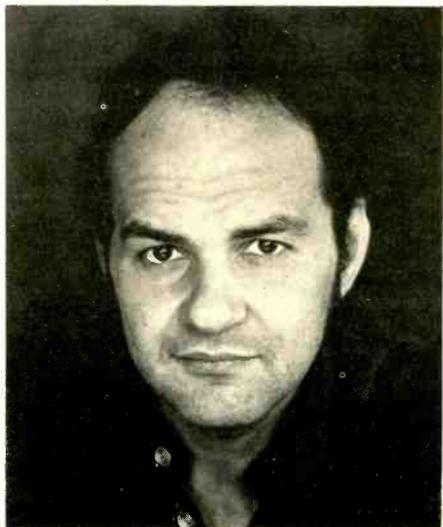
Performance: **Top-drawer**
Recording: **Excellent**

Ravel's *Trio in A Minor* has always been a special favorite of mine among the French master's slim output of chamber works, and it has had some distinguished recorded performances, including still-available monophonic versions by Rubinstein-Heifetz-Piatigorsky and Oborin-Oistrakh-Knushevitzky. This latest recording of it not only stands up to the finest previous recordings in warmth of phrasing and rhythmic alertness but also has the benefit of recorded sound that enhances the music's lyrical aspect without in any way diluting the crispness of such movements as the rhythmically intricate *Pantomme*. Particularly felicitous in the recording is perfect balance of the three instruments, making for a truly well-woven musical fabric from beginning to end.

The formidable *Sonata for Violin and Cello* is one of the masterpieces of its particular genre, but it is difficult in its virtuosic demands as well as in its musical substance. Neither of the two recorded performances I have heard previously (Oscar Shumsky with Bernard Greenhouse and the Schoenfeld Duo) can match in imaginative flair and virtuosic brilliance the achievement of Jaime Laredo and Leslie Parnas, which does much to dissipate the reputation of this sonata as a somewhat sterile creation. In this realization the music emerges as one of Ravel's most vital and fascinating works, even if it is worlds removed from his more overtly sensual creations of the pre-World War I era. D.H.

JAIME LAREDO

An imaginative, virtuosic Ravel sonata



WRITE FOR QUOTATION

FACTORY SEALED CARTONS
FRANCHISED DISTRIBUTOR
QUICK SHIPMENT

WE GIVE DISCOUNTS ON HI-FI COMPONENTS

SOUND REPRODUCTION, INC.

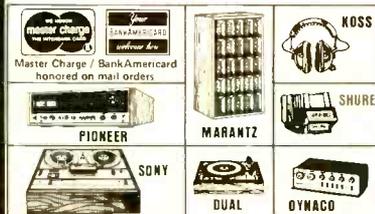
460 CENTRAL AVENUE
East Orange, New Jersey 07018
(201) 673-0600

CIRCLE NO. 61 ON READER SERVICE CARD

DIXIE SAVE ON Brand Name Audio Components BY MAIL

Write Today for Our FREE Audio Catalog

DIXIE is one of the oldest and largest audio component mail order houses in the country. Our prices on brand name components are actually LOWER than "Discounters". See our new catalog or call us for a price quote. Everything shipped factory-sealed with full manufacturer's warranty.



DIXIE HI-FIDELITY

SR-11

5600 Second St., N. E., Washington, D. C. 20011
Phone: 1-202-635-4900

Please rush me your FREE Audio Catalog and complete information. I understand there is no obligation.

Name _____
Address _____
City _____
State _____ Zip _____

RAXACH: *String Quartet No. 2* (see CRUMB)

SAINT-SAËNS: *Symphony in A Major; Symphony in F Major* ("Urbis Roma"). Orchestre National de la ORTF, Jean Martinon cond. ANGEL □ S-37089 \$6.98.

Performance: **First-rate**
Recording: **Good**

Camille Saint-Saëns began writing symphonies at the age of fifteen and wrote one every three years till he was twenty-four; he then waited nearly thirty years before writing the one that is in the active repertoire now, the one numbered 3, not 5, because the first and third of those early efforts were never published. It is these unpublished symphonies that we have on this record, in what may well be their first performances since the 1850's. (Orchestral parts were copied out from manuscripts at the Bibliothèque Nationale for these recordings.) Only a few months ago Angel released Jean Martinon's disc of Saint-Saëns' "official" Symphonies Nos. 1 and 2 (S-36995), and now the conductor's wish to record all five of the symphonies is fulfilled. The performances are on the same high level as those of the other early pair and the exceptional one of the "Organ" Symphony on MHS 1232: if these youthful works fail to become as popular as, say, the Symphony in C by the seventeen-year-old Bizet, it will not be Martinon's fault—but to expect them to would be most unrealistic, for, while Saint-Saëns need not have been reluctant to publish these symphonies, they are hardly memorable.

In their own way, though, they make for agreeable listening. I especially enjoyed the earlier one, with its echoes of Mozart (literal ones of the *Jupiter* in the first movement), Mendelssohn, Schubert, and Schumann, and a particularly imaginative finale filled with elfin touches. The forty-minute F Major is at once more original and more strongly reminiscent of Schumann: it is also less concise and less consistent in its appeal. The first movement, introduced by an impressive theme in the brass, is succeeded by a virtuosic scherzo whose trio is a most effective display piece for the winds, but the remaining movements tend to sprawl: they add up to twenty-three minutes, and could have done with some pruning.

Angel has been quite generous and has managed to get both works conveniently on a single disc; side one, containing the A Major and the first movement of the F Major, plays nearly thirty-seven minutes, but it doesn't sound at all cramped. This is one of Angel's crypto-quadrasonic releases, yielding a pleasant, if unspectacular, sonic picture in both two-channel and SQ playback. R.F.

SCHUBERT: *String Quintet in C Major, Op. 163* (D. 956). Mstislav Rostropovich (cello): Taneyev Quartet. WESTMINSTER GOLD WGS-8299 \$3.49.

Performance: **Expressive**
Recording: **Pretty good**

SCHUBERT: *String Quintet in C Major, Op. 163* (D. 956); *Quartettssatz in C Minor* (D. 703). Dietfried Gurtler (cello, in Quintet): Weller Quartet. LONDON STS-15300 \$3.49.

Performance: **Idiomatic**
Recording: **Excellent**

Since there is no really outstanding full-price recording of Schubert's Cello Quintet listed in Schwann at present, both of these half-price releases are assured of special attention, and

Be kind to feet. They outnumber people two to one.

Good old feet. Kind, faithful and true.

Think of all the nice places they've taken you without asking anything in return.

Isn't it time you did something nice for them?

Like a pair of Roots?

Roots® are probably the most comfortable and luxurious pair of anything they will ever experience.

The Roots sole is sculptured so it cradles the heel and supports the arch. The low heel and rocker sole allow feet to walk the way they were born to.

The Roots heel has a built in "counter" that snuggles up to your heel and holds it in place.

Up front there's plenty of room for wiggling toes, plus room for air to circulate and keep feet cool.

And Roots are made in Canada (with supreme care) of the most luxurious top-grain Canadian leather.

They cost more than most casual shoes but, as in most things that cost more, the value is there.

You do nice things for the rest of your body all the time.

Isn't it time to consider your feet?

Roots.



Sold only at Roots stores in: Albuquerque, Amsterdam (Neth.), Ann Arbor, Atlanta, Austin, Berkeley, Birmingham (Ala.), Birmingham (Mich.), Boston, Boulder, Calgary, Cambridge, Chicago, Columbus, Costa Mesa, Dallas, Denver, East Lansing, Edmonton, Eugene, Evanston, Fort Lauderdale, Halifax, Hartford, Houston, Kansas City (Mo.), La Jolla, Las Vegas, London (Ont.), Los Angeles, Madison, Malibu, Miami, Milwaukee, Minneapolis, Montreal, Munich (Ger.), New York, Ottawa, Palo Alto, Philadelphia, Pittsburgh, Portland, San Francisco, Scottsdale, Seattle, Toronto, Tucson, Vancouver, Victoria, White Plains.
Roots are made in 15 styles for men and women. For more about them send 25¢ for "The Book of Roots" to Roots Natural Footwear, 1203 Caledonia Rd., Toronto M6A 2X3, Canada.
For address of store nearest you call 800-521-8960 toll free.

© 1975, Don Michael Co

TOKYO SHAPIRO

WORLD WIDE
WHOLESALE
DIRECT
TO YOU

WHO GIVES A FI?

We do and we want to spread the highest fi for the lowest buck! We know that top brands and low price is the name of the mail order game. We're Tokyo Shapiro, the audio specialists with over a million dollars of every brand worth having in stock. We buy big and keep overhead low (We don't even print a catalog 'cause they're so expensive and get obsolete so fast!) to keep the prices right for you!

Let us know what you want and we'll get you a price quote in the mail the same day! We've put it all together, price and brand selection. We've got all the catalogs and if we can't beat 'em all, we'll tell you! So check us out. You'll like our "No Delay Ship Today" philosophy, factory sealed new merchandise with full warranties, carefully packed and ready to go.

**TOP BRANDS
BELOW DISTRIBUTOR PRICING**
Write or Call Today:

TOKYO SHAPIRO

34300 Lakeland Blvd.
Eastlake, Ohio 44094
Phone: (216) 951-0433

ATTENTION:
Midwest Residents: Buy from us,
save excessive freight charges.

CIRCLE NO. 67 ON READER SERVICE CARD

PLUG IN



TO QUALITY Hi Fi & Music,
EQUIPMENT AT DISCOUNT PRICES!

IT'S EASY AT THESE PRICES! OUR HIGH VOLUME BUYING POWER ALLOWS US TO PASS THE SAVINGS ON TO YOU
SEND FOR OUR FREE CATALOGS:

Name _____
Address _____
City _____
State _____ Zip _____

- AUDIO CATALOG
 MUSICAL INSTRUMENT CATALOG

"OUR NAME TELLS THE STORY" SR-11

STEREO DISCOUNTERS

7A AYLESBURY RD. □ TIMONIUM, MD. 21093
(301) 252-6880

CIRCLE NO. 64 ON READER SERVICE CARD

136

one or the other of them, I think, might easily go to the top of anyone's list of current versions. I had never heard of the Taneyev Quartet, but it is clearly a first-rate ensemble, and its 1963 recording of the quintet with Rostropovich suggests that all participants had lived long and lovingly with the work; they take some risks in their expansive approach, but it cannot be categorized as idiosyncratic. The first side of the Westminster disc plays nearly thirty-six minutes, each of the first two movements accounting for half of the total. I was not aware of any unusual deliberateness in the first movement, which moves along at a pace that seems determined by the melodic contours themselves, but the conspicuous slowness of the adagio (more like *Lento* as performed here) is the biggest of the interpretive risks. It serves an intensely expressive end, and the tension is for the most part well sustained, but there are moments when the momentum comes very close to disappearing. This static effect is beautifully achieved, but it will not be to every listener's liking. In this movement, too, the engineering is less well focused than in the other three: those magical pizzicatos are turned into bumptious thuds, and Rostropovich's cello is given a perhaps understandable but nevertheless unnatural prominence. The scherzo and finale are exemplary in their strength and conviction.

The Weller version, recorded in 1970 but not released in this country until now, is a safer recommendation—in fact, it strikes me as the finest thing this ensemble has done on records. It is less overtly intense than the Russian version but, in its comfortably straightforward way, perhaps more idiomatically Schubertian. In the matter of tempo, all four movements are just about ideal. If the first two movements are somewhat less expressive than the Taneyev makes them, they are still splendidly effective—and unlikely to provoke any controversy: the slow movement hangs together more securely at the Weller tempo, and the excellent sound presents the five instruments in a thoroughly natural, well-balanced perspective. A further enhancement is the inclusion of a splendid performance of the *Quartettsatz*. (The liner notes discuss three works, not just two, the section on the quintet having been picked up unedited from an earlier London release that included the String Trio, D. 471.) R.F.

RECORDING OF SPECIAL MERIT

SHOSTAKOVICH: Piano Concerto No. 1, Op. 25; Piano Concerto No. 2, Op. 102; Three Fantastic Dances, Op. 5. Christina Ortiz (piano); Bournemouth Symphony Orchestra. Paavo Berglund cond. ANGEL S-37109 \$6.98.

Performance: **Highly poetic**
Recording: **First-rate**

One hardly thinks of these two lightweight piano concertos from the youthful and the mature Shostakovich as exactly poetic; one keeps remembering the fun and high jinks of the final movements—the First with its brilliant trumpet *obbligato* (nicely done here by Rodney Senior), the Second with its anticipation of Bernstein's *Candide* Overture. But it is to the poetic elements in the slow movements that the young Brazilian pianist Cristina Ortiz is most responsive. Yet she lacks nothing in the way of sparkle and brilliance to bring out the wit and zest in the end movements or the delicious whimsey in the Fantastic Dances.

(Continued on page 139)

PRICE WAR

AMERICA'S #1 VALUE LEADER

STEREO CORPORATION OF AMERICA

| | | | |
|---|---------|------|-------|
| | | | |
| Mastercharge/BankAmericard Phone For Immediate Shipments | | AR | SHURE |
| | | | |
| MARANTZ | PIONEER | DUAL | |

AUDIO DISCOUNTING STARTED IN NEW YORK & NOW WITH THE END OF FAIR-TRADE WE ARE SURE THAT NO ONE CAN BEAT OUR PRICES:

- We Discount Over 70 Major Brands
- Over 10 Years Of Reliable Service In The Mail Order Field
- Largest Inventory/Lowest Prices!

We Get The Best Deals From The Manufacturers. You Get The Best Deal From Us!

WRITE OR CALL!
For lowest of the low quote
(212) 338-8555
9-5 Mon. thru Sat.

SHOP BY PHONE!
\$1.00 Will Be Deducted From Any Orders Over \$100.

STEREO CORPORATION OF AMERICA

Dept. S-R 2122 Utica Avenue
Brooklyn, N.Y. 11234
Tel. (212) 338-8555

CIRCLE NO. 63 ON READER SERVICE CARD

ONE MARK AHEAD OF THE REST....

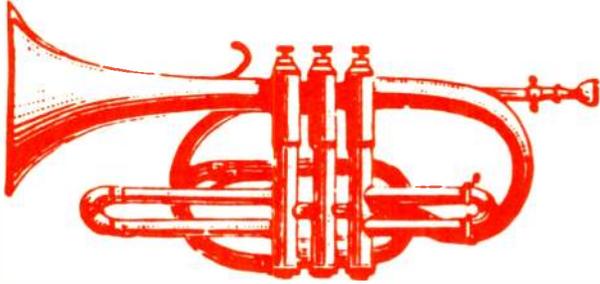
| | | | |
|--|--|--|--|
| | | | |
| | | | |
| | | | |
| Master Chge/BankAmericard Honored on Mail Orders | | | |

ADR Audio, one mark ahead of its competitors with the lowest prices of Famous Brand audio components, has now added complete CB & Video depts. All orders promptly shipped from the ADR warehouse in factory sealed cartons, fully warranted, fully insured. Send for our special price quote & newest money saving catalogue. Its your move . . .

FOR IMMEDIATE QUOTE
CALL (202) 723-6060

A.D.R. AUDIO
6200 CHILLUM PLACE N.W.
WASHINGTON, D.C. 20011

CIRCLE NO. 3 ON READER SERVICE CARD



FREE INFORMATION SERVICE

Here's an easy way for you to get manufacturer's information about products advertised or mentioned editorially in this issue. Just follow the directions below . . . and the literature will be sent to you free of charge.

- a** Tear out one of the perforated postage-free cards. Please print or type your name and address where indicated. Use only one card per person.
- b** Circle the numbers on the card that correspond to the key numbers at the bottom of the advertisement or editorial mention that interests you. (Key numbers for *advertised products* also appear in the Advertisers' Index.)
- c** Simply mail the card. One card per person is all that is necessary. No postage is required.
- d** This address is for our "Free Information Service" only. All other inquiries are to be directed to, Stereo Review, One Park Ave., New York, N.Y. 10016.



| | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 |
| 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 |
| 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 |
| 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 |
| 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 | 101 | 102 | 103 | 104 | 105 |
| 106 | 107 | 108 | 109 | 110 | 111 | 112 | 113 | 114 | 115 | 116 | 117 | 118 | 119 | 120 |
| 121 | 122 | 123 | 124 | 125 | 126 | 127 | 128 | 129 | 130 | 131 | 132 | 133 | 134 | 135 |
| 136 | 137 | 138 | 139 | 140 | 141 | 142 | 143 | 144 | 145 | 146 | 147 | 148 | 149 | 150 |
| 151 | 152 | 153 | 154 | 155 | 156 | 157 | 158 | 159 | 160 | | | | | |

Please send me 12 issues of Stereo Review for \$3.99 and bill me.
PLEASE PRINT—Use only one card per person.

SR11753

NAME _____

ADDRESS _____

CITY _____ STATE _____ ZIP CODE _____

(Zip Code must be included to insure delivery) (Void after Jan. 31, 1976)

| | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 |
| 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 |
| 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 |
| 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 |
| 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 | 101 | 102 | 103 | 104 | 105 |
| 106 | 107 | 108 | 109 | 110 | 111 | 112 | 113 | 114 | 115 | 116 | 117 | 118 | 119 | 120 |
| 121 | 122 | 123 | 124 | 125 | 126 | 127 | 128 | 129 | 130 | 131 | 132 | 133 | 134 | 135 |
| 136 | 137 | 138 | 139 | 140 | 141 | 142 | 143 | 144 | 145 | 146 | 147 | 148 | 149 | 150 |
| 151 | 152 | 153 | 154 | 155 | 156 | 157 | 158 | 159 | 160 | | | | | |

Please send me 12 issues of Stereo Review for \$3.99 and bill me.
PLEASE PRINT—Use only one card per person.

SR11752

NAME _____

ADDRESS _____

CITY _____ STATE _____ ZIP CODE _____

(Zip Code must be included to insure delivery) (Void after Jan. 31, 1976)

| | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 |
| 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 |
| 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 |
| 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 |
| 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 | 101 | 102 | 103 | 104 | 105 |
| 106 | 107 | 108 | 109 | 110 | 111 | 112 | 113 | 114 | 115 | 116 | 117 | 118 | 119 | 120 |
| 121 | 122 | 123 | 124 | 125 | 126 | 127 | 128 | 129 | 130 | 131 | 132 | 133 | 134 | 135 |
| 136 | 137 | 138 | 139 | 140 | 141 | 142 | 143 | 144 | 145 | 146 | 147 | 148 | 149 | 150 |
| 151 | 152 | 153 | 154 | 155 | 156 | 157 | 158 | 159 | 160 | | | | | |

Please send me 12 issues of Stereo Review for \$3.99 and bill me.
PLEASE PRINT—Use only one card per person.

SR11751

NAME _____

ADDRESS _____

CITY _____ STATE _____ ZIP CODE _____

(Zip Code must be included to insure delivery) (Void after Jan. 31, 1976)

FREE INFORMATION SERVICE

(SEE REVERSE SIDE)

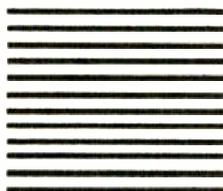
FIRST CLASS
PERMIT NO. 217
CLINTON, IOWA

BUSINESS REPLY MAIL

NO POSTAGE NECESSARY IF MAILED IN THE UNITED STATES

POSTAGE WILL BE PAID BY—

Stereo Review
P.O. BOX 2908
CLINTON, IOWA 52732



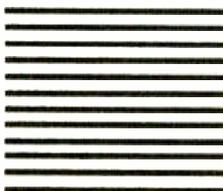
FIRST CLASS
PERMIT NO. 217
CLINTON, IOWA

BUSINESS REPLY MAIL

NO POSTAGE NECESSARY IF MAILED IN THE UNITED STATES

POSTAGE WILL BE PAID BY—

Stereo Review
P.O. BOX 2908
CLINTON, IOWA 52732



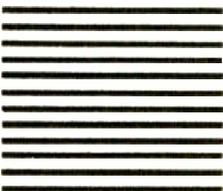
FIRST CLASS
PERMIT NO. 217
CLINTON, IOWA

BUSINESS REPLY MAIL

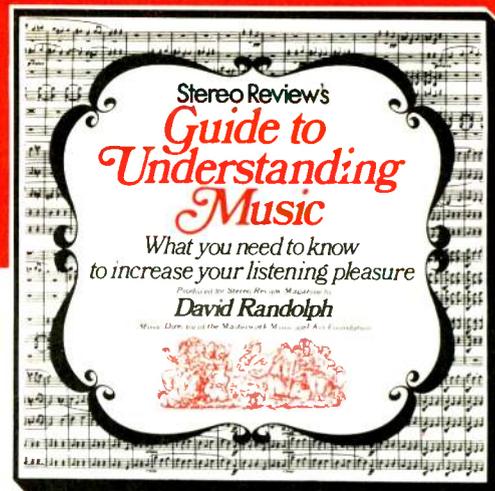
NO POSTAGE NECESSARY IF MAILED IN THE UNITED STATES

POSTAGE WILL BE PAID BY—

Stereo Review
P.O. BOX 2908
CLINTON, IOWA 52732



Stereo Review is proud to announce
an important new set of recordings
created to help you expand your
understanding of music.



This unique four-disc album is interesting, easy to comprehend, and instructive. It is the first project of its kind to approach the understanding of music through its basic elements:
rhythm . . . melody . . .
harmony . . . texture.

Written and narrated exclusively for Stereo Review by David Randolph, Music Director of the Masterwork Music and Art Foundation, this fascinating set of stereo records will help you become a more sophisticated, more knowledgeable listener—and a more completely satisfied one as well. It will give you an "ear for music" you never thought you had.

In the GUIDE TO UNDERSTANDING MUSIC, David Randolph first discusses, by means of recorded narration, how the composer uses and unifies all the basic musical elements. After each musical point is made in the narration, a musical demonstration of the point under discussion is provided. Thus you become a part of the creative musical process by listening, by understanding, by seeing how music's "raw materials" are employed by composers and performers to attain their highest level of expressivity and communication through musical form.

FOUR LONG-PLAY STEREO RECORDS:

Record I—The Elements of Music.
1. Rhythm, 2. Melody, 3. Harmony, 4. Texture.

Record II—Sense and Sensation in Music. (The Instruments of the Orchestra.) How Music is Unified.

Record III—Form in Music. Words and Music.

Record IV—Can Music Tell a Story or Paint a Picture? The Interpretation of Music.

THE GUIDE TO UNDERSTANDING MUSIC contains

OVER 200 MUSICAL EXAMPLES which have been carefully chosen from among thousands of recordings by major record companies as the best illustrations of musical points made in the recorded narration. In addition, supplementary musical demonstrations were specially recorded for this album.

FREE BOOKLET INCLUDED. The accompanying booklet is a valuable complement to the album. It presents David Randolph's straightforward professional approach to music, and shares the insights and understanding of his many years of experience in bringing music to listeners . . . as well as advice on how you can make the best use of the album.

FIRST TIME EVER OFFERED

The Guide to Understanding Music has been several years in the planning and production stages to assure that it would be as complete, as up-to-date, and as effective a presentation of its subject as possible. The exclusive four-disc recording is now ready available for the first time through Stereo Review. The special low price is just \$19.98 postpaid, for all four 33 $\frac{1}{3}$ rpm stereo long-play records, a price made possible by availability of the consultative and production facilities of Stereo Review and its Under ordinary auspices, a work of this nature and importance would cost much

SPECIAL SCHOOL AND LIBRARY OFFER

Of particular importance is the role the GUIDE TO UNDERSTANDING MUSIC can play as a teaching tool for music departments in schools throughout the country. Orders for 3 sets or more are available to schools and libraries at the SPECIAL DISCOUNT PRICE of only \$17.98 per album, a savings of 10% off the regular price of \$19.98. This special quantity price is also available to individuals and organizations who may have a need for more than one album. Schools may submit orders on standard purchasing forms.

HERE'S HOW TO ORDER:

CASH: Mail your order along with your name, address and remittance in the amount of \$19.98 postpaid. (Residents of Calif., Col., Fla., Ill., Mich., Mo., N.Y. State, D. C. and Tex. add applicable sales tax.)

CHARGE: To your American Express, BankAmericard, Master Charge or Diners Club account! Mail your order, name, address, credit card # and expiration date (Master Charge customers include 4-digit Interbank # above your name). Be sure your signature is on your order. You will be billed at \$19.98 plus sales tax, if applicable.

OUTSIDE U. S. A. ALBUMS ARE \$24.98 POSTPAID.

MAIL ORDERS TO: GUM, CONSUMER SERVICE DIVISION, DEPT. SV,
595 BROADWAY, NEW YORK, N.Y. 10012.



BIG DISCOUNTS

STEREO COMPONENTS

Largest selection of top name brands... try us and see...

It's worth a call
(301) 488-9600



6330 Frankford Ave.
Baltimore, Md. 21206

All mail answered within 24 hours

Phone Daily 9 AM to 9 PM
Saturday 9 AM to 4 PM
Phone (301) 488-9600

CIRCLE NO. 29 ON READER SERVICE CARD

Planning to move?

Let us know 8 weeks in advance so that you won't miss a single issue of STEREO REVIEW.

Attach old label where indicated and print new address in space provided. Also include your mailing label whenever you write concerning your subscription. It helps us serve you promptly.

Write to: P.O. Box 2771, Boulder, CO 80302, giving the following information:

Change address only.

Extend subscription. Enter new subscription.

1 year \$7.98

Payment enclosed (1 extra BONUS issue).

Bill me later.

← AFFIX LABEL →

If you have no label handy, print OLD address here.

| | | |
|---------|--------------|----------|
| name | please print | zip-code |
| address | | 0273 |
| city | | |
| state | | |

| | | |
|---------|--------------|----------|
| name | please print | zip code |
| address | | |
| city | | |
| state | | |

Add'l postage per year: Add \$1 for Canada; \$2 for all other countries outside the U.S.

Outside of Shostakovich's own remarkable recording issued on Seraphim from a 1958 taping, this is the only currently available disc that combines these three works. It is most enjoyable, beautifully played, and beautifully recorded throughout. *D.H.*

JOHANN STRAUSS, JR.: *Overtures* (see SUPPÉ)

R. STRAUSS: *Capriccio, Op. 85—Introduction* (see SUK)

STRAVINSKY: *Concerto in E-flat* ("Dumbarton Oaks"); *Concerto in D for String Orchestra*; *Dances Concertantes*. Los Angeles Chamber Orchestra, Neville Marriner cond. ANGEL S-37081 \$6.98.

Performance: **Delectable**
Recording: **Superb**

Neville Marriner is best-known to record buyers as the director of the Academy of St. Martin-in-the-Fields in London, but for the last five years he has directed the Los Angeles Chamber Orchestra as well. He is also known as a classicist, a term that can easily be expanded to include the chamber-orchestra music of Stravinsky.

This new disc, recorded in England during a European tour, makes a nice pendant to Marriner's recent attractive recording of *Apollon*. None of the pieces here are great music—Stravinsky's neo-Classicism ran pretty thin in the late Thirties and early Forties—but they are redeemed by a wonderful trashy danciness. Stravinsky's reputation as a classicist and intellectual is very misleading; this is great *bad* music, all of it in lively, well-appointed performances. And, except for the occasionally too-loud timpani in the *Dances Concertantes*, the recordings are excellent. *E.S.*

RECORDING OF SPECIAL MERIT

SUK: *Serenade for Strings in E-flat Major, Op. 6*. R. STRAUSS: *Capriccio, Op. 85—Introduction*. JANÁČEK: *Suite for String Orchestra*. Los Angeles Chamber Orchestra, Neville Marriner cond. ARGO ZRG 792 \$6.98.

Performance: **Brilliant**
Recording: **Excellent**

Neville Marriner's American ensemble, with which he recorded for both Argo and EMI during a visit to Britain last year, bears his stamp no less clearly than his English one, the Academy of St. Martin-in-the-Fields, and the repertoire in this collection is intoxicatingly attractive. The adorable E-flat Serenade of Josef Suk, who composed it when he was only eighteen, had not been available on records in this country for a decade or more until the release, only a year ago, of Karl Münchinger's recording on London CS-6737, and Münchinger's disc also includes the Strauss piece that is on the new Argo. I think Münchinger finds more of the warmth and good nature in both works (without ever being obvious about it) than Marriner, who seems more content to revel in the brilliance of his superbly polished ensemble. Yet Marriner is by no means deficient in charm, nor Münchinger in exuberance: it is only a matter of relative emphasis. Münchinger brings a more ingratiating quality to the scherzo-like second movement of the serenade, and to its finale, too, in which he is careful to note Suk's marking "*ma non troppo*



- Most effective cleaning system
- Easy... Thorough... Safe
- Cleans 'em all... LP's, 45's, 78's
- Removes static... Leaves no residue
- No electricity... You Spin & Clean Records
- Special concentrated Record Wash solution
- Gentle plush scrubbing pads get deep into grooves... remove for easy cleaning
- Only \$19.95, suggested list price.

After years of research with all types of record cleaning gadgets, gizmos and gimmicks, Fidelitone came up with a simple, direct solution... the Record Washer! Now you can wash your records quickly and easily with this unique Spin & Clean system. Gets out dirt deep down in the record groove... gives you maximum performance from your old records. Comes complete with special cloth and enough Fidelitone Record Wash Concentrate to wash up to 1,000 records!



FIDELITONE

207 N. Woodwork Lane Palatine, IL 60067

THE TOUCH OF MAGIC

in Phonograph Needles, Cartridges, Record Care, and Audio Accessories

CIRCLE NO. 19 ON READER SERVICE CARD

LEARN MORE ABOUT PSYCHOLOGY FREE...

Write for FREE information on the unique 8 quarter credit course in Introductory Psychology developed by the University of California and psychology today magazine

Write: **STUDY PROGRAM, Dept. SR-11**
Rm. 715, One Park Avenue, N.Y., N.Y. 10016

SAVE!

MONEY • TIME • FREIGHT

QUALITY STEREO EQUIPMENT AT LOWEST PRICES.

YOUR REQUEST FOR QUOTATION RETURNED SAME DAY.

FACTORY SEALED CARTONS—GUARANTEED AND INSURED.

SAVE ON NAME BRANDS LIKE:

| | |
|--------|--------|
| A.D.C. | KLH |
| A.R. | SHURE |
| DYNACO | KOSS |
| SONY | FISHER |

PIONEER

AND MORE THAN 50 OTHERS
BUY THE MODERN WAY
BY MAIL—FROM

illinois audio

Department 217S
12 East Delaware
Chicago, Illinois 60611
312-664-0020

CIRCLE NO. 27 ON READER SERVICE CARD

TOP Discount AUDIO

Your NATIONAL HEADQUARTERS

For Famous Brand Electronics By Mail

333 N. Michigan Ave. • Suite 2025
Chicago, IL 60601 • (312) 293-1825

All Orders Shipped In
Factory-Sealed Cartons

Write Or Call For
The Lowest Prices
Anywhere!

MILLION \$\$\$ INVENTORY

LOWEST PRICES ON

| | | |
|-------------|------------|------------|
| RECEIVERS | TURNABLES | TUNERS |
| SPEAKERS | CHANGERS | CARTRIDGES |
| TAPE DECKS | AMPLIFIERS | HEADPHONES |
| CALCULATORS | COMPACTS | CAR AUDIO |

Top Discount Audio 333 N. Michigan Avenue
SR-11 Suite 2025, Chicago, IL 60601
(312) 293-1825

We honor Master Charge and Bank Americard. Date _____
Please send me a quote on: _____

MR.
 MS.
(First) (Initial) (Last)
(Number And Street)
(City) (State) (Zip Code)

CIRCLE NO. 68 ON READER SERVICE CARD

presto." Marriner really is a bit too fast in this final movement, but the sparkle and zest of the playing are hard to resist.

What could well be the deciding factor is the third item on the disc. Münchinger offers a handsome performance of Hugo Wolf's *Italian Serenade*, a work that has been generously represented on records, while Marriner, rather more imaginatively, includes the splendid Janáček Suite for String Orchestra, which has not been available for at least twenty years. Like the Suk, it is an early work—Janáček was twenty-three when he wrote it—and its chief characteristic is charm. It comprises six brief movements, the last being not the expected brilliant allegro, but an andante of surprising depth. I do prefer Münchinger's handling of the Suk, but I think I could learn to live with Marriner's zippy tempo in the finale in order to have the Janáček suite. Both discs are excellently recorded. R.F.

SUPPÉ: *Overtures: Light Cavalry; Poet and Peasant; Morning, Noon, and Night in Vienna; Boccaccio.* JOHANN STRAUSS, JR.: *Overtures: A Night in Venice; Blindekuh.* Johann Strauss Orchestra of Vienna, Willi Boskovsky cond. ANGEL S-37099 \$6.98.

Performance: **Mellow**
Recording: **Marvelous**

The prospect of listening to still another *Light Cavalry* Overture, not to mention that chestnut most of us wearied of while still in childhood—I mean the dear old *Poet and Peasant*—filled me with gloom. There are days, after all, when a single *Morning, Noon, and Night in Vienna* can seem to go on for a month. Moreover, these are the kinds of works that have been getting the quadraphonic once-over recently from Eugene Ormandy and the Philadelphia in RCA CD-4 spectacles. What could Willi Boskovsky possibly add? The answer is, plenty. Ormandy's Suppé resounds with all the rich orchestral coloring the Philadelphia can give it; Boskovsky finds something else in the same scores—a mellowness, topped with just the right amount of Viennese *Schlag* to lend flavor to these mammoth portions of musical pastry. And Angel's engineers provide gallant assistance: the sound of deep basses, for example, is almost below the range of hearing, and the balance of orchestral tone brings transparency even to the heavy scoring of *Boccaccio*.

Sandwiched between each set of heavily upholstered Suppé overtures are two lighter ones by Strauss—the spirited overture to a *Night in Venice*, rife with gaiety and abundant tunes that promise more than the operetta itself can ever deliver, and the relatively obscure overture to one of Strauss' flops, *Blindekuh*, which abounds with lovely tunes in a jeweled setting, for all the world like another *Fledermaus*. At least, that's what Boskovsky is able to coax out of it. P.K.

TAKEMITSU: *Corona—London Version; For Away; Piano Distance; Undisturbed Rest.* Roger Woodward (keyboards). HEAD 4 \$6.98.

Performance: **Impressive**
Recording: **Good**

Toru Takemitsu has emerged as perhaps the leading Japanese avant-garde composer. One of the unlikely places where his music has been appreciated is London, where Roger Woodward, the local specialist in crazy mod-

ern piano music, gave an all-Takemitsu concert (including *For Away*, which was written for him) from which this recording was drawn. Takemitsu talks a good deal about "inner, personal" qualities, about "nature," about not being afraid of the past, about the unknown, about East and West, about new freedoms. I am very sympathetic to all of this, but what I find in the music is a very beautiful, vague, static, floating, sonorous quality that suggests the music of Morton Feldman as much as the inevitable Buddhist rock garden. Well, why not? All of it is very well performed on a multiplicity of keyboards, and it has been recorded with care. E.S.

VERDI: *I Masnadieri* (see Best of the Month, page 87)



NEVILLE MARRINER
Brilliant and not without charm

COLLECTION

GERARD SCHWARZ: *Baroque Chamber Music.* Telemann: *Trumpet Concerto in D Major.* Albinoni: *Trumpet Concerto in C Major.* Hertel: *Concerto a Cinque.* Gerard Schwarz (trumpet); Ronald Roseman, Susan Weiner, Virginia Brewer (oboes); Ronald MacCourt, William Scribner (bassoons); Edward Brewer (harpsichord). CMS/DESTO DC 6438 \$6.98.

Performance: **Strong**
Recording: **Good**

Although the sound produced by the unlikely combination of trumpet, oboes, bassoons, and harpsichord may become taxing to some listeners after a bit, the timbre is intriguing. These fine performers, and probably the recording engineer, deserve congratulations for such a beautiful balance. Even though I suspect that not all the music was originally scored for this combination (the Telemann and Hertel works were, but the jacket offers no information on the subject), the concertos come off with a sparkling brilliance which is typical of this joyous genre. The performances are rhythmically strong and sure-footed, and the players' ornamentation and embellishments are especially good. The album is for lovers of Baroque music who will settle for elegance and wit rather than continue to seek profundity. S.L.

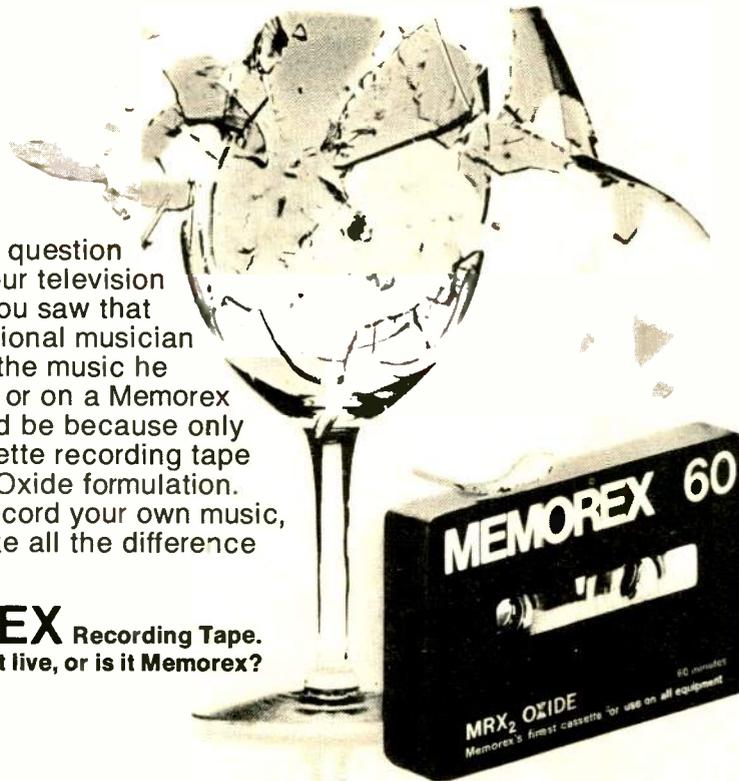


Is it live, or is it Memorex?

That's a tough question to answer. In our television commercials you saw that even a professional musician couldn't tell if the music he heard was live or on a Memorex cassette. Could be because only Memorex cassette recording tape has the MRX₂ Oxide formulation.

And if you record your own music, that could make all the difference in the world.

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





Collection James Goodfriend

A Dazzle of (Early European) Dances

There are two types of dance music, and we might label them "applied" dance music and "art" dance music. The former is written to be danced to. It is down-to-earth music with a solid beat that guides the dancers through their intricate slides, leaps, or formal patterns, as the case may be. It is music in which the body revels; hearts beat, toes tingle, and torsos sway—proper decorum, naturally, permitting. "Art" dance music is more refined, however, for in it the composer is evoking stylized impressions of movements recalled from a perhaps rarefied past. It is music which the brain follows through its intricate patterns and convolutions: the intellect delights in its artfully conceived melodies, its controlled modulations, and its sudden rhythmic surprises.

At hand are four recently released albums of early European dance music devoted, for the most part, to the "applied" sort, and they take us on quite a terpsichorean trip from the Middle Ages, through the Renaissance and early Baroque, and on to the high Baroque of the mid-eighteenth century. All four discs offer excellent performances by an abundance of ensembles and artists who handle their ancient instruments not only with technical ease but, what is more important, with great sophistication and musicianship.

"Golden Dance Hits of 1600" is a sampler put together from previously issued records made by the Ulsamer Collegium and the Collegium Terpsichore, plus some excellent guitar playing by Siegfried Behrend accompanied by percussionist Siegfried Fink. Don't let the title fool you: not all the music was popular around 1600. I seriously doubt, for example, that the distinctly medieval *Lamento di Tristano* with its *Rotta* was even heard of in the seventeenth century.

Despite many silly discrepancies between record and jacket, "Golden Dance Hits" is an excellent sampler of early dance music because of its wide range of repertoire and instruments. The medieval monophonic dance, judiciously accompanied by hypnotic drones, is represented by the *Istampita Ghaetta* and the *Lamento di Tristano*. The Italian sixteenth century is represented by Dalza and Negri. The contagious charm of the French Renaissance is well shown off by works from the *dancieries* of Gervaise, Phalèse, and Susa-

to. Nor are the Germans neglected: there is a generous sprinkling of "hits" by Widmann, Haussmann, and the ubiquitous Praetorius. Of particular interest is the group of guitar solos with imaginatively improvised percussion accompaniment. The playing is delicate, and the percussion adds a whole new dimension of subtle timbres to the music.

The scores for this early dance music typically give no indication as to which instruments should be used. It is, rather, left to the performers to choose the instrumentation. Praetorius (bless him), in his detailed and informative *Syntagma Musicum*, not only described just about every musical instrument that confronted the musicians of the Renaissance and early Baroque, but also offered deep insights into their proper usage. Both the Ulsamer Collegium and the Collegium Terpsichore know their Praetorius well (as must any ensemble playing music of this period) and offer us an enticing variety of "loud," "soft," and "broken" consorts to choose from.

In the full ensemble pieces, the Ulsamer Collegium shows a preference for using one sound throughout a piece and achieves its variety by changing the instrumental combinations from work to work and also by using some of its members as soloists. In contrast, the Collegium Terpsichore produces a light, silvery sound and shies away from solo performances. Its variety is achieved by carefully worked-out changes from one type of consort to another within the course of a single dance. This approach creates a lively mosaic effect and also underlines the structure of the music. One of the rewarding aspects of this disc is that one can contrast these two different approaches. One is as valid as the other, and both Collegia present them in excellent performances. It is more the pity, then, that the jacket notes wantonly omit a list of the instruments played, an omission which will undoubtedly frustrate the layman who hears an unfamiliar exotic sound and quite rightly would like to satisfy his curiosity as to just what is producing it.

But on with the dance. If you come across a Vanguard Everyman record titled "Les Menestriers," buy it! This group of young Frenchmen (the name is French for "minstrels") is astonishingly talented; they bring to

early music all the lusty zest it probably possessed in its original conception, before it accrued that dulling patina of scholarly dust. Their many skills give them command over recorders, crumhorns, rackets (not "racketts," as the jacket carelessly has it), viols, rebec, vielle, lute, pandora, cittern, and a package of percussion instruments. Add to this the fact that they sing with seductively natural voices in exquisite French (modern, not old, from what I could tell), and one can begin to imagine the variety, vivacity, and charm of this album.

The first side takes us from the thirteenth century through the Burgundian school. The medieval pieces are wildly oriental, with their sinuous melodies leaping and whining over unyielding drones and punctuated by erratically syncopated percussion. Especially exciting is the sound of the rebec in the *rotta La Manfredina*, which is played in one great *accelerando* and evokes a vision of a mid-Eastern belly dancer. One also realizes the profound stylistic harmonic change that revolutionized the sound of music between the anonymous thirteenth-century *La Ronde du Jaloux*, with its harsh quartal chord structures, and the sweet triadic sounds of the fifteenth-century's Gilles Binchois and Hayne van Ghizeghem.

On side two Les Menestriers prove their grasp of contrasting styles in the spirited *Branle de la Reine* and the smooth, sombre *Pavane d'Espagne*. Even more amazing is the suave unaccompanied singing of the two Jannequin *chansons*, each of which is followed by an instrumental rendition of the same music. Very few groups are able to produce such beautiful playing and singing by the same personnel. Also included are two English dances by Cutting and Byrd, and Neusiedler's *Juden Tanz* is chosen as a rousing conclusion because of its outrageous polytonality: a melody in C-sharp is cast over D Major harmonies! Here a little homework might have been in order. Despite the fact that this piece is often transcribed this way—see the *Harvard Anthology of Music*, Volume 1—it is now generally accepted that the top string of the lute in this particular case was tuned a half-tone higher than usual. This, of course, brings melody and harmony into a more conventional relationship, and the Arabic and Persian ele-



ments referred to in the jacket notes are thus quickly tamed to banality.

Almost every album of early dance music includes works from *Terpsichore*, Michael Praetorius' arrangements of over three hundred French dance tunes popular at the court of Henry IV. The Early Music Consort of London, conducted by David Munrow, brings us an Angel disc titled "Music of Praetorius" which not only includes a side of dances, but also reveals this composer's other face: motets from the stupendous *Musae Sioniae* and other collections.

The album includes a leaflet which is scrupulously documented. There is a fine essay on Praetorius which, as one peruses it, tempts one to compare this prolific and eminently practical musician with Telemann. Each performer and what he plays is listed, the maker of each instrument and his dates are given, texts and translations are supplied, and after each piece the instrumental forces used are given so that we can identify what device is producing which timbre. To listen to Munrow's side of Praetorius' dances is to be led knowledgeably into the world of early Baroque sound. One will never hear such a wheeze as that emitted by four crumhorn, nor such a snarl as that of four rackets, those incredible cans of tubing furnished with a double reed and holes that so indecently break the sound barrier. And in contrast we have the sweet consorts of recorders, buttery sackbutts, and golden viols.

THE motets of side two harken back to the polychoral techniques of early seventeenth-century Venice, which the Germans so much admired. The term "choir," as Praetorius made clear in his *Syntagma*, referred not only to groups of voices, but could also include various instrumental doublings or even the substitution of instruments for some of the voice parts. Here Praetorius is being his most practical and simply saying, "use what you've got." The Early Music Consort of London is made up largely of instrumentalists, and its vocal forces are limited to seven fine singers. Munrow must, perforce, take Praetorius' advice seriously in order to perform works written for several choirs. Thus the forces of the Consort are divided into various groups, or choirs, each consisting of several voices and contrasting combinations of instruments. The resulting sonority is spacious and the effect breathtaking, especially in the seventeen-part "Erhalt uns, Herr."

For those who have enjoyed the Ulsamer Collegium, either on "Golden Dance Hits" or on other discs, Archiv's "Tanzmusik des Hochbarock" is a superb album, handsomely packaged. The notes, in three languages, are lucid in their detailed discussion of the instruments and the many composers involved. As is usual with Archiv, the instrumentation of each piece is given as well as its printed source. Although this apparatus might appear a bit clumsy, it is of great help to student and scholar—and perhaps more than mildly interesting to the casual listener.

The basic repertoire is French with a smattering of English, Spanish, and German thrown in. The object of the record is to demonstrate the folk tradition on side one and the art tradition on side two. The lesson is strikingly made as we listen to four dances from John Playford's *Dancing Master* (including *Greensleeves*) played on such folk instruments as musette and vielle. The solo vielle playing is particularly fascinating, and one really has a chance to get a feel for its strange sound. The dances of Gaspar Sanz open up fresh aural areas in this field because of their almost flamenco sound. Konrad Ragossnig, a guest on this record, dramatically demonstrates through these pieces the difference between the earthiness of the guitar and the subtle contrapuntal implications of the lute. The side ends with a Reusner suite which presents the established order of dances during the high Baroque: allemande, courante, sarabande, an optional dance (in this case a gavotte), and a final gigue. The second side gives us some of the highly sophisticated dances of the French court and ends with an engaging taste of theatrical dancing: the final entrée from Lully's *Une Noce du Village*. This is a superb album which not only offers pleasure in casual listening but also presents a historical sequence if one wishes to follow it.

—Stoddard Lincoln

GOLDEN DANCE HITS OF 1600. Mainerio: *Schiarazula Marazula*; *Ungarescha-Saltarello*. Caroubel: *Courante*; *Volte*; *Courante*; *Volte*. Neusiedler: *Welscher Tanz Waschame-salHupfauff*. Dalza: *Calato alo Spagnola*. Anon.: *Istampita Ghuetta*; *Saltarello*; *Basse Danse La Magdalena*; *Lamento di Tristanol Rotta*; *Branle de Bourgogne*. Susato: *Ronde*. Haussmann: *Tantz*; *Galliard*; *Catanei*. Ger-vaise: *Branle de Bourgogne*; *Branle de Cham-pagne*. Phalèse: *Reprise*; *Galliard*. Praetorius: *Galliarde de la Guerre*; *Reprins*; *Galliarde*

de Monsieur Wustron. Ulsamer Collegium. Schein: *Allemande-Tripla*. Praetorius: *Gavotte*; *Spagnoletta*; *La Bourrée*. Widmann: *Magdalena*; *Agatha*; *Regina*. Collegium Terpsichore. Behrend (arr.?): *Tanz im Aicholdinger Schloss*; *Eichstatter Hofmühlentanz*; *Riedenburger Tanz*. Anon.: *Italiana*. Milan: *Pavan*. Negri: *Balletto*. Siegfried Behrend (guitar); Siegfried Finck (percussion). DEUTSCHE GRAMMOPHON ARCHIV 2533 184 \$7.98.

LES MENESTRIERS. Anon.: *Chançoneta Tedesca*. Moniot de Paris: *Vadurie*. Anon.: *Saltarello*; *Voulez-vous que je vous chante*; *La Ronde du Jaloux*; *La Manfredina*; *La Spagna*. Jannequin: *Il était une fillette*; *Ma peine n'est pas grande*. Anon.: *Branle de la Reine*; *Pavane d'Espagne*. Praetorius: *La Rosette*. Cutting: *Galliard*. Byrd: *My Lord of Oxenford's Mask*. Neusiedler: *Der Juden Tanz*. Binchois: *Adieu m'amour*. Hayne van Ghizeghem: *Gentil gallans*. Les Menestriers. VANGUARD EVERYMAN SRV 316 SD \$3.98.

PRAETORIUS: *Terpsichore*: *Passameze*; *Spagnoletta*; *La Bourée*; *Pavane de Spaigne*; *Courante M. M. Wüstraw*; *Suites de Ballets*; *Reprins secundam inferiorem* (Gailliard); *La Sarabande*; *Suite de Voltes*. *Motets*: *Resonet in laudibus*; *Erhalt uns, Herr, bei deinem Wort*; *Gott der Vater wohn uns bei*; *Aus tiefer Not*; *Allein Gott in der Höh sei ehr*; *Christus, der uns selig macht*. Boys of the Cathedral and Abbey Church of St. Alban; Music Consort of Ulsamer. David Munrow cond. ANGEL S-37091 \$6.98.

TANZMUSIK DES HOCHBAROCK. Sanz: *Canarios*; *Passacalle de la Cavalleria de Napoles*; *Espanoletas*; *Gallarda y Villano*. Konrad Ragossnig (guitar). Anon.: *Four Country Dances*. Corrette: *Mennet I and II*. Hotteterre: *Bourrée*. Bouin: *La Montauban*. Chédeville: *Musette*. Reusner/Stamley: *Suite*. Poglietti: *Balletto*. Desmarests: *Mennet*; *Passapied*. Fischer: *Bourrée*; *Gigue*. Anon.: *Gavotte*; *Loeillet*; *Corente*; *Sarabande*; *Gigue*. Lully: *Une Noce de Village—Dernière Entrée*. Ulsamer Collegium. DEUTSCHE GRAMMOPHON ARCHIV 2533 172 \$7.98.

Stoddard Lincoln, a harpsichordist and professor of music at Brooklyn College, is a specialist in Baroque and Classical music and has been a critic for the London Financial Times.

STEREO REVIEW MARKET PLACE

NON-DISPLAY CLASSIFIED: COMMERCIAL RATES: For firms or individuals offering commercial products or services, \$1.90 per word (including name and address). Minimum order \$28.50. Payment must accompany copy except when ads are placed by accredited advertising agencies. Frequency discount: 5% for 6 months; 10% for 12 months paid in advance.

READER RATE: For individuals with a personal item to buy or sell, \$1.20 per word (including name and address). No minimum! Payment must accompany copy. **DISPLAY CLASSIFIED:** One inch by one column, \$240.00. Two inches by one column, \$480.00. Column width 2-1/4". Advertiser to supply film positives. Please write or phone for frequency rates.

GENERAL INFORMATION: First word in all ads set in bold caps at no extra charge. All copy subject to publisher's approval. All advertisers using Post Office Boxes in their addresses MUST supply publisher with permanent address and telephone number before ad can be run. Closing Date: 5th of the 2nd month preceding cover date (for example, March issue closes January 5th). Send order and remittance to: Classified Advertising, STEREO REVIEW, One Park Avenue, New York, New York 10016, Attn: Hal Cymes.

EQUIPMENT

WRITE for quotation on any Hi-Fi components: Sound Reproduction Inc., 460 Central Avenue, East Orange, N.J. 07018. 201-673-0600.

NO fair trade laws in D.C. Write for discount prices on your choice of components. District Sound, Inc., 2316 R.I. Ave., N.E., Wash., D.C. 20018. (202) 832-1900.

Listen to TELEVISION IN STEREO



The TE 200 TELEADAPTER EASILY CONNECTS TO ANY TV & STEREO SYSTEM. Using an audio and matrix circuit, teleadapter takes a low impedance output from the television and delivers two HIGH IMPEDANCE CHANNELS OF SIMULATED STEREO to drive any amplifier. Frequency response is maintained so you can hear the ticks of bells or booming bass sounds as it happens on TV. With service warranty and hookup instructions \$16.95 ppd. Guaranteed to make your TV 100% more enjoyable.

OUR NEW TE 300 VHF UHF HI-FI TUNER IS NOW AVAILABLE. A complete and self contained 110 volt tuner VHF UHF antenna connection. Recording and amp output jacks. Five year service warranty \$149.95 ppd. From our factory.

SEND CHECK MASTER CHARGE NO. For TE 200 TE 300 or \$5.00 for C.O.D. TO: RHOADES NATIONAL CO. DEPT. SR P.O. BOX 817 HENDERSONVILLE TENNESSEE 37075

NAME _____
 ADDRESS _____
 CITY _____ STATE _____ ZIP _____

SEND COMPLETE CATALOG

DIAMOND NEEDLES and STEREO CARTRIDGES at DISCOUNT PRICES for SHURE, PICKERING, STANTON, EMPIRE, GRADO and ADC. Send for free catalog LYLE CARTRIDGES, Dept. S, Box 69, Kensington Station, Brooklyn, New York 11218.

AUDIO COMPONENTS at guaranteed lowest prices. Specializing in PIONEER, SANSUI, DUAL, MARANTZ, and BIC. Write for catalog on over 60 brands, including color televisions. Discount Sound, P.O. Box 6346, Washington, D.C. 20015. (301) 770-6550.

PROFESSIONAL HI-FI COURSE—Instructors include Len Feldman, Julian Hirsch, Larry Klein, and Larry Zide. Home study course also available. Send \$1.00 for audio primer and full information or visit HI-FI EXPO, 393 5th Ave., New York City 10016.

ABSOLUTELY THE LOWEST PRICES on name brand stereo components. Send for our free catalog to BOSTON AUDIO EXCHANGE, 1589 Commonwealth Avenue, Brighton, Massachusetts 02135

DON'T PAY the high mail order prices. Thieves Warehouse of Tampa, 1531 South Dale Mabry, Tampa, Florida 33609.

CANADIAN Discount Catalog. Name brand stereo and 4-channel gear. Etco-3, 521 5th Ave. NYC 10017.

DON'T PAY the high mail order prices. Thieves Warehouse of Sarasota, 6564 Gateway Avenue, Sarasota, Florida 33581

BUILD YOUR OWN SPEAKERS AND SAVE UP TO 50%



You can assemble your own high quality, multi-element stereo speakers in a few hours and save up to half the cost of comparable speakers. Send for our free 32-page catalog of speaker kits, raw speakers and accessories.

SPEAKERLAB
 Dept. SR3, 5500-35th N.E.
 Seattle, WA 98105
 1-800-426-7736

DON'T PAY the high mail order prices. Thieves Warehouse of Ft. Walton Beach, 652-D Beal Parkway, N.W., Ft. Walton Beach, Florida 32548.

CROSSOVERS—Custom designed; fully tested; guaranteed quality. Free Brochure. Write: Crossovers, Box 458, Placentia, CA 92670.

LOWEST PRICES on many brands of stereo components — 4 day delivery, write for same day quotes. University Stereo Cooperative, 57 E. Ridgewood Avenue, Ridgewood, N.J. 07450

DON'T PAY the high mail order prices. Thieves Warehouse of Mobile, 1770 Bellline Highway, Mobile, Alabama 36609.

DYNACO, IAD, Lowest Prices. Underground Hi-Fi Sales, 324 Broadwater Road, Arnold, MD 21012. (301) 647-0919.

FREQUENCY EXTENDER-EQUALIZER Model EQ3200. New! In limited production. Ask your dealer or contact Burwen Laboratories, Dept. 12, 209 Middlesex Turnpike, Burlington, Massachusetts 01803. Tel. (617) 273-1488.

STEREO NEEDLES and CARTRIDGES—ADC, Audio Technica, B&O, Empire, Grado, Micro Acoustics Pickering, Ortofon, Shure, Sonus, Stanton, Supex, BSR G.E., RCA, Sony, Panasonic and others. For FREE CATALOG, write: NEEDLE IN A HAYSTACK, INC., P.O. Box 17436, Washington, D.C. 20041.

LOW NOISE STEREO PREAMPLIFIER, Model SP5200. New! In limited production. Ask your dealer or contact Burwen Laboratories, Dept. 12, 209 Middlesex Turnpike, Burlington, Massachusetts 01803. Tel. (617) 273-1488.

RMAD has rock-bottom warehouse discount prices on all brand name audio gear! Write for same-day quote, free catalog. Rocky Mountain Audio Discount, 2055 South Valentia, Denver, Colorado 80231.

SOUND ADVICE FOR AUDIOPHILES—Over 70 brands; low prices. Write for quotes. Sound Advice, 15260 N. W. 60th Ave., Miami Lakes, Fla. 33014.

DON'T PAY the high mail order prices. Thieves Warehouse of Pensacola, 3731 Navy Boulevard, Pensacola, Florida 32507.

CUEING DEVICE for AR and others. Precision machined Silicone damped. American made. \$16.00 postpaid. Lyre-lift. 582 Franklin, Cambridge, Mass. 02139

STEREO COOP Now purchase stereo components directly from a manufacturer co-op, and realize substantial savings. Write for specific price quotations. Stereo Coop, 5631 Baltimore National Pike, Baltimore, Maryland 21228.

6-14 DB NOISE REDUCTION. Burwen DNF1201 works on any program source without pre-encoding. Eliminates hiss without changing tonal quality of program material. Request information and dealer directory. Burwen Laboratories, Dept. 12, 209 Middlesex Turnpike, Burlington, Massachusetts 01803. Tel. (617) 273-1488

hear-muffs

PATENTED PERSONAL AUDIO MONITORS
 FEATURING:
 • PATENTED OPERATING FEATURES
 • INCREDIBLE COMFORT
 • AMAZING ADJUSTABILITY
 • FIVE YEAR AUDIO WARRANTY
 And Cost Much Less Than Comparable Headphones!
 CALL OR WRITE FOR FULL DETAILS AND OUR 15 DAY EVALUATION OFFER.



HEAR MUFFS, INC.
 513 ROGERS ST. DOWNERS GROVE, IL 60515 (312)852-7330

ANTI-SKATING FOR AR TURNTABLES! Proven counterweight design installs in minutes. \$7.00 postpaid. Audio Innovational Products, P.O. Box 137A, Ballardvale Station, Andover, Mass. 01810.

DON'T PAY the high mail order prices. Thieves Warehouse of Montgomery, 3386 Norman Bridge Road, Montgomery, Alabama 36105.

FOR SALE

FOR A NEW AUDIO EXPERIENCE, learn to control your brainwaves. Aquarius Electronics, Box 962S, Albion, CA 95410.

DYNA STEREO 70 MOD KIT. Improved transient response, definition, bass, distortion. Instructions, schematics, parts list, \$5.00. With parts kit including new tubes \$58.00. Postpaid. Audio Designers, Box 122, Ledyard, Conn. 06339.

SHEET MUSIC: Professional Collection of 45 years Over 10,000 popular, jazz, country songs and folios covering 1920/1970 will be auctioned individually. List 25 cents. Tom Borden, Dept. C, Box 473, Brentwood, Tenn. 37027.

TAROT DECKS, Books, Games, Cartomancy Catalog. Send 25 cents. U.S. Games Systems, Inc., Dept. SR, 468 Park Avenue South, New York, NY 10016.

TUBES

TV and Radio Tubes 36 cents. Free 48 page color catalog Cornell, 4215-H University, San Diego, California 92105.

TAPE AND RECORDERS

SCOTCH RECORDING TAPE, lowest prices. TAPE CENTER, Box 4305, Washington, D.C. 20012.

RENT 4-track open reel tapes—all major labels—3,000 different—free brochure. Stereo-Parti, 55 St. James Drive, Santa Rosa, California 95401.

THRIFTIEST "Live"—Operatic, Symphonic—Tapes & Cassettes. P.O. Box 1101, Woodhaven, New York 11421.

OPERA TAPES—Open Reel and Cassettes—Historical performances of past 40 years. Unbelievable treasures and rarities. Also LP records. Ed Rosen, 66-33 Saunders St., Rego Park, N.Y. 11374.

EVERYTHING ON OPEN REEL! Pre-recorded classical/popular tapes. Latest releases. Dolby. Quad. 96-page catalogue \$1. Barclay-Crocker, Room 857 S, 11 Broadway, NYC 10004.

SCOTCH new low noise tape 10-1/2" metal 3600', 5 for \$35.00. Reels. POB 88338, Dunwoody, GA 30338.

GOLDEN AGE RADIO—your best source for radio tapes. Box 25215-T, Portland, Oregon 97225.

OLD RADIO PROGRAMS on tape. Thousands available. Six hours, \$8.00. Catalogue, 50 cents. Nostalgic Radio, Box 29-B, Peoria, IL 61601.

1930-1962 RADIO PROGRAMS. Reels, \$1.00 hour! Cassettes, \$2.00 hour! Mammoth Catalog, \$1.25. AM Treasures, Box 192J, Babylon, New York 11702.

YESTERDAY'S RADIO PROGRAMS on tape. Catalog \$1.00 refundable first order. Adventures, 1301 N. Park Ave., Inglewood, Calif. 90302.

OPEN REELS. Entire Ampex library and more. Major credit cards accepted. 1975 Catalog, \$1 refundable first order. Ampex, Dept. C103, P.O. Box 178, Elk Grove, Ill. 60007.

RARE OPERA, European music on tape. American, European broadcasts. Live Tapes. Historic performances. Free catalogue. Underhill, Bellport, N.Y. 11713.

CASSETTES

Plain white cassette labels, Norelco cassette cleaners, famous brand cassettes. Send for open reel and cassette discount catalog. 1-9 10-99 100 100010M
 Cassette Labels .02 .015 .01 .006
 Norelco Cassette Cleaner 65 .60 .55 .50 .45
 *Scotch Cassette SC90HE 2.72 2.55 2.44

*Buy 2 SC90HE, get 1 free
 Plus Postage by Weight and Zone Minimum Order \$5.00

OPEN REEL STEREO TAPE BUYERS!

At Last! An open reel catalog, including titles, songs, etc. of 95 long play, 2-3 hour albums by American Airlines or Ampex 4-track stereo tapes. Send \$1.00 — and we will also mail you a 140-page Harrison Stereo Tape Guide — so you'll get both for \$1.00 — and this \$1.00 is refundable on your first \$10.00 purchase of open reel stereo tapes at our 30% discount.

We've Got the Spirit! The Prices And the Address To Prove It
Saxitone's Bicentennial Tape Shoppe
 1776 Columbia Road, N.W., Washington, D.C. 20009



YESTERYEAR'S RADIO PROGRAMS. Giant Catalog listing thousands, \$1.00 (refundable). Ayers, Box 96V, Newton Junction, N.H. 03859.

TDK, BASF, Memorex, Maxell, cassettes, reels, 8-tracks. Lowest prices, new guaranteed. S&S Audio, P.O. Box 56039, Harwood Heights, Ill. 60656.

SCOTCH — TDK — MAXELL — MEMOREX — CAPITOL — AMPEX tape. Lowest Prices! S&P Enterprises, Box 101-B, Elk Grove Village, Ill. 60007.

SCOTCH, AMPEX BLANK TAPE—Lowest Prices—Fastest service. Free price lists. Omega, 25520 Graham, Detroit, MI 48239.

RENT RADIO SHOWS—Make copies or listen. Build collection reasonably. Catalog \$1.00 refundable. OTR Rentals, Box 1146S, Livermore, Calif. 94550.

TAPES Classical singers, conductors, instrumentalists in live performance, opera. Emphasis on Superior sound. Open Reel only. Good Sound Associates, P.O. Box 489, Planetarium Station, New York, N.Y. 10024.

RECORDS

SHOW ALBUMS. Rare, Out-of-Print LP's. 52 pg. list. 50 cents. Broadway/Hollywood Recordings, Georgetown, Conn. 06829.

"HARD to Get" records—all speeds. Record Exchange, 842 Seventh Avenue, New York, N.Y. 10019.

PROTECT your LP'S—Poly sleeves for jackets 8 cents; Round Bottom Poly Inner sleeves 6 cents; Poly lined paper 15 cents; white jackets 35 cents. Postage \$1.25. Record House, Hillburn, N.Y. 10931.

THOUSANDS like new LP's and prerecorded tapes. Catalogue \$1.50. Records, Hillburn, New York 10931.

COLLECTORS' Soundtracks. Mint. List 25 cents. Jemm's, P.O. Box 157, Glenview, Ill. 60025.

FREE 200-PAGE CATALOG. 1,400 New Stereo Recordings. Renaissance, Baroque, Classical, Romantic, Modern Music. Not sold in stores. Not listed in Schwann's. Highest quality! Budget label prices! Available only by mail. MUSICAL HERITAGE SOCIETY, Box 932 ST, New York, N.Y. 10023.

SOUNDTRACK RECORD ALBUMS—Mail Auction—Free List. Whalon, 2321D Hill, Redondo Beach, Calif. 90278.

OLDIES. 45rpm. Free Catalog. Corny's Record Shop, Box 166HK, Mason, Ohio 45040.

SOUNDTRACKS/OC, personalities—Free Newsletter. RTSR, 3700 Plaza Drive, Bldg. F/211, Santa Ana, California 92704.

SOUNDTRACK collection—Lowest Prices. List: 25 cents. Box 715, Florissant, Mo. 63033.

QUADRAPHONIC RECORDS AND TAPES—World's largest selection — all labels, over 1000 titles — at discount prices! For your free illustrated quad catalog, write: SOUND CONCEPTS, 2713 West Radan, Dept. A-11, Peoria, Illinois 61604.

FREE RECORD COLLECTION—Reviewers wanted. Each month we ship you new record releases to rate. Anyone can qualify. All you pay is postage. You pay nothing for the records. Applicants accepted on first come basis. Write: Stereo Research, 6162 Washington Circle, Milwaukee, Wisconsin 53213.

BIG BAND, Personality, Sound Tracks, Original Radio Broadcast, Jazz, Blues, Nostalgia. A record collector's paradise. Enclose 50 cents for catalog. Tropical, P.O. Box 414201, Miami Beach, Florida 33141.

SOUNDTRACKS—Movies, TV, Broadway, Related, Rare. \$1.00 for catalog. Refundable. "MR. SOUNDTRACKS", 59-359 Pupukeya Rd., Haleiwa, Hawaii 96712.

COMPLEAT CARUSO DISCOGRAPHY—Every published record chronologically on five stereo tapes. Second Takes, Notes, \$50.00. Bressen, Box 1154, San Francisco, CA 94101.

VINTAGE popular and classical LPs. 78s. Frequent auction lists. Nellie Melba to Doris Day. Records Resurrected, P.O. Box 143, Radnor, PA 19087.

WRITER'S Jazz LP disposals. Free List of 1000. JB, Box 4485, Long Beach, CA 90804.

OPERAS, Operettas, Operatic Recitals, Lieder, Chansons Scandinavian, Spanish vocals, piano, etc. Many rare items from private collection. SIERLE, 155 W. 95 St., NYC 10025.

SEARCHING? LP'S! DISContinued Records, 216 North Rose, Burbank, California 91505.

OLDIES—Private Collector. 45 and 78 RPM rock and pop records. Thousands of titles. Good to mint condition. Send want list and SASE to: SCOTT, Rt. 2, Box 194, Crystal River, FL 32629.

PLANS AND KITS

EXCLUSIVE U.S. Made, CBS Licensed SQ Decoder Kit. Full logic, wave matching and/or variable blend. SQ-1 (fixed blend). \$40.00. SQ-3 (variable blend). \$55.00. Knobs, cases not supplied. Regulated power supply available only with the decoder. \$5.00. Postpaid USA. Canada. Information available. Photolum Corporation, Dept. S-115, 118 East 28 Street, New York, N.Y. 10016.

INSTRUCTION

LEARN Electronics Organ Servicing at home. All makes, including transistors. Experimental kit—trouble-shooting. Accredited NHSC. Free Booklet, Niles Bryant School, 3631 Stockton, Dept. A, Sacramento, Calif. 95820.

DEGREE IN ELECTRONICS through correspondence. Free catalog. Grantham, 2000 Stoner Avenue, Los Angeles, California 90025.

MUSICAL INSTRUMENTS

UP TO 60% DISCOUNT. Name brand instruments Catalog. Freeport Music, 455Q, Route 110, Melville, N.Y. 11746.

WANTED

QUICKSILVER, Platinum, Silver, Gold, Cres Analyzed. Free Circular. Mercury Terminal, Norwood, Mass. 02062.

WANTED used Jazz Records. Send lists to Haynes, 709 Hirth, Columbia, MO 65201.

HYPNOTISM

FREE Hypnotism, Self-Hypnosis, Sleep Learning Catalog! Drawer H400, Ruidoso, New Mexico 88345.

SLEEP LEARNING, Hypnotic Method. 92% effective. Details free. ASR Foundation, Box 23429 EG, Fort Lauderdale, Florida 33307.

AMAZING self-hypnosis record releases fantastic mental power. Instant results! Free trial. Write: Forum (AA11), 333 North Michigan, Chicago 60601.

RUBBER STAMPS

RUBBER address stamps. Free catalog. 45 type styles. Jackson's, Dept. K, Brownsville Rd., Mt. Vernon, Ill. 62864.

BUSINESS OPPORTUNITIES

I MADE \$40,000.00 Year by mailorder! Helped others make money! Free Proof. Torrey, Box 318-NN, Ypsilanti, Michigan 48197.

MAILORDER MILLIONAIRE helps beginners make \$500 weekly. Free report reveals secret plan! Executive (1K11), 333 North Michigan, Chicago 60601.

HI-FI ENTHUSIASTS WANTED!! Earn more than just spare money in your spare time. We need campus representatives to sell name brand stereo components at discount prices in your area. High commission, no investment required. Serious inquiries only, please. Contact: Alan Weisberg, K&L Sound Services Co., 75 No. Beacon St., Watertown, Mass. 02172. (617) 787-4073.

FREE BOOK "2042 unique proven enterprises." Work Home! Hayling-B. Carlsbad, CA 92008.

GET RICH with Secret Law that smashes debts and brings you \$500 to \$5 Million cash. Free report! Credit 4K11, 333 North Michigan, Chicago 60601.

DO SIMPLE ADDRESSING—Mailing. Receive \$12.95 orders. Keep \$8.00 profit. Details—Push stamped envelope. Distributors, Box 9-ZD, East Rockaway, N.Y. 11518.

OIL LEASES Available on federal property. U.S. citizens age 21 or over eligible. Public drawings held monthly by Department of Interior. Send \$1.00 for details. American Oil Lease Co., Box 874, Milwaukee, Wis. 53201.

DISCOTHEQUES! Complete Report. Photos, Do's, Don'ts, Bookings, Equipment, etc., \$5.00. "Dynamic Uno," Box 8116, Corpus Christi, Texas 78412.

EMPLOYMENT OPPORTUNITIES

AUSTRALIA—NEW ZEALAND WANT YOU!!! 50,000 Jobs! Paid Transportation! Latest information and Forms. \$1.00. Austco, Box 3623-SR, Long Beach, California 90803.

OVERSEAS JOBS—Now Hiring, 103 Countries. All Occupations, High Pay, Free Transportation, Tax Benefits. Latest Computerized Reports—\$2.00. TRANSWORLD, International Airport, Box 90802-SR, Los Angeles, California 90009.

MOVIE FILMS

16mm SOUND Features, Shorts, New, Used for Sale. Free Catalog. National Cinema, 333 W. 57th St., N.Y., N.Y. 10019.

EDUCATIONAL OPPORTUNITIES

LEARN WHILE ASLEEP. Hypnotize! Strange catalog free. Autosuggestion, Box 24-ZD, Olympia, Washington 98501.

PUBLICATIONS

NEW Canadian magazine "ELECTRONICS WORKSHOP" \$5.00 yearly. Sample \$1.00. Etcoew, Box 741, Montreal "A" Canada.

THE ABSOLUTE SOUNDTM, in its seventh issue, will take an extended look at several new contenders for state-of-the-art: Infinity's Class D Switching Amp, its Servo-Statik Ia, Audio Research's Tympani IV and updated Dual 76a. Expect in-depth reviews of the Allison One, the Dahlquist bookshelf, Levinson's JC-2, the Denon and Fidelity Research cartridges. And much, much more. Subscriptions (four issues): \$10 USA, \$11 Canada; add \$2 if you want first class mailing, \$13 foreign. The Absolute Sound, Box 55, Northport, N.Y. 11768.

PERSONALS

MAKE FRIENDS WORLDWIDE through international correspondence. Illustrated brochure free. Hermes, Berlin 11, Box 110660/2D, Germany.

NEW Luxury Car Without Cost! Free details. Codex-DD, Box 6073, Toledo, Ohio 43614.

GET OUT OF DEBT Have All The Credit Cards You Want. Write: International Marketing Enterprises, 156 5th Ave., Dept. 40, NYC 10010.

MISCELLANEOUS

WINEMAKERS. Free illustrated catalog of yeasts, equipment. Semplex, Box 12276Q, Minneapolis, Minn. 55412.

CLASSIFIED ADVERTISING ORDER FORM

Please refer to heading on first page of this section for complete data concerning terms, frequency discounts, closing dates, etc.

| | | | | |
|----|----|----|----|----|
| 1 | 2 | 3 | 4 | 5 |
| 6 | 7 | 8 | 9 | 10 |
| 11 | 12 | 13 | 14 | 15 |
| 16 | 17 | 18 | 19 | 20 |
| 21 | 22 | 23 | 24 | 25 |
| 26 | 27 | 28 | 29 | 30 |
| 31 | 32 | 33 | 34 | 35 |

WORD COUNT: Include name and address. Name of city (Des Moines) or of state (New York) counts as one word each. Zip Code numbers not counted. (Publisher reserves right to omit Zip Code if space does not permit.) Count each abbreviation, initial, single figure or group of figures or letters as a word. Symbols such as 35mm, COD, PO, AC, etc., count as one word. Hyphenated words count as two words. Telephone numbers count as two words; as three words with area code.

_____ Words \$ 1.90 (Commercial Rate) \$ 1.20 (Reader Rate)

Payment of \$ _____ enclosed for _____ insertion(s).

CHARGE: American Express BankAmericard Master Charge Diners Club

for _____ insertion(s). You will be billed monthly.

Account # _____ Expiration Date _____

Master Charge Interbank # (4 digits above name) _____

SIGNATURE MUST BE PROVIDED BELOW

PRINT NAME _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

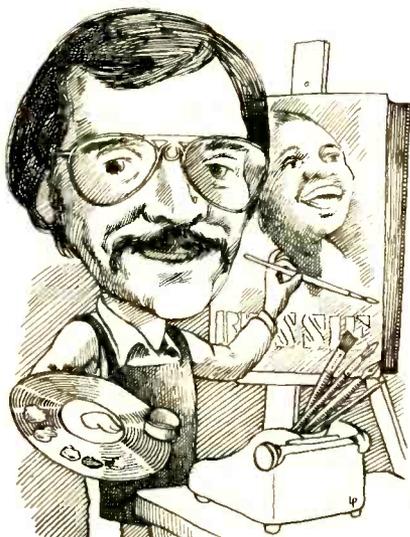
SIGNATURE _____ SR-1175



Introducing the Staff...

Since readers from time to time understandably display a natural human curiosity about the backgrounds of the writers and editors who bend their ears each month in these pages, we will be offering, in issues to come, a series of capsule biographies and autobiographies designed to satisfy that expressed need and at the same time to circumvent some of the hazards of mere speculation.

—Ed.



Contributing Editor

Chris Albertson

In Iceland, where I was born, the government radio station still offers monophonic tangos as Saturday night entertainment, and I don't recall hearing any black music until I was seventeen and living in Copenhagen. That was 1948, I was studying commercial art, and a Bessie Smith record, casually played on the Danish Radio, turned my career around. From then on, all my spare change went for jazz records and my spare time was spent reading anything I could find on the subject.

By 1953 I was working professionally as a commercial artist. I had come to the realization that, despite my cornet practice, I would never be Bix II, but I accidentally found myself running something called the Storyville Jazz Club. When B&O brought out its first tape recorder, I—being gadget-minded—immediately acquired one and took it to London where I pretended to be working for the Danish Radio and thus obtained permission to record the Humphrey Lyttelton band at a club session. My little lie became the truth when the Danish Radio accepted my tapes

and commentary as a program. A burst of activity followed: I did more radio work, wrote jazz articles, and recorded what became the initial releases on the Storyville/Sonet label. I also began conducting all-night jam sessions with such visiting stars as Lionel Hampton, Red Norvo, Quincy Jones, and Clifford Brown. Commercial art was fast taking a back seat to jazz, and in 1954 I moved to Iceland as a first step in the direction of New York.

My visa finally came through in late 1957, and I began a five-month period of futile job-searching and starvation in New York. When I took my last \$10 to Greyhound and asked for "the nearest big city," I ended up in Philadelphia, and a week later I was a producer/writer at WCAU Radio, the local CBS station. Next I became a disc jockey on WHAT-FM, the city's all-jazz station, and in the fall of 1960 I found myself back in New York as a record producer/liner-note writer for Riverside Records. Trips to New Orleans and Chicago in 1961 yielded the "Living Legends" series. I also produced records for Prestige in the early Sixties, helped re-launch the careers of such old-timers as Lonnie Johnson and Elmer Snowden, brought blues singer Ida Cox back into the studio, and wrote countless forgettable liner notes.

In 1964 I became an announcer at WBAI-FM, rising the following year to the position of general manager. It was an exciting station in those days, but by 1966 I had had enough of running out on Friday afternoons to borrow money to meet the payroll, so I went to work for the BBC in London. A year later, finding I had grown weary of working for other people and was getting too far removed from jazz, I decided to tackle free-lance writing. In 1970, after two years of hounding Columbia Records while I struggled to make ends meet as an occasional writer for *downbeat*, John Hammond obtained the go-ahead for a complete reissue of Bessie Smith's records. I spent the next couple of years producing those albums, was awarded two Grammys, and was asked by a publisher to write a biography of Bessie. That took another two years.

I was about to embark on a national promotion tour for my book when STEREO REVIEW came into my life, an association which, for my part at least, has been (except for this assignment) a happy one. I am currently working on a biography of Louis begun fourteen years ago in cooperation with the late Lil Armstrong. *Bessie*, my first book, will be made into a feature film starring Roberta Flack this fall, and my second book, a songbook entitled *Bessie Smith: Empress of the Blues*, was published last April. Possibly significant addenda: my Doberman-Pinscher, Bessie, recently ate a nineteenth-century collection of poetry (hardcover), I am addicted to a soap opera called *All My Children*, my album collection had reached 15,000 at last count (only four of which are Bessie Smith). I converted to quadraphonic sound this year, and I hope I never again have to write about myself.

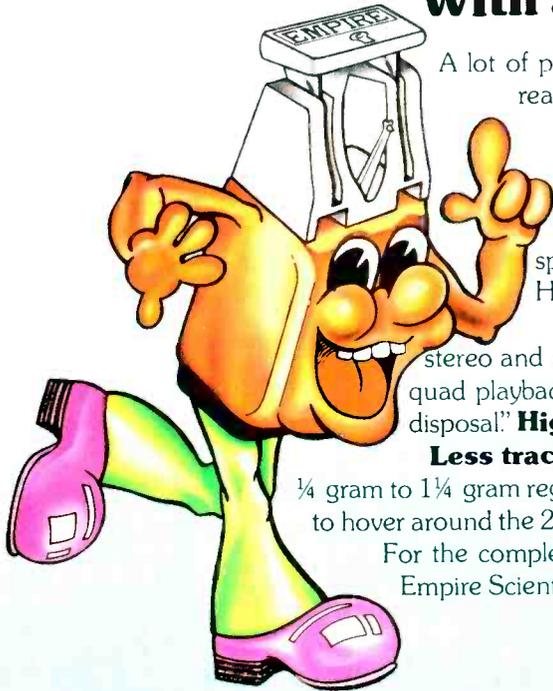
—Chris Albertson

STEREO REVIEW ADVERTISERS' INDEX NOVEMBER 1975

| READER SERVICE NO. | ADVERTISER | PAGE NUMBER |
|--------------------|--------------------------------------|-------------|
| 2 | Accuphase, Division of Teac | 10 |
| 3 | Acoustic Research | 121 |
| | ADR Audio | 136 |
| | ADS | 106 |
| | Akai America, Ltd. | 107 |
| 6 | Angel Records | 128 |
| 7 | Audioanalyst | 123 |
| 8 | Audio Dynamics Corporation | 113 |
| | Audio Technica, US, Inc. | 130 |
| 10 | Bang & Olufsen of America, Inc. | 94, 95 |
| 11 | BASF Systems | 7, 9 |
| | Bose Corporation | 35, 37 |
| 12 | BSR, McDonald Division | 103 |
| 13 | Component Discounters | 122 |
| 14 | Crown International | 14 |
| 16 | Discount Music Club | 43 |
| | Discwasher, Inc. | 13 |
| | Dixie HiFidelity | 134 |
| 17 | Dokorder | 131 |
| 50 | Dual | 52, 53 |
| 18 | Electro-Voice, Inc. | 45 |
| 21, 99 | Empire Scientific Corporation | 55, Cover 3 |
| | ESS | 84, 85 |
| 19 | Fidelitone | 139 |
| 20 | Frazier, Inc. | 102 |
| 22 | Garrard | 4, 5 |
| 23 | Gordon Miller Music | 120 |
| 24 | GTE Sylvania, Entertainment Division | 105 |
| 25 | Harman Kardon, Inc. | 64, 65 |
| 26 | Heath Company | 17, 20 |
| | Henry's Camera | 112 |
| 27 | Illinois Audio | 140 |
| 28 | Infinity | 49 |
| 29 | International Hi Fi Distributors | 139 |
| | J&B Scotch | 86 |
| | Jack Daniel's Distillery | 125 |
| 5 | Jennings Research, Inc. | 51 |
| 30 | Kenwood Electronics | 69 |
| 31 | Kirsch | 114 |
| 32 | Klipsch & Associates | 129 |
| 33 | KLH Research & Development | 24, 25 |
| 15 | Koss Electronics | Cover 4 |
| | L&M Cigarettes | 83 |
| 35 | Lafayette Radio Electronics | 54 |
| | Lorillard, Old Gold | 15 |
| | Lux Audio of America | 109 |
| 38 | Maxell | 46 |
| 39 | McIntosh Laboratory | 100 |
| | Mem Company | 11 |
| 40 | Memorex | 141 |
| 42 | Meriton Electronics | 63 |
| | Midwest Hi-Fi Wholesalers | 122 |
| 43 | Minolta | 100 |
| 37 | MX | 47 |
| 45 | Nakamichi | 134 |
| | Nikko Electric Corp. of America | 116 |
| 46 | Onkyo | 23 |
| 47 | Phase Linear | 44 |
| 48 | Philips High Fidelity Components | 101 |
| 41 | Pickering & Company | 117 |
| 49, 51 | Radio Shack | 119, 130 |
| 52 | RCA Victor | 97 |
| 53 | Rectilinear Research Corp. | 91 |
| | Revox Corporation | 133 |
| | Roots Shoes | 135 |
| 55 | S.A.E. | 104 |
| 56 | Sansui Electronics | 70, 71 |
| 57 | Schober Organ | 122 |
| 100 | Scott, H. H. | 119 |
| 58 | Scott Paper Company | 110 |
| | Sequerra | 40, 41 |
| 1 | Sherwood | Cover 2, 1 |
| 59 | Shure Brothers | 111 |
| 60 | Sony Corp. of America | 72 |
| 61 | Sound Reproduction | 134 |
| 62 | Soundcraftsmen | 98 |
| 63 | Stereo Corp. of America | 136 |
| 64 | Stereo Discounters | 136 |
| 65 | Tandberg of America | 2 |
| | TDK Electronics | 29 |
| | Teac Corporation | 56, 57 |
| 66 | Technics by Panasonic | 39 |
| | Time/Life Records | 30, 33 |
| 67 | Tokyo Shapiro | 136 |
| 68 | Top Discount Audio | 140 |
| 69 | Uher of America | 123 |
| 50 | United Audio | 52, 53 |
| 70 | US Pioneer | 99 |
| 71 | Yamaha International Corporation | 115 |

Keep on trackin'

With an Empire wide response cartridge.



A lot of people have started "track-in" with Empire cartridges for more or less the same reasons.

More separation: "Separation, measured between right and left channels at a frequency of 1 kHz, did indeed measure 35 dB (rather remarkable for any cartridge)" **FM Guide, The Feldman Lab Report.**

Less distortion: "...the Empire 4000D/III produced the flattest overall response yet measured from a CD-4 cartridge—within ± 2 dB from 1,000 to 50,000 Hz." **Stereo Review.**

More versatile: "Not only does the 4000D/III provide excellent sound in both stereo and quadraphonic reproduction, but we had no difficulty whatever getting satisfactory quad playback through any demodulator or with any turntable of appropriate quality at our disposal!" **High Fidelity.**

Less tracking force: "The Empire 4000D/III has a surprisingly low tracking force in the $\frac{1}{4}$ gram to $1\frac{1}{4}$ gram region. This is surprising because other cartridges, and I mean 4 channel types, seem to hover around the 2 gram class." **Modern Hi Fi & Stereo Guide.**

For the complete test reviews from these major audio magazines and a free catalogue, write: Empire Scientific Corp., Garden City, N.Y. 11530. Mfd. U.S.A.

EMPIRE

Choose the Cartridge Designed to Play Best in Your System

Plays 4 Channel Discrete (CD4) and Super Stereo

Plays 2 Channel Stereo

Plays All 4 Channel Matrix Systems (SQ, QS, RM)

| Model | 4000 D/III | 4000 D/II | 4000 D/I | 2000 E/III | 2000 E/II | 2000 E/I | 2000 E | 2000 |
|--|---|---|---|---|---|---|---|---|
| Frequency Response in Hz: | 5-50,000 | 5-45,000 | 10-40,000 | 5-35,000 | 6-33,000 | 8-32,000 | 10-30,000 | 10-28,000 |
| Output Voltage per Channel at 3.54 cm/sec groove velocity: | 3.0 | 3.0 | 3.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Channel Separation | more than 35dB | more than 35dB | 35dB | 35dB | 35dB | 35dB | 30dB | 30dB |
| Tracking Force in Grams: | $\frac{1}{4}$ to $1\frac{1}{4}$ | $\frac{1}{2}$ to $1\frac{1}{2}$ | $\frac{3}{4}$ to $1\frac{1}{2}$ | $\frac{1}{2}$ to $1\frac{1}{2}$ | $\frac{1}{2}$ to $1\frac{1}{2}$ | $\frac{3}{4}$ to $1\frac{1}{2}$ | 1 to 3 | 1 to 3 |
| Stylus Tip: | miniature nude diamond with 1 mil tracing radius ™4 Dimensional | miniature nude diamond with .1 mil tracing radius ™4 Dimensional | miniature nude diamond with 1 mil tracing radius ™4 Dimensional | nude elliptical diamond .2 x .7 mil | nude elliptical diamond .2 x .7 mil | nude elliptical diamond .2 x .7 mil | elliptical diamond .3 x .7 mil | spherical diamond .7 mil |
| For Use In: | turntable only | turntable only | turntable or changer | turntable or changer | turntable or changer | turntable or changer | changer only | changer only |
| |  |  |  |  |  |  |  |  |
| | (White) | (Yellow) | (Black) | (Clear) | (Blue) | (Green) | (Red) | (Smoke) |



© Koss Corporation

Koss introduces the first stereophone you fine tune yourself.

The Technician™/VFR

If you've been missing the brilliant highs and rich lows you think are in your favorite music, the new Koss Technician/VFR Stereophone is for you. Because unlike any other stereophone, it's the world's first stereophone to let you fine tune the frequency response range to suit your own listening preference. So instead of hearing somebody else's idea of what your music should sound like, you'll be able to shape the acoustic contour of your favorite music to the way you want to hear it.

By adjusting the VFR controls at the base of each earcup, you'll be able to discover a shimmering new brilliance in the highest notes of a piccolo. Or by re-shaping the curve for more bass, you'll be able

to feel a new breathtaking fullness in the deepest bass notes of an organ passage. But no matter how you set the VFR controls, you'll be shaping your own response curve. And that's a lot more exciting than simply listening to a frequency response curve pre-set at the factory.

Of course, along with being the first stereophone with a variable frequency response, the new Koss Technician/VFR still offers the superb professional styling and hour-after-hour wearing comfort that Koss Stereophones have always been famous for. So slip into a whole new stereophone experience at your Audio Specialist's. As you adjust the VFR controls you'll discover the shape of things to come . . . the Koss Technician/VFR.



 **KOSS stereophones**
from the people who invented Stereophones.

KOSS CORPORATION, 4129 N. Port Washington Ave., Milwaukee, Wisconsin 53212 • Koss International/London, Milan, Dublin Paris, Frankfurt • Koss limited/Ontario

CIRCLE NO. 15 ON READER SERVICE CARD