

SPECIAL
SPEAKER ISSUE

Stereo Review

AUGUST 1977 • ONE DOLLAR

Audibility of Distortion in Loudspeakers • Buyers' Guide to the New Speaker Kits • Plain Talk from a Speaker Designer

Equipment Test Reports: Harman-Kardon Citation 16 and 16A Stereo Power Amplifiers
Heath AD-1307 Audio Control Center • Koss ESP/10 Electrostatic Headphones
Onkyo A-7 Integrated Stereo Amplifier • SAE Model 2800 Stereo Parametric Equalizer



262940 SIT 80311E99 741J NOV77
R1 2
E GLENN SMITH
BOX 311
SCF
SMITHS
AL 96877

TWO SIGNIFICANT
BREAKTHROUGHS
IN TAPE

ONLY PIONEER
COULD INTRODUCE
A QUARTZ
PHASE LOCKED LOOP
TURNTABLE AND
CALL IT A BARGAIN.



QUARTZ SYNCHRO PULSE

PIONEER

THE PL 570. UNDER \$400.*

The average quartz phase locked loop turntable plays records virtually perfectly, has no audible wow or flutter, is unaffected by voltage changes, and manages to accomplish all this for slightly under \$800.

The new PL 570, on the other hand, has all the same features, but with one distinct advantage: it costs less than \$400.*

Which, you have to admit, is an awfully small price to pay for perfection.

MORE ACCURATE THAN A QUARTZ WATCH.

In brief, the PL 570 works by using a quartz crystal that oscillates 180 million times a minute as a timing mechanism. The speed of our direct-drive platter motor is then "locked" onto that rate of oscillation—and constantly adjusted to account for things like heat, line voltage variations, and even the weight of the record on the platter.

The benefit of all this is simple: the PL 570 can run virtually forever with no variation in speed. In fact, it's so accurate, special measurements are needed to fully describe it. Something called "time drift" is a mere 0.0003%. A figure unsurpassed by the finest quartz watch that gains or loses up to ten seconds a month. And "thermal drift" is 0.00004%. Which means that while we can't guarantee just how well the PL 570 will play in your freezer, normal room and operating temperature variations shouldn't affect it at all.

In more mundane measurements, wow and flutter is 0.025%. Four times under what the human ear can hear. And even with the quartz phase locked loop off, the turntable speed is unaffected with stylus pressure of up to 120 grams. Which, by no small coincidence, is about 119 grams more than you'll ever apply.

FOR THIS KIND OF MONEY YOU SHOULDN'T HAVE TO LIFT THE TONE ARM.

Unlike any other quartz phase locked loop turntable, the PL 570 is automatic. So

you're spared the burden of lifting our tone arm. But this isn't your average tone arm return system. Or your average tone arm, for that matter.

Where most automatic turntables use one motor for both the platter and tone arm, the PL 570 has a separate motor for each. Which means that the action of the tone arm motor never interferes with the accuracy of the platter motor. And where most tone arms sense when to return by using cams and gears that lessen sensitivity and cause vibration, the PL 570 uses a light emitting diode that does neither.

Then there's the tone arm itself. It's fully adjustable. You can even set the vertical tracking angle of your cartridge with a height adjustment lever. And the whole unit is mounted in a ¼ inch aluminum frame that not only looks nice, but helps your records sound nice by removing unwanted resonance.

OTHER FEATURES NOT USUALLY FOUND ON "BARGAIN" TURNTABLES.

When we set out to build the PL 570, we wanted it to be a lower cost quartz phase locked loop turntable. Not lower quality.

So like the quartz turntables that sell for hundreds of dollars more, the PL 570 features an electric strobe circuit that eliminates normal voltage frequency variations so you can adjust the PL 570 perfectly. Plus a "quick down" circuit that lets you go from 45 to 33½ almost instantly. And one piece monocoque construction that curbs howling caused by vibration.

At Pioneer, we've become number one today with people who care about music simply because we've always managed to take state of the art technology, and offer it with some consideration of the state of your wallet.

If the PL 570 is any indication, it looks like we're getting better at it all the time.

High Fidelity Components
PIONEER
WE BRING IT BACK ALIVE.

©1977 U.S. Pioneer Electronics, 85 Oxford Drive, Moonachie, New Jersey 07074

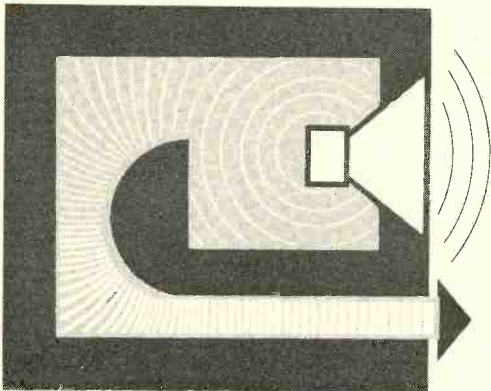


*The value shown in this ad is for informational purposes only. Actual resale prices will be set by the individual Pioneer dealer at his option.

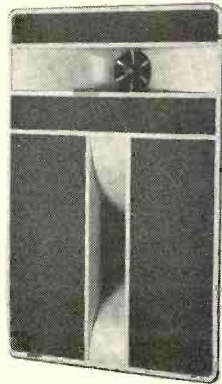
CIRCLE NO. 46 ON READER SERVICE CARD



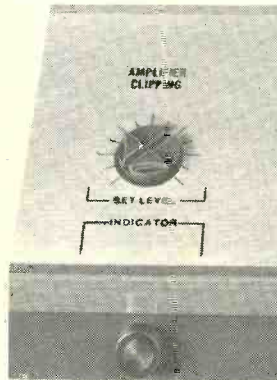
Now speakers with the brains to make your system perform better. And the guts to make it sound better.



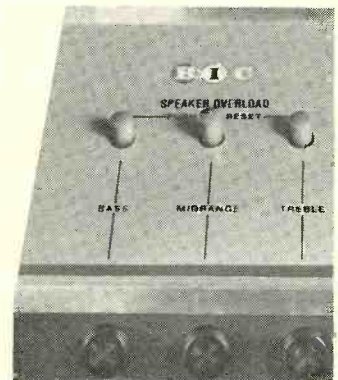
First, B-I-C revolutionized bass reproduction by applying the venturi principle to acoustics. The result: U.S. Patent #3,892,288. And, industrywide, a new generation of high-efficiency speakers.



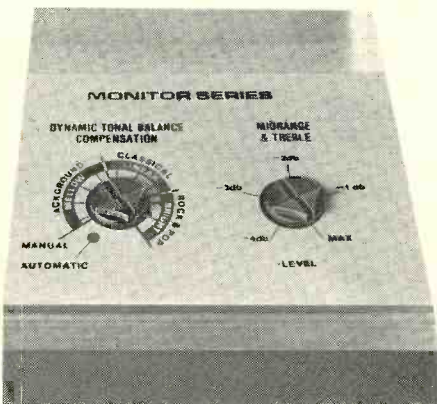
Then the new BICONEX® T-Slot Transducer (also patented) expanded sound dispersal to a room-filling 180 degrees.



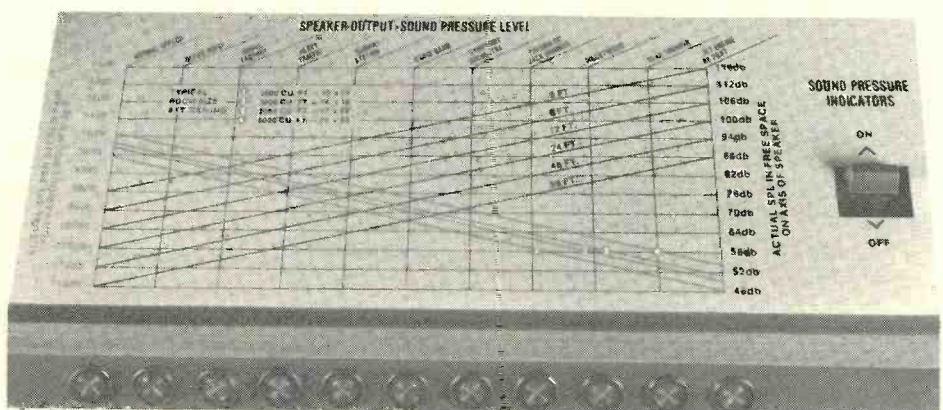
Now a Clipping Indicator on our System Monitor speakers lets you identify, pinpoint and avoid amplifier distortion.



And all models protect themselves against speaker overload. They automatically shut off power to a stressed speaker component, and signal the one affected.



At most sound levels, the ear has trouble hearing bass and treble tones. So we developed Dynamic Tonal Balance Compensation. As volume changes, it automatically adjusts speaker frequency response to give nature an assist. And a separate control matches midrange/treble levels to room acoustics.



The Formula 7 can even let you see what you're hearing. That bank of indicators displays Sound Pressure Levels. And the chart relates readings to room size and listening distance. Furthermore, the SPL Indicators help correct for channel imbalance in the music source, and even detect amplifier malfunction (such as spurious oscillations and DC power leakage). Here are loudspeakers that can actually make your entire system perform better. From B-I-C VENTURI.



Formula 5, 6 and 7 System Monitor speakers, shown with grilles removed. Formula 6 on optional base. See the full line at your audio center.



B-I-C VENTURI

TOMORROW'S TECHNOLOGY TODAY

B-I-C VENTURI, Westbury, N.Y. 11590. B-I-C, B-I-C VENTURI and BICONEX are trademarks of British Industries Co. Division of Avnet, Inc. In Canada: C.W. Pointon, Toronto.

FORMERLY HI FI/STEREO REVIEW

Stereo Review®

AUGUST 1977 • VOLUME 39 • NUMBER 2

The Equipment

NEW PRODUCTS <i>Roundup of latest audio equipment and accessories</i>	17
AUDIO QUESTIONS AND ANSWERS <i>Advice on readers' technical problems</i>	LARRY KLEIN 24
AUDIO BASICS <i>Don't Count; Listen</i>	RALPH HODGES 26
TAPE TALK <i>Two Breakthroughs</i>	CRAIG STARK 28
EQUIPMENT TEST REPORTS <i>Hirsch-Houck Laboratory test results on the Onkyo A-7 integrated stereo amplifier, Heath AD-1307 audio control center, Koss ESP/10 electrostatic headphones, Harman-Kardon Citation 16 and 16A stereo power amplifiers, and SAE Model 2800 stereo parametric equalizer</i>	JULIAN D. HIRSCH 31
SOME STRAIGHT TALK ON SPEAKER DESIGN <i>It has to do largely with the art of manipulating trade-offs</i>	GEORGE SIOLES 62
THE AUDIBILITY OF DISTORTION IN LOUDSPEAKERS <i>Surprising results when you test with music instead of sine waves</i>	PETER FRYER 68
THE SPEAKER KIT <i>There's plenty to do for those who can't resist the urge to do it themselves</i>	WILLIAM KANNER 74

The Music

THE RENAISSANCE OF THE LUTE <i>An enormous literature is waiting to be rediscovered</i>	IGOR KIPNIS 58
SLEEPING BEAUTIES OF R-&B <i>Did you get to the party too late to hear some of the good stuff?</i>	VINCE ALETTI 72
BEST RECORDINGS OF THE MONTH <i>Opera: Otto Nicolai's The Merry Wives of Windsor....Orchestral/Choral: Franz Schubert's Mass No. 5....Rock: John Cale's "Guts"....Pop Vocal: Bonnie Raitt's "Sweet Forgiveness," Barbara Cook's "As of Today"</i>	79
POPULAR DISCS AND TAPES	86
<i>Two Choice Disco Cuts</i>	EDWARD BUxbaUM 87
<i>Rediscovered Historical Beatlefacts</i>	STEVE SIMELS 88
<i>Burt Bacharach's Back</i>	PETER REILLY 92
<i>Pop Rotogravure</i>	RICK MITZ 96
<i>Annie</i>	PETER REILLY 102
<i>Helen Merrill and John Lewis: the Rapport is Just Fine</i>	CHRIS ALBERTSON 106
CLASSICAL DISCS AND TAPES	110
<i>American Art Song</i>	RICHARD FREED 111
<i>Late G & S: The Grand Duke</i>	PAUL KRESH 112
<i>Complete Songs of Fauré</i>	NED ROEM 120
<i>The Quintessence of Ives</i>	DAVID HALL 124

The Regulars

EDITORIALLY SPEAKING	WILLIAM ANDERSON 4
LETTERS TO THE EDITOR	8
TECHNICAL TALK	JULIAN D. HIRSCH 30
GOING ON RECORD	JAMES GOODFRIEND 52
THE POP BEAT	PAULETTE WEISS 54
ADVERTISERS' INDEX	130

COVER: Design by Borys Patchowsky; photo by Bruce Pendleton

COPYRIGHT © 1977 BY ZIFF-DAVIS PUBLISHING COMPANY. All rights reserved. Stereo Review, August 1977, Volume 39, Number 2. 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; John R. Emery, Senior 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. and possessions, \$7.98; Canada, \$8.98. All other countries, one-year subscription rate \$12.98, cash orders only, payable in U.S. currency. 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 80323. 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. Material in this publication may not be reproduced in any form without permission. Requests for permission should be directed to Jerry Schneider, Rights and Permissions, Ziff-Davis Publishing Company, One Park Avenue, New York, New York 10016.

Editorially Speaking

By William Anderson



DISC QUALITY: A PROBLEM SOLVED

If your mind is anything like as cluttered with useless information as mine is, I'm sure you won't thank me for reminding you that the German biologist Ernst Heinrich Haeckel is credited with inventing one of the all-time great conversation stoppers: "The ontogeny recapitulates the phylogeny." If you got through Freshman Bio intact you will know that that is the biological fraternity's Darwinian way of saying that the development of the individual from conception on is a kind of summary of the developmental history of the race. It is also a way of saying that first things come first, that chickens (as well as omelettes) come from eggs, and perhaps even (just watch this pirouette into relevance) that *the software anticipates the hardware*. Or so, at least, I had always thought.

For the past year and more we have been worrying away in these pages at the subject of disc quality. In the process we have estab-

lished some fairly interesting facts. The first is that there is a large (and growing) population out there seriously disturbed about what it sees as a steady deterioration in the quality of the Great American Phonograph Record. Quite beyond such comparatively high-flown concerns as dynamic-range compression, signal-to-noise ratios, frequency balance, and master-tape hiss, record buyers are concerned about the increase in such comparatively prosaic flaws as warps, non-electrostatic snap-crackle-and-pop, off-center pressings, stuck or otherwise untrackable grooves, audible surface scratches, non-fill, mold-grain, and just plain dirt (few things match the disappointment of opening a "factory-fresh," shrink-wrapped disc and finding it already soiled with greasy fingerprints).

Record manufacturers, when they choose to reply to these complaints, make a few factual points of their own. There is always, for

one thing, a small but vocal minority of professional carpers in any market (such as those who write me that they return eight out of ten records they buy), and post-Watergate paranoia may be creating new ones at a rate higher than usual. For another, many people *do* mistreat their discs, blaming the resulting damage on the manufacturer and returning the cripple for a refund. The industry has been strangely reticent, however, about the real cause of it all: the cost/price squeeze in which record producers find themselves caught (not, to be sure, without a bit of their own connivance). The costs of labor, raw materials, and management have all gone up in the past two decades at rates that are reflected hardly at all in disc prices. Mass-production efficiencies (faster-moving production lines) and technological innovations (thinner discs) have made up the difference, but they have also resulted in lower quality. And so, for perhaps the first time in the history of recording, we find disc software that is sonically inferior to the hardware it is meant to be played through.

This situation might have been let drift indefinitely had not the status of the equipment market changed radically in the past few years. For it is no longer merely the finicky audiophile minority (look at all those costly noise suppressors!) that is trying to get high-quality sound out of low-quality discs. Excellent audio equipment is rapidly becoming the norm rather than the exception. It is trembling, in fact, on the verge of exploding enormously into the mass market, and the time has come for the software industry to reassert its traditional technological leadership. That will not be done by dabbling faddishly with regressive direct-cut gimmickry, for however lovely the results in purely electronic terms, they must still run the gauntlet of the physical pressing process which is the principal source of consumer complaints. The time has come rather to step bravely (if expensively) into the noiseless new world of the digital disc. It's that or join the dodo.

Stereo Review

PUBLISHER

EDGAR W. HOPPER

EDITOR

WILLIAM ANDERSON

MANAGING EDITOR

WILLIAM LIVINGSTONE

EDITORIAL COORDINATOR

LOUISE GOOCH BOUNDAS

ART DIRECTOR

BORYS PATCHOWSKY

MUSIC EDITOR

JAMES GOODFRIEND

POPULAR MUSIC EDITOR

PAULETTE WEISS

ASSISTANT MUSIC EDITOR

VIVIENNE WINTERRY GOODMAN

TECHNICAL DIRECTOR

LARRY KLEIN

TECHNICAL EDITOR

RALPH HODGES

ASSISTANT TECHNICAL EDITOR

GEORGE TLAMSA

PRODUCTION EDITOR

JOHN HARRISON

ASSISTANT EDITOR, RESEARCH

RICHARD SARBIN

COPY EDITOR

DAVID STEIN

EDITORIAL ASSISTANTS

BARBARA AIKEN, DIANE NAKAMURA

CONTRIBUTING EDITORS

CHRIS ALBERTSON

NOEL COPPAGE

RICHARD FREED

DAVID HALL

ROY HEMMING

JULIAN D. HIRSCH

GEORGE JELLINEK

IGOR KIPNIS

IRVING KOLODIN

PAUL KRESH

STODDARD LINCOLN

J MARKS-HIGHWATER

RICK MITZ

LINCOLN PERRY

PETER REILLY

CHARLES RODRIGUES

ERIC SALZMAN

STEVE SIMELS

CRAIG STARK

JOEL VANCE

LONDON EDITOR

HENRY PLEASANTS

ADVERTISING DIRECTOR

JAMES J. SULLIVAN

ADVERTISING SERVICE MANAGER

LINDA BLUM

EXECUTIVE ASSISTANT

PEGI McENEANEY

ASSOCIATE PUBLISHER

STANLEY NEUFELD

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

Eastern Advertising Representative: Charles L. P. Watson

Midwestern Office: The Pattis Group

4761 West Touhy Ave., Lincolnwood, Illinois 60064

312 679-1100

Arnold S. Hoffman

Western Office

9025 Wilshire Boulevard

Beverly Hills, California 90211

213 273-8050; 272-1161

Western Advertising Manager: Linda Bartlett

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 80323

EDITORIAL CONTRIBUTIONS must be accompanied by return postage and will be handled with reasonable care; however, publisher assumes no responsibility for the 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

John R. Emery, Senior Vice President-Finance/Treasurer

Phillip T. Heffernan, Senior Vice President

Edward D. Muhlfeld, 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

Albert S. Traina, Vice President

Philip Korsant, Vice President

Paul H. Chook, Vice President

Edgar W. Hopper, Vice President

Charles B. Seton, Secretary

William Ziff, Chairman

W. Bradford Briggs, Vice Chairman

The designers of the state-of-the-art DDX 1000 present a direct-drive turntable at less than a third the price:

The DD 20.

The Micro Seiki DDX 1000 with its three-tonearm capability and its optional highly-acclaimed MA 505 tonearms has taken turntable engineering in a new direction with its styling and audiophile convenience features.

And now these same minds have engineered a superb direct-drive turntable for \$200 (nationally advertised value)*.

Like the DDX 1000, the DD 20 has a servo-controlled motor; changes in line

voltage have no effect upon rotation speed. A floating suspension system protects the turntable assembly and tonearm base, eliminating acoustic feedback and providing isolation from outside vibration.

Wow and flutter is less than 0.03 and signal-to-noise ratio is greater than 60 db.

Its precision-machined high mass platter has an engraved stroboscope pattern to attain absolute accuracy at 33 1/3 and 45.

The clean-lined base has an acoustic as well as an aesthetic function: formulated of a special compound of plastic and iron particles, it provides extremely high density. Result: a unique low resonance base.

Its specifications and engineering precision translate into a faithfulness of reproduction that will give you even greater enjoyment out of your favorite records.

Isn't it time to upgrade your pleasure?

MICRO SEIKI

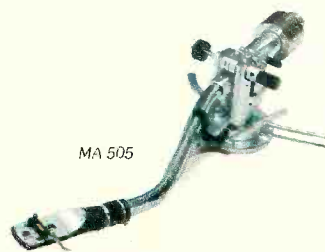
Advanced engineering in turntables.



DDX 1000



DD 20



MA 505

Distributed by TEAC Corporation of America, 7733 Telegraph Road, Montebello, California 90640. ©TEAC 1977.
*Actual resale prices will be determined individually and at the sole discretion of authorized Micro Seiki dealers.

**Introducing
The Bose Model 601.**



A New Direct/Reflecting® Speaker of Outstanding Performance, High Efficiency, Moderate Cost, and Exceptional Versatility.

The Model 601 is a totally new, Direct/Reflecting® loudspeaker from Bose. It employs a unique arrangement of six drivers in each enclosure (four tweeters and two woofers) to achieve a level of tonal accuracy and spatial realism comparable only to the world-renowned Bose 901® Series III.

The result is an open, spacious sound and a feeling of realism which can not be achieved by conventional speakers with front-mounted drivers beaming directly at the listener. Such conventional designs are aimed almost exclusively at producing accurate frequency response, while largely ignoring the spatial qualities so critical to the impact of a live performance.

In the Model 601, these important spatial qualities are accurately repro-

duced through the careful positioning and orientation of all six drivers in each speaker enclosure.

Each high-output woofer is capable of better dispersion and smoother midrange performance than a larger woofer, while they work together to provide bass response of exceptional power and clarity.

Accuracy of Tonal Balance.

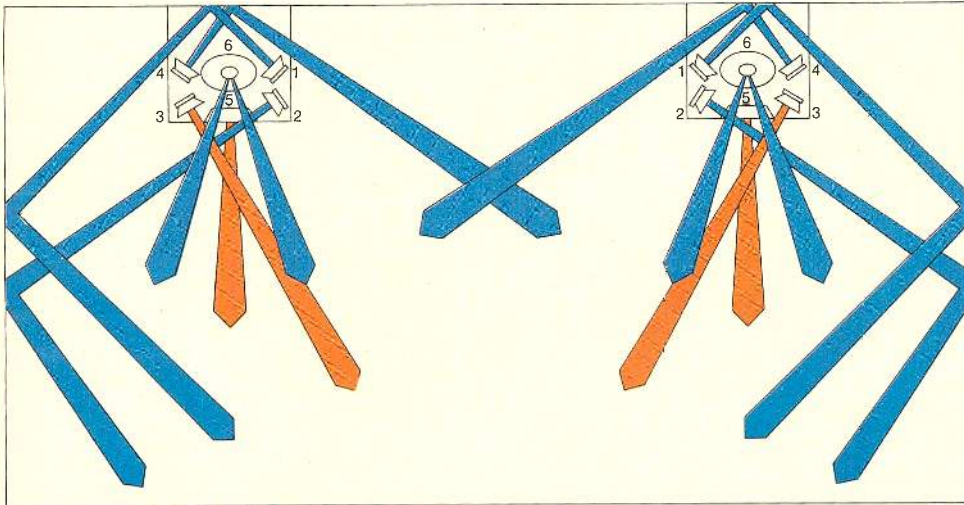
With all four tweeters covering the same upper frequency range and the two woofers covering the same lower range, small response irregularities of individual drivers are averaged and smoothed in a way that can not be duplicated using single drivers.

Efficiency.

The Model 601 is also a highly efficient speaker that can deliver superior reproduction of all kinds of music using an amplifier or receiver having as little as 20 watts of power per channel.

The Proof.

For a detailed description of the concepts and technology that make possible the superior performance of the Model 601, write for a full-color brochure to Bose, Dept. SR8, The Mountain, Framingham, Mass. 01701. But for the real proof—your listening enjoyment—just visit any authorized dealer and ask him to introduce you to the newest Bose Direct/Reflecting® speaker system.



This complex pattern of reflected and direct sound is the key to the spatial realism of the Model 601.

duced through the careful positioning and orientation of all six drivers in each speaker enclosure.

These performance qualities, along with high efficiency, moderate cost, and great versatility of speaker placement in practically any listening environment, make the Model 601 a loudspeaker of exceptional value.

The Concept Behind Bose Direct/Reflecting® Speakers.

Like the 901 Series III (the most advanced development of Bose design concepts and state-of-the-art manufacturing techniques), the Model 601 is a Direct/Reflecting® speaker system. It's designed to reflect the greater part of its sound output off the back and side walls of the room, surrounding the listener with the same kind of balance of reflected and direct sound experienced in a live performance.

The Tweeters.

Three tweeters in each enclosure (1, 2, and 4) provide reflected sound, creating a feeling of spaciousness, while one tweeter (3) radiates the smaller proportion of direct sound needed for a strong center image and crisp, sharply defined details.

Two of the tweeters are also positioned to radiate sound upward through the acoustically transparent top grille, thus avoiding interference from furniture in the room.

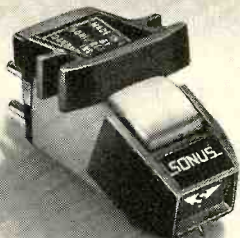
The Woofers.

There are two 8-inch woofers in each Model 601 enclosure, one aimed forward (5) and one angled upward (6) to contribute an important component of reflected sound. The use of two smaller woofers provides a cone area equal to that of a single much larger driver, while offering important



BOSE®
Better sound through research.

MAN
DOES NOT
LISTEN
BY SPECS
ALONE.



Specs and numbers by themselves can be meaningless. Take phono cartridges. Despite the fact that this state of the art has never been higher, with wide range, flat frequency response, excellent separation and superb tracking ability taken for granted, there's still room for improvement in the sound reproduction of even the best records. And in many systems, the cartridge itself is the limiting factor. We believe Sonus effectively removes this limitation.

What makes Sonus so audibly superior?

Differences in cartridges are hard to readily identify. But sensitive ears will easily recognize Sonus as having a reproductive quality that brings out the inner voices of complex musical passages with extraordinary clarity. A high definition cartridge that, because of a combination of design features, including its newly patented cantilever suspension, reproduces music with an uncanny sense of depth, ambience and realism.

So the next time you're considering an improvement in your audio system, consider upgrading your cartridge. Compare specs if you must. (You'll find that ours are equal to, if not better than anybody's.) But buy with your ears, not your eyes.

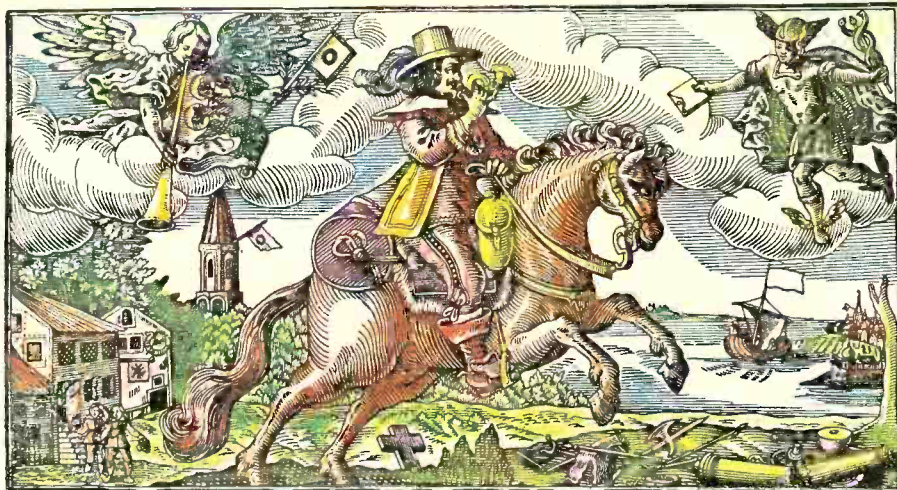
Because man does not listen by specs alone.

SONUS RESEARCH, INC., Sugar Hollow Rd.
Danbury, Conn. 06810

SONUS

High Definition Phono Cartridges

CIRCLE NO. 35 ON READER SERVICE CARD



LETTERS TO THE EDITOR

A Buffett Summer

● The dedicated romantic is always on the lookout for the book or record that will officially inaugurate the summer's escapist fantasies. My thirty-odd summers have been thoroughly subtitled—the summers of Huck Finn and Tom Sawyer, the seasons of the Beatles and the Beachboys, the vacation I read all those Steinbeck novels. More recently my estival excursions have been to the tropics with Peter Matthiesen and B. Traven, and it is in this later tradition of the American expatriate in warmer climes that I wish to nominate, as the soundtrack for summer 1977, Jimmy Buffett's evocative "Changes in Latitudes, Changes in Attitudes."

TOM TOLLEFSEN
Glen Ellen, Calif.

Quadracide

● I would like to join the growing number of people expressing their disgust at the attempted murder of quadrasonics. I have quite a bit invested in my quad equipment and half my records are quad, but after all the initial big pushes by Columbia, Sony, RCA, Panasonic, and JVC there has been nothing new.

Since the economy has stabilized and the various formats have nearly been perfected, there is *no excuse* for this sorry state of affairs!

J. R. THOMAS
Towson, Md.

Larry Klein replies: The "excuse" is that people haven't been buying quadrasonic equipment and software in sufficient quantities to make it worthwhile to keep producing and innovating. What those same people would have done if there weren't all those noncompatible formats is of course moot. In any case, the whole picture may change in a year or two, or three, or . . . For the latest quad news, see the Consumer Electronics Show report coming up in the September issue.

Bette Midler

● Thank you for that really marvelous story on Bette Midler by Rick Mitz in the June is-

sue. I hadn't paid much attention to her before—a few TV talk-show appearances and such—but the interview really got to me, particularly (God knows why) that one line ". . . right now, I'm all right. I've got my little hat on. . . ." She has that sympathetic quality of vulnerability that so many of our greatest theatrical personalities—from Fanny Brice to Marilyn Monroe—had. That and a little talent, and who can resist?

MICHEL LANDAU
New York, N.Y.

Sextets

● Irving Kolodin's "A Beginner's Guide to Chamber Music" in the May issue is a nice collection. However, in counting from two to eight one usually includes six! What happened to sextets? I suggest the Brahms string sextets in B-flat Major, Op. 18 (with the Amadeus Quartet, Aronowitz, and Pleeth, on Deutsche Grammophon 139 353) and G Major, Op. 36 (with the Marlboro Chamber Sextet, on Columbia MS-7445).

JEREMIAH WERHNER
Goshen, Mass.

Musical Muggers

● I've read Lester Bangs' reviews for years and generally understood them if not downright agreed with them. But his review of the "Ramones Leave Home" album (in the June issue) makes me wonder if perhaps I'm no longer trendy because of my distinct lack of violent masochism.

I certainly agree with his comments on Mr. Frampton, Boston, and everyone else directly or indirectly insulted in the review, but, good Lord, must we go to extremes? I bought the first Ramones album with a sort of bemused, "What on earth is this?" attitude, and proceeded to discover it was the worst five dollars I'd ever spent. My right speaker hasn't been in a good mood since I subjected it to that relentless guitar attack. I desperately tried every tone control on my receiver to neutralize the impact of that horrid lead vocalist, but to no avail.

Since then there has been no time of the day, day of the week, week of the month, etc.

in which I've been in the mood to hear the album again, and it sits there totally ignored between Jean-Luc Ponty and Lou Reed. It's not that the Ramones have no talent, which is beside the point with most of the New York wave of musical muggers, and I can certainly appreciate their artistic integrity, but I don't understand anyone's willfully praising them.

The Ramones are really phonies (as phony as Bowie or Farrah What's-her-name, or anyone else trying to sell an image), and anyone who would waste a whole page of STEREO REVIEW on a group obsessed with "total economy" has been *fooled* (and probably even believes *Charley's Angels* is a *detective* show).

MIKE AUBIN
Fremont, Calif.

Listening Lesson

● The letter from Charles Long in the June issue disturbed me. Some people *don't* talk while seriously listening to pop music! In my own case, I grew up screaming to the Beatles, dancing to the Stones, and getting stoned to the Dead. The music was enjoyable and consumable, rather like potato chips. But as I learned to be a critical listener to classical music, I turned back and applied my more knowledgeable ears to the rock I already liked, and I was very impressed. I would tell Mr. Long to listen to the *best* bands of 1965-1970 (not the trash), to listen to Bob Dylan's vocal phrasing and ignore his harmonica playing, to listen to the guitar playing in Cream and avoid the vocals, and to pay attention to the horizontal lines and counterpoint in Traffic and let the chords be subordinate. He should try to distinguish the social phenomenon of popular music from the musical phenomenon. It's rarely ever done—by musicians, insiders, outsiders, or reviewers.

KAREN MARBURGER
Portland, Ore.

TLS

● Concerning the Editor's comment in his June column that reviews in the *London Times Literary Supplement* "are often unsigned": the TLS abandoned anonymous reviews several years ago. (This has been a brief, signed, polite, and punctual letter of correction on a single subject. I dare you to print it.)

KEITH ALDRICH
Goleta, Calif.

The Editor replies: I abandoned the TLS several years ago largely because of its habit of concealing the identity of its writers; I may have to reconsider now that they have mended their ways. I thank Mr. Aldrich for bringing me up to date; perhaps he will do the same for the New York office of the TLS, who were of the same erroneous opinion when I spoke to them a few months ago!

AM Fidelity

● I'm delighted that Julian Hirsch is paying attention to the AM sections of receivers under test, but I disagree with his comment in the receiver review in the May issue: "Although the AM tuner produced a rather constricted, nasal sound, we would not hold that against [it]." His next remark, that "if AM

Introducing New Quantum by Memorex. Four Reasons It Sounds So Good.

1. Quantum offers low distortion. You get a true recording of any type of music at high output, with virtually no distortion.

2. Quantum has very high sensitivity. This maximizes output and allows you to effectively capture all signals at a greater level.

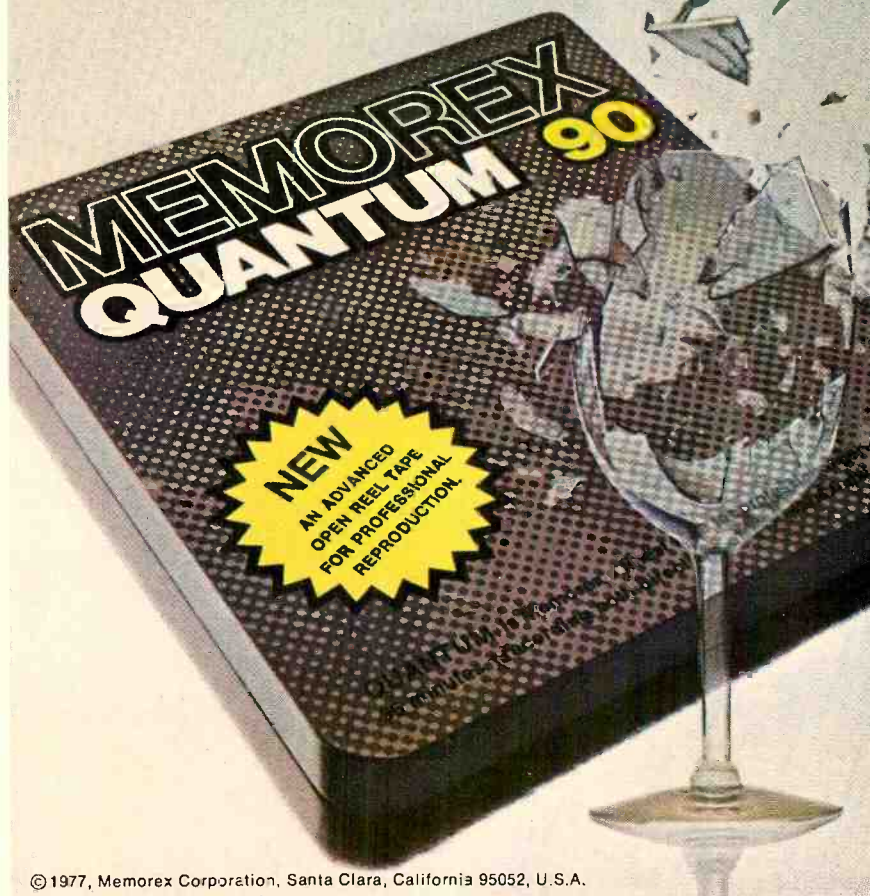
3. Quantum provides an excellent signal-to-noise ratio because its high sensitivity is obtained with no increase in noise level. This means a pure, brilliant sound.

4. Quantum gives you high saturation, resulting in a wide dynamic range and broad recording flexibility.

Quantum achieves improved recording performance while maintaining a high degree of mechanical excellence. With long life, durability, precision edge quality and excellent oxide adhesion.

The best way to hear the Quantum difference is to try it out for yourself. Available in 7" x 1800', 7" x 2400' and 10½" x 3600' reels.

MEMOREX Recording Tape.
Is it live or is it Memorex?



© 1977, Memorex Corporation, Santa Clara, California 95052, U.S.A.

CIRCLE NO. 25 ON READER SERVICE CARD

quality were a significant factor, few stereo receivers could be considered even marginally acceptable for quality reproduction," is absolutely right on—but surely, if an AM section is included in a receiver, it has to be a significant factor! AM is capable of high fidelity, it is possible to manufacture high-fidelity AM receiving equipment, and it is inexcusable for otherwise high-fidelity equipment to be sold to the public with terrible AM sections! Not until manufacturers are held responsible for a deficiency in this area will they upgrade, however.

ERIC G. NORBERG
Program Director, KEX
Portland, Ore.

Technical Director Larry Klein replies: There

is no way at the moment that a low-cost AM section in a receiver can deliver a wide audio bandwidth—assuming the AM stations are broadcasting it. AM equipment does not escape the laws of the marketplace: if enough consumers were willing to pay the extra cost for quality AM reception, I'm sure that one or more manufacturers would build the means for it into their receivers.

Hearing

After reading "A Rock Through the Window" (June "Editorially Speaking"), I couldn't help but send in the following letter of correction—trivial perhaps. In the article on distortion (also in June) Paul Milner says

that the two reflex muscles in the middle ear are activated by the facial nerve. As a medical student I must point out that only the muscle to the stapes is activated by the facial nerve, the other by the trigeminal nerve.

JIM BURKHOLDER
Seattle, Wash.

Karajan

I was delighted to see your article in the June issue on Herbert von Karajan, whom I consider easily the greatest living conductor. Indeed, I find him one of the three greatest who have ever put their art on discs, ranking with Beecham and Toscanini.

This feeling is very common in Europe, but very rare in the U.S., especially among the supposedly "expert" critics. However, if you'd like to try a really astounding experiment, take a few people who claim they dislike Karajan and have them compare, without knowing which is which, his *Eroica* finale with any other, and then the first movement of his recording of Ravel's *Rapsodie Espagnol* with the critically favored Boulez and Martinon versions.

In my experience thirty-one out of thirty-two people have chosen the Karajan *Eroica*, and seventeen out of seventeen have picked his Ravel. Statistically this is an almost unbelievable unanimity—but try it for yourself!

JOHN H. CONE
Pasadena, Calif.

About Herbert von Karajan: what a stuffed shirt! He's earned my vote as the person I'd most like to see slip on a banana peel.

MAURY MOLINA
San Francisco, Calif.

Souless Soul

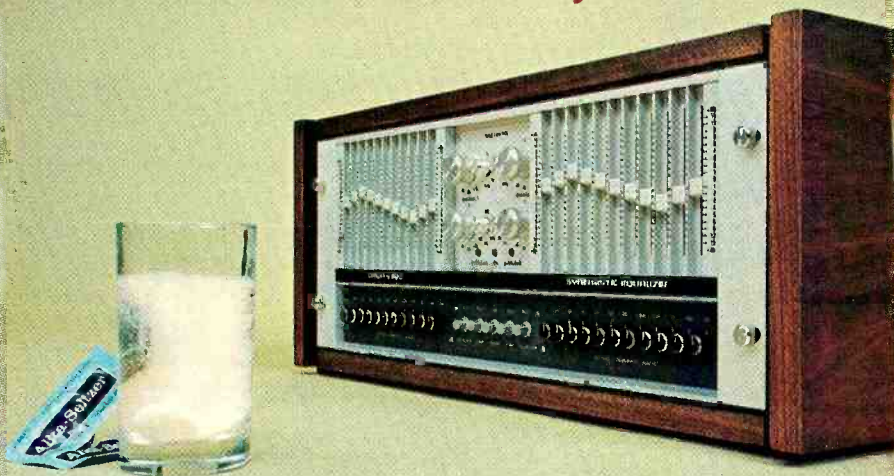
I was in a rush when I went into my favorite record store to buy David Soul's new album, so I grabbed a copy, paid for it, and left. When I got home and opened the album up I found that it did not contain his hit song, *Don't Give Up on Us*. At first I thought my eyes were playing tricks on me, but I looked again and even played the record through: no song. The next day I was in my car and heard a DJ announce the album and mention that it contained *Don't Give Up on Us*. So I went to my second-choice store and found the album again; sure enough, it had the song.

It's driving me nuts! They're the same album—same cover, same code numbers, same everything—except one has *Don't Give Up on Us* and the other doesn't. The store manager couldn't explain it to me, but maybe you can. Is my original album (without the song) of any special value? The label is Private Stock.

ROBERT S. YABLANS
Scarsdale, N.Y.

Popular Music Editor Paulette Weiss replies: To save you a trip to your eye doctor or psychiatrist, I spoke with Private Stock Records and learned that there were two pressings of Soul's album. The first, without *Don't Give Up on Us*, was recalled from stores when the song, released as a single, became a hit. *Don't Give Up* was then included in the second pressing, which was identical to the first in all other respects. About two or three thousand of the first-run copies are still scattered around (Continued on page 14)

Both of these are made in Elkhart, Indiana



The one on the right provides permanent relief from the pain of headache caused by poor room response

The good sound that comes out of your speakers can be different by the time it gets to wherever your ears are. Air, walls, rugs, drapes, furniture — can all affect frequency response.

The new Crown EQ-2 Equalization System is designed to correct that particular headache. The system

includes the Crown EQ-2 eleven-band, octave-center, stereo equalizer; plus the Crown equalization record, room response chart paper, and a manual which tells you how to make it happen.

Write today for full-color brochure. The information could be very good for your system.



CROWN
Box 1000, Elkhart IN 46514

ANNOUNCING THE SPEAKER NO ONE WAS WAITING FOR.



When people think of us, they think of receivers, tuners, amps, cassette decks and turntables. No one thinks of us for speakers.

But with the major advancements we've made in our components, we wanted to make sure they would sound the way they were supposed to sound.

We tested and listened to the best three-way speaker systems and found that almost all of them had remarkably inefficient mid-range speakers. And because 90% of the sound that you hear is in the mid-range, those inefficient speakers were making singers sound slightly nasal and applause sound like rainfall.

So we developed our new LS-40&A. Our goal was to eliminate the nasal sound, and make sure an ovation sounded like applause instead of rain on the deck of Noah's Ark.

You, of course, had no idea we were up to this.

With the help of computers, holographic analysis, and the sensitive ears of our engineers we built an efficient mid-range speaker that could do those things. Then we put that technology to work building a woofer whose cone eliminates mumbling, along with

a tweeter whose higher output would reproduce the sound of the singer's lips and breath.

It's everything a \$325 speaker should be, except it costs less than \$250*.

And, as crazy as this may sound, it was worth the wait.



For the Kenwood dealer nearest you, see your Yellow Pages, or write Kenwood, 15777 S. Broadway, Gardena, CA 90248.

*Nationally advertised value. For information purposes. Actual prices are established by Kenwood dealers. Cabinetry is walnut veneered with particle board rear panel.



KENWOOD

Sansui establishes of excellence:

The widest frequency response of any

The clean and extremely pure sound quality of the new Sansui AU-717 and AU-517 DC integrated amplifiers is distinctly superior to that of all other amplifiers available today. Stereo perspective is spacious, musical presence is strong and distortion has been virtually eliminated. Sansui has achieved this audible excellence by sophisticated research and precision engineering. When you listen to the new Sansui amplifiers and tuners, you will know that the most excellent specifications and the most advanced design do, in fact, produce the most pleasing and accurate musical reproduction.

Here's why. *Frequency response of the main amplifier section of the AU-717 and AU-517 is from zero Hz to 200kHz (+0.0dB, -3.0dB). This ensures sharp, clean transients and greatly reduces the problems of phase shifts. Audible distortion has been virtually eliminated by reducing total harmonic distortion to an astoundingly low 0.025%.

Dual-independent power supplies permit truest stereo separation and provide a large power reservoir.

For uncolored phono reproduction, equalization is within ± 0.2 dB (20-20,000 Hz, extended RIAA curve). The calibrated-attenuator volume control adds another precision capability to these professional quality amplifiers.

The ample power of the AU-717 and AU-517 lets you fill your listening room with the outstanding musical quality that the amplifiers provide. 85 watts and 65 watts per channel, respectively, min. RMS both channels driven into 8 ohms from 20-20,000Hz with no more than 0.025% THD.

The matching TU-717 tuner is designed to fully complement the achievements of these amplifiers. Dual IF bandwidth lets you select for lowest distortion (0.07% mono, 0.09% stereo) or for maximum selectivity (80dB). Signal-to-noise ratio is excellent: 82dB mono, 77dB stereo.

In addition to their outstanding musical capabilities, these new Sansui matched separates are elegantly styled with rack mounting adapters to be pleasing to the eye. And they are most attractively priced. The AU-717 and AU-517 are less than \$450† and \$370†, respectively. TU-717, less than \$320†. Look for them at your franchised Sansui dealer today.



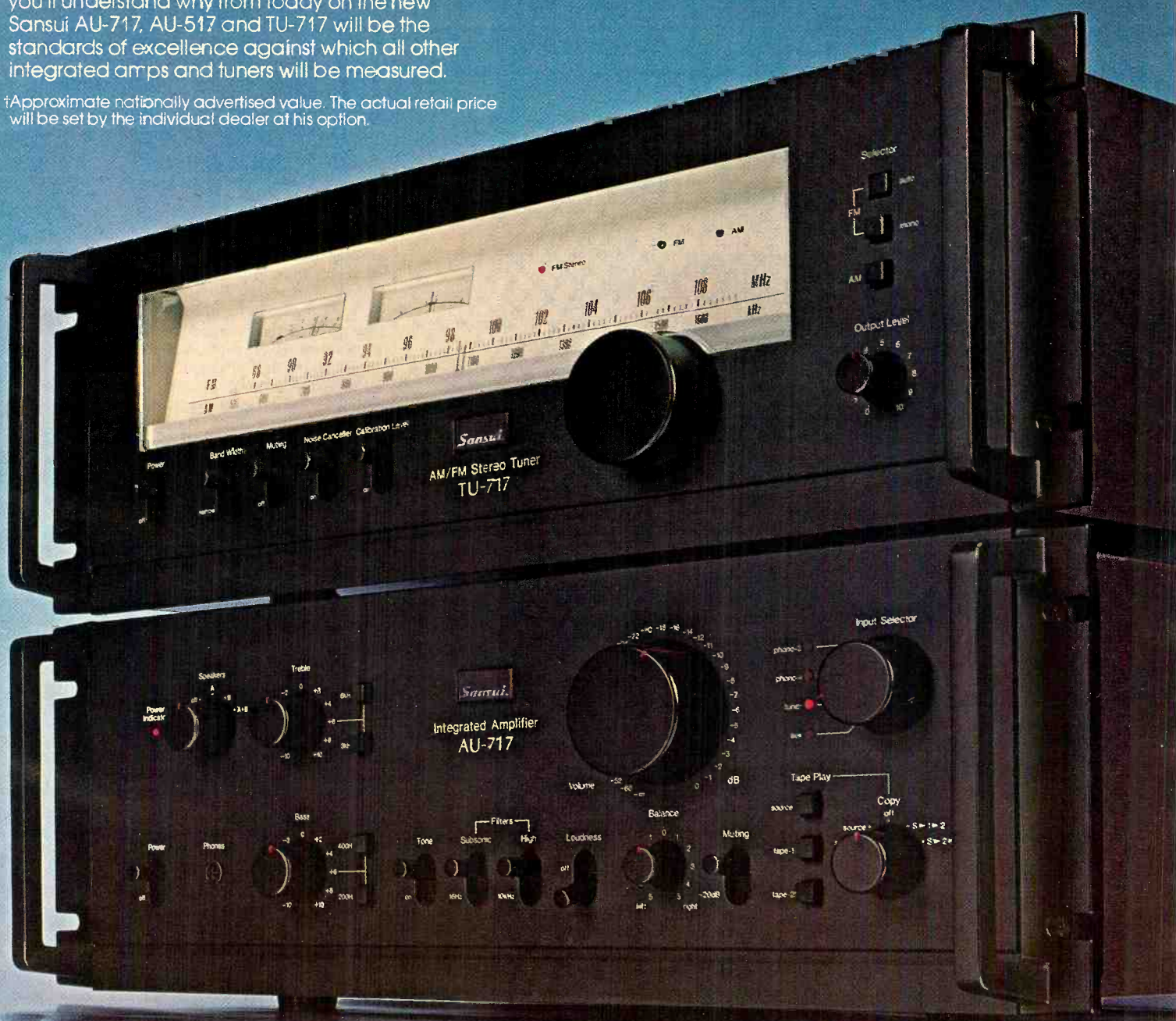
A whole new world of musical pleasure.

a new standard Zero Hz to 200kHz.*

DC integrated amplifier available today.

When you listen to these brilliant new components, you'll understand why from today on the new Sansui AU-717, AU-517 and TU-717 will be the standards of excellence against which all other integrated amps and tuners will be measured.

*Approximate nationally advertised value. The actual retail price will be set by the individual dealer at his option.



Sansui

SANSUI ELECTRONICS CORP.

Woodside, New York 11377 • Gardena, California 90247

SANSUI ELECTRIC CO., LTD., Tokyo, Japan

SANSUI AUDIO EUROPE S.A., Antwerp, Belgium • In Canada Electronic Distributors

CIRCLE NO. 33 ON READER SERVICE CARD

the country, and it was one of these you chanced upon. *Private Stock* will be happy to exchange albums if you write to them at 40 West 57th Street, New York, N.Y. 10019.

and a linguistic cousin to Erse, but singing it to make Mr. Callaghan feel all warm and fuzzy inside is about as appropriate as serenading an American President abroad with a Cheyenne buffalo dance.

WARREN C. WETMORE
New York, N.Y.

Rare Welsh Bit

● William Anderson's editorial on "Executive Music" in the May issue left me puzzled about one thing. At the White House function for British Prime Minister Callaghan, Robert White sang the first stanza of *All Through the Night* "in Welsh to flatter the distinguished visitors." Mr. Callaghan, to judge by his surname, is an Anglicized Irishman; I can't think of any Welsh P.M. since David Lloyd George. Welsh is a gorgeous language, right enough,

The Editor replies: One can acquire a nationality by birth or by adoption. Prime Minister Callaghan, born near Portsmouth, is Welsh by the latter course. He first became a Member of Parliament for South Cardiff in Wales, and has represented Welsh districts since 1945; following Mr. White's performance of All Through the Night at the White House, he stepped forward, visibly moved and presumably flattered, to congratulate the singer on his

Free details on a different kind of record club

offering... BACH, BEETHOVEN, BRAHMS,
CHICAGO, JOHN DENVER, EARTH-WIND & FIRE,
C.W. McCALL, FREDDY FENDER, LINDA RONSTADT,
GROVER WASHINGTON JR., DONALD BYRD
and every other composer and artist in print

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.

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 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 for immediate information.

	Discount Music Club Department 9-0877 650 Main St., New Rochelle, N.Y. 10801
NAME _____	
ADDRESS _____	
CITY _____	
STATE _____	ZIP _____

Welsh pronunciation (I did not inquire whether he felt all warm and fuzzy inside!).

Griffes Again

● Regarding reader Dennis Dunnett's letter in the June issue about Richard Freed's review of a new recording of the Griffes sonata, I would like to bring to the attention of those interested the following points: the recording of the sonata and the *Roman Sketches* was available on Lyrichord LL 105 as early as 1961; the Lyrichord disc is not true stereo, no matter what Mr. Dennis' jacket may say or his ears may tell him; and the Lyrichord recording was actually a rerelease of the now-defunct Walden label's LP-100, which first appeared in the early Fifties. (I have both the Walden and the Lyrichord pressings and they are identical.) Therefore, Richard Freed's statement that "there has not been a recording of the sonata in well over twenty years" is quite valid.

PAUL J. PORTNUFF
Chicago, Ill.

Audio Careers

● In the April issue, Larry Klein's first "Q. and A." deals with a subject (audio careers) I was asked about frequently when I was a recording engineer. Literally hundreds of letters of this nature prompted me to organize a school that would teach not only the basic skills of recording, but also the function and operation of the record-publishing business. It took several years of research and the kind cooperation and participation of the select membership of the RIAA and the AES, who submitted their suggestions for a curriculum.

We started teaching in January 1974. Our classes are kept small. We have no desire to turn out a great number of knob-twirlers. We turn out a small, select group of well-trained people, and 85 per cent of our diploma recipients are now working within the industry.

The American Music Conference (3505 East Kilgore Road, Kalamazoo, Mich., 49002) publishes a useful and informative booklet entitled *Careers in Music*, which discusses careers in performing arts, education, business, the recording industry, and allied fields.

LEO DE GAR KULKA, *President*
College for Recording Arts
665 Harrison Street
San Francisco, Calif. 94107

Larry Klein replies: On the East Coast, the journalism department of the University of Bridgeport is offering a minor in audio studies. The twenty-one-credit sequence includes courses in audio techniques, audio production and direction, field sound recording, studio technology, and audio engineering practices. The Institute of Audio Studies, capstone course of the program, is a nine-week summer session held in a professional recording studio doing actual production work. A certificate of achievement is awarded to students completing the minor or the summer institute. Interested students should contact Dr. Howard B. Jacobson, Department of Journalism, North Hall 214 (SR), University of Bridgeport, Bridgeport, Conn. 06602.

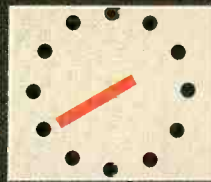
(STEREO REVIEW is compiling a listing of available audio schooling and would appreciate notice of current or anticipated programs.)



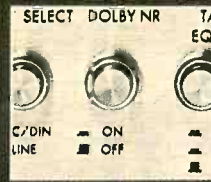
5 LED peak level indicators help eliminate distortion.



Long life Sen-Alloy head improves performance, reduces distortion.



Automatic recording when you're not there.



Dolby reduces tape hiss.



Bias and EQ switches for all types of tape.

No cassette deck can give you better performance without all these recording ingredients.



Most quality cassette decks look pretty much alike on the outside. So at first glance you might take the new JVC KD-35 for granted.

But take a second look. You'll see something no other make of cassette deck has—five peak-reading LED indicators. With a faster response than VU meters, or even peak-indicating meters, they help you avoid under-recording and they eliminate tape saturation and distortion. It's as close as you can come to goof-proof recording.

Then there's JVC's exclusive Sen-Alloy head for record and playback. Designed to give you the best of two worlds, it

combines the truly sensitive performance of permalloy with the ultra long life of ferrite.

Of course, the KD-35 has many other features like Dolby, bias and equalization switches, and automatic tape-end stop in all modes. It's also possible to go from one operating mode to another without going through Stop. What's more, you'll never have to miss taping a favorite broadcast because you're not

there; just connect the KD-35 to a timer and switch to automatic record.

And yet, with all this built-in capability, at \$260,* the KD-35 is priced just above the least expensive model in JVC's new cassette deck lineup. Just imagine what our top model is like.

JVC America Company, Division of US JVC Corp., 58-75 Queens Midtown Expressway, Maspeth, New York 11378 (212) 476-8300. For nearest JVC dealer call toll-free (outside N.Y.) 800-221-7502. Canada: JVC Electronics of Canada, Ltd., Scarborough, Ont.

JVC

We build in what the others leave out

*Approximate retail value. Dolby is a trademark of Dolby Labs, Inc.

NEW KOOL SUPER LIGHTS

Only 9 mg. "tar" in both sizes.

And KOOL's refreshing coolness, too.

At last, a low "tar" menthol cigarette with satisfying taste.



KINGS

LONGS

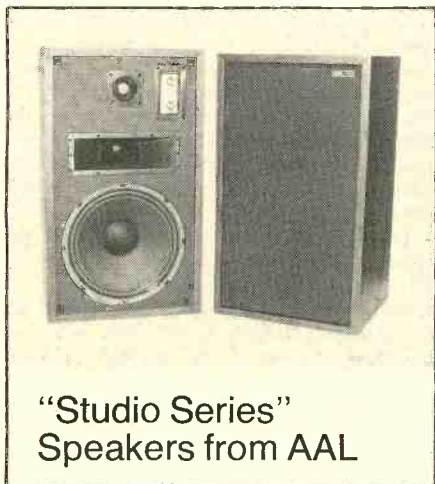
mg.'tar' in both sizes.

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

© B&W T CO.

9 mg. "tar," 0.8 mg. nicotine, av. per cigarette, by FTC method.

New Products latest audio equipment and accessories



**"Studio Series"
Speakers from AAL**

□ American Acoustic Labs announces its new Studio Series line of loudspeaker systems. The line consists of six models, all with computer-designed crossovers and fuses for speaker protection. The Studio Series speakers are said to conform to an "acoustically correct" response curve developed by AAL.

The Studio 3, occupying the approximate middle of the line, is a three-way acoustic-suspension system utilizing a 12-inch woofer, a 4 x 10-inch horn mid-range, and a horn-loaded 1-inch dome tweeter. It has a nominal impedance of 8 ohms and a frequency range of 25 to 25,000 Hz, with crossovers at 1,000 and 5,000 Hz. Continuously variable controls are provided to adjust the mid-range and high-frequency output. The suggested minimum input power for the Studio 3 is 10 watts per channel; up to 75 watts can be handled on program peaks. The particle-board cabinet, 26 x 15 x 13 inches, is covered with imitation-walnut vinyl. Price: about \$200.

Circle 115 on reader service card



**Subminiature Speaker
From ADS**

□ ADS announces a new, highly compact (about 7 x 4¼ x 4½ inches) loudspeaker system for use in automobiles and other mobile applications. The 200C is a two-way acoustic-

suspension system utilizing a 4-inch woofer and a 1-inch dome tweeter. The drivers, crossing over at 2,500 Hz with a slope of 12 dB per octave, are mounted in a solid aluminum cabinet.

The 200C has a frequency response of 85 to 20,000 Hz ±3 dB (50 to 22,000 Hz ±5 dB). The nominal impedance of the unit is 4 ohms; at least 5 watts of amplifier power is recommended. The maximum continuous input power suggested for the 200C is 30 watts. At a distance of 1 meter, the unit will produce a sound-pressure level of 90 dB with a 1-watt input signal.

The satin-black cabinet of the 200C is equipped with a perforated aluminum grille. For surface mounting the 200C comes with a swivel bracket, and for flush mounting a recess frame and foam grille are available. The 200C weighs about 4½ pounds. The speaker (plus swivel mount) is priced at \$110. The flush-mounting kit is optional at \$7.50.

Circle 116 on reader service card



**Dynaco Announces
LMS Speakers**

□ The Laboratory Monitor Series (LMS) from Dynaco includes five loudspeaker systems ranging from bookshelf to floor-standing models. All systems in the series have ducted ports. The smallest speaker in the line, the Model 2, requires a minimum continuous input of 5 watts per channel whereas the largest, the Model 7, requires 10 watts. The high-frequency response for all models extends to 20,000 Hz; bass response varies, extending to 38 Hz for the Model 2 and to 20 Hz for the Model 7. Power-handling capability varies from a maximum continuous input of 35 watts for the Model 2 to 150 watts for the Model 7. Tweeter level controls are provided for the Models 2 and 3, and these are augmented by mid-range level controls on the Models 5, 6, and 7.

The Model 6, shown, is a three-way system utilizing a 12-inch woofer, a 5-inch mid-range, and two 1-inch dome tweeters. Crossover frequencies are 900 and 4,500 Hz. The system is rated for a minimum amplifier power of 9 watts continuous. Maximum recommended power is 100 watts. Dimensions are 27 x 16 x 15 inches. All systems in the Laboratory Monitor Series come in oiled-walnut-veneer cabinets with beveled-front detachable grilles. Approximate prices range from \$140 to \$460.

Circle 117 on reader service card



**Column Speakers
Head Sony Line**

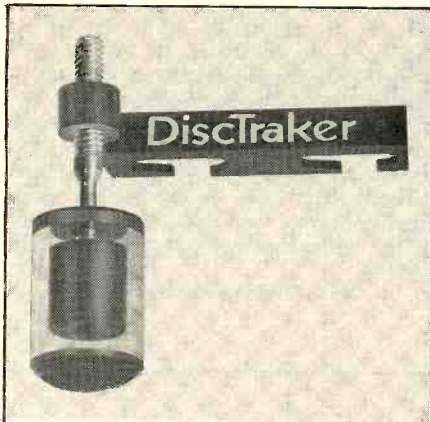
□ Two speaker systems employing columnar enclosures are the top models in a new line of loudspeakers from Sony. Both are three-way designs with identical drivers: a 10-inch woofer stiffened with a new lightweight graphite-fiber material called "Carbocon," and a 3¼-inch dome mid-range and 1-inch dome tweeter, both with diaphragms fabricated of titanium foil. The SSU-3000 (\$300) has a ported enclosure, while the larger SSU-4000 (\$400, shown) employs a rectangular passive radiator with a surface area of 104 square inches. The mid-range and tweeter radiate directly through special diffusion assemblies to control dispersion.

The two systems have rated frequency responses of 35 to 20,000 Hz (30 to 20,000 Hz for the SSU-4000) and nominal impedances of 8 ohms. Crossover frequencies are 600 and 5,500 Hz. Sony recommends amplifier powers ranging from 20 to 150 watts per channel continuous for either system. Enclosures are of particle board finished in walnut veneers. The width and depth dimensions of approximately 13½ x 14¼ inches are the same for the SSU-3000 and SSU-4000. Approximate heights are 34¼ and 47 inches, respectively.

Circle 118 on reader service card

(Continued overleaf)

New Products latest audio equipment and accessories



Tone-arm Damping Device from Discwasher

□ The DiscTraker is a pneumatic device designed to add damping to the tone arm and hence improve tracking and increase stability on warped records. The device, which attaches to the tone-arm headshell, consists of a vertically mounted cylinder with a movable piston inside; the base of the cylinder (which is covered with cushioning material) rides on the record surface. The result is a "dashpot" mechanism that counters the effect of headshell/cartridge inertia on the stylus when there are vertical warps in the record surface. It is also said to reduce record wear. Price: under \$30.

Circle 119 on reader service card



Kenwood's Top Integrated Amplifier

□ The KA-8300 is Kenwood's new top-of-the-line stereo amplifier. The unit features bass and treble controls with selectable turn-over points of 150 or 400 Hz for the bass and 3,000 or 6,000 Hz for the treble. Two power-output meters on the front panel are provided with switchable ranges from 0 to 3 or 0 to 100 watts. Two-position loudness-compensation and "presence" controls are included, along with 12-dB-per-octave high- and low-frequency filters. The KA-8300 has a "tape-through" circuit that permits dubbing from one tape machine to another while the amplifier is si-

multaneously being used for playing another program source. Jacks are provided for two phono and two tape sources, and the unit has provisions for three pairs of loudspeakers.

The KA-8300 is rated at 80 watts per channel continuous into 8 ohms, from 20 to 20,000 Hz. Both harmonic and intermodulation distortion are no more than 0.1 per cent. The phono inputs can handle up to 260 millivolts before overload; phono-input signal-to-noise ratio is 72 dB. The amplifier's high-level inputs have a 90-dB signal-to-noise ratio. Direct-coupled circuitry is employed in the preamplifier section of the KA-8300. The metal cabinet provided for the unit has approximate dimensions of 6 x 17 x 14¾ inches. Rack handles are available as an option. Price: about \$450.

Circle 120 on reader service card



Infinity Speaker Has Electromagnetic Induction Tweeters

□ Infinity's Quantum Line Source loudspeaker system has several special design features intended to increase dispersion and improve bass response. The system utilizes a vertical line (four feet in length) of eight electromagnetic induction tweeters for the frequency range of 4,000 to 32,000 Hz. Parallel to the strip of tweeters is a vertical column of six 1½-inch dome drivers for the frequencies from 600 to 4,000 Hz. This array of high- and mid-frequency drivers is intended to provide a line source of sound that fans out in the horizontal plane, so that frequency response is uniform within ±2 dB over 180 degrees in the frontal hemisphere of the speaker's radiation pattern.

A mid-bass driver near the bottom of the enclosure is provided to handle frequencies from 200 to 600 Hz. Below 200 Hz the system employs a 12-inch woofer working on what is called the "Infinity/Watkins dual-drive" principle. The driver has two voice coils of differ-

ent impedances; these are connected via an electrical network. Near the resonant frequency of the system, the coil with the lower impedance is the one actually driven by the amplifier, whereas at higher frequencies the higher-impedance coil is active. This design is said by the manufacturer to smooth the frequency response of the system in the low-frequency range.

The overall frequency response of the Quantum Line Source is 18 to 32,000 Hz ±2 dB. Impedance is nominally 4 ohms. The speaker requires a minimum of 100 watts per channel of continuous input power, and may be driven by one or two amplifiers. Power-handling ability is said to exceed the output of any currently available amplifier. Separate controls adjust the output levels of the mid-bass, mid-range, and high-frequency drivers.

The Quantum Line Source's cabinet, offered in a choice of walnut or rosewood veneer on particle board, has dimensions of 66 x 15 x 18 inches; the grille consists of acoustically transparent cloth suspended on a steel frame. The unit weighs 150 pounds. Price: about \$1,200. Infinity also features three smaller speaker systems employing the basic design approach of the Quantum Line Source: the Quantum 2 (\$700), Quantum 3 (\$485), and Quantum 4 (\$385).

Circle 121 on reader service card



Audio Load Kit From Heath

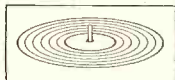
□ To provide suitable loads for the testing of audio amplifiers, Heath has introduced the ID-5252 kit, a resistance box capable of presenting resistive loads of 2, 4, 8, 16, or 32 ohms to an amplifier. Depending on how it is set up, the box can handle up to 240 watts of single-channel input or 60 watts from each of four channels, both into 8 ohms. The box contains four 8-ohm resistors accessible via five-way binding posts on the front panel. Five connecting tabs are provided to interconnect the resistors in various series and parallel configurations so that a range of resistances and power inputs is available. Jacks are provided for connecting oscilloscopes, voltmeters, or distortion analyzers across the amplifier terminals. The kit includes four 3-foot, 12-gauge leads. Price of the kit: about \$45.

Circle 122 on reader service card

(Continued on page 20)

IT'S MAGIC.
THE ACCUTRAC 4000.
IT THINKS.
IT REMEMBERS.
IT SEES.
IT PERFORMS.
IT TAKES THE EXPERIENCE OF
LISTENING TO MUSIC INTO
ANOTHER DIMENSION,
ANOTHER CENTURY.

IT'S THE ONLY INSTRUMENT
IN THE WORLD THAT LETS YOU
HEAR THE SELECTIONS ON A
RECORD IN THE ORDER YOU
LIKE, AS OFTEN AS YOU LIKE,
AND SKIP THE ONES YOU



DON'T LIKE.
EVEN BY
REMOTE
CONTROL.

IT SETS A NEW STANDARD
OF TECHNICAL SOPHISTICATION
THAT WILL SATISFY THE MOST
DEMANDING PURIST.

**COMPUTER CIRCUITRY
INSTEAD OF MECHANICAL
FUNCTIONS.**

WE REPLACED HUNDREDS OF
MECHANICAL PARTS WITH
ADVANCED COMPUTER
CIRCUITRY.

THE LATEST MOS IC CHIPS
COMBINE THE FUNCTIONS OF
THOUSANDS OF TRANSISTORS,
DIODES AND OTHER
COMPONENTS TO CONTROL AND
PROGRAM ALL AUTOMATIC
FUNCTIONS.

AS EASY AS 5, 2, 6, 6.

THE SLEEK CONTROL PANEL IS
SOMETHING OUT OF THE 21ST
CENTURY.

YET IT'S INCREDIBLY SIMPLE TO
OPERATE.

SAY YOU WANT TO HEAR THE
FIFTH CUT FIRST, THEN THE
SECOND CUT, THEN THE SIXTH
CUT TWICE.

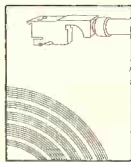
JUST PUSH THE BUTTONS
MARKED 5, 2, 6, AND 6 AGAIN.

THEN SIT BACK AND LET
ACCUTRAC DO THE REST.

IT ACCEPTS UP TO 24
DIFFERENT COMMANDS.

**THE TONEARM
WITH EYES.**

HOW DOES THE
ACCUTRAC KNOW
WHICH TRACK IS
WHICH?



ENGINEERED INTO
THE CARTRIDGE
IS A SOLID-STATE
INFRA-RED GENERATOR WHICH
FOCUSES A TINY BEAM OF
LIGHT ONTO THE RECORD.
THE CLOSELY SPACED GROOVES
OF EACH CUT SCATTER THE
LIGHT, BUT THE SMOOTH
SURFACES BETWEEN THE
CUTS SEND THE LIGHT BACK
TO THE INFRA-RED DETECTOR
IN THE CARTRIDGE.

THE INFORMATION IS
INSTANTANEOUSLY RELAYED TO
THE BRAIN IN THE TURNTABLE,
WHICH COUNTS THE TRACKS.
AND YOUR WISH IS ITS
COMMAND.

YES, MASTER.

A SMALL, CORDLESS REMOTE
TRANSMITTER WITH A
DUPLICATE SET OF CONTROLS
NESTLES IN THE PALM OF YOUR
HAND AS YOU RELAX IN THE
COMFORT OF YOUR EASY CHAIR.
POINT IT TOWARDS THE SILVER
SPHERE ACROSS THE ROOM AND
THE BLINKING RED LIGHT ON
THE REMOTE RECEIVER



WILL LET YOU KNOW IT HAS
RECEIVED YOUR COMMANDS.

**THE ARM YOUR FINGERS
NEVER TOUCH.**

BECAUSE OF ACCUTRAC'S
UNIQUE PROGRAMMING
CAPABILITY, YOU NEVER HAVE
TO TOUCH THE TONEARM.
AND THE CONTROLS ARE
OUTSIDE THE DUSTCOVER, SO
YOU NEVER RISK ACCIDENTALLY
DAMAGING A RECORD.

THE TONEARM HAS ITS OWN
SERVO-MOTOR WHICH IS
DECOUPLED THE INSTANT THE
STYLUS TOUCHES THE RECORD,
SO HORIZONTAL AND VERTICAL
FRICTION ARE VIRTUALLY
ELIMINATED.

"WOW", INDEED.

THE ONLY "WOW" YOU'LL
HEAR IS FROM YOUR
FRIENDS. ACCUTRAC'S WOW AND
FLUTTER ARE A COMPLETELY
INAUDIBLE 0.03% WRMS.
RUMBLE IS -70dB (DIN B).
THE TRACKING FORCE IS A
MERE 3/4 GRAM.
TONEARM RESONANCE IS
ONLY 8-10HZ.

AND A DIRECT DRIVE MOTOR
TURNS THE RECORD AT THE
EXACT SPEED, WHILE
ELECTRONIC SPEED
MONITORING SENSORS KEEP
IT THERE.

MAGIC & SCIENCE.

THE INTEGRATION OF
COMPUTER CIRCUITRY,
INFRA-RED OPTICS AND
AUDIO TECHNICAL
EXCELLENCE LETS
YOU HEAR THE TRACKS YOU
LIKE, IN THE ORDER YOU LIKE,
AS OFTEN AS YOU LIKE, AND
EVEN SKIP THE ONES YOU
DON'T LIKE.

THAT'S THE GENIUS OF
ACCUTRAC.



ADC PROFESSIONAL PRODUCTS
A DIVISION OF
BSR CONSUMER PRODUCTS GROUP
ROUTE 303, BLAUVELT, NEW YORK 10913
A BSR COMPANY © ACCUTRAC IS A REGISTERED TRADEMARK
OF AUDIO DYNAMICS CORP.

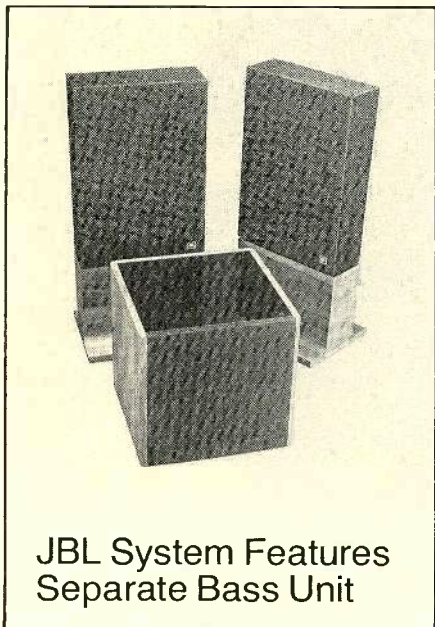


The Genius of
Accutrac®

AUGUST 1977

CIRCLE NO. 5 ON READER SERVICE CARD

New Products latest audio equipment and accessories



JBL System Features Separate Bass Unit

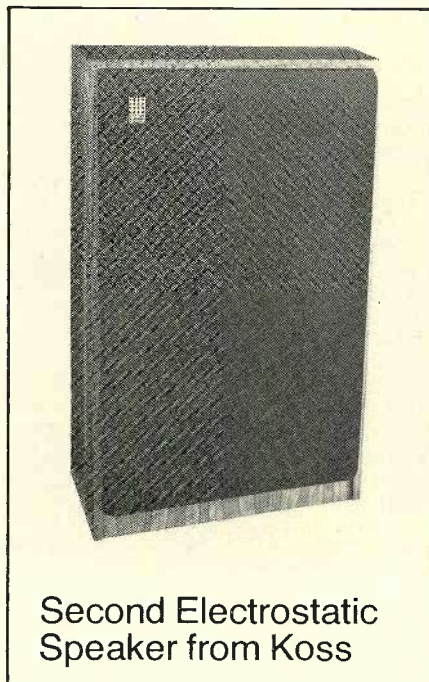
□ In addition to two "full-range" floor-standing units, the JBL L212 loudspeaker system employs a separate "Ultrabass" module, a woofer system for reproduction of very low frequencies. The "full-range" units (designed to respond down to 70 Hz) are three-way systems each utilizing an 8-inch woofer, 5-inch cone mid-range, and 1-inch dome tweeter; they are connected directly to the amplifier's speaker outputs. The 8-inch woofer, employing a 3-inch voice coil and a very stiff cone, operates from 70 to 800 Hz. The mid-range driver is active above 800 Hz, crossing over to the tweeter (JBL's 066 hemispherical-diaphragm unit) at 3,000 Hz.

The Ultrabass module contains a built-in 50-watt power amplifier and a 12-inch air-suspension woofer. The input signal for the module, which operates in a "common-bass" mode, is derived from the drive signals for the full-range pair, which are mixed to create a mono signal and equalized for uniform response from the woofer over the range of 25 to 70 Hz. The nondirectional character of these low frequencies permits placement of the bass module in any convenient location in the room. The module has an on-off switch for its amplifier, a phase-reversal switch, and a continuously variable level control.

The frequency response of the entire L212 system is 30 to 40,000 Hz ± 2 dB, and the nominal impedance is 8 ohms. The externally powered part of the system requires a minimum amplifier power of 10 to 20 watts per channel continuous, with 75 watts being the maximum safe input on program material. A 1-milliwatt input signal produces a sound-pressure level of 37 dB at a distance of 30 feet. The "full-range" units are about 38½ inches high and have bases which are 17 inches wide by 13 inches deep, tapering rapidly to an actual enclosure depth of 6 inches. The Ultrabass module has dimensions of 19½ x 18½ x 18½ inches; it features a smoked-glass top. All three units are finished in black

walnut and fitted with black acoustically transparent grille fabric. Price of the complete system: \$1,740.

Circle 123 on reader service card



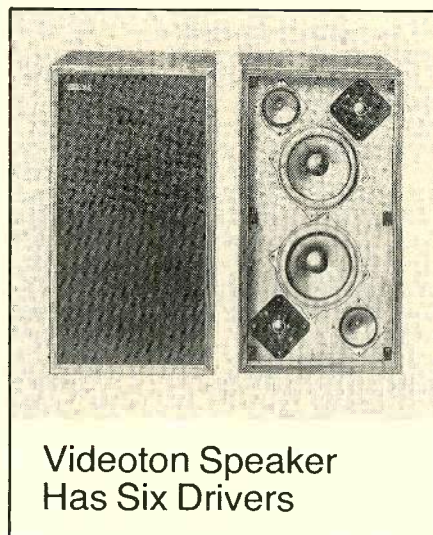
Second Electrostatic Speaker from Koss

□ The Koss Model 2 is a "hybrid" speaker system that employs a dynamic tweeter for the high frequencies (above 2,500 Hz) and electrostatic panels for the rest of its frequency range. According to the manufacturer, the tweeter, a 1-inch dome unit, was preferred over an electrostatic driver because of its superior dispersion at high frequencies.

The Model 2 resembles the larger Koss Model 1 in its use of multiple electrostatic diaphragms operating in tandem within each electrostatic panel. Also like the Model 1, it utilizes the audio-signal step-up transformers for the low-frequency and mid-range panels as elements in the crossover network that feeds them. The panels' bias voltage is derived from the a.c. line.

Frequencies up to 250 Hz are handled by two bass electrostatic panels that provide a total radiating area of 615 square inches. The mid-range panel, active from 250 to 2,500 Hz, provides 165 inches of radiating area. Overall, the frequency response of the Model 2 is 37 to 19,000 Hz ± 3 dB. Minimum impedance is 4 ohms. An amplifier capable of at least 75 watts per channel continuous output into 8 ohms is recommended; maximum power-handling ability is 300 watts. The front surface of the cabinet, constructed of walnut veneer on particle board, is 41 x 24 inches. Depth is 11½ inches at the base, tapering to 6½ inches at the top. The back panel of the system is acoustically open hardboard; a brown knit-polyester grille covers almost the entire front surface. Price: \$650.

Circle 124 on reader service card



Videoton Speaker Has Six Drivers

□ The Model D-402A "Supermax" is a new three-way loudspeaker system from the Hungarian firm Videoton. The system utilizes two 8-inch woofers, two 4-inch cone mid-ranges, and two 1-inch hemispherical dome tweeters in an acoustic-suspension enclosure. The woofers feature a special cone-suspension design patented by Videoton.

The Supermax has a useful frequency range of 35 to 20,000 Hz and a nominal impedance of 6 to 8 ohms. The manufacturer suggests a maximum continuous-power input of 50 watts per channel for the system; 80 watts can be handled on program peaks. The oiled walnut cabinet has dimensions of 27½ x 15½ x 11 inches, and the system weighs 45 pounds. Price: about \$200.

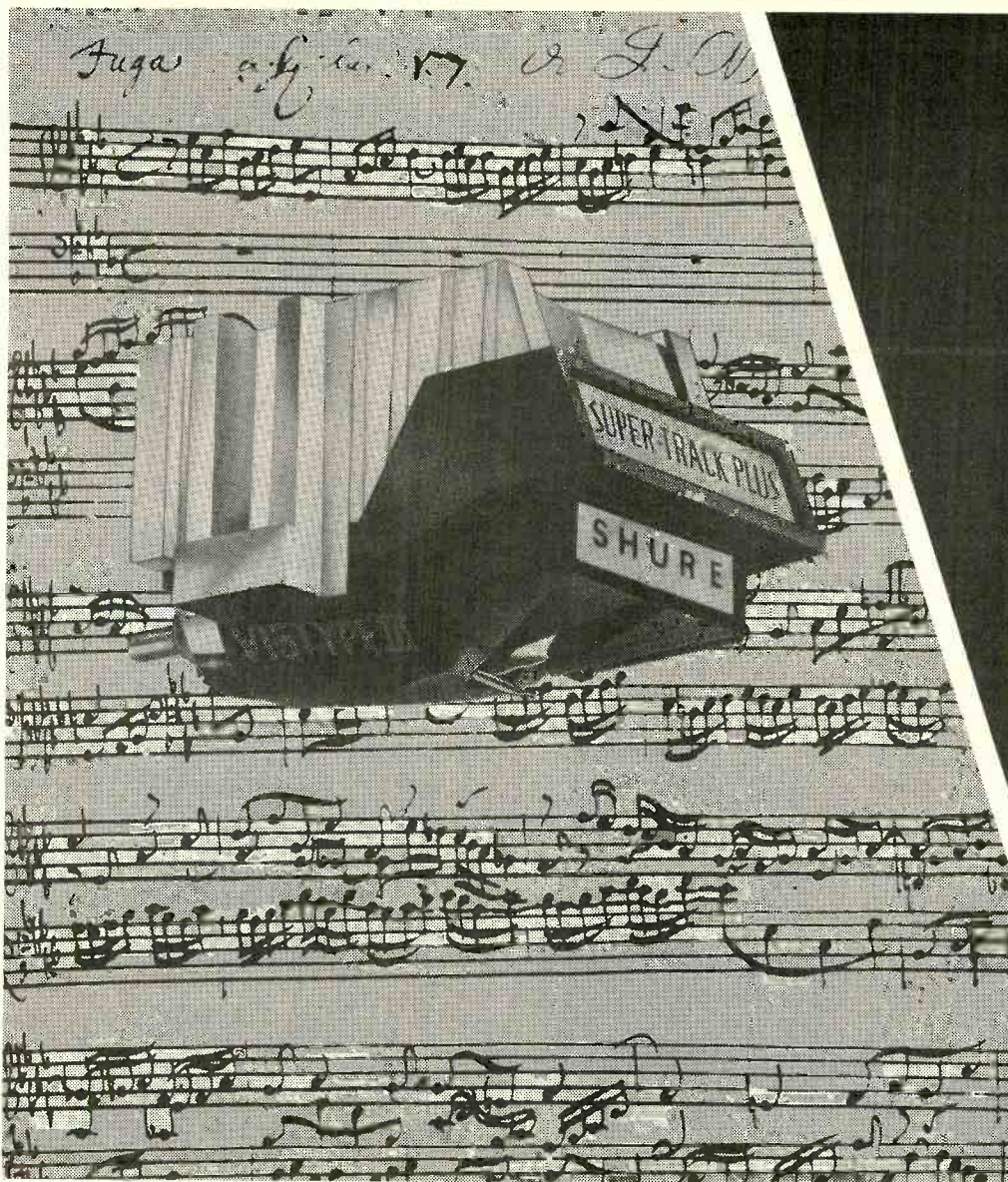
Circle 125 on reader service card



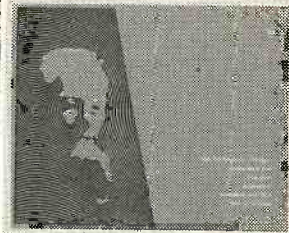
New Line of Marantz Receivers

□ The Models 2265, 2285, and 2330 (shown) are among the latest stereo receivers to be offered by Marantz. All three models feature tape-to-tape dubbing facilities permitting tape copying from one deck to another while the receiver is playing a third source. Separate controls are provided for bass, mid-range, and treble, with selectable turnover frequencies. The Models 2285 and 2330 feature a steep-slope (18 dB per octave) high-frequency

(Continued on page 22)



THE PREMIER FAMILY
OF STEREO SOUND REPRODUCERS
SHURE



The Test of Time.

Critics were most generous in their praise when the Shure V-15 Type III phono cartridge was first introduced. The ultimate test, however, has been time. The engineering innovations, the uniform quality and superb performance of the V-15 Type III have made it the audiophile's choice as the source of sound for the finest music systems both here and abroad.

Consider making the relatively modest investment of a new cartridge to upgrade the

performance of your entire hi-fi system. It will make a difference you can hear!

The original manuscript by J. S. Bach shown is reproduced by kind permission of the British Library.

Shure Brothers Inc.
222 Hartrey Ave.
Evanston, IL 60204
In Canada:
A. C. Simmonds & Sons Limited

TECHNICORNER
MODEL V-15 TYPE III
Tracking Force Range: 3/4 to 1 1/4 grams
Frequency Response: 10 to 25,000 Hz
Typical Tracking (in cm/sec peak recorded velocity at 1 gram):
400 Hz .26 cm/sec 1,000 Hz .38 cm/sec
5,000 Hz .35 cm/sec 10,000 Hz .26 cm/sec
Channel Separation (Minimum): 25 dB at 1 KHz; 15 dB at 10 KHz
Stylus: Model VN35E Biradial Elliptical, 5 x 18 microns (.0002 x .0007 inches)
Also available: Model V-15 III G with the VN3-G Spherical stylus, 15 microns (.0006 inches)
Model VN78E Biradial Elliptical stylus, 13 x 63 microns (.0005 x .0025 inches) for mono 78 rpm.

SHURE®

MANUFACTURERS OF HIGH FIDELITY COMPONENTS, MICROPHONES, SOUND SYSTEMS AND RELATED CIRCUITRY.

New Products latest audio equipment and accessories

filter, and the Model 2330 has Dolby noise-reduction circuitry with the 25-microsecond de-emphasis appropriate for decoding Dolbyized FM broadcasts.

The per-channel continuous power ratings (into 8 ohms) are 65 watts for the Model 2265, 85 watts for the Model 2285, and 130 watts for the Model 2330, all for any frequency from 20 to 20,000 Hz. Total harmonic and intermodulation distortion is no more than 0.08 per cent for all three units.

The tuner specifications of all three receivers are almost identical. Usable sensitivity is 10.3 dBf, and the 50-dB quieting sensitivity is 36 dBf. Capture ratio is 1 dB. Image and i.f. rejection are 85 and 100 dB, respectively, and AM suppression is 55 dB for the Models 2265 and 2285, 57 dB for the Model 2330. The tuner frequency response for all three units is 30 to 15,000 Hz ± 1 dB, with no more than 0.3 per cent distortion in stereo and 0.15 per cent in mono. Stereo separation is 45 dB at 1,000 Hz. The ultimate signal-to-noise ratios for the Models 2265, 2285, and 2330 are 65, 67, and 67 dB, respectively, in the stereo mode, and 75, 78, and 78 dB in mono.

The Models 2265 and 2285 have approximate dimensions of 5 $\frac{1}{4}$ x 17 $\frac{1}{4}$ x 14 $\frac{1}{4}$ inches; the Model 2330 measures 5 $\frac{3}{4}$ x 19 $\frac{1}{4}$ x 15 $\frac{1}{4}$ inches. Walnut-veneer cabinets are available as an option. Prices: Model 2265, \$570; Model 2285, \$670; Model 2330, \$790. Cabinets are \$35 for the first two, \$45 for the Model 2330.

Circle 126 on reader service card



**Circuit Breaker
In Acousti-phase
Speaker System**

□ The Acousti-phase Phase Monitor is a two-way bass-reflex loudspeaker system utilizing a 12-inch woofer and a 1-inch Mylar dome tweeter. The Phase Monitor's port is located at the rear of the cabinet, and the woofer is constructed with a special double-foam suspension. A level control is provided for the

tweeter, and the entire system is protected from overload by a circuit breaker.

The Phase Monitor, with a nominal impedance of 8 ohms, has a frequency response of 32 to 20,000 Hz. The crossover frequency between the woofer and tweeter is 1,500 Hz. The manufacturer suggests that the unit be used with amplifiers delivering between 10 and 70 watts per channel continuous power; over 150 watts can be handled on program peaks. The Phase Monitor's cabinet, constructed of particle board with simulated-walnut vinyl covering, measures 25 x 15 x 14 inches. A detachable acoustically transparent grille is provided; the unit weighs 52 pounds. Price: about \$160.

Circle 127 on reader service card



**Sonic Systems'
Omnidirectional
Speaker System**

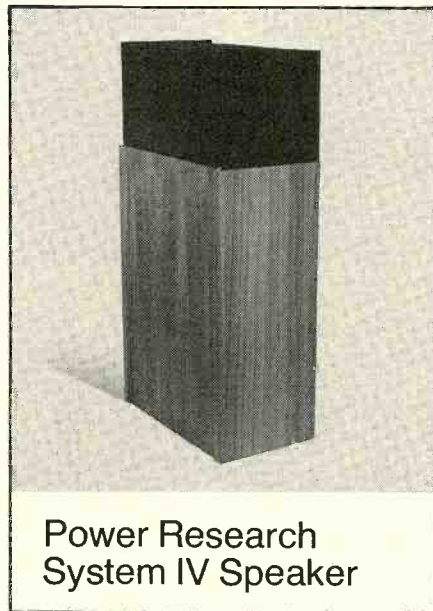
□ The Sonic Systems Model One-A is a two-way loudspeaker system employing a 15-inch woofer and four high-frequency compression drivers in an enclosure with a slot-loaded port. The woofer is mounted on a special internal baffle board situated behind the regular baffle. The four high-frequency drivers (which are not horn-loaded) are mounted one per side on each of the four sides of the cabinet, giving the system an omnidirectional radiation pattern in the horizontal plane.

The frequency response of the Model One-A is 32 to 18,000 Hz ± 3 dB. The crossover between woofer and tweeters occurs at 800 Hz. The manufacturer suggests amplifier powers in the range of 100 to 150 watts per channel continuous to drive the speaker, which has a nominal impedance of 8 ohms. A sound-pressure level of 102 dB is produced at a distance of 1 meter when the Model One-A is driven with a 1-watt input signal; a 150-watt signal at the same distance will produce a sound-pressure level of 123 dB. The Model One-A's cabinet, of matched-grain oiled walnut, measures 45 x 28 $\frac{1}{2}$ x 21 $\frac{3}{4}$ inches, and the

system weighs about 150 pounds. The non-detachable acoustically transparent grille is black. Price: \$1,500.

Sonic Systems also offers a smaller speaker system, the Model Two, featuring the same types of drivers but with just two tweeters, which radiate front and back. Price: \$1,100.

Circle 128 on reader service card



**Power Research
System IV Speaker**

□ The Power Research Products System IV is a four-way loudspeaker system utilizing four high-efficiency drivers: a 10-inch sub-woofer, 6 $\frac{1}{2}$ -inch woofer, 3-inch cone mid-range, and a 1 $\frac{1}{8}$ -inch piezoelectric tweeter. The woofers are mounted face-down on a completely sealed cabinet with a high degree of internal absorption; the backs of the woofer cones provide the bass radiation. The tweeter and mid-range are mounted one above the other on an upright metal frame that faces into the listening area. Foam pads attached to this frame reduce sound reflections and possible edge-diffraction effects.

The System IV has a frequency response of 26 to 22,000 Hz ± 4 dB and a nominal impedance of 8 ohms. Crossover frequencies are at 75, 600, and 8,000 Hz. The minimum recommended amplifier power is 30 watts per channel; up to 200 watts can be handled on program peaks. The system is enclosed in an 11 $\frac{1}{2}$ x 19 x 39-inch walnut-finish cabinet with an acoustically transparent black grille top. Weight is 78 pounds. Suggested price: \$435.

Circle 129 on reader service card

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

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

Audition free for 10 days Karl Böhm's superb Deutsche Grammophon recording of

Mozart's Six Greatest Symphonies

SPECIAL BONUS: Mozart's Piano Concertos Nos. 12 and 26

All 4 International Award-Winning Records For Less Than The Price Of 1!

Your Introduction To The Unique Money-Saving Program That Offers Free Auditions Of Prize-Winning Recordings By The Leading Concert Artists Of Our Time!

Wolfgang Amadeus Mozart—music's greatest natural genius—divinely gifted beyond any other musician who ever lived! And into his six greatest symphonies he poured a multitude of his most astonishingly beautiful, incredibly moving inspirations!

- Symphony No. 41, "Jupiter"
- Symphony No. 40 in G-minor
- Symphony No. 39 in E-flat
- Symphony No. 38, "Prague"
- Symphony No. 36, "Linz"
- Symphony No. 35, "Haffner"
- Extra! Symphony No. 32

Now you are invited to hear these miraculous works in their finest recording... interpreted with extraordinary empathy by Karl Böhm... played to perfection by the Berlin Philharmonic Orchestra... captured in unsurpassed stereo realism by Deutsche Grammophon. So outstanding is this recording that it has won *three* of the music world's most eagerly sought honors: the Grand Prix International du Disque, Edison Award and Deutsche Schallplatten Prize! In addition, you will also receive Mozart's Piano Concertos Nos. 12 and 26, "Coronation," superbly performed by soloist Geza Anda with the Salzburg Camerata Academica — winner of the coveted Grand Prix des Discophiles.

Now enjoy and keep these 4 superb albums for less than the price you'd pay for 1!

Because these magnificent recordings have met with almost unprecedented acclaim, they have been chosen to introduce you to The Great Awards Collection, a totally new concept in home listening. You may enjoy all eight masterpieces, on four superb-quality, imported records, for 10 days absolutely free. Then keep all four, if you wish, for only \$6.98 (that's less than the price you'd pay for just one record)! Simply mail the coupon at right today.

Here's how the program works...

As a member of The Great Awards Collection you will receive only the finest recordings of prize-winning concert performances by preeminent orchestras, conductors and soloists. There is no minimum number of recordings you must buy. And you can cancel your membership at any time. What's more, every superb recording you choose to examine comes to you on a free 10-day trial basis. So you'll never waste a penny on disappointing purchases!



Approximately 14 times a year you will receive the current issue of our Great Awards Collection Bulletin highlighting an exceptional Selection of the Month and other brilliant classical releases recommended by a distinguished jury of musicians, scholars and musicologists. If you want to examine the Selection of the Month you need do nothing. It will be shipped to you automatically. If you want any other selection, just mark your choices on the order card you will receive and return it by the date specified. If you do not want any selection, just check the proper box on your order card and return it by the date specified. It's that simple!

Special half-price bonus offer saves you money!

In addition to great music, you'll enjoy great savings with our half-price bonus plan. For every record you buy at our low members' price (always well below suggested retail), you may choose an-

other one from a list of award-winners and other critically-acclaimed LPs and pay just half that price! A truly economical way to build your library of superb classical recordings.

How many records are you committing yourself to buy when you return the attached coupon? *None at all!* Even your introductory set of *Mozart's Six Greatest Symphonies and Piano Concertos 12 and 26* comes to you *on approval*. Audition it free for ten days, then either return it — or keep it for only \$6.98 for all four records (plus a small postage/handling charge).

Here at last is the ideal way to acquire a connoisseur's record library in easy stages. You listen at home to every award-winning selection you elect to examine before deciding whether to buy it! Please act today! Begin your money-saving, no-obligation membership in The Great Awards Collection by mailing the coupon for your free trial, with four-for-less-than-the-price-of-one purchase option of this essential collection of Mozart's Six Greatest Symphonies and exquisite Piano Concertos Nos. 12 and 26.

Eight ways The Great Awards Collection helps you enjoy fine music more than ever!

1. The greatest music by the world's immortal composers.
2. A major, award-winning recording yours to audition each month.
3. Superior imported LPs — silent surfaces.
4. Free ten-day trials of all selections.
5. All selections always far less than retail price.
6. Extra savings with Half-Price Bonus Plan.
7. No obligation to buy — no minimum purchase.
8. Money-saving introductory offer.

----- Send no money now — Mail coupon TODAY! -----

Listen for 10 days free. Keep all 4 for less than the price of 1!

The Great Awards Collection • 175 Community Drive • Great Neck, N.Y. 11025

Please send me, for my free audition, the triple-award-winning recording of Mozart's Six Greatest Symphonies by Karl Böhm, together with Géza Anda's award-winning performance of Mozart's Piano Concertos Nos. 12 and 26. I may return the set after 10 days and owe nothing, or keep it and pay only \$6.98* for all four Deutsche Grammophon records, plus a small postage/handling charge. This is all four records for less than the regular price of one!

Each month I will also be notified of major award-winning recordings available to Great Awards Collection members free for 10 days. For every one of these records I buy at your members' price (always below suggested retail), I may also choose one record at half that price from your special list. I am not obligated to buy any minimum number. I may cancel my membership at any time.

NAME _____

ADDRESS _____

(please print)

APT. NO. _____

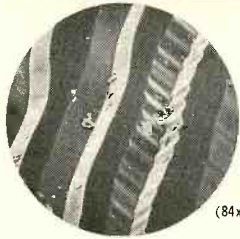
CITY _____

STATE _____

ZIP _____

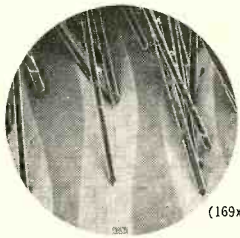
Offer limited to the 48 connecting states. Offer expires 12/31/77. Limit: one membership per household. Only new members eligible. 69210
NOTE: All applications are subject to review and we reserve the right to reject any application. *Sales tax added for New York residents.

Take a close look at a better record cleaner. Audio-Technica AT6002



(84x enlargement)

This is an A-T scanning electron microscope photo of the dirt that must be removed if your records are to sound clean. It's dirt that is falling on your records even as you listen.



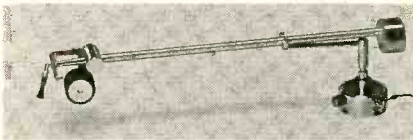
(169x enlargement)

Our unique carbon fiber brush sweeps each groove literally hundreds of times as the record plays, just before the stylus touches the groove. The carbon fiber brush helps conduct static charges away, making groove cleaning easier. And the incredibly small 6 micron diameter reaches deep into the groove for the smallest particles.



(844x enlargement)

Immediately behind the brush, our velvet pad captures and holds dust particles as you play. And moisture removed from an inner reservoir helps to dissolve stubborn deposits to prevent static build-up.



This 4-way attack on dirt (brush, pad, liquid, and conductive path to ground) is uniquely effective. For proof, clean a record with any other system. Then "play" it with the AT6002. You'll find dirt removed by the AT6002 that was left behind by other cleaners. Try it today. Just \$9.95 at all Audio-Technica dealers.

audio-technica
 INNOVATION □ PRECISION □ INTEGRITY
 AUDIO-TECHNICA U.S., INC.
 Dept. 87F/1, 33 Shiawassee Ave.
 Fairlawn, Ohio 44313
 In Canada: Superior Electronics, Inc.

Audio Q. and A.

By Larry Klein



STEREO REVIEW's Technical Director runs through a speaker-design program on a computer terminal at the Koss Corporation.

Blown Driver

Q. I have a pair of good three-way speaker systems, and I blew out either the tweeter or the mid-range driver—or maybe even the crossover—in one of them. What is the best way to tell which component is damaged? Is something like this covered by manufacturer's warranty?

J. NORRIS
 Elmira, N.Y.

A. I've never come across a case where a crossover network's components were blown out, although sometimes a tweeter or mid-range level control will "open" under stress. FM interstation hiss will provide a good wide-range test signal that will let you determine by ear which of your drivers isn't working. If you put your ear close to each of the drivers in question you should be able to tell easily enough whether any noise is coming out of it. Your good system will provide a standard of comparison.

As far as warranties are concerned, you'll have to take that up with the manufacturer. In these days of super-power amplifiers and discotheque sound levels, most companies aren't as willing as they once were to believe that their tweeter or mid-range unexpectedly died trying to deliver a flute solo while being driven by a 10-watt amplifier.

Cartridge Degaussing

Q. When I demagnetize the heads on my reel-to-reel recorder, the degausser will pass within 6 to 8 inches of my turntable. Is it possible to damage the phono cartridge in any way with the demagnetizer?

BILL BARMINSKI
 Benton, Ill.

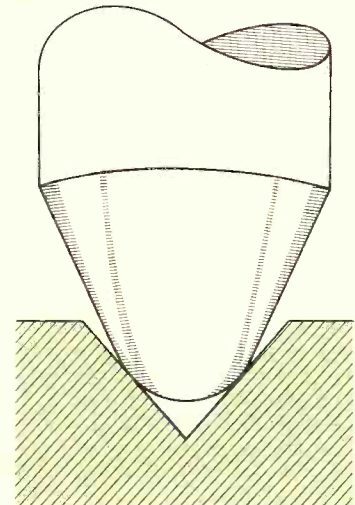
A. I assume that you are concerned about whether you might accidentally degauss the magnetic assembly in your cartridge. If you were to place a cartridge on a heavy-duty bulk eraser and give it a couple of jolts, it is possible that its performance would be affected. However, the field around a hand-held tape-head degausser is so concentrated (and usually weak enough) that no damage to your cartridge could possibly occur over a 6-inch distance.

New Noiseless Diamond

Q. Recently I purchased a new four-channel cartridge with a "four-dimensional" diamond for my stereo system. The stylus size is 0.2 mil (biradial) and the frequency response is 15 Hz to 45 kHz. The thing that amazes me is that many of my records that had unbearable surface noise now sound brand new. Can you give me any explanation for this?

STEPHEN CHARLES GRIGGS
 Baltimore, Md.

A. Consider the fact that a record groove has a roughly triangular cross section and the conventional spherical (conical) stylus has a gently rounded contact surface (see diagram). This means that each differently



shaped stylus is likely to ride on a different area of the record-groove walls. If the surface noise is caused by damages on one "level" of the groove wall and the new stylus rides higher, lower, or covers a greater area than the original one, the noise is going to be far less obtrusive.

Line-frequency Addenda

I was particularly interested in the "Moving Overseas" Q & A in the May issue since our company manufactures and supplies

many pieces of electronic equipment for use both in the United States and in foreign countries. Although our equipment is not in the audio field, some of the problems of different line voltages and operating frequencies are the same. We have found that even when the proper a.c. voltage is supplied, units employing power transformers designed specifically for 60-Hz operation can run into problems when used on 50-Hz lines. At the lower line frequency, 60-Hz transformers tend to saturate or develop excessive internal power loss. Although many high-quality transformers are specifically designed for 50- and 60-Hz operation or have adequate design margins, it is best to check with the manufacturer in advance of your purchase or your move overseas.

The ferro-resonant type of regulated power supply can also cause problems on 50 Hz. I don't recall seeing any of these used in consumer hi-fi equipment, but they are found in some professional designs. Such power supplies are very sensitive to line-frequency changes, and operation on other than the design frequency can cause appreciable changes in output characteristics even with the proper line-voltage input.

THOMAS PERAZELLA
Berkey Marketing
Woodside, N.Y.

Thanks to Mr. Parazella for his addenda to the discussion. Most hi-fi equipment has a label on the rear apron or the chassis bottom stating its power-input requirements or options. If the label says "50-60 Hz," assume that the equipment won't run into trouble at the lower line frequency, although it may run slightly warmer than normal.

Groove Ghosts

Q. I have noticed audio ghosts on many of my discs. The ghosts seem to appear before or after the actual signal, depending on which cartridge I use. Is this problem intrinsic to the disc, or does it depend on the cartridge?

D. MAX BOONE
San Diego, Calif.

A. Yes to everything. What you refer to as "ghosts" are known in the recording trade as "groove echo." Although such an echo can occur on a master tape as a result of "print-through" between adjacent tape layers, it usually arises somewhere in the disc-recording/playback process. (You can sometimes tell the difference between master-tape print-through and groove echo by whether or not the material heard is from the immediately adjacent groove). As to causes and cures, the matter is more complex than appears at first glance. When the object is to get as much playing time as possible on a side, the acetate is cut with the grooves as closely spaced as possible. "Possible" in each case is determined by the specific character of the material to be cut into the grooves. Loud, low-frequency signals cause greater groove excursions than soft, higher-frequency signals. Rather than space all the grooves on the disc widely in order to accommodate an infrequent loud, low passage, a variable-pitch guidance system is used to control the groove spacing laid down by the cutter head. A special "preview" tape head on the machine playing back the master tape for the cutter is used to monitor the signal that will be cut adjacent to the groove being cut at any particular moment.

The groove spacing is then continuously adjusted on the basis of the information from the preview head to prevent any grooves from touching (which could cause stylus "sticking") or simply being too close (which could cause groove echo). The accompanying photo of a typical groove area (courtesy Sid Feldman, Mastertone Studios) shows some normal variations in groove spacing and width.



But what spacing is *too* close? The pre-echo effect comes about because the signal cut into the groove wall has somehow modulated the wall of the adjacent groove sufficiently to provoke a response from the phono stylus. It is evident that groove echo is most often heard when a quiet groove is next to a loud one since two equally loud grooves will usually mask each other. However, for various reasons, audio signals around 3,000 Hz are more likely to be heard in adjacent grooves than higher or lower frequencies.

There are several imponderables in the groove-echo problem. I'm told that some cutting engineers won't use fresh blank acetates because they have not yet aged to adequate hardness, and, all other cutting factors being equal, "soft" acetates are more prone to groove echo. Acetates have another peculiar characteristic in regard to groove echo: it is possible to cut an echo-free disc, put it aside, and have groove echo show up hours later. Since the cutting stylus also does a certain amount of "pushing" at the acetate while engraving the groove, it could be that stresses are set up that slowly equalize through acetate "flow" and appear as modulation in adjacent groove walls.

Why should different cartridges reproduce more or less groove echo? Since groove echo is actually a low-level signal modulated into the groove wall, a cartridge capable of responding to small groove undulations (which means any good cartridge) should be as sensitive to the phenomenon as any other. However, there is a factor that I've mentioned in connection with "surface-noise" sensitivity. It may well be that the upper portion of the V-shaped groove is more likely to contain groove echo than the deeper part. This could be true simply because the area that separates the groove walls (the *land*) gets thinner as you get closer to the record surface. Since differently shaped styli "read" different parts of the groove wall, it is likely that styli that sit lower in the groove will pick up less groove echo than wider styli.

Introducing the new AT605 FEEDBACK FIGHTER!



Now, enjoy freedom from acoustic feedback with the new AT605 Audio Insulator System from Audio-Technica.

Add the AT605 System and stop howling from feedback at high sound levels, reduce distortion or cartridge mistracking from sound energy conducted from speaker to turntable.

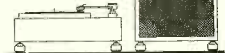
Solve problems of outside vibration like subways, heavy trucks, or jarring footsteps. Or reduce transmission of annoying sound to adjacent apartments with the AT605 System under your loudspeakers. Gain new freedom of speaker placement, and improve performance especially of high-energy, low-frequency transients.



The slightly-curved bottom surface of each AT605 flattens as weight increases so that only the right number and size of resilient rubber projections support your equipment. Four insulators support up to 36 lbs. (9 lbs. each).

The felt-covered upper support is easily adjusted for accurate leveling. A precision bubble level is included. And each unit is enclosed in an attractive brushed chrome housing.

If feedback limits the quality of your system, or restricts your choice of equipment location, the AT605 Audio Insulator System can help. At all Audio-Technica dealers for just \$24.95 suggested retail. Win the fight against feedback today!



 **audio-technica**
INNOVATION □ PRECISION □ INTEGRITY

AUDIO-TECHNICA U.S., INC.
Dept. 87F/2, 33 Shawassee Avenue
Fairlawn, Ohio 44131
In Canada: Superior Electronics, Inc.

Audio Basics

By Ralph Hodges



DON'T COUNT; LISTEN

ELSEWHERE in this issue George Soles, a speaker designer, writes authoritatively about his approach to system design. I'd like to supplement his discussion with some remarks about the raw materials he works with and the reasons why they tend to be chosen.

A typical high-fidelity loudspeaker system, of which there are hundreds available, consists of a box containing two or maybe three "drivers" (the actual loudspeakers themselves) and a quantity of Fiberglas or other absorbent damping material. Also, somewhere within the box there will be a compact assemblage of electronic parts (the crossover network) that determines which driver(s) will receive the low-frequency signals from the amplifier and which the higher-frequency ones—and in what relative amounts. One or more controls to adjust the amount of signal fed to certain drivers may be provided as well.

These bits and pieces may seem unfamiliar at first, but there's nothing very complicated about the way they've been put together or even the general way in which they work. Often, all the parts of some celebrated speaker system are individually available on the open market; assembling them physically is simply a matter of woodworking and perhaps a little soldering. But if this is so, what accounts for the "magic" in loudspeakers and the supposed superiority of some over others? The answer lies in the overall design and the repeatedly successful execution of it. A good speaker system is a combination of suitable ingredients chosen for their quality and consistency and then skillfully blended (the parallels to cooking and wine-making have frequently been pointed out, and they are apt up to a point). Although the proper blending results from the designer's special skills, the ingredients are usually out in the open where all of us can look at them. So let's do so.

ALMOST every driver has a diaphragm—the cone of a woofer or mid-range driver or the dome of a tweeter, for example—and some mechanism to move it. The mechanism is most often a simple electric motor consisting of a coil of wire in a strong magnetic field. The motion the coil imparts to the diaphragm, which is fastened directly to it, is an in-and-out vibration. All in all, the operating principle of a speaker driver hardly differs from that

of a drum, with the drum head being the diaphragm and the drum stick the energizing voice coil. However, a drum has a certain deliberate and characteristic sound resulting from the fixed frequencies at which it invariably vibrates when left to its own devices. We'd like a speaker diaphragm to have no such "preferred" frequencies of vibration; we want it to move *only* in response to the voice-coil motion and not according to its own physical nature as well. It happens that this is a practical impossibility, but the degree to which a manufacturer can moderate the various "preferred" frequencies or *resonances* largely determines a driver's quality. And the degree to which a speaker-system designer can "get around" the resonances that remain is a measure of his skill. This is because the more a driver tends to have audible resonances, the more it will sound like itself and the less like the program material it is supposed to be reproducing.

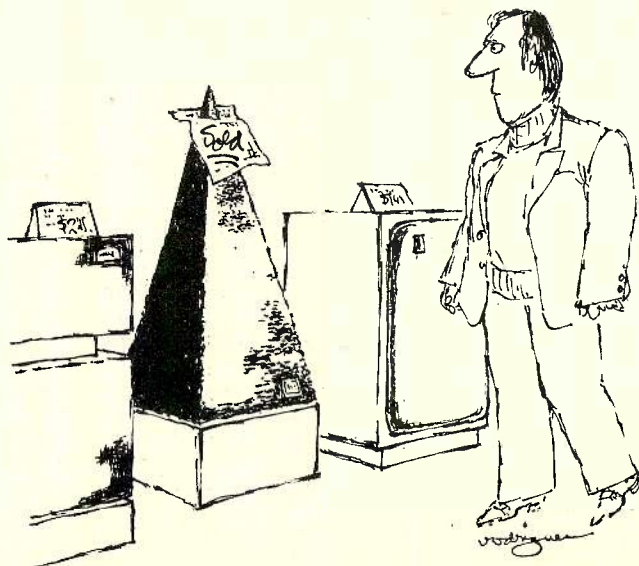
A speaker system employing various types of drivers does so not because this is a particularly elegant or efficient mode of design, but because of grim necessity. Intuitively we can appreciate that the large, rugged diaphragm of a woofer is best suited to the powerful bass

frequencies, while the small, lightweight tweeter diaphragm lends itself to the more rapid vibrations of high frequencies. Drivers that perform acceptably at all audible frequencies have been built and are available, but their cost and complexity are not, in the view of many speaker designers, sufficiently offset by their theoretical advantages.

Multi-driver design is based on the premise that almost any driver will perform well over a certain limited range of frequencies. Above and below that range it may get into resonances and other troubles, but if the crossover network is designed to limit the signals reaching it to the frequencies it reproduces best, other drivers can presumably be found to take over where the original driver cannot, with fidelity, go. The ridiculous extreme of this approach would be a speaker system containing perhaps ten mediocre drivers, from huge "sub-woofer" to tiny "super-tweeter," each handling about an octave of the ten-octave audio-frequency range. For various reasons this is not a very good way to build either a low-cost or a high-performance speaker system, so the usual practice is to find two or three better drivers that can span a wider range with genuine competence.

A "two-way" speaker system (incorporating just a woofer and a tweeter) has certain very persuasive technical advantages, and there are some excellent two-way systems on the market. However, the designer's objective may be a de luxe system with exceptionally deep and/or powerful bass and exceptionally extended, well-dispersed high frequencies, which will probably oblige him to use a very large, rugged woofer and a correspondingly small, delicate tweeter. In this case one or more mid-range drivers may be required as well to fill in where the large woofer and tiny tweeter cannot overlap, and the result is a three- or four-way speaker system.

RECOGNIZING that consumers are prone to associate a multi-way design with de luxe performance, there are some speaker manufacturers who throw cheap additional drivers into their designs willy-nilly in the hope of creating some consumer appeal. This is called the numbers game, and it is for suckers only. So don't count; *listen*. There is more to a good speaker than you can see behind the grille or read from a specification sheet.



If you've been thinking Realistic is great only in the middleweight division, the STA-2000 is going to take you by surprise. We designed and manufactured it in our own factory to deliver quality beyond reproach, and judging from critical acclaim, we succeeded. The fine styling and precision controls are obvious. But the heart of this receiver is in its circuitry . . . the extra-low-

noise phono stage . . . the sensitive dual-gate MOSFET tuner with PLL. Come by your nearby Radio Shack for a free copy of the reviews. And hear for yourself what all the excitement's about. You'll be amazed at just how far \$499.95* can go. The Realistic 2000, 75 watts per channel, min. RMS at 8 ohms from 20-20,000 Hz, with no more than 0.25% total harmonic distortion.

"noise figures rivaling those of many a separate (preamp) . . . If any part approaches over-achiever status, it is the power amplifier . . . The controls are unusually flexible"

High Fidelity Magazine,
March 1977

"separation at mid-frequencies was an incredibly high 54 dB . . . usable (FM stereo) sensitivity point was reached with a signal of only 5.0 μ V . . . excellent basic circuit design"

Audio Magazine,
March 1977

The Rave-Reviewed Realistic® 2000

STA-2000 AM/FM STEREO RECEIVER

REALISTIC

SELECTOR PHONO AUX1 AUX2

BASS LAT

TREBLE PLAT

BALANCE

TREBLE

VOLUME

STEREO

10KHz

88 90 92 94 96 98 100 102 104 106 108

FM

AM

REALISTIC

RS

NOW PLAYING AT A RADIO SHACK NEAR YOU

SOLD ONLY WHERE YOU SEE THIS SIGN:

Radio Shack®

A TANDY COMPANY • FORT WORTH, TX 76107 • 5000 LOCATIONS IN 9 COUNTRIES

BANK AMERICA
Master Charge
THE INTERSTATE BANK

These two credit cards honored at most Radio Shacks.
* Price may vary at individual stores and dealers.

Tape Horizons

By Craig Stark



TWO BREAKTHROUGHS

THIS month I'm pleased to be able to report on two recent technological breakthroughs, one in tape heads, the other in tape itself. Both are developments that may fundamentally alter the future of recording.

In recent years most new developments in tape oxides have come from Japan, but the 3M Company has the honor of being the first to announce that it is ready to produce a tape that goes beyond oxides altogether. The tape will utilize as its magnetic medium extremely refined metallic particles with the trade name Metafine IV. Some idea of the magnitude of the resulting improvement can be gained by comparing the areas under the curves in the upper left-hand quadrant of Figure 1, which shows (A) an older ferric oxide, (B) chromium dioxide, and (C) the new 3M development.

When engineers look at the potential of various magnetic materials, they make use of "B-H" curves such as these to show two vital parameters: *coercivity* (the width of the loops where they cross the zero axis, designated H_c and measured in oersteds) and *retentivity* (the height at the vertical axis, called B_r and measured in gauss). Roughly speaking, retentivity is an index of the maximum output level obtainable on playback, and coercivity is the key to high-frequency (or, more precisely, short-wavelength) response. One of the newer ferric oxide tapes, for example, would have a slightly higher retentivity than chromium dioxide, though its coercivity would be considerably less.

According to 3M research director Dr. John D. Holm, Metafine IV has a coercivity between 1,000 and 1,100 oersteds (compared with about 350 to 380 for a top iron oxide and about 550 for chromium dioxide), and a retentivity between 3,000 and 3,500 gauss (1,050 to 1,520 is in the ballpark for today's ferrics, and about 1,400 is typical for chrome). While chromium dioxide represented a major step forward in achieving high-frequency response at slow speeds, it did nothing for overall output. At one step, Metafine IV has twice the output of chrome (a 6-dB jump) and twice its high-frequency potential!

Coercivity is also a measure of the bias-current requirement of a tape, however, and this spells trouble if we want to use Metafine with conventional recorders. For one thing, consumer tape decks at present do not have the bias current available to record the new tapes

properly. Most pro machines don't either, but this is a simple matter to remedy electronically. More serious, probably, is the fact that most present-day consumer tape heads won't accept the amount of record-bias signal Metafine requires.

At first, 3M planned to use Metafine IV primarily for video tape, but the response from audio manufacturers was so positive that the company is now ready to roll just as soon as equipment manufacturers have produced machines to use the new tape. How soon this will take place is anyone's guess (mine is the second half of 1978), but 3M's announcement should accelerate development. (According to my sources, one manufacturer has already achieved a 60-dB signal-to-noise ratio and flat response to 15,000 Hz using metal-particle tape in a 15/16-ips microcassette.)

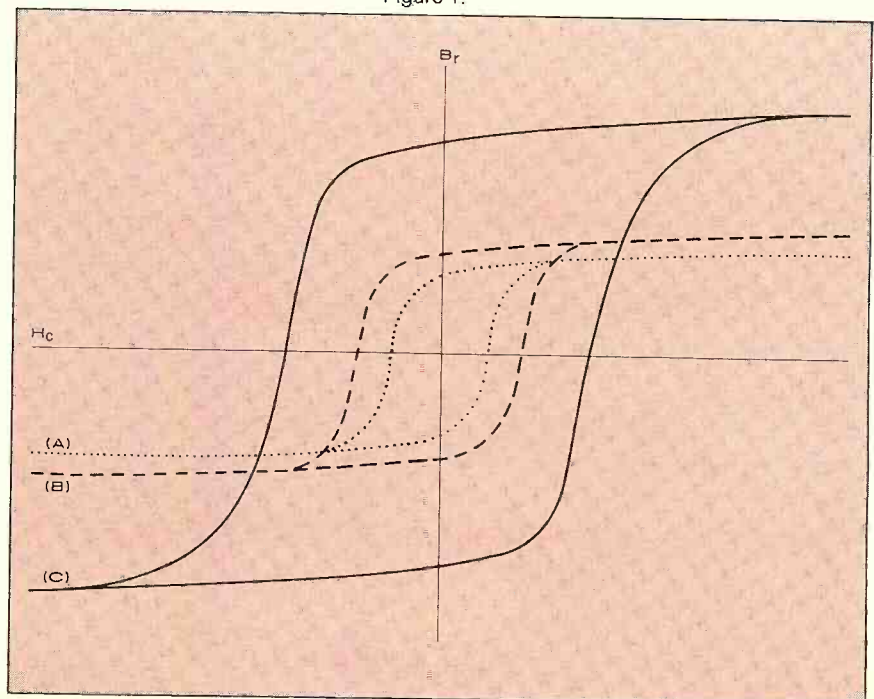
And 3M is not entirely alone in the field. Although Maxell and TDK have not said anything publicly, I'm told that both have sent

samples of a metal-alloy tape to various hardware manufacturers, and BASF showed a prototype as much as two years ago. But 3M has now broken the ice, and we'll let you know how well Metafine IV fulfills its promise—as soon as someone gets me a suitable machine and a tape sample for testing.

JAPAN has also come forth with a major new development. Hitachi has just announced that its laboratories have perfected a revolutionary new tape playback head that utilizes a "Hall-element" semiconductor in place of the coil used in all regular head designs. This eliminates the need for the whole bass-boost/treble-cut equalization system required by all conventional recorders, and it also reduces low-frequency phase shifts and high-frequency losses from the self-capacitance of the coil windings. Further, eliminating the coil assembly reduces the size of the head to the point where it becomes easy to include separate record and playback elements, each optimized for its own function, in the same head case.

Though discovered in 1880 by Edward H. Hall of Johns Hopkins University, the "Hall effect" used in the new Hitachi head was largely a laboratory curiosity until the development of semiconductor technology in the 1950's. To understand it, imagine that this page is made not from paper but from a very thin sheet of a semiconductor material (such as indium antimonide) to which you have connected a battery at the left and right edges. The flow of electrons will then go from left to right, as these words do. If you now apply a magnetic field *perpendicular* to the paper (from your eye to the page), some of the electrons will be deflected toward the top of the page, and you could measure this deflected "Hall voltage" with a suitable meter connected to the top and bottom edges of the page. The amount of the Hall voltage depends on the nature and thickness of the semiconductor sheet (the thinner, the better), the amount of control current (the battery, in this example), and, of course, the magnetic field strength.

Figure 1.



To make its Hall-effect tape head (see Figure 2), Hitachi starts with a yoke similar to that used for a conventional head. The head core provides the pole pieces and magnetic structure to gather and concentrate the flux from the recorded tape onto the surface of the Hall element, which can be located within the front or the rear gap. The Hall element itself is formed by first evaporating, then remelting and recrystallizing an extremely thin (one micron, or less than 40 millionths of an inch) layer of indium antimonide onto a ferrite sub-

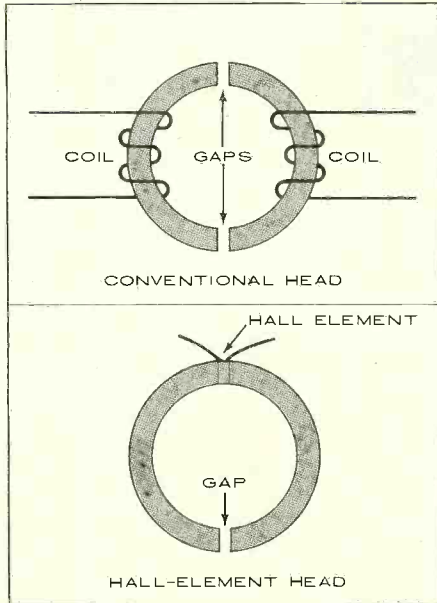


Figure 2.

strate, and then connecting suitable electrodes for the control and output currents.

The inventor of the new head is Dr. Tetsu Oi, of Hitachi's Central Research Laboratory, who also perfected the special "microzone recrystallizing" process that is necessary to obtain a sufficiently high signal-to-noise ratio. (Ordinary Hall-element semiconductors are in use at retail checkout counters to read magnetically coded product prices and credit cards, but they don't have the signal-to-noise requirements of a first-class tape head.) According to Dr. Oi, current models have about the same output from a Dolby-level tone on a tape as a conventional head does, but they offer a slightly better signal-to-noise ratio at the tape-preamplifier output.

Cassette decks using the new head will soon be available in Japan and later in this country, but it appears from my own calculations that the head's greatest potential may lie at open-reel speeds, where the greatest amount of bass-boost/treble-cut equalization is used. Further, open-reel is the format in which editing is important, and here the Hall-element head has a tremendous potential. With ordinary heads, the tape must be in motion to produce any output at all, so to find an editing point you have to rock the tape back and forth across the heads and hope you can stop at just the right spot. A Hall-element head, however, works equally well whether the tape is moving or stopped, since it responds directly to the strength of the magnetic field rather than to the rate of change in the field. That in itself should make it a best seller for tape editors, including this one!

New Phase Linear III's restore the missing third dimension.

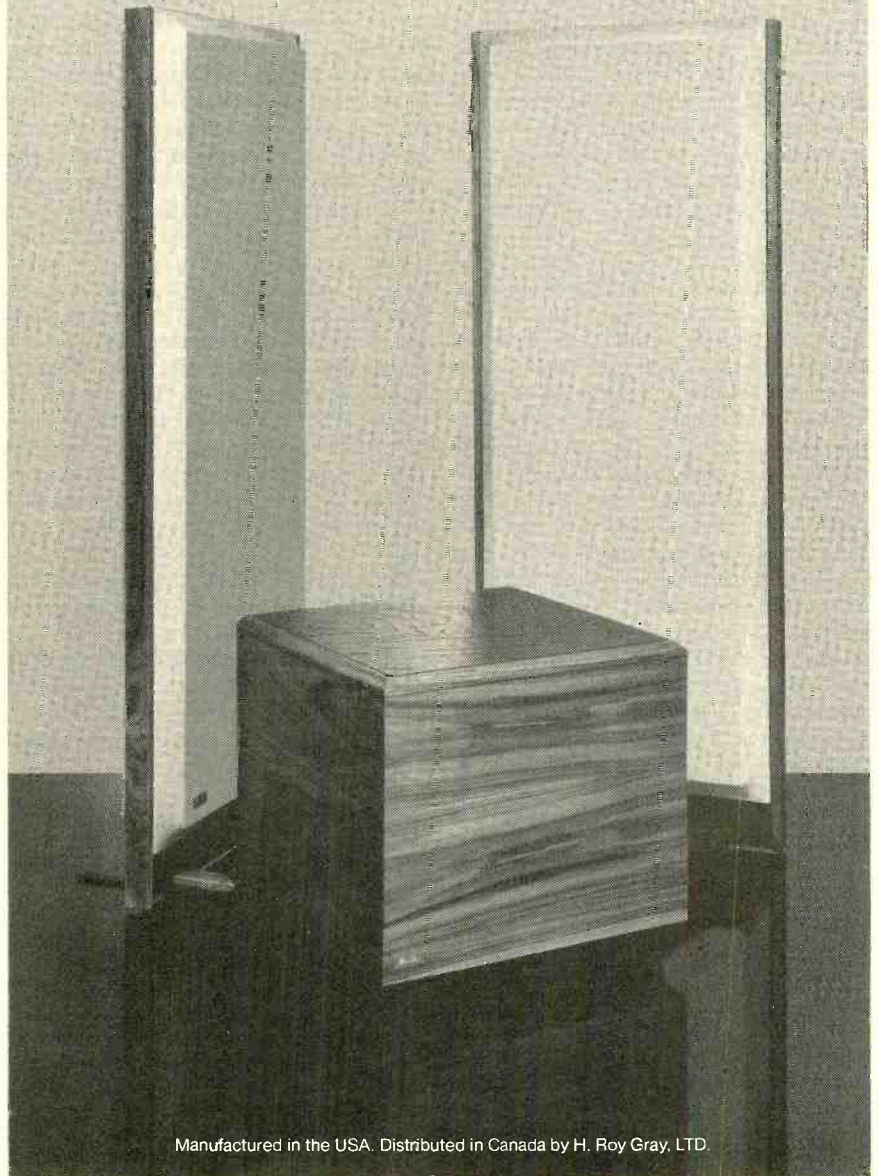
The third dimension of a live performance, that open airy feeling of "being there," has been missing from recorded music. Until now. The new Phase III Loudspeakers create a sense of acoustic space never before achieved in a home stereo system. Phase III is a four-way, four-piece system consisting of 20 drivers. The twin five foot panels utilize a precise geometric arrangement of the mid-range and high-frequency drivers designed to generate an ideal

relationship between direct and reflected sound. The bass module, with its two 12" subwoofers, provides an awesome bass response. A separate Electronic Motion Control System provides spatial imaging circuitry, frequency tailoring and equalization. It installs easily in your amplifier or receiver. Phase Linear III can add an entirely new dimension to your listening enjoyment.

Phase Linear[®]
The Powerful Difference



See your dealer and ask for an audition.

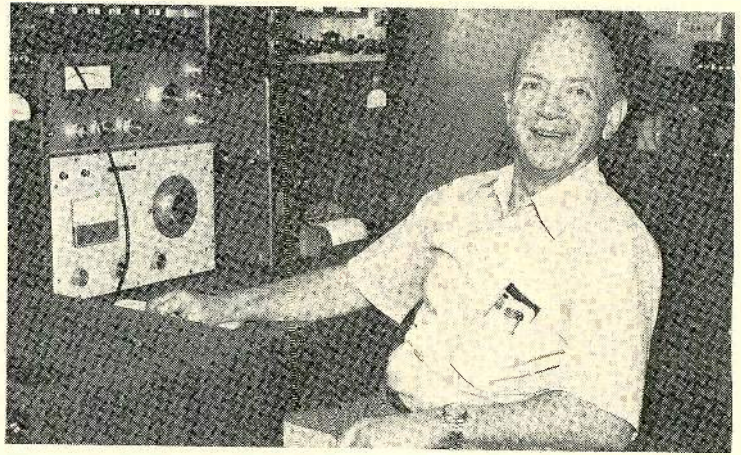


Manufactured in the USA. Distributed in Canada by H. Roy Gray, LTD.

CIRCLE NO. 29 ON READER SERVICE CARD

Technical Talk

By Julian D. Hirsch



● **ARE SPEAKERS GETTING BETTER?** A letter from a reader comments that our recent test reports show a remarkable number of speakers having nearly flat response down to the lowest audio frequencies, seemingly without regard to their size or price. Is it really possible, he wonders, for, say, a \$100 bookshelf speaker to have a bass response that is only 3 dB down at 32 Hz without any significant loss of efficiency? His letter goes on to suggest that there has been either a sudden improvement in loudspeaker technology or else a change in the Hirsch-Houck Labs' frequency-response measurement methods, and he asks which is the case.

First, it should be made clear that the speakers that appear in our test reports are not representative of *everything*—good and bad—that's out there in the marketplace. Instead, the units chosen for test are selected from among the *better* speakers available to the consumer at various price levels. Therefore, any system reported on in our pages represents at least a reasonable value by today's speaker standards—but it is evident that those standards *are* considerably higher than they were several years ago.

As far as the Hirsch-Houck Labs' measurements are concerned, my low-frequency measurement technique employing a close-spaced microphone has remained unchanged for several years. Therefore, if the speakers in recent test reports *appear* to have better bass response than their predecessors, it is simply because they *do*.

Over the years, I have given much thought to my test results and how well they do (or don't) correlate with what I hear. Could it be that my method of measuring frequency response is not sensitive enough any more to reveal the differences normally to be expected between speakers? Since we moved to a newly constructed laboratory nearly a year ago, there would seem to be the

possibility that the new acoustic conditions are affecting results in spite of our best efforts to correct for them.

However, any such doubts I might have about the validity of our speaker-response measurements are dispelled by listening experiences in the same room used for the measurements. Once the levels of two speakers have been carefully matched for the particular program material, it is astonishing to hear how much alike the better systems sound. The listening setup accommodates up to four sets of speakers that can be compared in pairs at the touch of a button (which also simultaneously matches their sound levels). Often the only way I can tell (from a distance of 10 feet or more) which speakers are on is to look at the switch settings on the comparator panel. When I push the button, the only differences that stand out may be slight shifts in apparent source position or a change in spatial perspective related to the speakers' dispersion qualities.

ALL this certainly leads me to conclude that the better speakers *are* becoming more nearly alike in their important characteristics, though not necessarily in the subtleties that are stressed—perhaps overstressed—by many audiophiles. It seems clear that the essential sound

character of a system (which is basically determined by its octave-to-octave energy balance) can be as good in many \$100 speakers as in others costing five or six times that much.

When making such heretical statements, one should take pains to be correctly understood. Since the sound of any speaker is radically influenced by the listening room and everything associated with it, and since not all speakers are affected in the same way by their surroundings, there are going to be many situations in which sizable differences will be heard between speakers even though my tests, or someone else's, indicate that they should sound pretty much alike. I cannot emphasize too strongly the importance of speaker placement, room dimensions, and room acoustics in determining the response one will actually hear. Just because a speaker measures nearly flat to 30 Hz in our tests, this does not mean that you or I will be able to hear a reasonably strong, clean 32-Hz note from it in our home listening rooms. What it does mean is that, *all else being equal*, the speaker should deliver a deeper bass than some other whose close-miked response does not extend so far downward in frequency.

I prefer to view my own—and other peoples'—tests and evaluations of speakers as *general* indicators of performance that should *never* be accepted by a reader as a guarantee that a certain speaker will sound precisely as good in his home as it did in our lab (or vice versa). Once again, I repeat my warning that the only sure way to know how a speaker will sound in your home is to listen to it in your home. The only thing you can learn with certainty from hearing it in another place is what it sounds like in *that* place. And, sad to say, even relative judgments between speakers can be affected by the environment, so that just because speaker A sounds somewhat better than speaker B in the showroom

Tested This Month

●
Onkyo A-7 Integrated Amplifier
Heath AD-1307 Control Center
Koss ESP/10 Headphones
Harman-Kardon Citation 16 and
16A Power Amplifiers
SAE 2800 Parametric Equalizer

does not necessarily mean it will still sound better than B if you compare the two systems at home.

As to whether a small, inexpensive speaker can really have a good low-bass response without some sacrifice in performance, the laws of physics demand

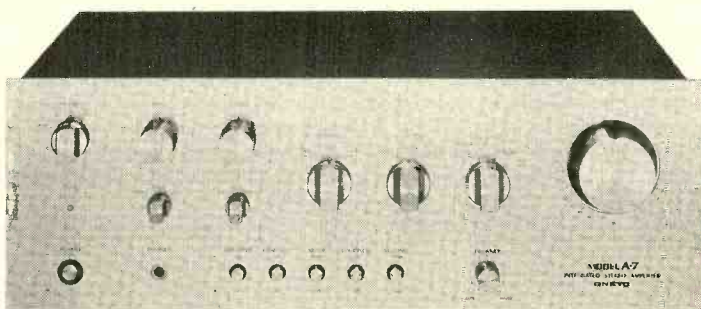
that some "trade-off" take place. For example, there will be wide variations between speakers (with the same bass frequency response) in their bass distortion at a given sound-pressure level, and also in the maximum bass level that can be produced without excessive distortion.

A small cone can produce very low frequencies, but not at a very loud level. If your aim is to "feel" the bass pressure, you should not count on doing so with one of the smaller speakers, even if its bass response at lower listening levels matches that of a larger speaker.

Equipment Test Reports

By Hirsch-Houck Laboratories

Onkyo A-7 Integrated Stereo Amplifier



ONKYO'S Model A-7 is that company's finest integrated stereo amplifier, rated to deliver 65 watts per channel to 8-ohm loads from 20 to 20,000 Hz with less than 0.1 per cent total harmonic distortion. Its frequency response is specified well beyond the audio range, with a ± 1 -dB rating from 2 to 80,000 Hz. This accounts for its excellent low-frequency square-wave response. (A 50-Hz square wave is said to emerge from the amplifier with less than 5 per cent tilt on its top and bottom, indicating flat response without significant phase shift to well below 5 Hz.)

The Onkyo A-7 has a thick brushed-satin aluminum panel and machined metal knobs that give it an exceptionally rugged appearance—which is more than skin deep, we might add. Volume is adjusted by a large, heavy knob that operates a true thirty-two-step switch attenuator (as opposed to the more common potentiometer control with mechanical detents). The upper eighteen steps adjust the volume in 1-dB increments, increasing to 2-dB and larger steps as the volume is further reduced.

Three bar knobs in the center of the panel select the program source and control the two tape decks that can be connected to the A-7. The input selector has positions for two magnetic phono cartridges, tuner, and a high-level (AUX) input. The MONITOR switch connects either the selected source or the playback output from tape deck 1 or tape deck 2 to the amplifier. The DUBBING switch cross-connects the two tape decks so that tapes can be copied from either machine to the other.

To the left of these controls are the bass and treble tone controls. Each is an eleven-position selector switch, boosting or cutting the response in 2-dB steps. Below each control is a smaller knob that serves to bypass the

tone-control circuits entirely or change the turnover frequency. The bass-turnover frequencies are 125 and 400 Hz, and the treble frequencies are 2,000 and 8,000 Hz. The SPEAKERS switch connects either, both, or neither of two pairs of speakers to the amplifier outputs.

The other controls, principally pushbuttons, include the power switch (with a nearby pilot light), SUBSONIC and high-frequency filters, the mono/stereo MODE switch, LOUDNESS compensation, and a 20-dB audio MUTING switch. The balance control and a stereo-headphone jack complete the front-panel features. At the amplifier's rear, in addition to the signal inputs and outputs, there are separate preamplifier outputs and power amplifier inputs joined by jumper links. Insulated binding posts are used for the speaker connections, and one of the three a.c. outlets is switched. The Onkyo A-7 is 17½ inches wide, 15 inches deep, and 6¼ inches high. It weighs about 30 pounds, including the furnished black metal protective cabinet. Price: \$350.

● **Laboratory Measurements.** Probably because the Onkyo A-7 carries a modest power rating for an amplifier of its size and weight, it became only slightly warm during the one-hour FTC preconditioning period. The output, with both channels driven at 1,000 Hz into 8-ohm loads, clipped at about 76 watts per channel. The 4- and 16-ohm outputs were 105 and 48 watts. The total harmonic distortion (THD) at 1,000 Hz was essentially the residual of our test instruments (0.002 to 0.0025 per cent) from 0.1 to more than 20 watts output. It increased to 0.0045 per cent at 50 watts and to 0.007 per cent at 70 watts. The intermodulation distortion (IM) was 0.05 per cent at 0.1 watt; it decreased to 0.006 per cent in

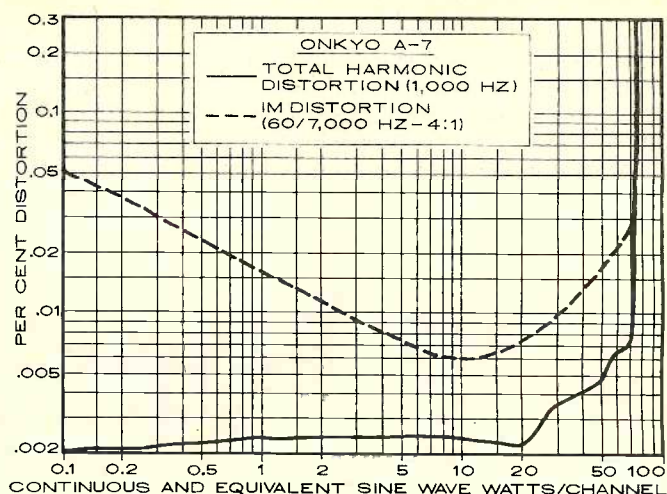
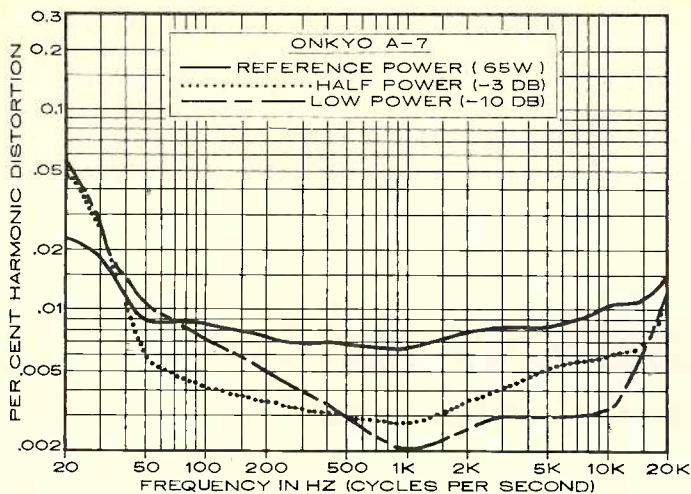
the vicinity of 10 watts and rose to 0.028 per cent at 70 watts. It also rose at extremely low power levels, to 0.19 per cent at 6 milliwatts output.

The Onkyo A-7 was driven to a reference output of 10 watts by a high-level input of 62 millivolts or a phono input of 1 millivolt. The respective unweighted noise levels, referred to 10 watts, were -78 and -74 dB, both excellent figures. The phono preamplifier stage overloaded at a high and safe 235-millivolt input. The manufacturer points out that precision components are used for the RIAA equalization circuits of the A-7, so that its equalization accuracy is rated at ± 0.3 dB from 30 to 15,000 Hz. That is exactly what we measured, and the same tolerance applied in fact to the extended phono response from 20 to 20,000 Hz. There was virtually no interaction with phono-cartridge inductance, which increased the output by only about 0.8 dB at 20,000 Hz.

The selectable tone-control turnover frequencies of the A-7 give it considerable flexibility in meeting specific response needs. However, we noted that the maximum range of the bass control, in particular, was far larger than it needed to be. With the 400-Hz turnover, about 23 dB of boost was available at 20 Hz, and with the 125-Hz turnover the maximum boost was almost 20 dB at 20 Hz and still increasing at lower frequencies. These controls should be used with caution, since it would be easy to overdrive a speaker (or the amplifier itself) at very low or high frequencies by indiscriminate use of bass boost.

The loudness compensation, which boosted both low and high frequencies, was very mild in its action and therefore more listenable than most such systems (especially if the audio muting is used so that the volume control can be operated in the upper half of its range). The SUBSONIC filter is rated to take effect below 10 Hz with a 6-dB-per-octave slope. It affected the output at 20 Hz by less than 1 dB. The HIGH filter also had a 6-dB-per-octave slope, with the -3-dB response point at 5,500 Hz. It was about as effective as such a gradual filter can be since the cut-off frequency is well chosen for reduction of noise with minimum effect on the program.

● **Comment.** The Onkyo A-7 is a smooth amplifier whose virtues are best appreciated in use rather than by reading its specifica-



tions. From the beginning, we sensed the care that had gone into providing exactly the right tactile response in the controls. Although the volume detents are distinct, they are so light that one might turn the knob without really being aware that it is a stepped control. This sensation is enhanced by the unobtrusive way in which the level changes as the control is turned, with no sudden or unexpected changes in volume (even the steps themselves are rarely audible as such).

All the other controls operated as effective-

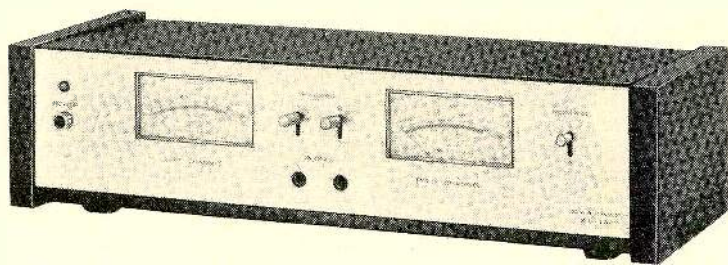
ly, without noise but with a positive "feel" that complements the A-7's overall air of precision. We are well aware that other makes of amplifiers have many of the same qualities, but in few of them have *all* these virtues been put together without slipping up somewhere. If Onkyo "goofed" anywhere, we didn't find any evidence of it.

As for how the A-7 sounds, we can say simply that nothing we have heard sounds any better. This is only to be expected from an amplifier whose performance is so much bet-

ter than that of any other part of a music system. It doesn't distort; it doesn't add hum or noise (subjectively, it is even quieter than the unweighted measurements would suggest); it doesn't emit clicks or thumps, no matter how the controls are handled; it can perform just about any normal system-control function; it is powerful enough for almost everyone; it looks good; and its price is not unreasonable. To us, all of this adds up to a very successful product.

Circle 105 on reader service card

Heath AD-1307 Audio Control Center



In our reviews of Heath's most powerful amplifier, the excellent AA-1640 (STEREO REVIEW, May 1975 and October 1976) we commented on its meters, which displayed the true instantaneous power-output level of the amplifier. At the time, we were so impressed that we expressed the wish that these meters be made available as an accessory for use with other amplifiers.

Perhaps somebody at Heath was listening, for they have now made available the Model AD-1307, an audio control center based on these meters and their electronic circuits. The unit can also serve as a system control center for both a.c. power and speaker switching.

Styled to match other recent Heath audio components, the AD-1307 is supplied with its brushed-aluminum front panel and black-

finished metal cabinet. The POWER pushbutton at the left of the panel (with a LED pilot lamp above it) energizes the internal meter circuits and also applies power to the four switched a.c. outlets in the rear of the unit. This is a boon to the audiophile who has (or plans to have) a super-power amplifier but whose preamplifier (like most) cannot safely switch hundreds of watts of primary power. The Heath AD-1307 power switch can control up to 1,500 watts through its accessory outlets, enough for a pair of AA-1640 power amplifiers (or their equivalents) plus all the other components likely to be used in a high-quality music system. It also has four more unswitched outlets, also able to handle up to 1,500 watts. When power is on, the meter scales are illuminated, leaving no doubt as to the status of the system.

The meters have logarithmic scales covering a range of more than 33 dB. They are also calibrated in watts (to 8-ohm loads) from 0.2 to 200 watts (the upper portion of the scale, from 0 to +3 dB, extends the range to 400 watts).

The AD-1307 has inputs for two separate stereo amplifiers and two pairs of speakers. A MONITOR level switch connects the meters to either the A or the B amplifier's speaker terminals. Normally, the A and the B pairs of speakers can be connected only to their respective amplifiers (by moving the corresponding SPEAKERS lever switch to its up position) or shut off (by moving the switch down).

With a quadraphonic system, connections can be made that will allow the meters to display power levels in all four channels. An alternative connection for stereo systems is to wire jumpers externally between the corresponding terminals of the A and B amplifier connections so that either the A or the B speakers (or both) can be connected to the amplifier with the front-panel switches.

In addition, there are separate conventional headphone jacks on the front panel for both A and B amplifier outputs. Resistive L-pads isolate the phone jacks from the amplifier outputs so that phones can be used safely with amplifiers of any power rating. Additional ter-

(Continued on page 38)

"GET YOUR GUARD UP."

Ally S. Kwan

"There are 400 different jobs in the National Guard. And every one of them helps somebody. Including yourself."

People in the National Guard aren't just sitting around on their hands waiting for things to happen.

"They're fighting forest fires. And battling blizzards. Saving folks from floods. Even helping to rebuild schools."

"And you'd better believe they're fighting for themselves, too. Learning skills. Learning to make life work."

"You can learn any one of 400 different jobs in the National Guard. And every one of them helps somebody. Including yourself."

"The Guard needs you. The country needs you. Get your Guard up."

August is Salute the Guard Month.

Call 800-638-7600.

Or your local recruiter.



The Guard belongs.

CIRCLE NO. 45 ON READER SERVICE CARD

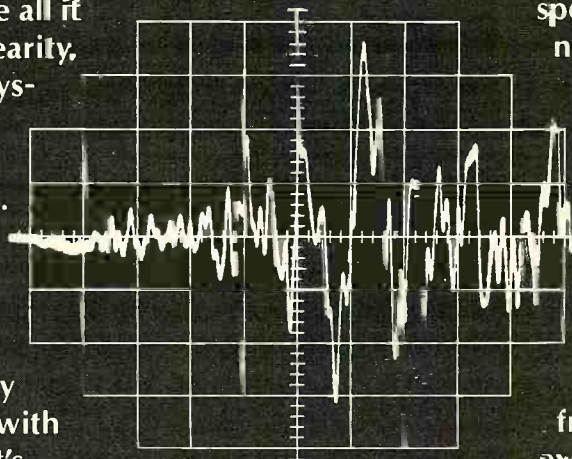
Technics knows there's more to Linear Phase than staggered speakers.

If staggered speakers were all it took to achieve phase linearity, other staggered speaker systems would sound like ours. But Technics knows it takes more. Much more. Like a phase-controlled crossover network that takes into account the phase characteristics of each driver. Like extremely wide-range drivers, each with a frequency response that's as flat as it is wide. And finally, aligning the acoustic center of each for the optimum acoustic position.

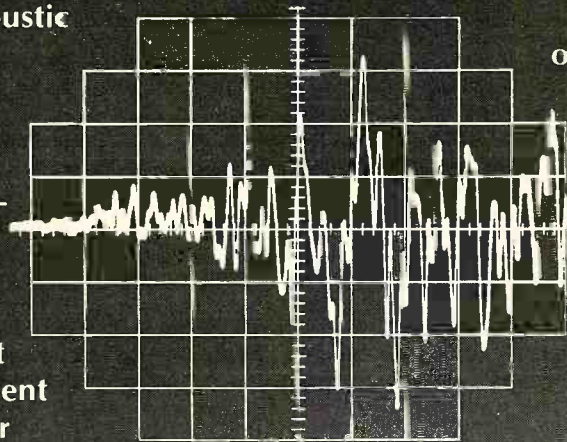
But just as important, Technics knows that to achieve phase linearity as well as a wide and flat frequency response is also to achieve the ultimate in high fidelity: waveform fidelity. With it the output waveform of any component or speaker will be a mirror image of the waveform put into it. And that sounds better than good. It sounds live.

And if seeing is believing, look at the waveforms. On top is the oscilloscope reading (the fingerprint) of a live piano waveform. The other, the piano as reproduced by Technics Linear Phase SB-7000A. That's waveform fidelity you can see, as well as hear.

How did we do it? By designing a crossover network that would provide an overall linear phase characteristic for the entire



Live Piano Waveform.



Piano Waveform
Reproduced by SB-7000A.

speaker system, while simultaneously compensating for the different acoustic pressures of the individual drivers.

When we finished we ended up with a unique phase-controlled crossover network consisting of 6 dB and 18 dB/octave cut-off slopes. It not only eliminates "audible dip" at the crossover frequencies, but also assures excellent localization of the original sound source within the acoustic field.

But as important as the crossover network is in achieving linear phase, so are the individual driver units. That's why we designed and manufactured the speaker drivers with the flattest amplitude, widest frequency response and lowest distortion possible. A goal we achieved only after exhaustive amplitude and phase studies in anechoic chambers.

Our final step was aligning the acoustic center of each driver in precisely the same vertical

plane. But it took more than anechoic chambers. Technics had to develop a new time-delay system using BBD (Bucket Brigade Device).

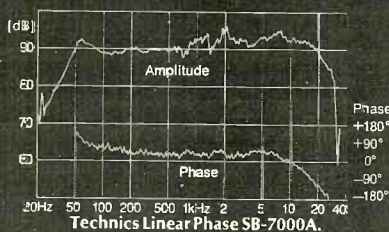
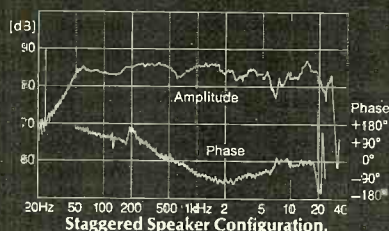
Only then could we locate the optimum acoustic position for each driver. In addition, each unit is positioned vertically for the best horizontal dispersion and then spaced as

Much more.

closely as possible for the best vertical dispersion of all audio frequencies. What's more, after alignment each unit is fine-tuned to assure precise linearity.

The result, with the SB-7000A for example, is an overall phase response, linear between $0^\circ \pm 45^\circ$ between 100Hz and 15kHz. A figure that's virtually flat and definitely unsurpassed by any other multi-range speaker system.

As the graphs prove, even staggered speaker systems with seemingly "linear phase" characteristics show moderate to



severe phase shifts at different frequencies. But as you can see, the Technics SB-7000A has an unprecedented flat amplitude/frequency response and linear phase response.

But we don't expect you to buy any speaker system based on how good it sounds on paper. Audition the world's most linear phase speaker systems: the Technics SB-7000A, SB-6000A, SB-5000A. You'll find out just how much more there is to Technics

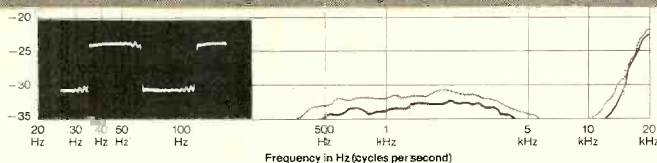
Linear Phase than staggered speakers.

Technics

by Panasonic



CIRCLE NO. 42 ON-READER SERVICE CARD



In the graph frequency response was measured using the CBS 100 Test Record, which sweeps from 20-20,000 Hz. The vertical tracking force was set at one gram. Nominal system capacitance was calibrated to be 300 picofarads and the standard 47K ohm resistance was maintained throughout testing. The upper curves represent the frequency response of the right (black) and left (grey) channels. The distance between the upper and lower curves represents separation between the channels in decibels. The inset oscilloscope photo exhibits the cartridge's response to a recorded 1000 Hz square wave indicating its resonant and transient response.

For more information on the Empire 2000Z, and our free brochure "How to Get the Most Out of Your Records," write: Empire Scientific Corp., Department ± 1 dB, 1055 Stewart Avenue, Garden City, N.Y. 11530.

EMPIRE

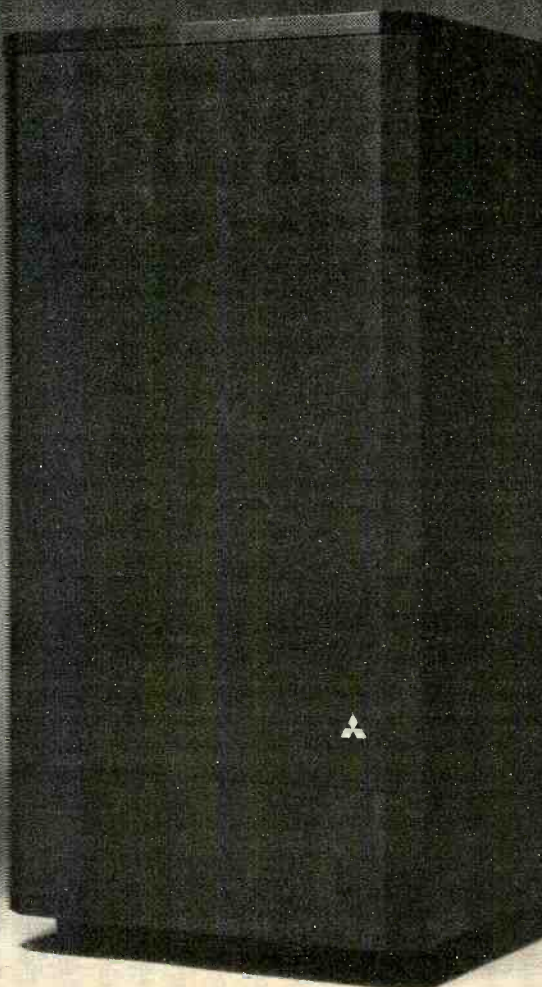
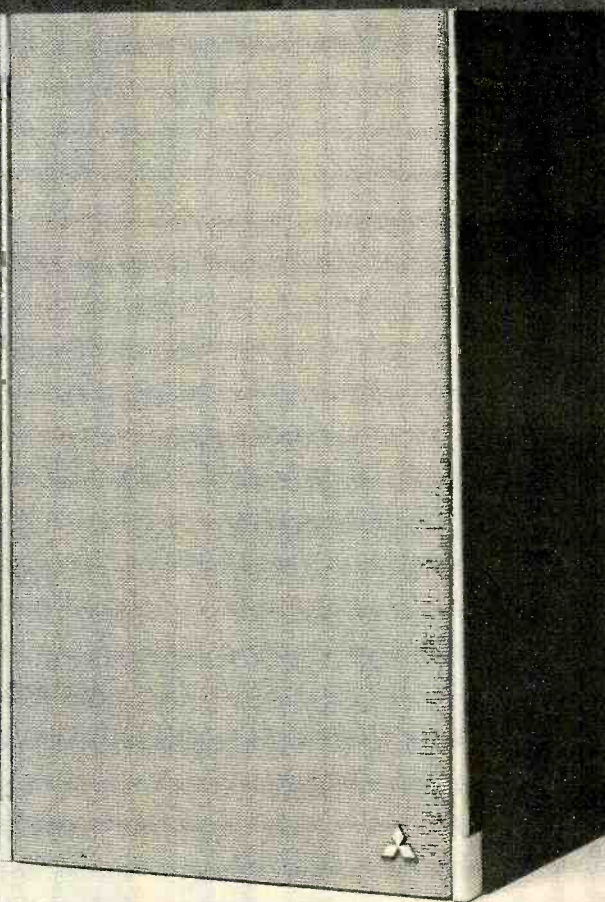
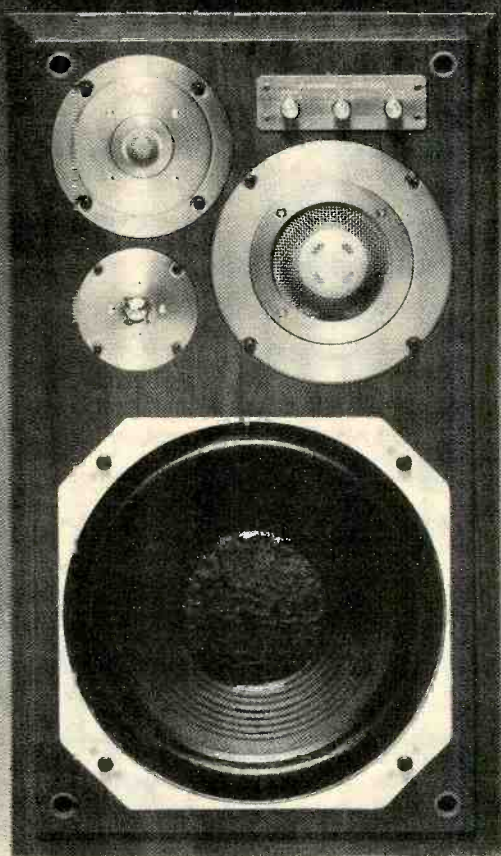
minals are provided in the rear of the unit for connecting electrostatic headphones directly to the amplifier speaker-terminal outputs. The speaker connections are made with the polarized screw-head plugs introduced by Heath in their Modulus series of components. Standard screw-type barrier strips are used for the amplifier's speaker connections and electrostatic headphone connections.

The specifications of the Heath AD-1307, though brief, are impressive. The peak-responding meters have a rated response time of less than 50 microseconds and a decay time greater than 0.5 second. The overall dimen-

dedicated transient power levels. So long as the interval between bursts did not exceed 10 milliseconds, the meters exactly indicated the steady-state level with bursts as short as 10 microseconds! Longer "off" times between bursts caused the meters to read less than the steady-state power. For example, a 100-millisecond "off" time gave a -3-dB error when the burst duration was between 1 and 10 milliseconds. In the standard test for VU meter ballistics (applying a 0.3-second burst at a rate of once per second) the meters read 1.5 dB low.

nearly as fast as LED displays, the meters gave at all times a running account of the maximum power that the amplifier was called upon to deliver. We would have appreciated more intermediate calibration marks on the meters (the major markings are at 0.2, 2, 20, and 200 watts), but this can surely be assigned to the category of "nit-picking."

The price of the unit might seem a bit high for a pair of meters and some switches. However, the AD-1307 is much more complicated than that. No unassisted mechanical meter movement can respond in microseconds, and the performance of the Heath unit is made



No artificial ingredients.

We don't pick up a woofer here, a tweeter there, and cram them together in a creaky box.

We make everything from scratch.

The enclosures, the crossovers, the drivers, and even our own paper.

Because if there's anything we hate, it's loudspeakers that editorialize on the music.

So, to keep our sound perfectly real, we control everything to the nth degree. And then some.

Not just the components and the manufacturing.

But also the testing.

We test our speakers by sight. With laser holography that actually creates a picture of the sound patterns they produce.

We test our speakers by instruments. With anechoic chambers that give our sound waves no place to hide.

We test our speakers by ear. With engineers who, in turn, have their hearing tested every day.

This isn't easy. This isn't cheap. But if the result is loudspeakers like those at the left, who's to say it's not worth it?



The DS-303 (top left) is a 4-way acoustic air suspension bookshelf system with a frequency response of 30-35,000 Hz. A power-handling capacity of 100 watts. And an acoustic pressure level of 90 dB/W @ 1 meter.

The DS-50CS (lower left) is a 3-way bass-reflex floor-standing system with a frequency response of 25-20,000 Hz. A power-handling capacity of 80 watts. And an output acoustic pressure level of 92 dB/W @ 1 meter.

Both are so good, they're sold as part of The System. The only one-name, one-look, one-warranty, high performance audio system with speakers as good as the amplifier. An amplifier as good as the pre-amp. A pre-amp as good as the turntable. A turntable as good as the tuner. A tuner as good as the speakers. With no weak links anywhere.

So if you're considering a new pair of loudspeakers, we hope you'll spend some time with ours.

Because how many other speakers could go through all that testing?

And live to speak about it?

 **MITSUBISHI**
AUDIO SYSTEMS

For more information write Melco Sales, Inc., Dept. SR, 3030 East Victoria Street, Compton, California 90221.

extended, flat bass response of the ESP/10 (like that of the ESP/9) is perhaps less obvious, but it is just as remarkable as its mid- and high-frequency response. These are the only headphones through which we have been able to hear consistently whatever turntable rum-

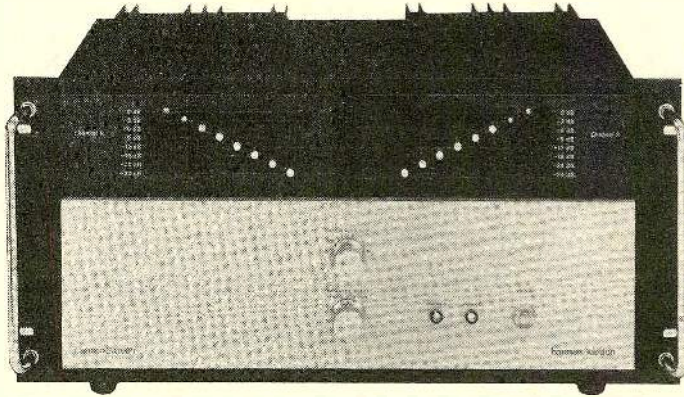
ble exists either on records themselves or on FM broadcasts using them.

Earlier in this report we wondered how one goes about improving a product that is already a leader in its field. Clearly, one does this by making it more reliable, more comfortable,

and generally more convenient to use without in any way degrading its sound quality. That is what Koss did, and the result is a headphone we are quite sure will enjoy the same reputation its predecessor did.

Circle 107 on reader service card

Harman-Kardon Citation 16 and 16A Stereo Power Amplifiers



THE Harman-Kardon Citation 16 power amplifier, which has been on the market for several years, has undergone some changes and is now designated the Citation 16A. Externally, the only differences are minor cosmetic ones in knob styling and panel lettering. Almost all the published specifications for the 16A are identical to those for the 16. The principal change seems to be a slight reduction in the power bandwidth—from 110 kHz to either 45 or 70 kHz (the figure is given differently in the operating and service manuals). With the bandwidth rating reduction, however, comes a lower distortion rating, between 0.1 to 0.05 per cent at 75 watts output into 8-ohm loads over the specified frequency range.

The basic specifications of the H-K Citation 16/16A are quite impressive in themselves. The FTC power rating is 150 watts per channel into 8-ohm loads, from 20 to 20,000 Hz, with less than 0.05 per cent total harmonic distortion (THD). The square-wave rise time is rated at less than 3 microseconds, and the slew rate at greater than 30 volts per microsecond. The noise level is rated at better than 100 dB below 150 watts, the input impedance is 22,000 ohms, and a signal input of 1.25 volts is required for full output.

The H-K Citation 16A is large and heavy compared with some other similarly rated amplifiers. This results, in part, from the fact that each channel has a completely separate power supply. Each output stage uses ten power transistors whose massive heat sinks occupy most of the rear of the amplifier. Between the two sets of heat sinks are the signal-input phono jacks and the speaker outputs, which use insulated binding posts on standard 3/4-inch centers. The heavy-duty power cord is fitted with a three-prong molded plug.

The most distinctive features of the H-K Citation 16A, viewed from the front, are the

two slanting rows of LED lights, extending upward and outward from the center of the panel. Each channel has eight lights, which come on progressively at power levels from -30 to 0 dB (the amplifier's rated maximum output). The 0 and -3-dB lights are red, warning of possible overload, the -6- and -9-dB lights are amber, and the others are green. A rotary switch on the panel increases the display sensitivity in three steps (at maximum sensitivity as little as 4 milliwatts will light the -30-dB LED). It will also turn all the lights on (the so-called TEST position) or shut them all off if desired. Another knob changes the calibration to match operation into either 4- or 8-ohm speaker loads. The amplifier itself is turned on and off by a pushbutton switch, and two red pilot lights glow when the primaries of the two power transformers are energized (so that an extinguished light signifies a blown fuse for that channel).

With the minor exceptions noted, everything we have said applies equally to the original Citation 16. Curious about the differences between the two, we obtained a sample of each. A careful comparison of their schematic diagrams revealed several circuit differences. The Citation 16 used integrated-circuit "op-amps" in its input section, while in the 16A this function has been taken over by a number of discrete transistors and associated components. Also, in several places in the amplifier a single transistor has been replaced by a Darlington pair (a higher-gain component), and there have been a few minor changes of component values. We also found a change in the amplifier's protective-relay circuit, which disconnects the speakers instantly if any d.c. component appears in the amplifier's output (it also provides a turn-on delay of several seconds). Here we found an added IC op-amp, presumably to increase the sensitivity of the protective circuit.

Harman-Kardon notes that the 16A output stages are operated in Class A up to about 2.5 watts output, where the transition to Class AB occurs. The practical effect of this is to cause the transistors to operate at a higher quiescent temperature than would exist with normal Class AB bias (which apparently was used in the original Model 16). In the service manual for the 16A it is stated that the heat sinks will reach 60 degrees Celsius (140 degrees Fahrenheit) during sustained idling, and at the one-third-of-rated-power level used in the FTC preconditioning period the temperature will reach 80° C (176° F). A thermal protective device cuts off the amplifier's power if the temperature reaches 90° C (194° F).

The Harman-Kardon Citation 16A is 19 1/8 inches wide, 9 1/8 inches high, and about 13 3/8 inches deep. It is equipped with handles on the front panel, and the panel is drilled for rack mounting. The amplifier weighs 55 pounds. Price: \$795.

● **Laboratory Measurements.** We subjected both amplifiers to the same tests. After the preconditioning period, the heat sinks of both amplifiers were too hot to touch comfortably for more than a second or two. The outputs clipped at about 200 watts per channel into 8 ohms at 1,000 Hz. The output into 4 ohms was 240 watts for the Model 16 and 277 watts for the 16A. The respective 16-ohm outputs were 127 and 121 watts.

The 16's total harmonic distortion at 1,000 Hz was about 0.002 per cent or less from 0.1 to almost 180 watts output, reaching 0.05 per cent at 190 watts. The 16A was fairly similar, with distortion measuring between 0.002 and 0.003 per cent up to 100 watts and 0.007 per cent at 190 watts. The intermodulation (IM) distortion of the 16 was virtually unmeasurable, reading about 0.001 per cent from 10 to 150 watts and 0.012 per cent at 190 watts. The 16A's IM distortion was about 0.003 per cent up to 20 watts, increasing to 0.016 per cent at 150 watts and 0.02 per cent at 190 watts. Both amplifiers had harmonic distortion levels well below 0.02 per cent from about 50 to 20,000 Hz at full power and lower output levels; the 16A measured 0.02 per cent or less over the full 20- to 20,000-Hz range.

The two amplifiers had approximately the same sensitivity, developing 10 watts output with inputs of 0.31 and 0.33 volt. The unweighted noise levels measured -85 to -87 dB referred to a 10-watt output—which is consistent with the amplifier's full-power noise ratings.

The only respect in which we measured a distinct difference between the two amplifiers

(Continued on page 48)

WHY MOST CRITICS USE MAXELL TAPE TO EVALUATE TAPE RECORDERS.

Any critic who wants to do a completely fair and impartial test of a tape recorder is very fussy about the tape he uses.

Because a flawed tape can lead to some very misleading results.

A tape that can't cover the full audio spectrum can keep a recorder from ever reaching its full potential.

A tape that's noisy makes it hard to measure how quiet the recorder is.

A tape that doesn't have a wide enough bias latitude can make you question the bias settings.

And a tape that doesn't sound consistently the same, from end to end, from tape to tape, can make you question the stability of the electronics.

If a cassette or 8-track jams, it can suggest some nasty, but erroneous comments about the drive mechanism.

And if a cassette or 8-track introduces wow and flutter, it's apt to produce some test results that anyone can argue with.

Fortunately, we test Maxell cassette, 8-track and reel-to-reel tape to make sure it doesn't have the



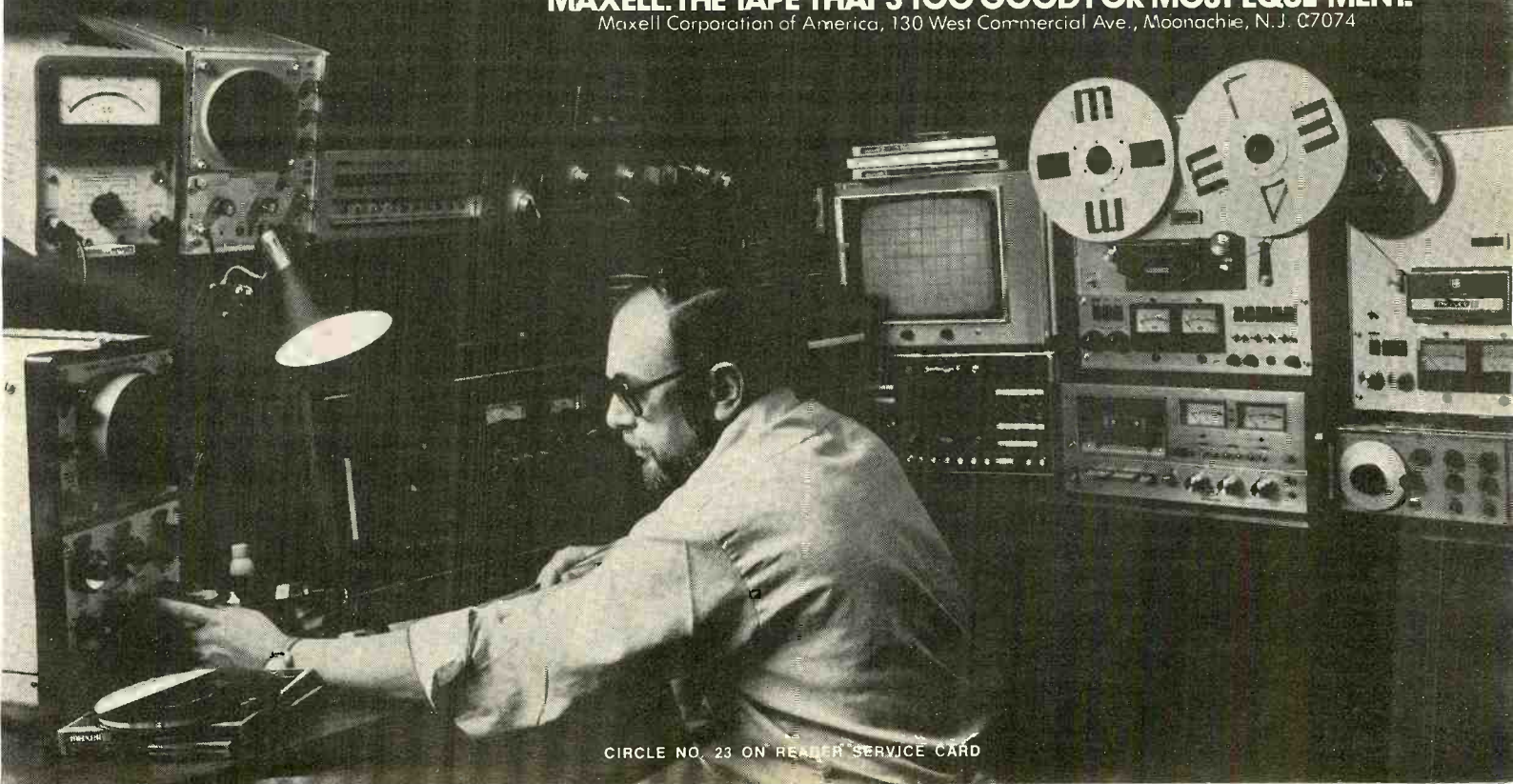
problems that plague other tapes.

So it's not surprising that most critics end up with our tape in their tape recorders.

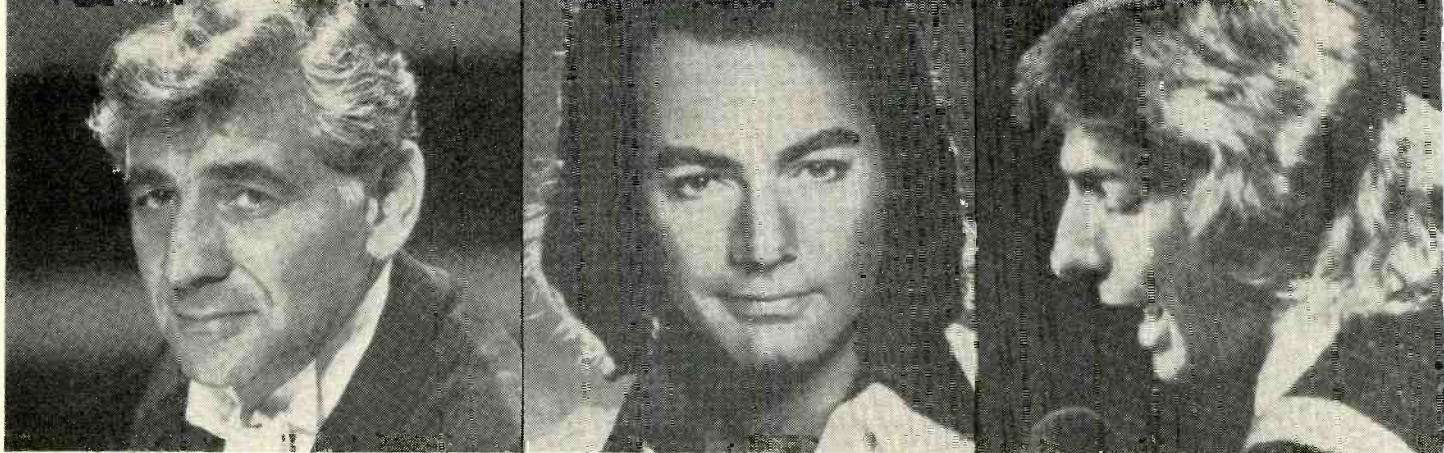
It's one way to guarantee the equipment will get a fair hearing.

MAXELL. THE TAPE THAT'S TOO GOOD FOR MOST EQUIPMENT.

Maxell Corporation of America, 130 West Commercial Ave., Moonachie, N.J. C7074



Bernstein! Diamond! Manilow!



- | | | | | |
|--|--|--|--|--|
| 265926 Leonard Bernstein
Age Of Gold
<small>(COLUMBIA)</small> | 269209 * BOSTON
More Than A Feeling
<small>(EPIC)</small> | 267195 NEIL DIAMOND
BEAUTIFUL NOISE
<small>(COLUMBIA)</small> | 267849 BARRY MANILOW
This One's For You
<small>(ARISTA)</small> | 274894 * THE BEST OF FREDDY FENDER
Wasted Days And Wasted Nights
<small>(ABC)</small> |
| 273516 * GLEN CAMPBELL
SOUTHERN NIGHTS
<small>(CAPITOL)</small> | 272104 TOM JONES
SAY YOU'LL STAY UNTIL TOMORROW
<small>(EPIC)</small> | 271593 * THE STALLER BROS.
THE COUNTRY AMERICA LOVES
<small>(RCA)</small> | 274902 * LAWRENCE WELK
20 GREAT HITS
<small>(RCA)</small> | 270132 * BOB SEGER & THE SILVER BULLET BAND
NIGHT MOVES
<small>(CAPITOL)</small> |
| 273706 * THE BAND
ISLANDS
<small>(CAPITOL)</small> | 274977 * TAMMY WYNETTE
Let's Get Together
<small>(EPIC)</small> | 269050 * AL STEWART
Year Of The Cat
<small>(JANUS)</small> | 270313 * KENNY LOGGINS
Celebrate Me Home
<small>(COLUMBIA)</small> | 269852 FERRANTE & TEICHER
FEELINGS
<small>(LIT)</small> |
| 219477 SIMON & GARFUNKEL'S
GREATEST HITS
<small>(COLUMBIA)</small> | 264663 BEVERLY SILES
ANDRE KOSTELANETZ
PLAISIR D'AMOUR
<small>(COLUMBIA)</small> | 171504 SWITCHED ON BACH
<small>(COLUMBIA)</small> | 253746 * DONNY & MARIE
OSMUND
NEW SEASON
<small>(POLYDOR)</small> | 246348 SONNY & CHER
GREATEST HITS
<small>(MCA)</small> |
| 274811 * RITA COOLIDGE
Anytime...Anywhere
<small>(A & M)</small> | 268185 Earth, Wind & Fire
SPIRIT
<small>(COLUMBIA)</small> | 274795 * BOB JAMES
BJ4
<small>(CTI)</small> | 249953 * TANYA TUCKER'S
GREATEST HITS
<small>(COLUMBIA)</small> | 271924 * CONWAY TWITTY
GREATEST HITS VOL. II
<small>(MCA)</small> |
| 270835 Engelbert Humperdinck
AFTER THE LOVIN'
<small>(EPIC)</small> | 255638 THE CARPENTERS
HORIZON
<small>(A & M)</small> | 269828 * PHOEBE SNOW
It Looks Like Snow
<small>(COLUMBIA)</small> | 273417 RAY CONNIF
After The Lovin'
<small>(COLUMBIA)</small> | 271361 * ZZ TOP
TEJAS
<small>(LONDON)</small> |
| 271643 * DON WILLIAMS
VISIONS
<small>(ABC DOT)</small> | 272021 * MERLE HAGGARD
THE ROOTS OF MY RAISING
<small>(CAPITOL)</small> | 260737 HELEN REDDY'S
GREATEST HITS
<small>(CAPITOL)</small> | 268631 * WILLIE NELSON
THE TROUBLEMAKER
<small>(COLUMBIA)</small> | 187161 MORMON TABERNACLE CHORUS
GREATEST HITS, Vol. 3
<small>(COLUMBIA)</small> |
| 274837 * Ramsey Lewis
Love Notes
<small>(COLUMBIA)</small> | 269605 LOGGINS & MESSINA
BEST OF FRIENDS
<small>(COLUMBIA)</small> | 269183 * G. GERSHWIN
TILSON-THOMAS
Rhapsody In Blue
<small>(COLUMBIA)</small> | 260695 * ERIC CARMEN
ALL BY MYSELF
<small>(ARISTA)</small> | 274787 * RONNIE LAWS
Friends & Strangers
<small>(BLUENOTE)</small> |
| 270553 * KANSAS
LEFTOVERTURE
<small>(KIRSHNER)</small> | 264424 * The Greatest Hits Of
JOHNNY RODRIGUEZ
<small>(MERCURY)</small> | 250324 * THE BEST OF
WAYNE NEWTON-LIVE
<small>(GREENE)</small> | 273193 * DAVE MASON
LET IT FLOW
<small>(COLUMBIA)</small> | 264150 ROGER WILLIAMS
VIRTUOSO
<small>(MCA)</small> |
| 265918 CARPENTERS
A KIND OF HUSH
<small>(A & M)</small> | 271916 * MARY MACGREGOR
Torn Between Two Lovers
<small>(ARISTA)</small> | 269407 Electric Light Orch.
A New World Record
<small>(LIT)</small> | 252551 Orff: CARMINA BURANA
Michael Tilson Thomas
Cleveland Orchestra & Chorus
<small>(COLUMBIA)</small> | 265256 * NANCY WILSON
This Mother's Daughter
<small>(CAPITOL)</small> |
| 271932 * LORETTA LYNN
Somebody Somewhere
<small>(MCA)</small> | 110262 * THE PLATTERS
Encore of Golden Hits
<small>(MERCURY)</small> | 272138 * JOHNNY
DUNCAN
<small>(COLUMBIA)</small> | 267500 WAR'S
GREATEST HITS
<small>(WAX)</small> | 272153 * LYNN ANDERSON
WRAP YOUR LOVE...
<small>(COLUMBIA)</small> |
| 249813 BURT BACHARACH'S
GREATEST HITS
<small>(RCA)</small> | 269522 * CHARLIE DANIELS BAND
HIGH LONESOME
<small>(EPIC)</small> | 262071 MANTOVANI
THE GREATEST GIFT IS LOVE
<small>(LONDON)</small> | 260057 * LINDA RONSTADT
SILK PURSE
<small>(CAPITOL)</small> | 268599 * BAY CITY ROLLERS
Dedication
<small>(ARISTA)</small> |
| 272971 * THE KINKS
SLEEPWALKER
<small>(ARISTA)</small> | 268672 * ANDY WILLIAMS
ANDY
<small>(COLUMBIA)</small> | 269383 * GEORGE BENSON
GOOD KING BAD
<small>(CTI)</small> | 239855 MAC DAVIS
Stop And Smell The Roses
<small>(COLUMBIA)</small> | 269241 * PERRY BOTKIN
NADIA'S THEME
<small>(RCA)</small> |
| 267302 * JESSI COLTER
Diamond In The Rough
<small>(CAPITOL)</small> | 272112 * CHARLIE RICH
TAKE ME
<small>(EPIC)</small> | 274528 ARTHUR FIEDLER
BOSTON POPS ORCHESTRA
GREAT STRAUSS WALTZES
<small>(LONDON)</small> | 273498 * Bach/Turmer
Overdrive
FREEWAYS
<small>(Sony)</small> | 270793 * MICKEY GILLEY
GILLEY'S SMOKIN'
<small>(PLAYBOY)</small> |
| 264499 FERRANTE & TEICHER
PIANO PORTRAITS
<small>(LIT)</small> | 263400 * BOZ SCAGGS
SILK DEGREES
<small>(COLUMBIA)</small> | SELECTIONS WITH TWO NUMBERS ARE 2-RECORD SETS OR DOUBLE-LENGTH TAPES, AND COUNT AS TWO SELECTIONS. WRITE EACH NUMBER IN A SEPARATE BOX. | | 274506 * BURTON CUMMINGS
MY OWN WAY TO ROCK
<small>(PORTLAND)</small> |
| 273425 * JIMMY BUFFET
CHANGES IN LATITUDES
<small>(ABC)</small> | 206270 * MONTY PYTHON
Live at City Center
<small>(ARISTA)</small> | 232603-232604 * DICK CLARK
20 YEARS OF ROCK 'N ROLL
<small>(BUDDAH)</small> | 24969 BARRY MANILOW
LIVE
<small>(ARISTA)</small> | 248774 * LIBERACE'S
GREATEST HITS
<small>(A&W)</small> |
| 252387 * THE BEST OF NAT KING COLE
<small>(CAPITOL)</small> | 270934 * ROBIN TROWER
LONG MISTY DAYS
<small>(CHRYSALIS)</small> | 274860 * HERBIE HANCOCK
V.S.O.P.
<small>(COLUMBIA)</small> | 270827 * THE BEST OF ROD STEWART
VOLUME 2
<small>(RECORD)</small> | 274423 * JOHNNY PAYCHECK
SLIDE OFF OF YOUR SATIN SHEETS
<small>(EPIC)</small> |
| 268235 * BARBIE BENTON
SOMETHING NEW
<small>(PLAYBOY)</small> | 246843 VLADIMIR HOROWITZ
NEW RECORDINGS OF CHOPIN
<small>(COLUMBIA)</small> | 273938 * MARVIN GAYE
LIVE AT THE LONDON PALLADIUM
273939
<small>(TAMLA)</small> | 272005 * DIANA ROSS
An Evening With Diana Ross
<small>(MOTOWN)</small> | 267492 † EVERYTHING YOU ALWAYS WANTED TO HEAR BY DION AND THE BELMONTS
<small>(Laurie)</small> |
| 256099 THE CAPTAIN & TENNILLE
Love Will Keep Us Together
<small>(A & M)</small> | 274159 GLADYS KNIGHT & THE PIPS
STILL TOGETHER
<small>(BUDDAH)</small> | 269541 MANTOVANI
All Time Romantic Hits
COUNTS AS TWO
<small>(LONDON)</small> | 262311 PETER FRAMPTON
Frampton Comes Alive!
<small>(A & M)</small> | 269795 † DAVE DUDLEY
PRESENTS DAVE DUDLEY
<small>(LIT)</small> |
| 272187 * Dave Brubeck Quartet
25TH ANNIVERSARY REUNION
<small>(ROBINSON)</small> | 274803 * GEORGE DUKE
FROM ME TO YOU
<small>(EPIC)</small> | 271031 * CHICK COREA
My Spanish Heart
<small>(POLYGRAM)</small> | 247072 † THAT '71 ENTERTAINMENT
ANDRE KOSTELANETZ
DUET AS TWO
<small>(COLUMBIA)</small> | 269544 † MARY KAY PLACE
TONIGHT: AT THE CAPRI LOUNGE
<small>(COLUMBIA)</small> |
| 274845 * TOM T. HALL
ABOUT LOVE
<small>(Sony)</small> | 272203 * BEST OF DONNA FARGO
<small>(ABC DOT)</small> | 269217 STEVIE WONDER
SONGS IN THE KEY OF LIFE
269218
<small>(TAMLA)</small> | 269422 † GREAT MOMENTS OF PERCY FAITH
<small>(COLUMBIA)</small> | 271957 † BEST OF LAURIE
<small>(Laurie)</small> |
| 271866 SANTANA
FESTIVAL
<small>(COLUMBIA)</small> | 269787 * KENNY ROGERS
LUCILLE
<small>(LIT)</small> | 271940 NEIL DIAMOND
Love At The Greek
271941
<small>(COLUMBIA)</small> | 269422 † FRANK SINATRA
MY ONE & ONLY LOVE
SENTIMENTAL JOURNEY
<small>(CAPITOL)</small> | 274431 † SONNY JAMES
IN PRISON IN PERSON
<small>(COLUMBIA)</small> |

* Selections marked with a star are not available in reel tapes

† Available on records and 8-track tapes only

Wonder! CAPTAIN AND TENNILLE!



Just six of the great performers whose latest recordings are now offered on stereo records, cartridges, cassettes & reel tapes!

COLUMBIA RECORD & TAPE CLUB INVITES YOU TO TAKE

Any 8 for \$1.00

plus shipping handling

if you join now and agree to buy 8 more selections (at regular Club prices) in the next 2 years

- 239350 * STEVIE WONDER
TAMLA GREATEST HITS VOL. 2
- 274936 ARTHUR FIEDLER
BOSTON POPS ORCHESTRA
Nutcracker Suite • Peter Gynl
- 272 HERB ALPERT & THE TIJUANA BRASS!
Greatest Hits Vol. II
- 270843 * THE BEST OF
GLEN CAMPBELL
- 274654 * AL DIMEOLA
ELEGANT GYPSY
- 273557 * WEATHER REPORT
HEAVY WEATHER
- 270033 * Melinda Manchester
Help Is On The Way
- 265744 * RAY CONNIFF
Send In The Clowns
- 262055 * HANK WILLIAMS JR. & FRIENDS
STONED AT THE JUKEBOX
- 249631 BOBBY VINTON
MELODIES OF LOVE
- 273524 * Return to Forever
Musicmagic
- 264044 * THIN LIZZY
JAILBREAK
- 272146 JOHNNY MATHIS
MATHIS IS
- 271098 * JOHNNY CASH
THE LAST GUNFIGHTER BALLAD
- 265223 AEROSMITH
ROCKS
- 263517 CAPTAIN & TENNILLE
SONG OF JOY
- 271809 JIM CROCE
Time In A Bottle
- 222018 THE 5th DIMENSION
Greatest Hits On Earth
- 273409 VLADIMIR HOROWITZ
FAVORITE BEETHOVEN SONATAS
Moonlight, Appassionata, etc.
- 273565 * MAYNARD FERGUSON
CONQUISTADOR
- 263731 DONNY & MARIE
FEATURING SONGS FROM
THEIR TELEVISION SHOW
- 273276 NATALIE COLE
UNPREDICTABLE

- 272229 Captain & Tennille
COME IN FROM THE RAIN
- 272195 JETHRO TULL
Songs From The Wood
- 270660 * ORIGINAL SOUNDTRACK
SATURDAY NIGHT LIVE
- 239525 BARBRA STREISAND
THE WAY WE WERE
- 274829 * The Brothers Johnson
Right On Time
- 266403 * CHARLIE RICH'S
GREATEST HITS
- 264590 LEONARD BERNSTEIN
NEW YORK PHILHARMONIC
Tchaikovsky Symphony No. 3
- 271890 BURT BACHARACH
FUTURES
- 274415 * GEORGE JONES
ALL TIME GREATEST
HITS, VOL. I
- 274910 * SUPERTRAMP
EVEN IN THE QUIETEST MOMENTS
- 201129 TCHAIKOVSKY
1812 Overture
Philadelphia Orch., Ormandy
- 273151 LOU RAWLS
Unmistakably Lou
- 274662 * JOE TEX
Bumps And Bruises
- 273508 * MARIE OSMOND
THIS IS THE WAY
THAT I FEEL
- 270629 KISS
Rock And Roll Over
- 274878 * PAUL ANKA
THE MUSIC MAN
- 259895 BARRY MANLOW
TRYIN' TO GET
THE FEELING

- 270678 * ORIGINAL SOUNDTRACK
ROCKY
GONNA FLY NOW
- 267187 CHICAGO X
Another Rainy Day In NYC
CHICAGO IS A CITY OF MUSICIANS
- 272211 * MAC DAVIS
THUNDER IN
THE AFTERNOON
- 275040 * Kotelanez Plays The
Music Of Charlie Chapin
And Duke Ellington
- 259184 PAUL SIMON
STILL CRAZY AFTER
ALL THESE YEARS
- 274852 CAT STEVENS
IZITSO
- 236885 CARPENTERS
The Singles 1969-1973
- 274373 * IOCC
DECEPTIVE BENDS
- 268490 HELEN REDDY
MUSIC, MUSIC

Here, indeed, is an exciting array of America's favorite recording stars from every field of music—classical, rock, jazz, country, popular, folk—music to satisfy your every mood! There are 160 selections in all to choose from, and you may have any 8—at once—on this introductory offer!

To join the Club and receive your 8 records or tapes, just fill in and mail the application today. You will receive your introductory package in the mail, together with a bill for only \$1.00, plus shipping and handling.

Every four weeks (13 times a year) you'll receive the Club's music magazine, which describes the Selection of the Month for each musical interest... plus hundreds of alternates from every field of music. In addition, up to six times a year you may receive offers of Special Selections, usually at a discount off regular Club prices.

If you wish to receive the Selection of the Month or the Special Selection, you need do

nothing—it will be shipped automatically. If you prefer an alternate selection, or none at all, simply fill in the response card always provided and mail it by the date specified.

You will always have at least 10 days in which to make your decision. If you ever receive any Selection without having had at least 10 days to decide, you may return it at our expense, for full credit.

Your own charge account will be opened... the records and tapes you order will be mailed and billed at regular Club prices, which currently are \$6.98 or \$7.98—plus shipping and handling. (Multiple unit sets and Double Selections may be somewhat higher.)

After completing your enrollment agreement (by buying 8 selections within 2 years), you may cancel membership at any time. If you decide to continue, you'll be eligible for our generous money-saving bonus plan. Act now—mail the application today!

COLUMBIA RECORD & TAPE CLUB, Terre Haute, Indiana 47811

Please accept my membership application in the Club under the terms outlined in this advertisement. Send me the 8 selections listed below, for which I will be billed only \$1.00, plus shipping and handling. I agree to buy 8 more records or tapes (at regular Club prices) in the coming two years—and may cancel membership at any time after doing so.

SEND MY SELECTIONS IN THIS TYPE OF RECORDING (be sure to check one):

6RF/DM

- 8-Track Cartridges
- Reel Tapes
- Tape Cassettes
- Records

Write in numbers of 8 selections:

MY MAIN MUSICAL INTEREST IS (check one):
(But I am always free to choose from any category)

- Easy Listening 2
- Teen Hits 7
- Classical 1
- Country 5 (no reel tapes)
- Jazz 4 (no reel tapes)

Mr. Mrs. Miss. (Please Print) First Name Initial Last Name Apt. No.

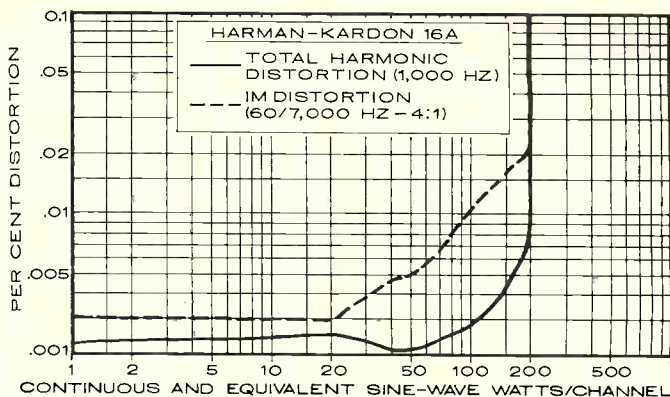
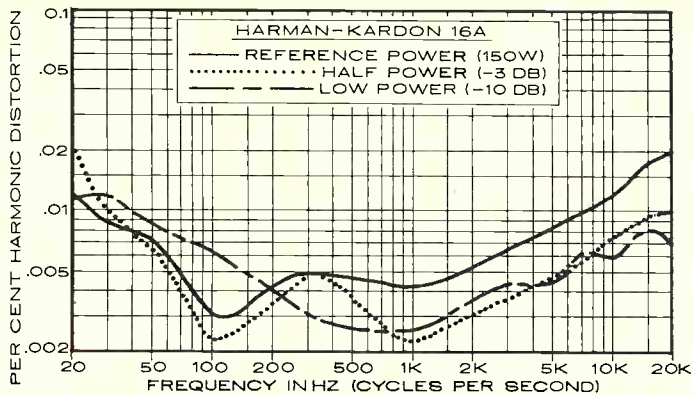
Address State Zip

Do You Have A Telephone? (Check one) YES NO
A.P.O. F.P.O. Alaska, Hawaii, Puerto Rico write for special offer. 359/F77



Columbia House
1400 North Frustridge Avenue
Terre Haute, Indiana 47811

NOTE: all applications are subject to review and Columbia House reserves the right to reject any application.



was in their transient response. The rise time of the 16 was 2 microseconds, while the 16A measured 1 microsecond (both are rated at 3 microseconds). In like manner, the slew rate measured 24 volts per microsecond on the 16 and 30 volts per microsecond on the 16A (again, both amplifiers are rated at 30 volts per microsecond).

No measurements were needed to reveal the difference in operating bias between the two units, however. The 16 ran quite cool under normal listening conditions, while the heat sinks of the 16A became uncomfortably hot to the touch. Our rough guess, based on touching the two amplifiers, would be that the 16A runs hotter with no signal than the 16 does under normal signal drive conditions. However, both amplifiers withstood testing without mishap and, no matter how hard they were overdriven, never did more than cut off the outputs occasionally with their protective relays.

The power-indicator lights were only approximately accurate, though certainly good enough for their purpose. Their instan-

taneous response makes it easy to see how an amplifier can often be driven to a 150-watt output on ordinary program material, even with speakers of reasonably high efficiency.

● **Comment.** The bench tests of the Harman-Kardon Citation 16 and 16A do not reveal any differences between them that we judge to be significant. Perhaps the redesign was in the interests of reducing transient intermodulation distortion (TIM), for which certain IC op-amps are notorious. This is not the place to go into a discussion of that matter, other than to say that, to us, the entire TIM phenomenon, as it applies to *audible* effects with well-designed amplifiers under real-world (not laboratory or contrived) conditions, falls into the same category as belief in the Easter bunny.

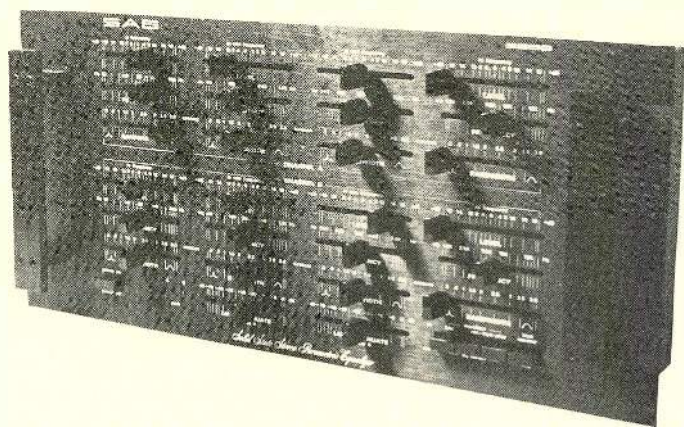
We set up the two amplifiers for an A-B listening comparison. They were driven from the same preamplifier, using the best records and ancillary record-playing equipment we could muster, as well as FM radio. Several types of speakers were used, all of good qual-

ity though quite different in their characteristics. Our listening levels ranged from full output from the amplifiers down to background-music levels. The switching was instantaneous, and of course there was no need to adjust the gain when switching, since the two amplifiers were closely matched in their sensitivity. For a cross-check, we also switched to a fine 200-watt-per-channel power amplifier of another make.

The results? It should come as no surprise to anyone who has performed similar tests carefully and objectively that no difference could be heard between the two H-K amplifiers (or the third amplifier, for that matter) on any speaker, with any program material, at any listening level. In short, our tests did not reveal any improvements in the performance of the H-K Citation 16A. We weren't disappointed, however, since we had never found that the Model 16 *needed* improvement; in either version it is one of the cleanest and most rugged power amplifiers one can buy.

Circle 108 on reader service card

SAE Model 2800 Stereo Parametric Equalizer



ONCE upon a time, before there was such a thing as high fidelity, the tone control provided on radios and consoles merely rolled the high frequencies down from a "flat" con-

dition (which was usually none too flat to begin with). One of the hallmarks of early high-fidelity components was their use of a special tone-control system that not only provided

separate adjustments for bass and treble frequencies but even permitted their levels to be boosted as well as attenuated. This arrangement, though better than the simple treble roll-off system, was quite limited as a means of enhancing or correcting the program. On occasion it might make a really bad record sound tolerable, but more subtle tonal variations were beyond its capabilities.

This basic tone-control system was improved considerably over the years, first by feedback circuits that made it possible to vary the response at the extremes of the audible spectrum with little effect on the mid-range, and more recently by providing a choice of "turnover" frequencies, which further extended that capability. On the assumption that the mid-range, too, might require correction, a third tone control for that frequency band appears on some amplifiers and receivers.

The next step—a giant one in terms of added utility—was the graphic equalizer, which

(Continued on page 50)

It's time for everybody else to start playing catch-up. Again.

From the very beginning, experts have acclaimed the performance and feature innovations of Yamaha receivers as nothing less than spectacular.

But now, we've outdone ourselves.

Yamaha is introducing a new line of receivers with such unprecedented performance, it's already changing the course of audio history.

Real Life Rated™ While traditional laboratory measurements provide a good relative indication of receiver performance, they simply don't tell you how a receiver will sound in your living room in actual operation. So Yamaha developed a new standard for evaluating overall receiver performance under real life conditions. It's called **Noise-Distortion Clearance Range (NDCR)**. No other manufacturer specifies anything like it, because no other manufacturer can measure up to it.

We connect our test equipment to the phono input and speaker output terminals, so we can measure the performance of the entire receiver, not just individual component sections like others do. We set the volume control at -20dB, a level you're more likely to listen to than full volume. We measure noise and distortion together, the way you hear them.

On each of our new receivers, Yamaha's Noise-Distortion Clearance Range assures no more than a mere 0.1% combined noise and distortion from 20Hz to 20kHz at any power output from 1/10th watt to full-rated power.

Four receivers, one standard. On each of our four new receivers, Yamaha reduces both THD and IM distortion to new lows—a mere 0.05% from 20Hz to 20kHz into 8 ohms. This is the kind of performance that's hard to come by in even the finest separate components. But it's a single standard of quality that you'll find in each and every new Yamaha receiver. From our CR-620 and CR-820 up to our CR-1020 and CR-2020.

What's more, we challenge you to compare the performance and features of our least expensive model, the CR-620, with anybody else's most

expensive receiver. You'll discover that nobody but Yamaha gives you our incredibly low 0.05% distortion and -92dB phono S/N ratio (from moving magnet phono input to speaker output).

You'll also discover that nobody else starts out with such a variety of unique features. Independent Input and Output Selectors that let you record one source while listening to another. A Signal Quality Meter that indicates both signal strength and multipath. The extra convenience of Twin Headphone Jacks. Or the accurate tonal balance provided at all listening levels by Yamaha's special Variable Loudness Control.

More flexibility. It's consistent with Yamaha's design philosophy that you'll find the same low distortion throughout our new receiver line. Of course, as you look at Yamaha's more expensive models, it's only logical that you'll find the additional flexibility of more power, more functions, and more exclusive Yamaha features.

For example, there's a sophisticated tuner, with unique negative feedback and pilot signal cancellation circuits (patents pending), that makes FM reception up to 18kHz possible for the first time on a receiver. Plus other refinements like a Built-In Moving Coil Head Amp, Fast-Rise/Slow-Decay Power Meters, and Yamaha's own Optimum Tuning System.

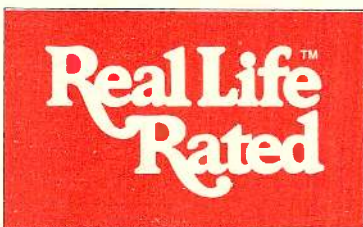
Now's the time to give us a listen. Our new receiver line is another example of the technical innovation and product integrity that is uniquely Yamaha. And your Yamaha Audio Specialty Dealer is an example of uncommon dedication to faithful music reproduction and genuine customer service. It's time you heard them both.

If your Yamaha Audio Specialty Dealer is not listed in the local Yellow Pages, just drop us a line.

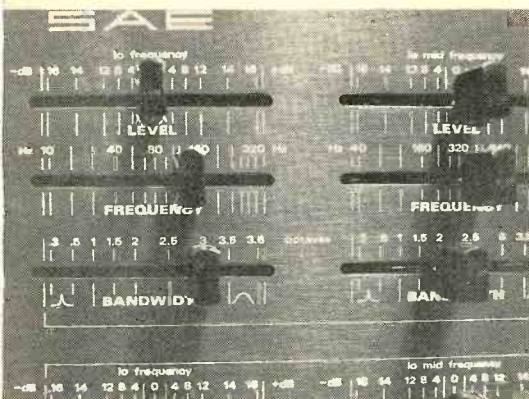


YAMAHA

Audio Division, P.O. Box 6600, Buena Park, CA 90622
©1977 YAMAHA INTERNATIONAL CORP



CR-620		MC HEAD AMP
NFB/PLL		CR-820
OTS		NDCR
CR-1020		0.05%
Signal Q		CR-2020



Closeup of the upper left corner of the 2800's panel shows one grouping of three controls that handles one of the bands.

permitted independent adjustment of level in five to ten separate frequency bands. Now, however, there is an equalizer available whose capabilities transcend those of the old-fashioned octave-band graphic equalizer by about the same degree that the latter outperformed conventional tone controls. The SAE Model 2800 parametric equalizer is so versatile that there is literally no way to describe the variety of response curves it offers.

In the sense that SAE uses the term "parametric," it means that the Model 2800 can be adjusted to boost or cut the response at selectable frequencies (instead of relying on the

preset center frequencies of ordinary graphic equalizers). Also, "Q" of each equalizer response is adjustable over a wide range. The latter feature permits the width of the band of frequencies affected by each control to be varied from 0.3 octave to 3.6 octaves.

The control functions of the SAE Model 2800 are divided into four broad (and overlapping) frequency bands, identified as LO, LO-MID, HI-MID, and HI frequencies. Within each band, there is a continuously variable frequency adjustment, giving coverage of the 10- to 320-Hz, 40- to 1,200-Hz, 240- to 7,600-Hz, and 1,200- to 15,000-Hz ranges. Since these bands overlap, it is even possible to concentrate the action of two or three filters at one frequency (for example, 1,200 Hz from the LO-MID, HI-MID, and HI bands). Each band also has a slider control that adjusts its gain over a ± 16 -dB range, with a detent at the center (0-dB) setting. The bandwidth adjustment for each range is a slider control calibrated in octaves from 0.3 to 3.6.

The dozen controls are fully duplicated for the second channel. In addition, each channel has a master-level slider, providing up to 70 dB of attenuation from the 0-dB (normal) setting. LED's monitor the peak levels in the two channels and flash if they exceed permissible limits.

The remaining controls are pushbutton switches for power (there is a LED pilot light) and the operating mode of the equalizer. The Model 2800 is normally inserted in the tape-monitor loop of an amplifier or receiver, and the tape input and output jacks are duplicated on its rear panel. A button on the front panel

bypasses the equalizer circuits when it is released. Normally, the tape outputs carry an unequalized program, but two of the control buttons permit the equalizer to be inserted in the signal path going to the recorder or coming from its playback amplifier. There is also a monitor button for listening to the tape.

The SAE Model 2800 has an insertion loss, with all controls centered, of less than 1 dB, and the maximum output before clipping is rated at 9 volts into a 10,000-ohm load. The input impedance is 100,000 ohms, the output impedance is 500 ohms, and the equalizer can drive any load impedance greater than 600 ohms. Nominal rated output is 2.5 volts.

The styling of the Model 2800 conforms to the "professional" look of the other SAE components. Its front panel, $8\frac{3}{4} \times 19$ inches, is slotted for rack mounting, fitted with rugged handles, and finished in semi-gloss black. The chassis, also finished in black, is $3\frac{1}{2}$ inches deep. The unit weighs about 10½ pounds. The only connectors on its rear panel are the line and tape-recording input and output jacks (standard phono jacks). The equalizer can be operated either vertically or horizontally, and it has rubber feet on its bottom for vertical installation. An optional walnut cabinet is available. Price: \$550. The Model 1800, a scaled-down version with two bands, is also available for \$300.

● **Laboratory Measurements.** Since it would not be possible to measure more than a few of the frequency-response curves made possible by the Model 2800, we plotted several families of curves to verify the calibration accuracy of the center-frequency and bandwidth controls. All were acceptably close to the markings on the panel.

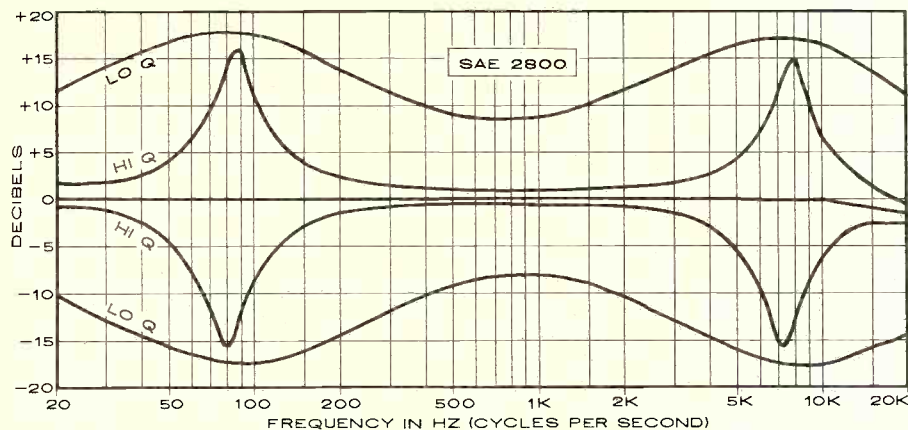
With the controls set to "flat," the response of the equalizer was within ± 0.25 dB from 20 to 12,000 Hz, dropping to -1.5 dB at 20,000 Hz. The clipping level at 1,000 Hz was 8.5 volts. Total harmonic distortion (THD) was about 0.01 per cent at all outputs up to 2.5 volts, and only 0.028 per cent at 8.5 volts, just before the onset of clipping. The gain of the unit was -0.9 dB. The wideband (unweighted) noise in the output was 76.6 dB below 2.5 volts, and power-line hum was 86 dB below that level.

All the controls of the SAE Model 2800 operated smoothly, and the device produced neither audible noise nor switching transients (there is a delay of several seconds after power is applied before the outputs are connected to prevent turn-on transients from reaching the amplifier and speakers).

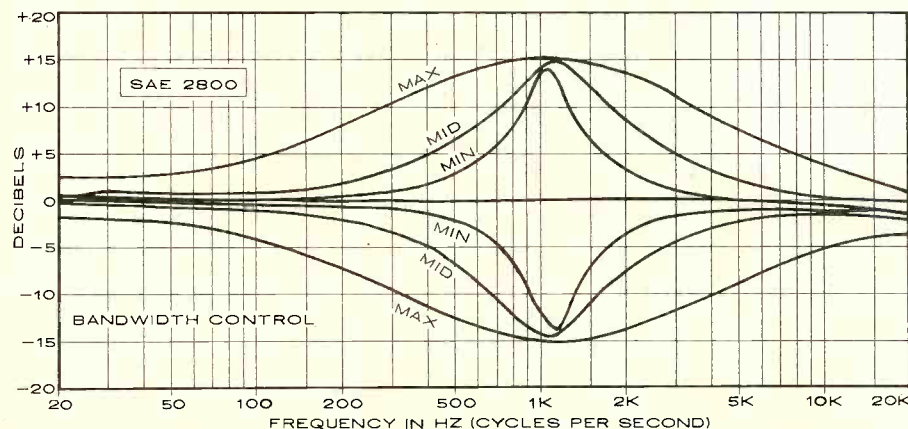
● **Comment.** If you know what you want to hear, can recognize it when you do hear it, and have a good deal of patience, the chances are that the SAE Model 2800 will be able to produce exactly the sound you want from just about any set of audio components. If it cannot, it is unlikely that you can buy anything else that can. However, we suspect that the real forte of this intriguing product is in recording. For producing special effects, emphasizing or de-emphasizing any particular instrumental sound and the like, it should be hard to beat.

The applications of the Model 2800 are sure to be limited more by the user's patience and know-how than by its own capabilities. However, it would be a mistake to think of it as just another "super tone control." It is far more than that.

Circle 109 on reader service card



Response curves with the frequency controls set at about 80 and 8,000 Hz (and flat) are shown above. Boost and dips of 16 dB were set at the two frequencies and the bandwidths were adjusted first for wide, then for narrow. The lower graph shows the effect of the bandwidth control at three settings. (The level control is at full boost and cut, the frequency control at 1,200 Hz.)



BE SURE YOU CHOOSE THE ONE YOU LIKE.



A TEAC LASTS A LONG, LONG TIME.

One of the reasons is that we've been *making* them for a long, long time. In 1955, TEAC came on the scene with the first in a long line of fine open reel tape recorders.

Since then, of course, we have developed a sister line of cassette decks. But our first love remains open reel tape recording equipment: the truest method of sound reproduction available today.

Consider the alternatives. If you want top-of-the-line quality, but only need bottom-of-the-line features, the A-2300SX is the buy of the year. From there, you can add DOLBY,* larger 10½" reels, four heads, auto reverse, four-in/two-out mixer, memory stop, 15 ips, four channel Simul-Sync, and variations thereof.

In short, as long as you're getting a tape deck, can you conjure up a single reason it shouldn't be a TEAC?

TEAC®

The leader. Always has been.

TEAC Corporation of America
7733 Telegraph Road
Montebello, California 90640

In Canada TEAC is distributed by White
Electronic Development Corporation
(1966) Ltd.



*Dolby is a trademark of Dolby Laboratories, Inc.

©TEAC 1977

CIRCLE NO. 41 ON READER SERVICE CARD

Going on Record

By James Goodfriend



THE GUARD CHANGES

HAROLD GOMBERG, principal oboist of the New York Philharmonic, has made the orchestra season just completed his last. His decision to retire does not so much mark the close of a brilliant career (he is sure to make guest appearances and to continue recording) as it does the ending of one era and the beginning of a new one. Few men have dominated their fields, especially in the eyes of their colleagues, as Gomberg has dominated his. Other oboists had their adherents, but Gomberg was a phenomenon known to musicians everywhere, and the opportunity to hear him when the Philharmonic was on tour drew the best of his colleagues and competitors to the concert hall. He will be missed by many and dismissed by a few, the mark of not only a master, but a tough, strong-willed, and individualistic man.

Gomberg is representative of a class of musicians, those who so exemplified the mastery of their respective instruments that the mere mention of the instruments brought to mind (and still does, in some cases) the name of the instrumentalist. Jean-Pierre Rampal and Julius Baker for the flute, Segovia for the guitar, Casals for the cello, Dennis Brain for the horn, Helmut Walcha and the late E. Power Biggs for the organ, Roger Voisin and Helmut Wobisch for the trumpet, William Primrose for the viola, and Reginald Kell—plus, in a special way, Benny Goodman—for the clari-

net. Perhaps even more than the great pianists and violinists—who were, for obvious reasons, far more numerous—these men were the personifications, the virtual human equivalents of their instruments.

In their domination, though, they tended to overshadow others. The public mind, after all, is not really big enough, or interested enough, to retain the names of half a dozen flutists, hornists, clarinetists, or what have you. And so some extraordinary talents never received the approbation that was their due. I will not append a list here; every musician and music lover would have at least a handful of names to add to it. In most cases this complete possession of the spotlight was both a passive and an unintentional thing, but there are cases known where talents were deliberately covered, too-promising students held back, real competitors disparaged behind their backs. Such is the way of the world. Many who sought a corner in the spotlight were younger than those who held it—but perhaps not enough younger. They came up during the prime of the great ones and suffered the fate of the acorn that falls too close to the tree.

But look at that list of masters now. Several are dead, some are retired, others are close to retiring. Even Rampal, whose strength “is as the strength of ten” and who is as active as ever, cannot claim to be getting any younger. The same, needless to say, has been happening among the multifarious virtuosos of the violin and the piano. The guard is changing.

Some old-line music lovers (like myself) may have wondered about the host of new performers appearing, seemingly, every day and everywhere. I think that it is not that we are experiencing an unprecedented flowering of instrumental talent (though that may be the case in regard to certain instruments), but that the giants are starting to slip away and their shadows no longer mask the new growth. With a place in the sun comes visibility, and that is what we are witnessing.

A few samples: James Galway is an astonishing flutist, with a sensational technique, fine musicianship, and, on the basis of his Mozart record (RCA ARL1-2159, reviewed in this issue), a powerful tone that is virtually halfway to that of a trumpet. Such attributes imply a certain style (and one might question what sort of a *Faune* he would make), but he

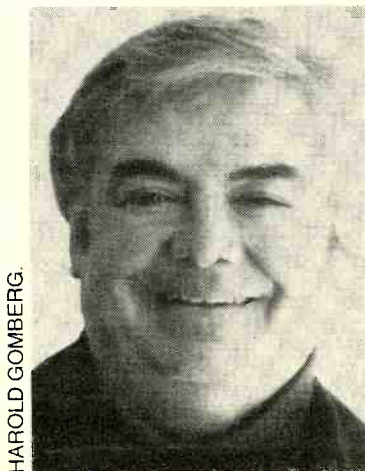
is obviously someone to hear. Paula Robison is also making a considerable name for herself on the flute, Ransom Wilson will obviously be heard from more, and Franz Brüggem, who is by no means advanced in age despite his impressive list of recordings, already dominates the field of early music for flute and recorder. These and others will obviously become the Moyses, the Kincaids, the Barères, the Ramps, and the Bakers of a future time.

Among clarinetists, the estimable Gervase de Peyer probably holds the position once filled by Reginald Kell. But the young American Harold Wright and the young Scandinavian Kjell-Inge Stevansson, two very different kinds of players, must certainly join him and Stanley Drucker as *important* musicians.

As for the horn, there has probably been no one before Barry Tuckwell, at least in the modern world, who has been able to exist as a soloist without benefit of either an orchestral position or a teaching schedule. Tuckwell's solo recorded repertoire already far exceeds that of Dennis Brain, and, though no one who has heard it is likely to forget the special sound of Brain's horn, Tuckwell, together with the admirable Hermann Baumann, is ample evidence that virtuoso horn playing is far from a dying art.

Obviously an expanding field is that of the trumpet virtuoso, for the pioneering efforts of Voisin and Wobisch (among others) brought back to musical life the art and the repertoire of the Baroque trumpet, one that had lain dormant since the death of Johann Altemburg in 1801. (Those who go back twenty or twenty-five years will remember recordings of the Bach Second Brandenburg Concerto with the trumpet an octave lower than written or the part played by a clarinet or soprano saxophone.) Today such young virtuosos as Edward Tarr and Gerard Schwarz, along with Don Smithers, John Wilbraham, and the Russian Timofey Dokschützer, cover the entire range of the repertoire with apparently ever-increasing skill. The field is big enough now to rate more than a single giant.

SPACE limitations here allow only a sort of introductory sampling of this changing of the guard, but this will hardly be the last word on the subject. In future issues we expect to present interviews and critical assessments of many of these younger people who will be among the great musical names of their time. You *can* tell the players without a scorecard, but a word even to the already wise can only make them wiser.



HAROLD GOMBERG.



JAMES GALWAY

Credentials Like These Are Worth Reading



When you're buying speakers, you want to talk specs. And we don't blame you. In fact, we encourage it. Because when you invest your good money in a pair of speakers, you want more than just a pretty cabinet.

Consider the new Jensen Spectrums. These good sounds didn't just happen. They're the result of extensive engineering efforts and exhaustive testing. Testing that ranged from exacting measurements in laboratory "live" rooms and anechoic chambers to in-depth consumer surveys.

Examine our Spectrum Model 540. It's an excellent example of the superb specs you'll find throughout the Jensen Spectrum Series.

The Spectrum 540 is a 3-way, 4 element system that is so efficient it can be driven with as little as 10 watts continuous power. Its maximum power rating is 75 watts continuous.

The woofer is a 12" long-throw, high compliance design. Special acoustic suspension and infinite baffle enclosure give you extremely low distortion. And a high temperature voice coil affords high power handling. Magnet structure weight is a hefty 4½ lbs. with a Gap Flux Density of 10,000 Gauss.

Two 3½" cone midranges give excellent power handling and eliminate break-up in the critical midrange region. Tuned isolation chambers control response at the low end of the midrange spectrum. They also provide acoustical isolation in the cabinet between the midranges and the woofer. An edge damped rim suspension with specially treated molded cone offers sharp, clear, midrange reproduction.

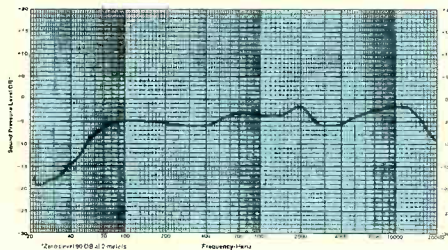
A 1½" Mylar® rear damped hemispherical dome tweeter offers a disper-

sion of 170°. Its large, lightweight voice coil gives high power handling, yet maintains a low mass for good high frequency reproduction.



Tweeter and midrange controls allow you to adjust your Spectrum System to room conditions and listening preferences; controls are front mounted for convenience, continuously variable, calibrated in db attenuation from a maximum, or flat, response.

FREQUENCY RESPONSE



About as flat as you can get... and that's good. The Frequency Response Range is an admirable 25 to 25,000 Hz.

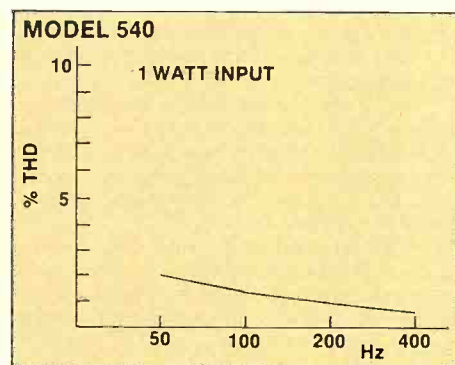
TONE BURSTS



"Blurring" and "Overshoot" are reduced to a minimum in this acid test of transient response. The Spectrum 540 re-

produces each waveform accurately with low distortion.

TOTAL HARMONIC DISTORTION



Distortion is kept to a minimum in Jensen Spectrum Speaker systems.

The cabinet is built with solid walnut front moldings and walnut veneer on wood composition panels. All walnut surfaces are hand rubbed for a rich luster and beauty. The baffle is finished in an attractive, durable black pebble grain.

In short, Jensen Spectrum speakers aren't designed to put out the most amount of bass or the most amount of treble. They're designed to put out the right amount. We consider them to be the best speakers we've produced in 50 years. Simply because when it comes to sound reproduction, they're extraordinarily accurate. And that's what specs are all about.

For further information and name of your nearest authorized Spectrum Dealer, write to: Jensen Sound Laboratories, Dept. SR-87 United Parkway, Schiller Park, Illinois 60176.

JENSEN

SOUND LABORATORIES

Division of Pemsco, Inc. Schiller Park, Illinois 60176

The Pop Beat

By Paulette Weiss

Pop Editor Weiss at the Other End with Link Davis, Jr., and Ray Benson of Asleep at the Wheel (photo by Wendie Lombardi)



CARLY, DOLLY, AND LILY

I DON'T know precisely when you are reading this (mid-July?), but I am writing it in mid-May, just after Carly Simon, who has made no major public appearances in the past two years, gave the last in a three-night series of unpublicized performances at a New York talent showcase, the Other End. In an effort to overcome an increasingly debilitating case of stage fright, Carly planned several secret appearances in various small clubs such as the End, billing herself only as "a special guest." Even her record company, Elektra, was unaware of her plans. I had plucked the word off the grapevine operated by sister Lucy Simon, and made plans to attend the next-to-last show on Friday.

Secret, hah! By the third night, everybody had tuned in and turned up for what was obviously destined to be a typical glitter-city Event. Masses of fans were jammed up against the entrance, many of them disappointed to the brink of tears when they discovered that tickets were all gone or, worse, that their reservations had not been recorded. Even songbird Phoebe Snow, looking bemused and mildly disgruntled, was kept waiting in the street.

I was luckier: my host was Doc Pomus, whose name may not be familiar, though the many songs he's written are—among them *Teenager in Love* (made famous by Dion and the Belmonts) and *Save the Last Dance for Me* (one of the Drifters' hits). In the late Fifties, Doc and Mort Shuman ranked with Leiber and Stoller as one of the best-known teams in rock composing. Now he is an Other End regular, a veteran of the music wars, and a connoisseur of the talent parade. His table offered a great view of the stage and an even better one of an audience in which flutist Herbie Mann, actress Diane Keaton, Monty Pythonian Eric Idle, and, of course, sister Lucy milled and mingled with varying degrees of nonchalance and self-consciousness. Sure-footed Chevy Chase plowed through the crowd demanding the return of a (fictitious, one hopes) lost pearl necklace, and when the wonderfully dissipated-looking Mick Jagger appeared, Carly's Evening at the End was inscribed for all time in the pop/rock Book of Blessed Events.

If Carly was nervous, she concealed it magnificently, delivering a smooth, totally engaging performance. Her voice was rich,

strong, and beautifully controlled through a program of her old material, every song a hit. She introduced just one new song, *Nobody Does It Better*, the theme of the newest James Bond flick and scheduled for release shortly as a single—the song, not the movie. (Where there is a single, can an album be far behind?) When husband James Taylor, looking shy and country-gangly, joined her for just one number, a nicely harmonized duet of his lovely *You Can Close Your Eyes*, the audience quiv-



Dolly and Lily

ered with palpable delight. Everyone was obviously much pleased to be there, and the good humor flowed out into the streets with the departing crowd.

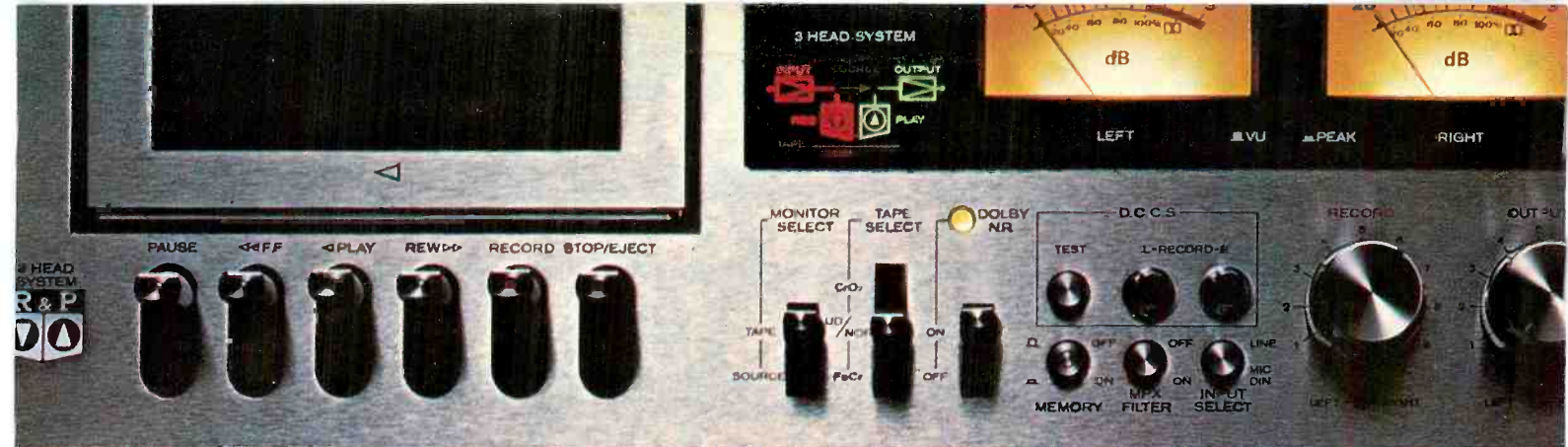
I took mine with me to the next socio-musical Event of the evening, the Dolly Parton in Gotham Party. Dolly, too, was in the midst of a three-night gig at a small New York club, but, unlike Carly's, Dolly's shows (at the Bottom Line) were heavily publicized, RCA's mighty PR machine gathering in droves of the high and the mighty, many of whom were both. Mick Jagger showed up two nights in a row, perhaps vying for the Most Visible Celeb About Town award with tireless gala-goers Patti Smith and Sylvia Miles, who also caught

Dolly's act. Andy Warhol, Candice Bergen, and Bruce Springsteen shone in the gaudy firmament that made up the country singer's packed audiences. Dolly, bless her, bounced on stage, all platinum hair, high heels, and amplitude, and *entertained* with a vengeance. Starting with a spirited version of *Higher and Higher*, the only thing she sang that wasn't her own, she moved on to more "country" material, accompanying herself alternately on the guitar, dulcimer, and banjo. Many of these country tunes slipped easily and naturally into really rocking rhythms (as they do on her latest album, "New Harvest . . . First Gathering," RCA APL1-2188). Country purists may cluck over Dolly's attempts to cross over to a wider audience, but I approve heartily. She's a fine, stylish, impressively musical singer, and she does right by her new material.

At two in the morning Dolly's special midnight concert was over, and invited celebrants were elevated up to the elegant Windows on the World restaurant (atop one of the World Trade Center towers) for a champagne "breakfast." Although the juxtaposition of guests wearing everything from feather boas to leather boots was visually intriguing, and the spectacular wraparound view of the night-lit city from the one-hundred-and-seventh floor was breathtaking, somehow it all seemed flat; there was considerably less bubble in the atmosphere than I had expected. That may or may not say something about this whole "crossover" business, but I prefer to blame it on the lateness of the hour. A party needs more than champagne, a smart setting, and Beautiful People; it needs a vital center, a dynamite hostess. But Dolly, who had already done two shows that night, was simply not up to a third.

My favorite Event this merry month of May was not a socio-musical happening at all. Arista Records invited the press to a special afternoon performance of Lily Tomlin's held-over Broadway show *Appearing Nitely*, at which president Clive Davis would announce the signing of Ms. Tomlin to the label. Before the performance began, Davis made his announcement and introduced a handful of famous folk in attendance—Cicely Tyson, Harry Nilsson, Sally Kellerman, Roberta Flack—and the ubiquitous Patti Smith. I was quite unprepared for the way in which Lily Tomlin simply *becomes* her characters, visually and vocally, using no costumes and almost no props. There are few belly laughs in the show—she is not so much a comedienne as an actress whose dramatic insights and sensitive portrayals border on . . . well, genius. I left the theater a confirmed fan, determined to spread the word about the (just released) recording of the show, "Lily Tomlin on Stage" (Arista AL 7003).

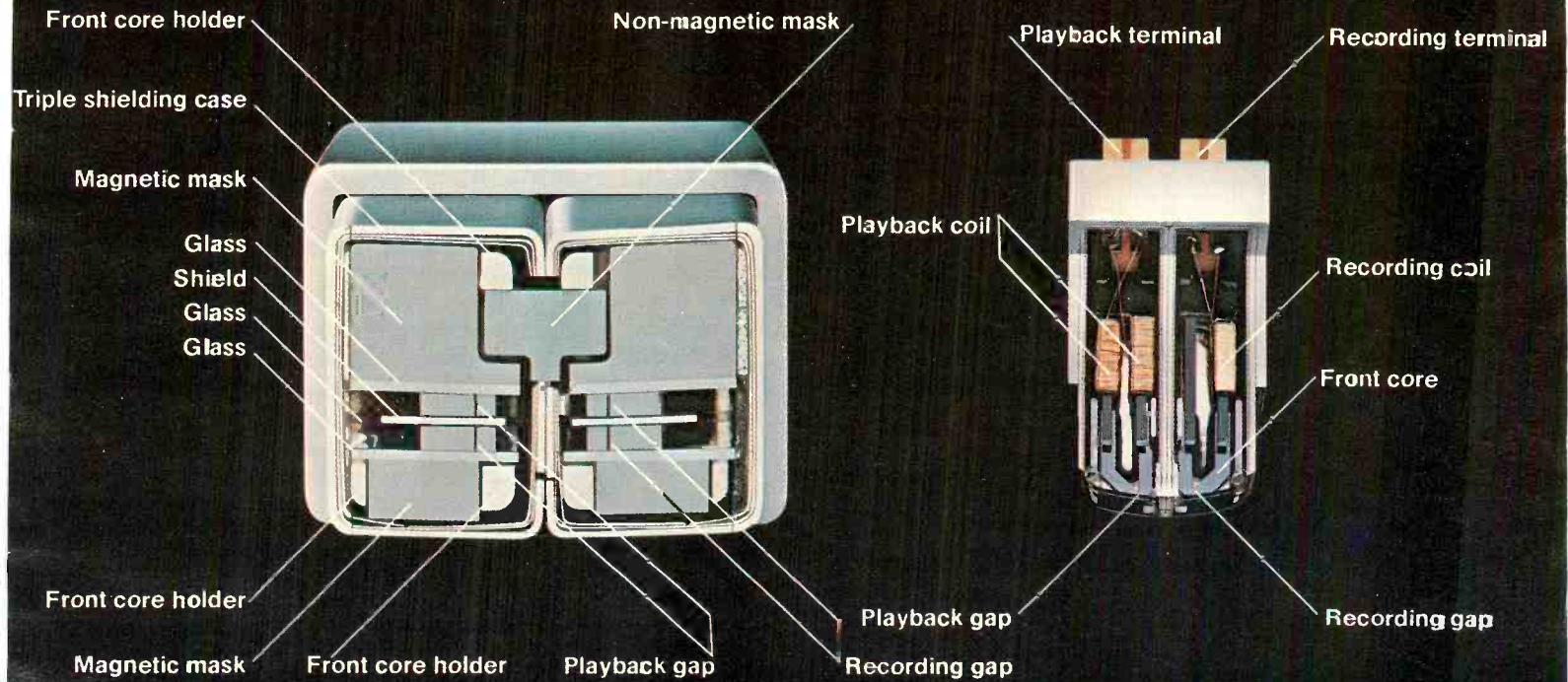
What else? Well, there was the Olivia Newton-John soiree at the ritzy Hotel Pierre following her sold-out Metropolitan Opera concert, Atlantic Records' party announcing the signing of the Temptations at the spectacular new disco Studio 54, the Helen Reddy do that boasted New York mayoral candidate Bella Abzug among the guests *plus* an enormous cake on which Helen was realistically depicted in shades of pink icing (delicious), and the cast party for the new Broadway musical *Annie* (see review in this issue), at which Sandy (the dog), his understudy Arf, and I had a brief conversation about the amount of dog-food advertising on TV these days. . . .



D-800

Frequency response: 30—18,000Hz \pm 3dB
 S/N ratio: More than 55dB (Dolby off)
 More than 63dB (Dolby on)
 Wow & flutter: 0.05% W.R.M.S.

Heads: Record and Playback combination: ferrite head
 Motor: Phase-controlled DC servo motor



Three heads above other cassette decks.

Hitachi's R&P Head.

Two-head decks are compromise performers, because they use a single head for both record and playback.

To insure no-compromise performance, Hitachi developed the R&P 3-Head system. It uses 3 heads, like professional reel-to-reel decks. And these unique record/playback heads have separate and optimum gap widths extending both dynamic range and

frequency range significantly.

The Hitachi R&P head is capable of playback monitoring, so you can compare the original source with your tape, a moment after it's recorded. And as an added benefit, its single housing eliminates height and azimuth adjustment problems.

Add up the benefits. You'll agree that Hitachi's decks are three heads above other cassette decks.



Introducing the Koss Theory of loudspeaker design and the three new Koss CM speaker systems that prove it.

When Koss invented the stereophone, music lovers and audio experts were amazed at the low distortion, broadband frequency response, and high efficiency achieved by the Koss drivers. Indeed, the resultant Sound of Koss created a revolution in the audio industry.

Today, the exciting new Koss Theory of loudspeaker design has created another revolution. By developing a complex series of audio engineering formulas and by utilizing the precise knowledge of modern computer science, Koss engineers have created a breakthrough in loudspeaker technology of such significance that it heralds the second major revolution in loudspeaker design technology. For the first time, it's now possible to scientifically derive and produce the optimum system parameters for any loudspeaker.

By computerizing the Koss Theory and by first selecting the number of bandpasses desired in the system, the system's desired efficiency, the f_3 , low bass cutoff, and the desired cabinet size; Koss engineers are able to derive specific design parameters for every component in the total system. In fact, the Koss Theory is so sophisticated that even the structural design of the cabinet and the precise positioning of the components in the cabinet for optimum dispersion and phase coherency are specified.

Of course, what's really important is not the Koss Theory itself but the sound of the three new Koss speakers

that prove it. Indeed, with current technology, there are no speakers available at similar prices that can match the Koss CM 1010 two bandpass loudspeaker, the Koss CM 1020 three bandpass loudspeaker or the Koss CM 1030 four bandpass loudspeaker in low distortion, high efficiency, and broadband frequency response.

But then, the incredible sound of these three new speakers isn't surprising when you consider some of the revolutionary new features they offer:

Take for example, the CM 1010's unique mass aligned 10-inch passive radiator that enhances the lower 2 octaves of the bass and allows for the use of a specially designed 8-inch woofer to reproduce the critical midrange up to 2.5 kHz. With the alignment mass in place, the CM 1010 reproduces a maximally flat response from an f_3 of 35 Hz on outward. However, by

removing the alignment mass, those who prefer more acoustic energy in the 50 to 80 Hz range can create an f_3 of 40 Hz and a low bass ripple of $1\frac{1}{4}$ dB centering on 60 Hz.

Or take the CM 1020's dual port design that provides an optimal cross sectional port area for proper cabinet tuning. Or the unique parallel midrange design of the CM 1030. By utilizing two $4\frac{1}{2}$ -inch drivers operating in parallel, Koss engineers were able to decrease the excursion of each driver thus creating a dramatic decrease in potential driver distortion and an equally exciting increase in the overall brilliance and presence of the midrange response. Then again there's the Koss high bandpass 1-inch dome tweeter and unique acoustic transformer that creates an incredible 6 dB increase in headroom.

And, of course, there's also the patented quasi second-order crossover network that provides a smooth, acoustically invisible transition from bandpass to bandpass.

But those are just some of the revolutionary features offered by the new Koss CM loudspeakers. Why not prove the Koss Theory of loudspeaker design to yourself by asking your Audio Dealer to give you a full demonstration of the beautiful Sound of Koss. Or write to Fred Forbes, c/o the Koss Corporation, for our free, full color CM loudspeaker brochure. Once you've heard these revolutionary new loudspeakers, we think you'll agree: hearing is believing.





KOSS[®] CM SPEAKER SYSTEMS

hearing is believing[™]

KOSS CORPORATION, 4129 N. Port Washington Ave., Milwaukee, Wisconsin 53212
Koss International/London, Dublin, Paris, Frankfurt • Amsterdam • Koss Limited/Ontario • Koss K.K./Tokyo
CIRCLE NO. 19 ON READER SERVICE CARD



Renaissance of the Lute

AMONG instruments long relegated to history, few have made more spectacular comebacks recently than the lute. Perhaps this is because of its relationship to the guitar, so incredibly popular today. With the rediscovery of additional older repertoire and, no less important, a burgeoning interest in hearing old music played on the instruments of its own time, it is not very surprising that a number of guitarists have taken up the lute as a sometime alternative—and in some cases have even moved over to it entirely.

The history of the lute dates back to the early Middle Ages, and its introduction into Western civilization may be traced to the invasion of Spain by the Arabs in 711 A.D. Until around 1500, of course, the instrument had no printed repertoire; this was to come first from Venice, followed in short order by the early sixteenth-century publications of German and French printers. Together with already existing manuscripts, an immense body of solo lute music was swiftly accumulated. (From English sources alone, for example, we have today around two thousand such pieces created between 1540 and 1620.) Nor was this the full extent of the lute's repertoire, since the pear-shaped instrument, with its fretted fingerboard and pairs of strings tuned in unisons or octaves, was also much in demand for accompaniment and ensemble work.

Over the centuries the lute evolved from a sensitive but workable instrument that could be mastered by virtually any gentleman into an exceedingly complex one suitable only for skilled specialists. The fifteenth-century lute of nine strings became, by the first quarter of the eighteenth century, an unwieldy twenty-four-string instrument (eleven pairs plus two single top strings). Compare this to the guitar's six single strings, with its consequently simpler tuning and tablature (the spe-

cial type of notation used for these instruments), and it is easy to see why the guitar eventually superseded the lute in popularity with both players and composers.

Judging at least from his recordings, a perfect example of a guitarist turned lutenist is the forty-five-year-old Austrian Konrad Ragossnig. For DG Archiv he has produced what is perhaps the largest, if obviously not totally comprehensive, survey of Renaissance lute music yet committed to discs. The first volume, of English music (Archiv 2533 157), which I reviewed most favorably more than a year ago, has now been followed by six beautifully recorded discs devoted, respectively, to lute music from Italy, Spain, Poland and Hungary, Germany and the Netherlands, France, and—as if that were not enough—a marvelous assemblage of works for combinations of two and three lutes from the same period and almost as many countries.

A good many of the works chosen are reasonably familiar from other lute and (especially) guitar collections—for instance, the Luis Milán pavaues, the Narváez variations on *Guárdame las Vacas*, the dance settings of Jean-Baptiste Besard and Pierre Attaignant, and the satiric *Juden Tantz* of Hans Newsidler. To these, however, Ragossnig adds enough lesser-known examples of the varied types of dances, contrapuntal pieces, settings of popular songs, and variations that were the mainstay of the lute repertoire in this period to provide discoveries for even the dedicated lute buff. He plays them all, on a David Rubio instrument, with expressivity, clarity, and a good feel for direction and climax. His interpretations are sprightly or moving as required, and, although some might object to his occasional use of fingernails (rather than fingertips) to pluck the strings, these recordings can safely be

“Over the centuries the lute evolved from a sensitive but workable instrument that could be mastered by virtually any gentleman into an exceedingly complex one suitable only for skilled specialists.”

By Igor Kipnis

Lute



recommended as among the best of their type and overall as a most pleasurable anthology. If buying all seven would disorder either your budget or your musical digestion, I'd be inclined to recommend singly the album of music for two and three lutes as perhaps the most tantalizing appetizer.

A rather smaller survey of sixteenth- and seventeenth-century European lute music, available on the Hungaroton label, features András Kecskés in works by Hungarian, Czechoslovakian, Polish, and Austrian composers, as well as pieces by others written in the styles of these countries (Hans Newsidler's *Der Polnisch Tanz* for example). Kecskés' playing of the twenty-five brief and relatively simple pieces (most of them dances) is technically and stylistically skillful, if a little low-key in terms of personality, sprightliness, and brilliance. The monochrome dynamics are partly offset, however, by the rhythmic pulse provided by accompaniment from some period percussion instruments (played by Ágnes Méth)—a rather curious but very effective addition. The lute reproduction is somewhat too close-up but clean, and the program duplicates only a very few pieces from the Ragossnig set.

Kecskés demonstrates another of the lute's roles on an overly reverberant Harmonia Mundi disc entitled "The Pleasures of the Renaissance," where he provides the accompaniment for six mid-sixteenth-century to early-seventeenth-century lute songs as well as eight instrumental pieces, mainly dances, from Central Europe. On his own, the lutenist performs four brief solos (including the anonymous English *Greensleeves* and *Kemp's Jig*). His partners are Zeger Vandersteebe, a countertenor whose lower range is more pleasing to the ear than the upper

reaches, and René Clemencic, who performs brilliantly on recorders and percussion. (Kecskés, incidentally, is a member of the redoubtable Clemencic's Viennese early-music ensemble.)

An especially intelligently conceived program by James Tyler, an American now working in England, involves no fewer than four instruments: a normal Renaissance lute, a larger bass lute with the same number of strings but differently tuned, an eighteen-string theorbo (an archlute with far greater bass capacity), and, finally, an eighteenth-century English-made guitar. The album, entitled "Music for Merchants and Monarchs," offers, among



András Kecskés

other entertaining fare, some anonymous early-seventeenth-century music that might have been heard at an English ale house, three pieces by Hans Newsidler (who described himself as a burgher of Nuremberg), two pieces written by Michelangelo Galilei (brother of the astronomer Galileo) for the Duke of Bavaria, and dances and song settings for the Medici court in the mid-seventeenth century by Carlo Calvi. Tyler's scholarly style is admirable and his technique very secure, though I would describe his playing as more gentle and lyrical than dynamically virtuosic. Not least among the delights of this well-recorded disc are the guitar selections by Calvi and his contemporary, Giovanni Paolo Foscarini, which attest to the popularity of the Spanish guitar in Italy during the seventeenth century and help explain why this instrument, far mellower and brighter than the modern guitar, was in a posi-

tion to rival the brighter-sounding—and higher-status—lute.

David Rhodes, who has recorded other lute works by Bach's friend Sylvius Weiss (1686-1750), performs a suite and a chaconne by that composer on the second side of his new Titanic disc, "Baroque Guitar and Lute." Most of the opening side is devoted to Robert de Visée's D Minor Suite, played (like the music of two other French composers, François Campion and Henri François de Gallot) on a J. Van Lennep reproduction of a Baroque guitar. Its sound is intriguing in color, but Rhodes' performances on both guitar and lute tend to be rhythmically forward, which may be acceptable in freer, prelude-like pieces but not in dance movements. (Contrast his style in playing Weiss with that of Eugen Müller-Dombois on the recently released ABC Classics 67006, "The Baroque Lute I"—a fine introduction to later music for the lute.) Compared to that of his colleagues on the other discs reviewed here, Rhodes' technique is uneven. Moreover, his ornamentation is not always cleanly executed and his use of the strumming *rasgueado* (in the



Konrad Ragossnig

guitar works), though interesting at first, deteriorates through excess into an annoying mannerism—quite unlike the more subtle way Tyler employs it on his album. Titanic's engineering, which produces a somewhat dry sound on the guitar side, dispenses with the usual stereo placement and gives the solo instruments to the left channel, the

right one being reserved for room ambience. The program annotations are scholarly but not always to the point.

The British Oryx label presents an all-Bach recital of partly original, part-



David Rhodes

ly transcribed works for lute played by the late Walter Gerwig. Although the reproduction is extremely good, it is worth noting that these soberly conceived but pleasing performances, originally recorded by Bärenreiter in Germany, were released eleven years ago on Nonesuch (H-71137) and are still available on that label. The interpretations compare favorably with the live-

lier if idiosyncratic Narciso Yepes recording of Bach's complete lute works on DG Archiv 2708 030.

LUTE playing has always been an introverted art, and it takes a very special kind of artist to project the instrument fully. This is by way of introducing not only the finest lute recording of the present batch but, in my opinion, the greatest performances on that instrument yet committed to disc. Julian



James Tyler

Bream's first solo lute recording—on Westminster XWN 18429, released in the mid-Fifties—was devoted entirely

to music of John Dowland, and in the years since he has continued to pay special attention to the often intensely melancholic outpourings of this grandest of Elizabethan lutenist-composers. (Dowland is well represented, for example, on Bream's RCA albums LSC-2819, 2987, and 3331.) His latest RCA collection, entitled simply "Lute Music of John Dowland," contains a dozen pieces, of which the majority are either dances or "fancies" (contrapuntal fantasias). It is the latter, in fact, that give this album its special distinction, for Bream provides the most ravishingly, touchingly beautiful versions of the well-known *Farewell* and *Forlorn Hope* fancies (Nos. 3 and 6, respectively, in the new Poulton/Lam edition) that I could ever imagine. Equally fantastic are his virtuosity and the excitement he generates in the few faster pieces, such as the extraordinary *A Fancy* (No. 73). Also notable is the fact that, through multiple recording, Bream plays two duets with himself—*My Lord Chamberlain*, *His Galliard* and the popular *My Lord Willoughby's Welcome Home* (Nos. 37 and 66a)—but these emerge without a hint of gimmickry. The reproduction, though at too high a level and consequently requiring a stiff volume cut for pleasant listening, is immaculate. The greatest praise I can bestow on this superb album is that, after having listened to well over twenty-four sides of (mainly) lute music in a period of a few weeks for this assignment, I played Bream's disc through not once but three times in succession. □

LUTE MUSIC OF THE RENAISSANCE. *Volume 2, Italy.* Music by Capirola, Spinacino, Francesco da Milano, Molinaro, Barbetta, Terzi, Negri, and Santino da Parma. *Volume 3, Spain.* Music by Milán, Mudarra, and De Narváez. *Volume 4, Poland and Hungary.* Music by Cato, Polak, Džugoraj, Bakfark, and Anon. *Volume 5, Germany and the Netherlands.* Music by Judenkünig, Newsidler, Moritz von Hessen, Waissel, Ochsenhun, Adriaenssen, Howet, Sweelinck, Van den Hove, Vallet, and Anon. *Volume 6, France.* Music by Attaignant, Le Roy, Ballard, and Besard. Konrad Ragossnig (Renaissance lute). DEUTSCHE GRAMMOPHON ARCHIV 2533 173, 2533 183, 2533 294, 2533 302, 2533 304 \$7.98 each.

MUSIC FOR TWO AND THREE LUTES. Music by Molinaro, Johnson, Pacoloni, Adriaenssen, Robinson, Hassler, Dowland, Van den Hove, V. Galilei, Piccinini, and Anon. Konrad Ragossnig, Jürgen Hübscher,

and Dieter Kirsch (Renaissance lutes). DEUTSCHE GRAMMOPHON ARCHIV 2533 323 \$7.98.

CENTRAL EUROPEAN LUTE MUSIC, SIXTEENTH-SEVENTEENTH CENTURY. Music by Bakfark, Heckel, Waissel, Džugoraj, Newsidler, Cato, Polak, Chilesotti, Stobaeus, Craus, Phalèse, and Anon. András Keckés (lute); Ágnes Méth (tabor and timbrel). HUNGAROTON SLPX 11721 \$6.98.

LES PLAISIRS DE LA RENAISSANCE. Music by Planson, Castro, Picchi, Caccini, Cara, Rotenbacher, Japart, Phalèse, Dowland, Morley, and Anon. Zeger Vandersteene (counter-tenor); René Clemencic (Renaissance recorders and percussion); András Keckés (lute). HARMONIA MUNDI HMU 963 \$7.98.

MUSIC FOR MERCHANTS AND MONARCHS. Music by Newsidler, Foscarini, Robinson, Mellii, Calvi, M. Galilei, and

Anon. James Tyler (Renaissance lutes, archlute, Baroque guitar). SAGA 5420 \$6.98.

BAROQUE GUITAR AND LUTE. Music by De Visée, Gallot d'Angleterre, Campion, and Weiss. David Rhodes (Baroque guitar and lute). TITANIC Ti-5 \$7.00.

BACH: *Prelude in C Minor (BWV 999); Fugue in G Minor (BWV 1000); Suite in A Major (BWV 1007); Suite in E Major (BWV 1006), excerpts; Suite in E Minor (BWV 996), excerpts.* Walter Gerwig (lute). ORYX 1202 \$6.98.

DOWLAND: *A Fancy, No. 5; Captain Digerie Piper's Galliard; My Lord Chamberlain, His Galliard; Resolution; Mr. Lanton's Galliard; Forlorn Hope Fancy; Sir John Souche's Galliard; Piper's Pavan; My Lord Willoughby's Welcome Home; Galliard to Lachrimae; Farewell; A Fancy, No. 73.* Julian Bream (lute). RCA ARL1-1491 \$7.98.



some straight talk on

SPEAKER DESIGN

Competent designers can get pretty much what they are looking for; their speakers usually sound different simply because they are looking for different things

By George Sioles

I AM engaged in what some consider to be a rather mysterious occupation, part art, part science, and perhaps just a dash of magic. Granted that it may look that way to outsiders, the fact of the matter is that the work of the speaker designer is neither mysterious nor magical. It is, however, fascinating for those who enjoy wrestling with problems and making design choices involving electronics, acoustics, mechanics, and musical aesthetics.

The first thing that must be said is that no one these days designs a loud-speaker system—or any other product, for that matter—in a vacuum. Though a designer can, on the one hand, draw upon the research, the designs, and even the products that have gone before, he is hemmed in on the other by considerations involving visual aesthetics, manufacturing costs, and the realities of the marketplace.

Perhaps because the design problem involves so many different elements, it attracts many kinds of problem-solvers. And so there is no such thing as a stereotypical speaker designer. They vary all the way from the eager young

enthusiast gifted with a "golden ear" and not much technical training to go with it to the experienced technologist with advanced degrees who knows far more than he actually needs to design an acceptable speaker. The former owes his job to the still-popular belief in the intuitive or "talent" aspect of acoustics. The latter knows that acoustics is *not* an intuitive field and is therefore suitably wary in his approach to design problems.

Outstanding audio designers have the faculty of creativity coupled with an objectively critical attitude and backed by a broad knowledge of engineering and music. Some confirmation of this is provided by one psychologist's observation that most creative output in pure mathematics takes place by the age of twenty, in physics by the age of thirty, and in product development in the late forties—presumably because years must pass before one acquires the necessary experience in the various aspects of art, science, and commerce that have to do with product development.

How does a speaker designer go about his business? The first-born design is typically an effort to exorcise the creative devil: the designer senses an unrealized need, comes up with a novel solution, and cannot rest easy until he has tested it. For example, faced some years ago with a tweeter that had limited power-handling ability but potentially excellent response characteristics, I realized that I could use *numbers* of them to achieve both power handling and wider dispersion by mounting them on differently facing planes—initially on the facets of a dodecahedron. This first product was later followed by several others based on the same principle. (The first design of a sequence is frequently the most innovative one; subsequent designs are usually scaled-down variations on the theme.)

Speaker designers often go through a progression in their professional development. They become involved first with transducers—say, the design of specific drivers having certain prescribed characteristics (an example

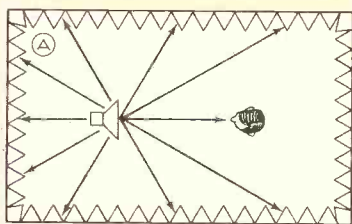
would be a woofer that will produce the required low-frequency response in an enclosure of a given size—a relatively simple and totally analytical problem). But these are things most designers can handle well enough. To understand the whole reproduction/perception process, to develop a design "philosophy," if you will, a designer must go beyond transducer design to learn about room acoustics and how they influence speaker performance, about psychoacoustics and how sound is perceived by the brain. It is when these (and other) factors are well understood that refinements in design beyond the obvious become possible.

These additional considerations also introduce frustration, of course, for the acoustics of the listening room, although certainly part of the *total* design problem, are rarely under the designer's control (low-frequency losses, for example, can be quite variable—low in rooms with plaster, brick, or cinder-block wall construction, high in cases where light wallboard is used). Some designers have nonetheless attempted

Which Frequency Response?

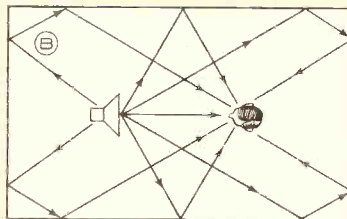
THE frequency-response curve is one of the few pieces of data that, correctly interpreted, can tell you something about how a loudspeaker really sounds. But one vital question must be answered first: *which* frequency response? All speakers have at least two major response curves, and knowing which one you're looking at is vital to the interpretation.

In the totally sound-absorbent (anechoic) room of Figure A—and

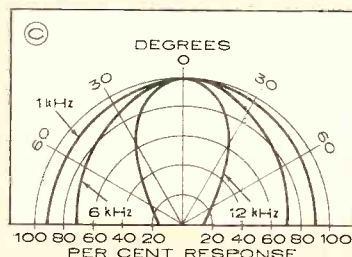


also in open air—the sound radiated by the speaker in directions *other* than toward the listener is completely lost. Thus, when the listener is directly in front of the speaker, only its *on-axis* frequency response is heard. This is the curve most often presented in specification sheets. In Figure B, a highly reflective room assures

that virtually all the speaker's radiation in *every* direction will reach the listener, so that what he hears is closer to what is called the loudspeaker's acoustic-power response.

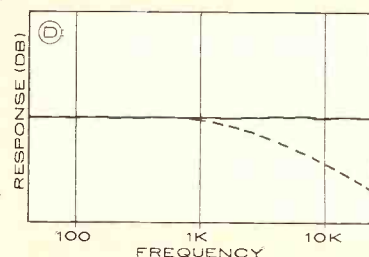


This distinction would not matter if the speaker's on-axis and power responses were identical or at least very similar. They almost never are, however. Figure C shows the output of a hypothetical tweeter as it varies with frequency and direction. At 0 degrees (on axis), the curves for 1, 6, and 12 kHz correspond, suggesting a flat on-axis response. But, at 60 degrees off axis in either direction, the



12-kHz output has decreased to a small fraction (about 20 per cent) of the 1-kHz output, which is anything *but* a flat response. From this example it is apparent that a typical speaker has numerous different frequency responses that will combine in a normally reflective room to give an overall response.

Figure D compares the on-axis response of a system using the tweeter of Figure C (solid line) with the probable power response (dashed line) it would exhibit in a reflective room. Under normal circumstances, the power response is closer to what the speaker would actually sound like than the on-axis response is—unless one were very close to it.



For better or worse, a typical listening room is neither perfectly absorbent nor perfectly reflective. A speaker designer must therefore give serious consideration to how he will adjust the two frequency responses to best control the sound the listener will actually hear.

SPEAKER DESIGN...

"...the acoustics of the listening room, although certainly part of the total design problem, are rarely under the designer's control..."

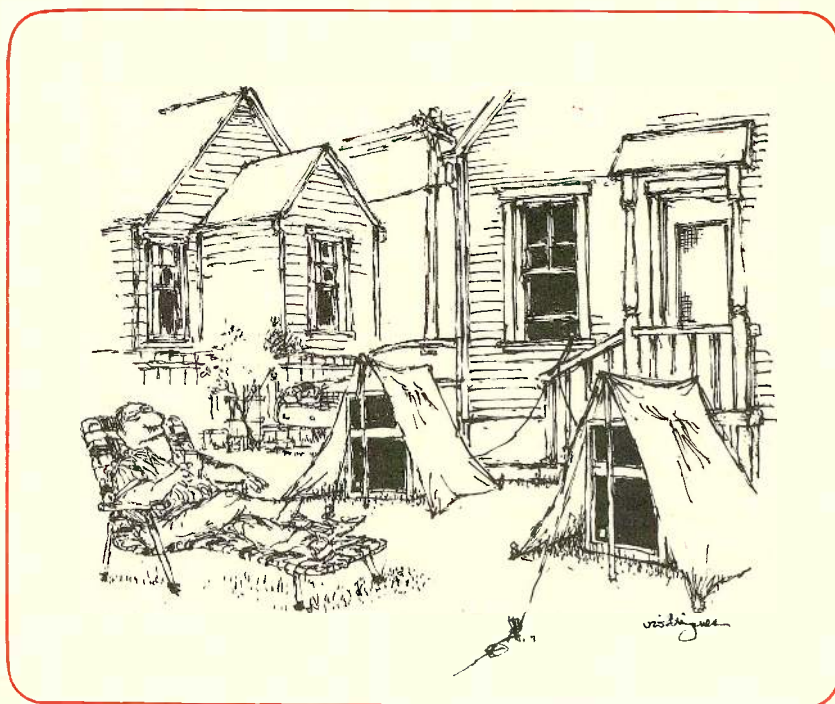
to deal with these problems in different ways. Reflections by the room boundaries (walls or floor) that affect bass response because of interference effects can be dealt with by adjusting the mounting position of the woofer within its cabinet. (It is best to get the woofer as close as possible to the room boundaries so that the interference dip produced by the distance from the boundaries moves up in frequency to the range handled by the mid-range driver—which is then spaced further from the boundaries than the woofer, effectively eliminating the output loss.) One can also position the speakers asymmetrically with respect to the room boundaries, thus getting a dip at different frequencies for the two stereo channels. This helps minimize the net irregularity in response. Ideally, the serious designer would like to be able to specify exactly how his speaker will be installed because the best placement means, simply, the best response.

FOR many of these same reasons, the speaker designer would also like to exercise some control over the recording sessions that produce the records that will be heard through his speakers. This is but wishful thinking, of course, for not only are the recording sonics well out of the speaker designer's control, they are not even standardized from studio to studio. Some employ a number of microphones "close up," with the performers randomly arranged or recorded at different times, mixing the results appropriately into left and right channels to produce the stereophonic perspective. Others use crossed, directional microphones at some chosen "optimum" distance to pick up left and right sections of a musical group. Since the frequency balance of the recording is affected by the directional effects of musical instruments and the control-room "balancing" of multiple mike outputs, it is apparent that a working familiarity with them is of great importance when it

comes time to make judgments about various speaker-design trade-offs.

All that is largely in the area of theory; what of the nuts-and-bolts questions? To start with a basic one: some companies manufacture one or more of their own drivers, but many others either have them built to specifications or simply modify available units. "Rolling your own" does not ensure good results any more than buying standard parts suggests poor ones. It has been my good fortune to have lived in both worlds sequentially, and there have been some interesting surprises. When I first became involved in loud-

Aside from such cost-adding cosmetics, there was at the time a magnet-structure weight race whose best analogy could perhaps be discovered in the concurrent horsepower race in automobiles. A woofer, for example, was often judged solely on the size of its cone and the weight of its magnet; the bigger both were, the better. These days it is generally understood by audiophiles that there is an *optimum* magnet weight for a given woofer, depending on the size of the enclosure and the effective diameter and mass of the cone. In designing an acoustic-suspension speaker, for example, one must pay close at-



speaker-system design in the early Fifties, there were very few manufacturers of high-fidelity loudspeaker systems, and all of them made their own drivers.

In the late Fifties there was a sudden proliferation of speaker manufacturers (the list is still swelling), most of them *not* manufacturing their own drivers. I was more than a little surprised to learn, early in the game, that the mass-produced products of the OEM (original-equipment manufacturers) people were so good. In fact, it was easy to obtain drivers with whatever specifications one desired, and at favorable prices. And in truth, many of the things that were being done by those who built their own drivers in the early Fifties (and even later) added cost to the product without really improving acoustic performance.

attention to the "Q" figure—the ratio of reactance to resistance at a resonance frequency. A "Q" of larger than 1 means there will be a peak at the fundamental in-box woofer resonance; a "Q" of 1 means that the bass response will be flat down to the resonance frequency and fall off below it; and a "Q" of less than 1 means that the speaker will start to lose output at frequencies above the resonance frequency.

Obviously, a designer must control the value of "Q" to obtain the desired bass response, and that means controlling the variables that affect it: cone diameter (the larger the cone, the higher the "Q"), magnet weight (the greater the weight, the lower the "Q"), enclosure volume (the greater the volume, the lower the "Q"), and the mass of the cone and voice coil (the greater the mass, the lower the "Q").

(As an aside on this matter of speaker measurements, it is interesting that some people still believe a massive cone is inherently incapable of producing the rapid attack of a steep wavefront. This is a beautiful example of how intuition can lead one astray. The frequency components that produce the rapid rise time associated with good transient response are handled not by the woofer, but by the high-frequency drivers. The real or imagined slowness of response of the woofer has no bearing on whether the system *as a whole* is capable of the proper reproduction of transients.)

SOMEWHAT further along in the design process, the designer will submit detailed woofer specifications (mass, voice-coil characteristics, magnet flux, etc.) to one or more of several manufacturers of drivers, or he may select suitable units from one of their catalogs. Although woofers are assembled, by and large, by the suppliers to the designers' own specifications, tweeters and mid-ranges are generally stock items. But since the designer has such a wide choice available from U.S. manufacturers (and others in Germany, Holland, Denmark, England, France, and—of course—Japan), there is no shortage of suitable units for a given purpose.

When samples of the specified units arrive, the designer tests them first in an anechoic chamber. Why? Because the detailed behavior of a driver can be investigated most readily without room-boundary reflections that would confuse the data. What he is looking for are undamped resonances, adequacy of power handling, polar response (used to assess the acoustic power ra-

diated vs. frequency, since the frequency response on the principal axis gives only a small part of the total picture), and so on.

(Parenthetically, on the matter of sound dispersion, dome tweeters might seem—intuitively—from the shape of their radiating surfaces to have broader dispersion at high frequencies, and many advertisements suggest that they do. Not so. Whatever its shape, a radiating surface 1 inch in diameter has some "beaming" at very high frequencies. Figure 1 shows a typical set of responses, taken at various angles from the principal axis, that make this clear.)

The choice of a cone as against a dome tweeter hinges in general on

whether or not the design will use one or several tweeters—and what they will cost. Because of the larger voice coil in the dome type, power-handling capacity is greater than it is in the smaller-coil cone type. But the larger voice coil means that a larger (more expensive) magnet will also be required to attain the same efficiency.

Woofer-cone size is another choice that must be made. The larger the woofer, the greater the acoustic-power output for a given cone excursion. But, all other things being equal, a driver of smaller diameter will provide a lower resonance frequency in an enclosure of fixed volume, and therefore a more extended low-frequency response. And

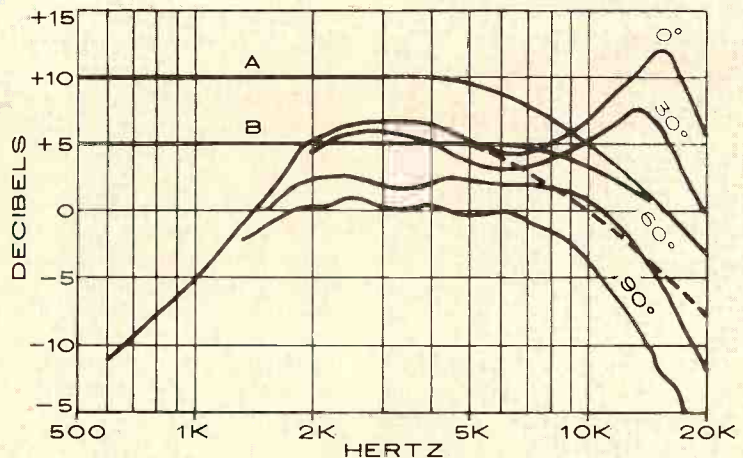
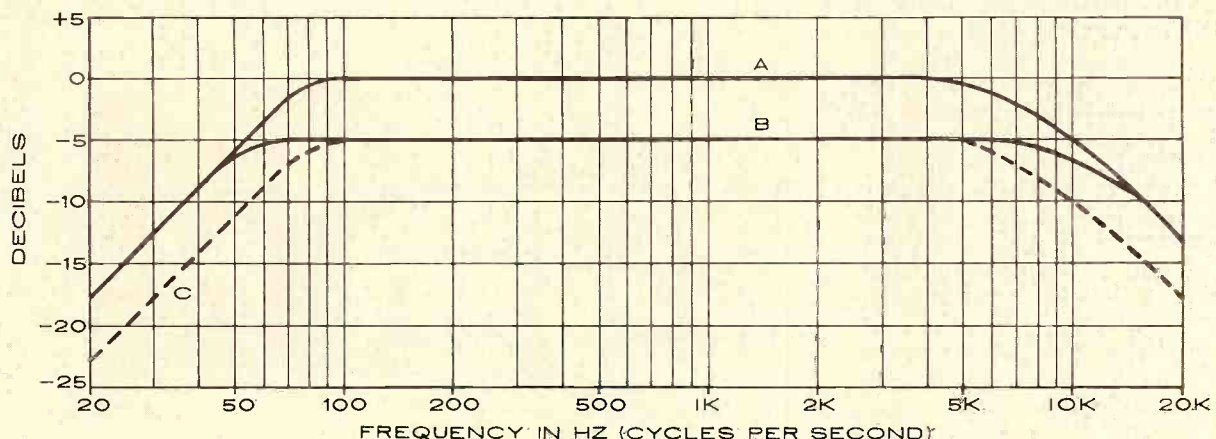


Figure 1. Frequency-response curves are shown for a 1.1-inch dome tweeter measured with microphone positions on-axis (0 degree) and at 30, 60, and 90 degrees off-axis. The tweeter has an essentially flat acoustic-power response.

Figure 2. When sensitivity (efficiency) is traded for bandwidth, the result is a speaker with response curve A. Response curve

B is for a wider-bandwidth, lower-efficiency speaker. If levels were equalized at mid frequencies, the result would be curve C.



SPEAKER DESIGN...

"the fact that the better speakers are sounding more and more alike should be reason for rejoicing..."

that is what is meant by "trade-offs."

Once suitable drivers have been chosen, they are combined in geometrical (acoustic) configurations that (1) conform to the budget and (2) produce the acoustic-power response and dispersion characteristics the designer wants. It should be obvious that not all designers are pursuing the same goals in every design. Some are looking for very high efficiency, which usually corresponds with very high power-output potential. Others are looking for the very flat acoustic-power response and wide dispersion that characterize "neutral"-sounding speakers, and they are content to let the efficiency fall where it must. Still others prefer enhanced low-frequency or high-frequency output—or both—in the interest of providing impressive thumps or sizzles for those hooked on such sound effects.

Figure 2 shows the form of one type of trade-off that engineers refer to as "gain-bandwidth product." Curve A shows a high level of output (for a given level of input) with roll-off at both the high and low frequencies. Contrast this with Curve B, which depicts a less-efficient speaker with a wider and flatter range (note that at 25 Hz and 20 kHz, speaker B is actually *more* efficient than its high-efficiency competitor). The point is that all these individual measurements and values affect each other, and everything cannot be accomplished in one package. It can therefore be seen that what typifies the speaker-design process more than driver-validation techniques and other (quite necessary) measurements is the *decision making*, the deliberate choice of just those characteristics the completed speaker is intended to have. Competent designers can get pretty much what they are looking for; their speakers usually sound different simply because they are looking for different things.

Having selected the drivers and assembled them in a box, the designer can proceed with the crossover network, which is designed to adjust the frequency-response characteristics of the drivers to protect the high-frequen-

cy units from potentially damaging low frequencies. The final curve defining overall performance is actually derived from a larger number of response measurements taken at various points equidistant from the speakers and summed to obtain the speaker's omnidirectional frequency response—which is another way of saying acoustic-power response, *the single most important characteristic of speaker performance*. Finally, there are listening tests in a "calibrated" listening room to check on the objective measurements. If what we hear doesn't seem "right," we go back to our earlier work, review it carefully, and determine (if we can) what went wrong.

LISTENING tests are carried out in a number of ways. Some companies use statistical methods—a panel of "golden ears" listens to a number of speakers (the one under evaluation plus those considered to be its competitors) concealed behind acoustically transparent but optically opaque screens. A variety of program material is used by the panelists to evaluate the various unseen and unidentified speakers, which are then rated numerically by preference or characterized by such purely subjective descriptives as "natural," "balanced," "open," "hollow," "nasal," etc. Japanese manufacturers (among others) also use such techniques, but their jurors are frequently selected at random rather than being specially chosen for their trained ears.

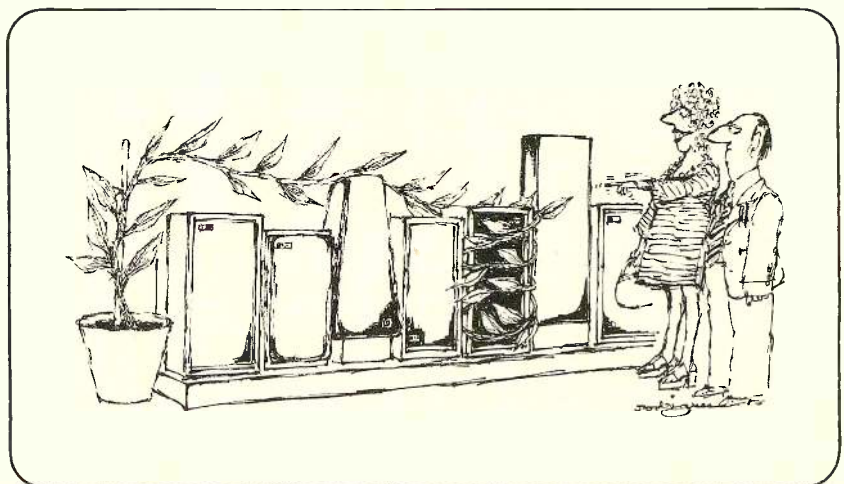
Some designers like to ear-check speakers using "pink noise." Such a signal played through a flat speaker yields no sense of pitch, and therefore is very revealing of any overemphasis of a part of the frequency range. But this test, like all others, is fraught with peril, for any quasi-absolute ear test of speaker "neutrality" should be done in a listening room whose transmission

characteristic is known to be uniform—and that means an *awfully* good room. Lesser rooms require that speaker locations be interchanged so that any perceived differences are due only to the speaker and not the room. And when "accuracy" is being evaluated, the listening levels of the reference and test speakers must always be kept equal, for it is well known that on an A-B test the louder speaker will almost always be perceived by the listener as the "better" one.

Obviously, all designers do not approach their problems in the same way, and all the work that goes into a design and its evaluation has not been described here. But it should nonetheless be clear that the process is neither mysterious nor magical. Not only are the electroacoustical laws governing speaker design easily understandable, but they can even be programmed (for woofer/cabinet operation) into a computer for optimization.

THESE days, the products of competent speaker designers, whatever their technical persuasion, tend to sound more alike than different. Those differences that do exist are the result of the trade-offs in "Q" value that are chosen, acoustic-power response, efficiency, octave-to-octave balance, and the like. From the consumer's point of view, the fact that the better speakers are sounding more and more alike should be reason for rejoicing, for it means they are *all* getting closer to the accurate reproduction of the recorded "reality" even though they are approaching the task from many different directions. □

George Sioles, *president and chief engineer of Design Acoustics, Inc.*, has worked as an acoustic designer for twenty-five years, occasionally on products other than speakers.



Two Bold Statements:

1. Synergistics has engineered the very best loudspeakers for your stereo system

...regardless of the price!

2.



Each Synergistic loudspeaker, from our smallest two-way model S-12 to our six-element, four-way model S-72 has been engineered to more perfectly complement the other components in a stereo system. This "synergistic coupling" results in greatly improved total system sound quality. The chart below shows you the Synergistics model we recommend in various total system price ranges. All seven Synergistics models are true "audiophile" loudspeakers capable of reproducing wide dynamic range and musical clarity previously associated only

with "monitor-type" speaker systems; yet, all Synergistics models will realize optimum performance when operated with low-to-medium powered receivers and amplifiers. What does all this mean to you? Simply stated, it means that whether you're spending under \$450 or as much as \$1,500 for your system,

there's a Synergistics loudspeaker specifically designed to enhance the overall sound quality.

SYNERGISTICS: cooperative inter-action in a system where the total effect is greater than the sum of its component parts.

Total System Price	Recommended Synergistics Loudspeaker
Under \$450	Model S-12A
Under \$500	Model S-22A
Under \$600	Model S-32A
Under \$700	Model S-42A
Under \$850	Model S-52A (Tower)
Under \$1,100	Model S-62A (Tower)
Under \$1,500	Model S-72A (Array)

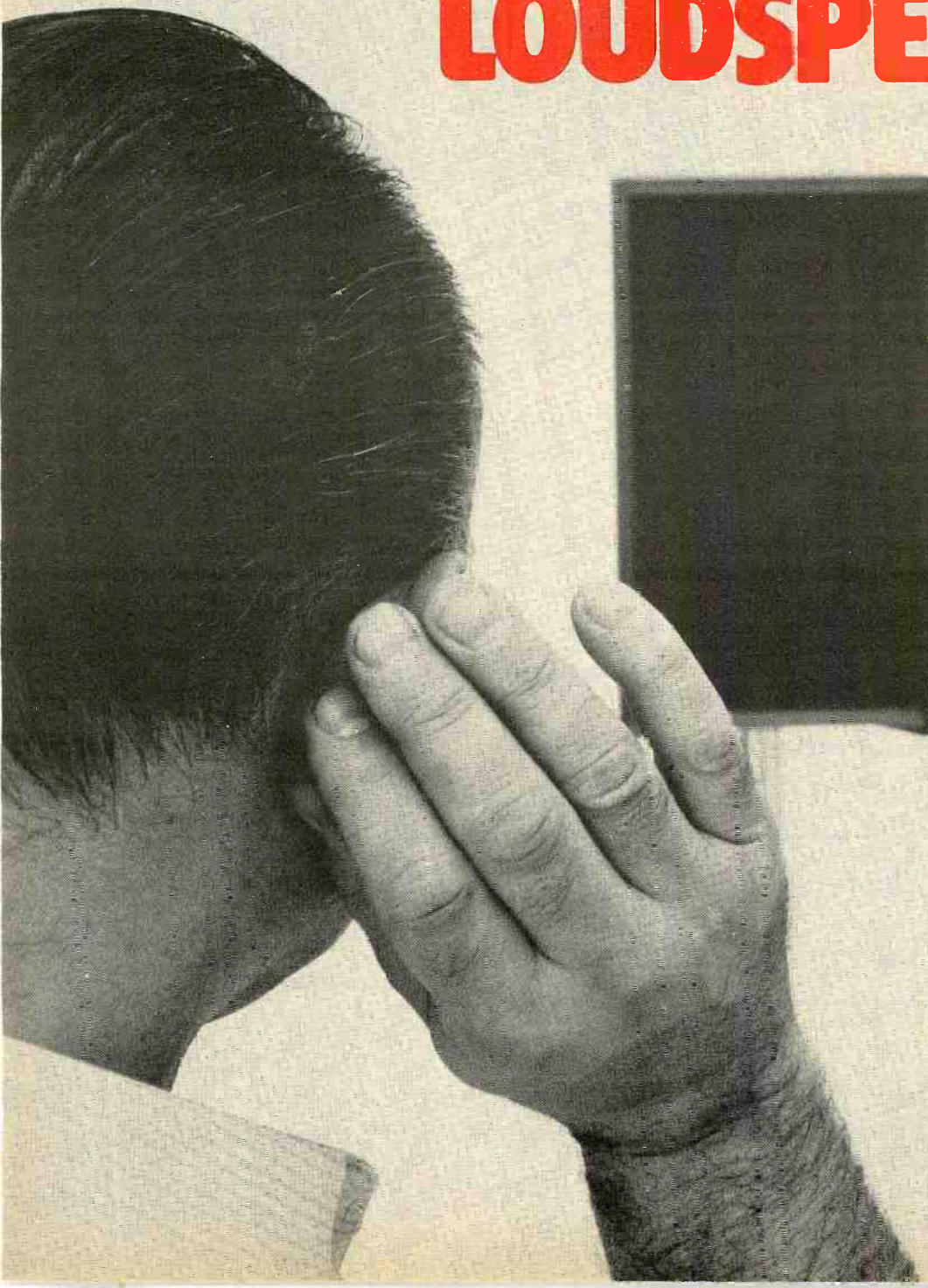


For More Information Write To: Synergistics, P.O. Box 1245, Canoga Park, California 91304.

The Audibility of

- Intermodulation
- Delayed Resonance
- Doppler

DISTORTION IN LOUDSPEAKERS



By Peter Fryer

IN some quarters of the audio world it has long been taken as gospel that small fractions of a per cent of a given kind of distortion can make an otherwise good loudspeaker unacceptable to critical listeners. It is further alleged that esoteric technical measurements employing sine-wave or white-noise signals that are flat to several megahertz are capable of demonstrating this.

It has always seemed to me and my fellow researchers, however, that such demonstrations missed the point entirely, that the whole question of the audibility or inaudibility of these minute distortions really comes down to this: How much distortion can the human ear detect *on the kind of signals loudspeakers are designed to reproduce*? For the vast majority of people that means *music*, whether classical or popular, and not sine or square waves. And it also means *listening* rather than watching the oscilloscope of a spectrum analyzer.

Since there have been some suggestions that intermodulation distortion is one of the worst culprits in respect to making speakers—and other components—sound nasty (and most speakers are supposed to produce at least some of it) the engineering staff at the Wharfedale Works of Rank HI FI in England decided to tackle it first in an effort to determine its subjective rather than its theoretical audibility.

Intermodulation distortion (IM) is caused by nonlinearities in the reproduction chain, and it consists of new “unmusical” frequencies added to two or more input signals at some point during the process of reproduction. These IM products are “unmusical” because they are not harmonically related to the tones present in the original signal; therefore, they *must* sound bad. Presumably you can expect to be able to hear very tiny amounts of IM—unlike the case with “harmonic” distortions (HD), which often merely amount to more of what the musical instruments produce anyway. In brief, HD can be said to change the *tonal coloration* of the music, while IM changes *content*.

How could we find out how much can actually be heard of the various distortions? Well, we decided independently to use an approach very similar to that described by Robert Carver for his investigations on crossover distortion (STEREO REVIEW, May 1973). It involves generating electronically “pure” distortion (the very concept of “pure distortion” is somehow fascinating!) and adding known amounts of it to a loudspeaker which is either normally free of it or is being used in such a way that it generates very little of it.

Intermodulation

Carver described how an amplifier was set up to produce known amounts of crossover distortion at the turn of a switch. But what can you do to a loudspeaker that will cause it to produce specific amounts of intermodulation, Doppler, or other desired “test” distortions without having it simultaneously produce a variety of other extraneous distortions which would cloud the issue? In the case of IM, a device known as a balanced modulator can be used to give pure “first-order” components of intermodulation distortion (these being frequencies that are the mathematical sum and difference of the high and low frequencies in the music signal). When building this device we made sure that it could provide IM outputs down to less than 0.1 per cent since we tended to support the generally held view that even very *minute* amounts of this kind of distortion would be disturbingly audible. However, when we reached our preliminary test stages we thought our carefully built apparatus had gone wrong because even at its output of 1 or 2 per cent none of us could hear any difference when the distortion was added to the music. The device had to be redesigned to give up to 10 per cent measurable distortion and 100 per cent total for demonstration purposes—quite a surprise to all parties concerned.

“We found pronounced differences in distortion-detecting ability between the different classes of listeners.”

After several false starts and design modifications of our testing equipment, the listening tests commenced in earnest using several different types of music and different “classes” of listeners. The first thing we noticed was just how *awful* intermodulation distortion sounded. In fact, it did not sound much like a loudspeaker fault at all. Rather it sounded like a mistracking phono cartridge or a very small transistor radio straining to be heard (I must be one of the very few audio engineers who has actually been *paid* to make a perfectly good loudspeaker sound like a transistor radio). The second thing we noticed was that with most kinds of music it

took about 5 to 6 per cent distortion to be detectable, but piano music was more revealing. For example, with Liszt's Piano Concerto No. 4, 2 per cent distortion was clearly audible. The situation changed radically when two *pure* tones were used; 0.1 per cent could then be heard when the conditions were right.

We found pronounced differences in distortion-detection ability between the different classes of listeners. Skilled listeners such as audio engineers and people who listened critically to a lot of classical music were able to detect as little as one-fifth as much distortion as those who listened only to pop music or were not in the audio business. It also seemed (admittedly on the basis of a very small sample) that women were *less* able to detect IM distortion than men—a result perhaps best left without comment.

Delayed Resonance

Since at normal listening levels less than 1 per cent IM is produced by most loudspeakers, we felt safe in assuming that IM is not an intolerable or even audible problem under most circumstances. It therefore seemed best to concentrate our efforts on those distortions we can actually hear in loudspeakers—but, once again, which are they? Well, one distortion was uncovered a very long time ago by D.E.L. Shorter at the BBC; he called it “delayed resonance.” Despite the fact that manufacturers seldom if ever mention the delayed-resonance phenomenon, it *is* one of the distortions one can actually hear, mainly because most speakers produce lots of it. The cause of this distortion can best be described as “the speaker carrying on broadcasting long after the program has finished,” and it results when parts of the cone assembly store energy and continue to release it after the music ceases. Figure 1 (next page) illustrates the effect.

It is possible to measure this type of distortion in a number of ways, one of which employs a computer. The measurement gives a number of curves showing how much the speaker continues to radiate, at various frequencies, so many milliseconds after the input signal has been switched off, and these curves often reveal peaks and dips which do not show up on normal steady-state (sine-wave) frequency-response curves. Figure 2 shows a typical spectrum of delayed energy after an interval of 1 millisecond.

Having charted the peaks and dips resulting from this delayed-resonance phenomenon, we nevertheless (as with

DISTORTION IN LOUSPEAKERS

"...the threshold of audibility lies somewhere between 2 and 6 per cent in program music, though the test signals that reveal [distortion] best permit as little as 0.1 per cent to be detected."

other *measured* distortions) had no idea how *audible* they were. To find out, a second distortion simulator was built to introduce measured amounts of the equivalent of these delayed resonances into a loudspeaker that was free of them. Once again we had some preconceived ideas we "knew" were right before we had actually done the experiments. In this case we supposed that resonances which were sharp and high (and would therefore "ring" or oscillate for the longest period of time) would be the most easily heard and the most objectionable.

Once again our ideas proved wrong in practice. Tests were run to relate the audibility of resonances of different Q value (Q indicates the sharpness and width of a resonant peak) against a background of wide-band noise, classical orchestral music, and "pop." It seems that since they cover a large portion of the audio spectrum, the low-Q (broader and flatter) resonances are excited for a greater proportion of the time, whereas sharper resonances are very rarely triggered by program music. However, when the peak is *very* broad and low (a Q value of less than 1), the audible effect is simply an increase in loudness over a portion of the frequency range, and this can be audibly compensated for—with some success—by an equalizer. Such low-Q peaks are, in any case, less objectionable than those resonances having Q's between 1 and 5.

As with other kinds of distortion, there is a test signal that most easily shows up delayed resonance. Just as a two-tone test signal is most effective

for IM and a single pure tone for cross-over distortion, delayed resonance is best shown up by white or pink noise. With its own test signal, this kind of distortion can be heard up to an order of magnitude more easily than with a musical program. Taking a few random results, peaks having a Q of 25 at 1,000 Hz have to be about 4 dB above the normal response curve before they can be heard in pop music, whereas peaks having a Q of 1 can still be heard when they are 12 dB *below* response-curve level. With white noise, this figure would be closer to 25 dB below response-curve level. Classical music gives rise to figures just above midway between these two extremes.

Doppler

The next kind of distortion we decided to look (listen?) into is a real hot potato. Some experts say that it is totally irrelevant and never audible, while others maintain that it is very important indeed and that even minute amounts of it completely destroy the musical experience. Clearly, it appears to be

largely a matter of opinion. The distortion I refer to is caused by the Doppler effect.

Doppler distortion occurs as follows: consider a single speaker cone reproducing two frequencies at once—100 and 10,000 Hz, for example. During each half-cycle of the 100-Hz signal the same speaker reproduces 50 cycles of the 10,000-Hz signal. The cone has a relatively large excursion at 100 Hz and a far smaller one at 10,000 Hz. The net result is that the listener is hearing a cone producing 10,000 Hz that is also alternately moving toward and away from him at a rate of 100 times a second. Thus (if you recall the Doppler effect from high-school physics) the first 50 cycles of the 10,000-Hz tone are "compressed" by the advancing cone and the frequency is increased; the next 50 cycles of 10,000 Hz are stretched out (and the frequency decreased) as the speaker cone retreats.

There is no question that speakers do produce this distortion, and the smaller the driver involved and the wider the frequency range that it must cover, the more of this distortion occurs. However, the real question again is the sen-

Figure 1, right, shows effect of a loudspeaker on a tone burst. Onset of signal is at (A); burst ends at (B); the delayed resonance area is at (C).

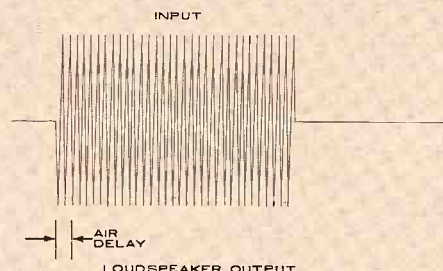
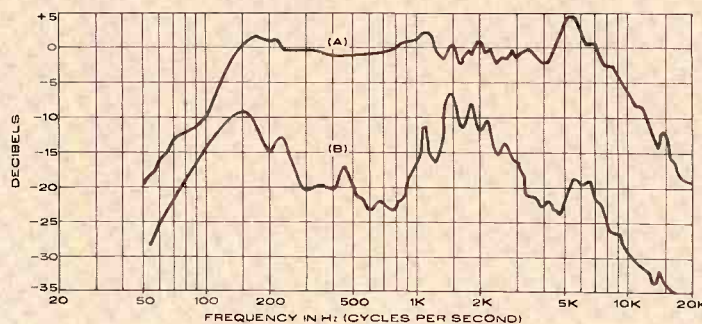


Figure 2, below, shows (A) original energy distribution and (B) the sound spectrum coming out of the speaker 1 millisecond after signal is shut off.



sitivity of the human ear to Doppler effects in loudspeakers reproducing music. It was with great interest that we set about building a device to simulate Doppler distortion. We found we could simulate Doppler effects by using an electronic delay line whose delay could be varied at a rate determined by a low-frequency signal. This electronically variable delay can simulate the effect of low-frequency cone excursion on a simultaneous high-frequency signal. With the particular instrument we designed, we were able to simulate a total voice-coil/cone movement of 150 mm (± 75 mm), or almost 3 inches!

So, with open minds, and not knowing which of the two camps of opinion was more nearly correct, we fed some music containing very low organ notes (Camille Saint-Saëns' Third Symphony) through the simulator into a four-way speaker which inherently had very little of this distortion. Our Doppler-effect device made the music sound as though it were being produced by a smaller and smaller single-cone, full-range loudspeaker. The first thing we noticed was that most of the time, even with the simulator on full, there was not enough low-frequency energy in the music signal to produce *any* audible effect. But when the low organ notes came on and modulated the higher frequencies present in the music, we found that the small amounts of Doppler distortion generated were not particularly unpleasant and their detectability was perhaps half of that for intermodulation distortion.

WHEN it comes to expressing this distortion as a precise percentage, we run into several problems. We can either express it as a percentage of frequency shift (in which case the percentage will be constant whatever the upper frequency being shifted around), or we can express the amplitude of the extra frequency components (which appear as a result of the Doppler action) as a percentage of the upper frequencies' "unshifted" amplitude (Figure 3 shows the "extra" frequencies or *sidebands* produced as a result of the Doppler effect). In this latter case the percentage increases as we increase the upper frequency; for example, if we are feeding our 100-Hz and 10,000-Hz signals to the speaker, the 10-kHz signal would result in twice as much distortion as a 5-kHz signal would.

This dependence on the upper frequency used makes giving percentages of Doppler distortion in music difficult, though of course the percentage of frequency *shift* is unaffected. It turned out that our first design for a Doppler-simulating machine was fine for pure tones (the specific test signal for this

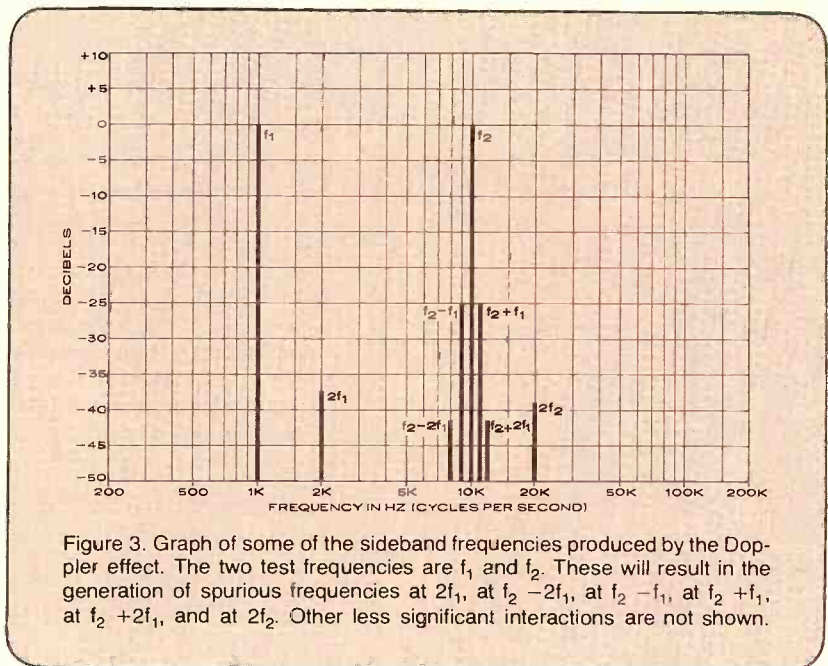


Figure 3. Graph of some of the sideband frequencies produced by the Doppler effect. The two test frequencies are f_1 and f_2 . These will result in the generation of spurious frequencies at $2f_1$, at $f_2 - 2f_1$, at $f_2 - f_1$, at $f_2 + f_1$, at $f_2 + 2f_1$, and at $2f_2$. Other less significant interactions are not shown.

kind of distortion), when it showed that about 0.2 per cent of upper-frequency (4,000 Hz) amplitude distortion was detectable—corresponding to 0.015 per cent of frequency shift. But it could be used on music only when the music consisted mostly of two relatively pure tones—such as a track from Mike Oldfield's "Tubular Bells." In such a case, it showed that about 5 to 6 per cent distortion of the upper frequency was audible. To obtain an absolute value of the amplitude distortion, another delay line was used to cancel out the "carrier" (or non-shifted upper frequencies), leaving only the new frequencies created by the Doppler effect. These could then be measured as a percentage of all frequencies and would give us an absolute value. Fortunately, in the case of "Tubular Bells," this figure turned out to be about the same as that calculated by assuming the music consisted of only two frequencies. As for other program material, organ music had a detection level at 9 per cent, and distortion of 8 per cent and below remained undetectable on a pop vocal recording. On the basis of our research, we are prepared to state that, with the possible exception of small full-range units, loudspeaker systems used under domestic listening conditions will *never* produce enough Doppler distortion to be audible on conventional program material.

There are still a number of other distortions that can be studied through this line of approach; indeed, even after we had reduced "delayed-resonance" distortion to below audible levels we could still hear phenomena that

we would judge worthy of investigation. We have already begun to probe into cavity and reflection effects in loudspeakers. There are also diffraction effects, simple harmonic distortion, and other orders of intermodulation distortion worth investigating. These last two, oddly enough, are quite difficult to generate in pure form.

It is clear that for those distortions that actually produce "extra" tones (intermodulation, Doppler, crossover, and, I suspect, harmonic), the threshold of audibility lies somewhere between 2 and 6 per cent in program music, though the test signals that reveal them best permit as little as 0.1 per cent to be detected. Those distortions that modify the response in some way, such as delayed resonance and box reflections, are far less disturbing in that the threshold of detection with music is about 13 to 15 per cent. When special test signals are used, the threshold of detection falls to 3 to 5 per cent. However, speakers produce more of these latter kinds, and they are the most significant form of distortion investigated so far. All in all, I guess we can count ourselves lucky that the ear allows music to mask significant amounts of these distortions, for otherwise the job of the loudspeaker designer would obviously be much more difficult than it already is! □

Dr. Peter Fryer devises new speaker measurements at Rank HI FI England. He assesses distortions and studies speakers with holography and delayed-gating techniques.

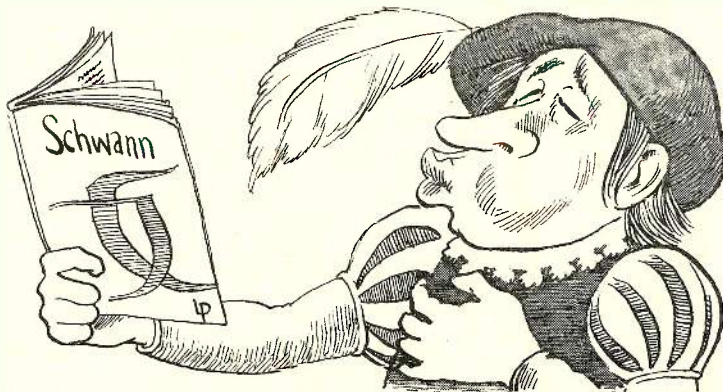
MOST people are spared the knowledge of exactly how many records are released each week, but those of us who have to carry all of them home from the post office know that it is a staggering figure. Happily, a certain number of them prove to be quite listenable, even memorable. Somewhat fewer—about one in twenty-five, I'd say—actually last through the week and become favorites. But what may seem a small percentage to a reviewer is probably more records than most consumers buy or even hear about in

low is a mixed bag containing something for everyone.

● Facts of Life is a two-man, one-woman trio whose first album, "Sometimes" (released earlier this year on Kayvette 802), falls into that down-to-basics, soap-operatic area where rhythm-and-blues and country-and-western overlap. Produced by Millie Jackson, queen of lowdown soul, the album is at its best when dealing with Jackson's own favorite subjects: adultery and "gettin' it on." *Caught in the Act* is a minor classic in this genre—a short, deftly dramatic dialogue over a quietly understated rhythm track that begins like this: "Get dressed, baby, I'm afraid we're caught./Your husband is here—somebody musta tipped him off." The woman gives the situation a nice, nasty bite when she announces her only regret is the timing of the interruption: "We were in the midst of heaven," she swoons, "When hell broke in on us." The music throughout is serviceable, occasionally catchy, but not very ambitious, so it's the vocals—robust and gritty—and the unabashed directness of the songs themselves that make the album an especially enjoyable example of the Southern r-&-b tradition.

● Dee Dee Sharp, of course, is the girl who made *Mashed Potato Time* in 1962, followed it up almost immediately with *Gravy*, and then disappeared from the radio and the record-hop circuit as abruptly as she'd arrived. While out of the public eye, however, she married producer Kenny Gamble, half of the brilliant, trend-setting Gamble and Huff team. They brought her back in 1975 on one of the most satisfying albums to come out of Philadelphia that year, "Happy 'Bout the Whole Thing" (Philadelphia International PZ-33839, © PZA-33839). Here, Sharp replaces the hard-edged cuteness of her singles with a smooth Philadelphia soul so-

Sleeping Beauties of R&B



Awakened by Vince Aletti

a year, and many of these favorites, often some of the very best records issued each year, simply slide unnoticed into vinyl limbo.

One of the discouraging things about organizing this bevy of sleeping beauties was the discovery that many of the rhythm-and-blues records I'd hoped to rescue from obscurity were already cut-outs, dropped from their record companies' active catalogs after a year or two of disappointing sales or lost through the demise of an entire label. There are a lot of them still out there, though, still in print and still available, and I've chosen six of these. My own taste tends toward invigorating disco styles, Philadelphia sophistication, emotional voices and emotional lyrics, but the selection be-



Philadelphia Int.

phistication, though producer Bobby Martin never allows it to smother the real delight and sass in her voice. The material is strong and widely varied: 10cc's *I'm Not in Love* sends Sharp zigzagging across her emotional range, from whispering to shouting and back again; *Love Buddies* is a casually sexy testament to modern romance; and both *Share My Love* and the title track, *Happy 'Bout the Whole Thing*, are energetic dance numbers that Dee Dee romps through in high spirits. This is one of the best comeback albums in recent years.

● Perhaps the most immediately striking thing about Carl Carlton is the similarity of his sharp, young-boy voice to that of Stevie Wonder in his early years: both have the same cutting, raw-honey quality, almost shrill around the edges yet bursting with sweetness. Carlton's last album, "I Wanna Be with You" (ABC D-910, © 8022-910H, © 5022-910H), released at the end of 1975, was also his best, primarily because it brought him together with Bunny Sigler, Philadelphia's most eccentric, unpredictable, and entertaining producer. Sigler, who also wrote most of the songs here, provides Carlton with a collection of bright, upbeat tracks that the singer makes the very most of, strutting his stuff with breathy exuberance. Though the material is uneven and Sigler's quirky arrangements are



ABC Records

occasionally difficult to dance through, for the most part this is a match made in heaven. Carlton has the perfect adolescent tone and attitude to get away with a song called *Spend the Night* ("So I can make love to you") and such lyrics as "Take Liz Taylor, Vonetta McGee/My baby looks so much better to me."

● Vernon Burch is another singer who might easily be confused with Stevie Wonder. Not only does he sound like Wonder at his peak, he is

also capable of writing songs of Wonder quality. Burch's "I'll Be Your Sunshine" (United Artists LA342-G), one of the strongest debut albums by a black performer in 1975, is composed entirely of original material that he produced and arranged along with veteran pop producers Tom Wilson, Spencer Proffer, and Denny Diante. Clearly, there's a debt to Stevie here—most noticeably on *Loving You Gets Better with Time*, the lovely, gently pulsing song that opens up the album—but Burch is no imitator; he's taken Wonder's inspiration and translated it into his own style. The bulk of the album is given over to high-powered dance cuts in a chunky



United Artists Records

rock-and-soul mixture that's a refreshing departure from the prevailing disco sound. But the slower songs have enough strength and vitality to keep them from being overwhelmed or reduced to mere filler status.

● Another impressive 1975 debut was Angelo Bond's "Bondage" (ABC D-889), an album that deserves comparison with some of Smokey Robinson's best solo work. Like Robinson, Bond is a singer-songwriter from Detroit with a plaintive, aching-sweet voice and the wit and precision of a short-story writer. He manages to deal with the most sentimental themes without turning to cliché or mush, and even the flaws are covered up by the emotional sureness and purity he brings to them. *Reach for the Moon* is a short sketch about a poor family that draws strength from the mother's words: "Reach for the moon, you may land among the stars/ But you're gonna make it, I know that you are." In *He Gained the World (But Lost His Soul)*, Bond sums up the life and death of a gospel singer turned rock star in three verses of quick, brilliant detail. Elsewhere, he sings about loving two women and losing both (*Man Can't Serve Two Masters*), about temptation (*Eve*),



Sanzak/Valentine/ABC

about neglect (*I Never Sang for My Baby*), and, with touching affection, about his gambling, womanizing father (*What's So Bad About Feeling Good?*). This richly rewarding, beautifully crafted album should not be overlooked.

● Loleatta Holloway is a big woman with an even bigger voice. Her roots are in belting Southern r-&-b and gospel, and she sings with a magnificent, unrestrained fervor rarely heard these days outside of black churches. Her finest album, "Loleatta" (Gold Mind GZS 7500), came out at the beginning of this year; it hit hard and fast with the disco crowd but slipped by nearly everyone else. There's no reason, though, why this should remain a cult record. Under the direction of Norman Harris, another Philadelphia master, Holloway shouts and sizzles her way through a collection of love songs that put even Aretha Franklin's to shame. The disco cuts, especially *Hit and Run* and *Dreamin'* (which ends in a terrific gospel rave-up), are frantic and fierce, set in dense, swirling arrangements that are among the sharpest the genre has to offer. The ballads, particularly *Worn Out Bro-*



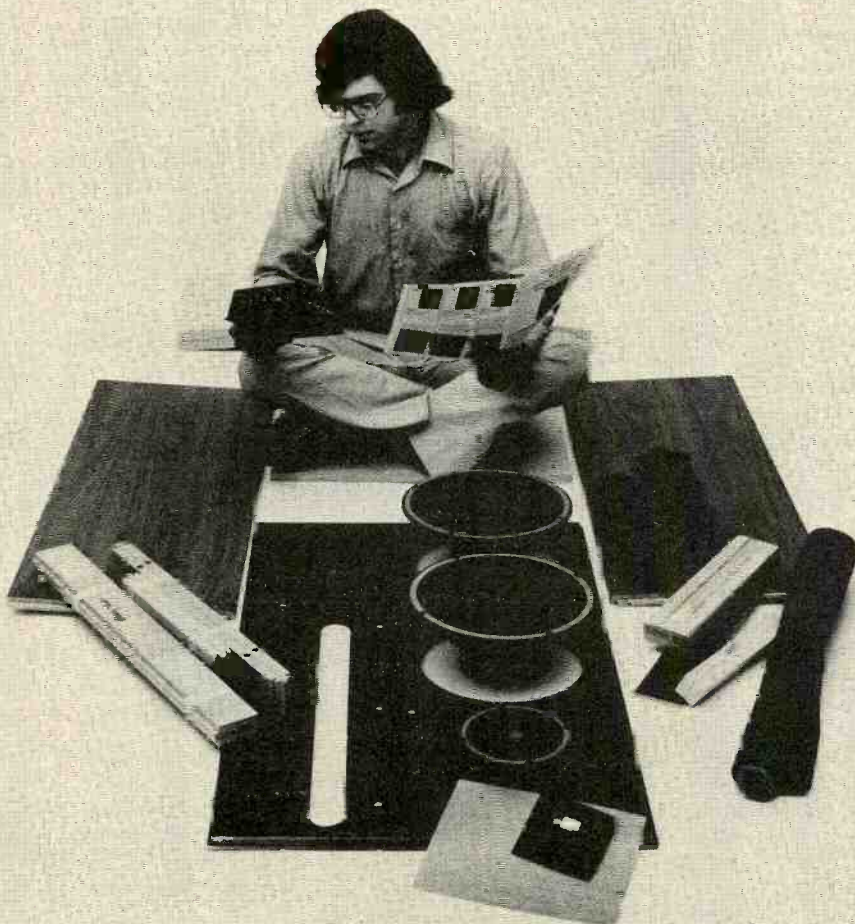
Salsoul Records

ken Heart, are almost painfully emotional. Both ends of the spectrum are treated with equal drama, and whether Holloway is singing or just talking to you, she's utterly riveting. This is surely one of the hottest female vocal albums this year. □

THE SPEAKER KIT

As speaker systems improve overall,
the quality and performance
of kits goes up too

By William Kanner



Bozak's Symphony Kit with recommended drivers

ONCE upon a time, back in the early days of high fidelity, if you wanted a good amplifier you probably built your own. And, of course, you also built your own speaker. Life was rather simple then: you bought a full-range driver (preferably the largest one you could find or afford), built a box that would suit it (usually the largest one that would fit into your living room), and—*voilà!*—you had a speaker system. If you were a really sophisticated audiophile, you might have added a carefully chosen mid-range and tweeter and bought or built a crossover network. And, of course, you had to deal with only *one* box, because those were the good old days of mono.

As commercial speakers became smaller and somewhat more scientifically designed, the appeal of do-it-yourself systems declined correspondingly. No longer could the average home-built system compete effectively in cost or performance with the creations of a technically competent company geared to high-volume production. But this development certainly did not eliminate the desire of some audio enthusiasts to get involved in the construction of speaker systems. It did, however, change the nature of the involvement somewhat. Today, in place of hit-or-miss matings of drivers and enclosures, there is substantial activity centered on a newly revived kind of do-it-yourself project: the speaker-system kit.

WHAT makes one of the new kits different is its more consistent performance. Whether it comes ready to assemble with pre-cut and finished enclosure panels or simply as a set of cabinet plans with a list of drivers and crossover components, it is essentially a *final* design that does not require (or invite) further experimentation and modification by the builder. If the instructions are followed faithfully, the result will be a known quantity—a functional replica of the original design as engineered and “fine-tuned” by the manufacturer. This means that many kits can and do offer performance that conforms to rather tight and ambitious specifications. Many also benefit from the recently developed mathematical models for speaker performance and computer-assisted design techniques.

All this is fine, but *why* build your own speakers in this day and age? For several reasons: the satisfaction of working with your hands, the sense of accomplishment when the job is finished, even the knowledge that you have made a personal contribution to your system. But if you approach a speaker kit with the idea of saving

big money, you will likely be disappointed. The cash you save is more than made up for by the time spent and the possible hassles encountered in the building itself. Kit-building can be fun and marvelous therapy for idle hand or mind, but only if you enjoy the activity as well as the end product. And the activity, needless to say, will call more upon whatever woodworking skills you have than any electronic experience you may have acquired in building audio components from kits.

If we accept the notion that building a speaker kit looks like an interesting project, then what kind of kits are there out there? Perhaps the easiest to build are the ones from Heath, which supply loose drivers and an assembled cabinet. Your task is to put together a crossover network, wire the connections between the components, and install all the parts in the cabinet. One large advantage of Heath's speaker kits is that the company has retail dealers across the country, and at these Heath-kit Electronic Centers you can frequently audition any of the company's speaker systems before you build.

Since Bozak's B-4000A speaker system is available assembled (as well as in kit form), it too can be auditioned in advance. As a kit it comes either as a pre-cut but unassembled cabinet that you have to put together or as a free set of plans for constructing your own enclosure. The drivers and crossover are sold separately in either case. The full price of the B-4000A's component parts is a rather steep \$590, but the company says that the B-4000A is planned around what it calls the "growth system." Thus you can start out with fewer than the full complement of drivers, use the system in that form, and build up to the final ten-driver B-4000A in stages.

If you'd like a somewhat more adventurous carpentry project, England's KEF Company supplies drivers and crossovers. It also supplies plans for suggested enclosures, but all the cabinet work is up to you.

Some of the long-established famous names in loudspeaker systems still sell drivers and plans for their products. If you should crave Altec's "Voice of the Theatre" system or one of Electro-Voice's new computer-optimized kit systems, all you need do is buy the drivers and the appropriate crossover networks (if necessary) and go to it (you'll have to buy the wood independently). Company-supplied plans are usually adequate for someone who has a background of experience with woodworking tools, but if you should find yourself in need of assistance, the companies will help.

Speaker-kit Manufacturers and Suppliers

- Accurate Sound, 1213 "M" Street, Lincoln, Nebraska 68508
- Altec Corporation, 1515 South Manchester Avenue, Anaheim, California 92803
- Bozak, Inc., Box 1166, Darien, Connecticut 06820
- Electro-Voice, Inc., 600 Cecil Street, Buchanan, Michigan 49107
- Heath Company, Dept. 40-325, Benton Harbor, Michigan 49022
- James B. Lansing Sound, Inc., 8500 Balboa Boulevard, Northridge, California 91329
- KEF Electronics, Intratec, 399 Jefferson Davis Highway, Arlington, Virginia 22202
- Peerless Audio, Burwen Research, Inc., 40 Jytek Drive, Leominster, Massachusetts 01453
- SpeakerKit, Box 12, Menomonie, Wisconsin 54751
- Speakerlab, Inc., 5500 35th Avenue N.E., Seattle, Washington, 98105
- Tannoy-Ortofon, Inc., 122 Dupont Street, Plainview, New York 11803

While most people are still more interested in going to their local audio dealer and buying a set of ready-built speaker systems, there is clearly a resurgence of interest in kit building. And as speaker systems improve overall, the quality and performance of kits goes up too. The old stand-bys are known quantities, and if you buy the Altec or Tannoy systems you know, by and large, what kind of sound you will end up with. However, one of the problems with many of the speaker kits on the market is that they are from relatively new companies, and because of their limited distribution, auditioning them is difficult. Your friend down the block is not likely to have just bought a pair, and tests on them in audio maga-

zines are few and far between. This dearth of information leaves the kit market somewhat less accessible to the audiophile than it might be, but a willingness to invest some extra effort in pre-purchase research will usually get you answers to many of the important questions about the product.

The table on the following page will give you an idea about what speaker kits are available and where. Any questions you have should, of course, be directed to the manufacturers involved. And for those who want to plunge even more deeply into speaker design, we include a bibliography that will take you as far as you care to go into the world of crossover design, response curves, sawdust—and acoustics. □

Speakers and Acoustics—A Bibliography

- *How To Build Speaker Enclosures*, by Alexis Badmaieff and Don Davis. Howard W. Sams & Co., Inc., Indianapolis (1966), \$4.95.
- *The World of Sound*, by Sir William Bragg. Dover Publications, Inc., New York (1942), \$2.00.
- *The Cabinet Handbook*, by G. A. Briggs. Herman Publishing, Boston (1962), \$4.95 paperback; \$7.95 hardcover.
- *Loudspeakers*, by G. A. Briggs. Herman Publishing, Boston (1958), \$11.95.
- *Hi-Fi Loudspeakers and Enclosures*, by Abraham B. Cohen. Hayden Book Co., Inc., Rochelle Park, N.J. (1968), \$6.85.
- *A Guide to Musical Acoustics*, by H. Lowery. Dover Publications, Inc., New York (1956), \$2.00.
- *Building Speaker Enclosures*, by Robert G. Middleton. Radio Shack, Fort Worth, Texas (1972), \$1.25.
- *Music, Physics, and Engineering* (formerly titled *Musical Engineering*), by Harry F. Olson. Dover Publications, Inc., New York (1967), \$4.50.
- *The Audio Encyclopedia* (2nd Edition), by Howard M. Tremaine. Howard W. Sams & Co., Inc., Indianapolis (1969), \$34.00.
- *Reproduction of Sound*, by Edgar Villchur. Dover Publications, Inc., New York (1965), \$2.00.

Speaker Kit Manufacturers and Specifications Researched by George Tlamsa

Manufacturer	Model	Enclosure type	Approx. Price (\$)	Woofer (in.)	Mid-range (in.)	Tweeter (in.)	Crossover frequencies (Hz)	Impedance (ohms)	Recommended amplifier power range (watts)	Frequency response (Hz) ¹	Cabinet dimensions: h x w x d (in.)	Type of cabinet kit	Remarks
ALTEC	A7-8	vented, horn-loaded	\$353	15	R	R	800	8	10-250	40-20,000	52 1/2 x 30 x 24	P	Compression driver with sectoral horn.
"	A7-500-8	vented, horn-loaded	385	15	R	R	500	8	10-250	40-20,000	52 1/2 x 30 x 24	P	Compression driver with sectoral horn.
"	A7-X	vented, horn-loaded	N.A.	15		R	1200	8	10-350	45-20,000	52 1/2 x 30 x 24	P	Horn-loaded dome.
BOZAK	B-4000A	i.b.	590 ^R	two 12	6	eight 2 ^R	400; 2,500	8	50-100	35-20,000	44 1/2 x 26 1/2 x 15 5/8	P, K	Contains four dual 2-in. tweeters. Price is for knock-down cabinet kit.
"	B-410 Concert Grand	i.b.	662	four 12	two 6	eight 2 ^R	400; 2,500	8	60-150	35-20,000	52 x 36 x 19	P	Four dual 2-in. tweeters.
ELECTRO-VOICE	12 TRXC	vented	115 ^R		12, 3-way ^R			8	1-25	37-17,000	27 1/2 x 21 1/2 x 17 1/4	P	Whizzer cone for mid-range, horn tweeter. Note that Electro-Voice prices are slightly higher in some Western states, Alaska, and Hawaii.
"	SP8C	vented	52		8, full-range ³			8	1-25	41-12,000	16 1/2 x 13 x 10 1/2	P	
"	SP12C	vented	67		12, full-range			8	1-25	37-10,000	27 1/2 x 21 1/2 x 17 1/4	P	
"	SP15A	vented	125		15, full-range			8	0.5-50	34-8,000	31 1/8 x 23 7/8 x 19	P	
"	MC8A	i.b.	34		8, full-range			8	1-12	42-20,000	20 1/2 x 16 1/2 x 13	P	
"	MC12A	vented	45		12, full-range			8	1-20	32-11,000	27 1/2 x 21 1/2 x 17 1/4	P	
HEATH	AS106	a.s.	27 ^R		4 1/2, full-range			8	4-20	70-16,000	12 x 7 x 6	A	Mail order prices, retail prices slightly higher.
"	AS1140	i.b.	38/pr.		4 1/2, full-range			8	2-10	70-16,000	12 x 7 x 6	A	
"	AS1332	a.s.	80	8		1 1/2	3,400	8	9-50	50-18,000	19 x 10 1/2 x 8	A	
"	AS1342	vented	60	8		2x6 horn	2,500	8	4-50	60-14,000	22 1/2 x 12 x 10 1/2	A	
"	AS1352	a.s.	100	10		1 1/2	2,800	8	6-50	45-18,000	24 x 13 1/2 x 11	A	
"	AS1363	a.s.	120	10	4 1/2	1	750; 4,000	8	6-100	45-18,000	24 1/2 x 14 1/2 x 11 1/2	A	
"	AS1344	a.s.	130	6 1/2		1	4,000	4	5-100	55-20,000	40 x 11 x 11	A	
"	AS1373	a.s.	150	10	4 1/2	1d	500; 3,000	8	10-200	30-22,000	26 x 14 1/2 x 11 7/8	A	
"	AS103A	a.s.	220	12	1 1/2d	3/4d	575; 5,000	4	25-100	20-20,000	25 x 14 x 11 1/2	A	Kit version of AR 3A speaker system.
"	AS46	vented	240	14		2	2,000	8	5-50	40-20,000	23 1/2 x 14 x 12	A	Kit version of JBL speaker system.
"	AS1348	a.s.	270	15 ^R	two 4 1/2	three 1	500; 3,000	8	8-250	28-20,000	38 x 24 x 15	A	Slot-loaded
JBL	LX24	vented	188	12 ^R		2	2,500	8	10-75	N.A.	30 1/2 x 19 1/2 x 12 1/2	P	Extended-range.
"	LX5	vented	473	15		c.d. ^R	500	8	10-150	N.A.	37 1/2 x 25 1/2 x 18 1/2	P	Horn-loaded.
"	LX8	vented	239	14		2	2,000	8	10-75	N.A.	30 1/2 x 19 1/2 x 12 1/2	P	
"	LX10	vented	395	14		c.d. ^R	1,500	8	10-75	N.A.	30 1/2 x 19 1/2 x 12 1/2	P	Horn-loaded.
"	LX30	vented	440	12	5	s.r. ^R	800; 7,500	8	10-150	N.A.	34 1/2 x 19 1/2 x 16 1/2	P	Horn-loaded.
"	LX50	vented	773	15		c.d. ^R	500	8	10-150	N.A.	34 1/2 x 19 1/2 x 16 1/2	P	Horn-loaded.
"	N1200	vented	407	15 ^R		c.d. ^R	1,200	8	10-75	N.A.	34 1/2 x 19 1/2 x 16 1/2	P	Extended-range, horn-loaded.
"	N2400	vented	278	15 ^R		r.r. ^R	2,500	8	10-75	N.A.	34 1/2 x 19 1/2 x 16 1/2	P	Extended-range, horn-loaded.
"	LX80; N8000	vented	680	12		r.r. ^R	800; 8,000	8	10-150	N.A.	34 1/2 x 19 1/2 x 16 1/2	P	Horn-loaded.
"	LX10; N8000	vented	539	14		c.d. ^R	1,500; 8,000	8	10-75	N.A.	30 1/2 x 19 1/2 x 12 1/2	P	Horn-loaded.
PEERLESS	8-52	a.s.	66/pr. ^R	8		2 1/2	1,500	8	5-40	50-18,000	18 1/2 x 9 x 9 1/2	P	Plans provided in free brochure available from dealers.
"	8-82	a.s.	48	8		1d	1,600	8	10-80	45-20,000	18 1/2 x 9 x 9 1/2	P	
"	8-753	a.s.	118/pr. ^R	8	4	2 1/2	700; 4,000	8	10-40	50-18,000	18 1/2 x 9 x 9 1/2	P	2 1/2-in. tweeter sold only in pairs.
"	10-103	a.s.	78	10	4	1d	500; 4,000	8	15-100	40-20,000	22 1/2 x 11 1/2 x 9 1/2	P	
"	12-123	vented	98	12	4	1d	500; 4,000	8	20-120	32-20,000	22 1/2 x 11 1/2 x 9 1/2	P	
SPEAKERKIT ⁵	Lambda Four	a.s.	170 ^R	10	2d	1d	600; 4,000	8	15-100	35-20,000	26 x 13 1/2 x 11	P, K, A	Price for pre-assembled cabinet kit.
"	Lambda Five	a.s.	185 ^R	12	2d	1d	600; 4,000	8	15-120	32-20,000	28 x 15 1/2 x 14 1/2	P, K, A	Price for pre-assembled cabinet kit.
"	Lambda Eight	i.b.	99 ^R		2d	1d	4,000	8	15-120	600-20,000	13 x 8 x 7	P, K, A	To be used in quad systems for ambience recovery.
SPEAKERLAB	1	a.s.	64 ^R	8		1d	2,500	4	8-40	N.A.	18 1/2 x 11 1/2 x 9 1/2	P, K	Knock-down cabinet kit prices; do not include shipping costs (to be paid by customer).
"	2	a.s.	89	10		1 1/2d	1,000	4	12-50	N.A.	23 5/8 x 15 1/2 x 11 7/8	P, K	
"	3	a.s.	149	12	6	1d	400; 5,000	8	20-100	N.A.	28 x 16 1/2 x 11 7/8	P, K	
"	4	a.s.	180	12	6	4 1/5x1 4/5 horn	400; 5,000	8	20-100	N.A.	28 x 16 1/2 x 11 7/8	P, K	
"	6	a.s.	215	12	14x3 1/8 horn	4 1/5x1 4/5 horn	700; 5,000	8	20-100	N.A.	28 x 16 1/2 x 11 7/8	P, K	
"	7	a.s.	279	12 & 10	14x3 1/8 horn	4 1/5x1 4/5 horn	700; 5,000	4	20-150	N.A.	29 x 18 x 15 1/8	P, K	
"	K	a.s.	399	15	16 1/2x5 1/2 horn	4 1/5x1 4/5 horn	400; 5,000	4	10-150	N.A.	50 3/8 x 32 1/2 x 28	P, K, A	
TANNOY	"Arden" ^R	vented	330	15, 2-way			1,000	8	3-85	45-18,000	39 x 26 x 14 1/2	P	Model names are suggested enclosures identical to those used for assembled
"	"Berkeley"	vented	330	15, 2-way			1,000	8	3-85	55-18,000	33 x 21 x 12	P	Tannoy speaker systems of the same designation.
"	"Cheviot"	vented	261	12, 2-way			1,000	8	5-60	60-15,000	33 x 17 1/2 x 10 1/2	P	
"	"Devon"	vented	261	12, 2-way			1,000	8	5-60	70-18,000	23 x 15 1/2 x 10 1/2	P	
"	"Eaton"	vented	255	10, 2-way			1,000	8	7-50	75-18,000	20 1/2 x 13 1/2 x 9 1/2	P	

Explanation of Symbols:

A—kit contains a preassembled cabinet. K—Knock-down cabinet included in kit; materials necessary to put cabinet together (such as glue and caulk) are often included. N.A.—not available. P—manufacturer supplies only plans for cabinet. R—see Remarks column. a.s.—acoustic suspension. c.d.—compression driver. d.—dome. i.b.—infinite baffle. r.r.—ring radiator. s.r.—slot radiator.

Footnotes:

¹The input power ranges given for Altec, Bozak, Heath, JBL, Speakerkit, and Speakerlab represent the range of output power per

channel suggested by these manufacturers for the amplifier driving the speakers. The figures given for Electro-Voice, Peerless, and Tannoy represent the maximum continuous power input (per channel) these speakers can withstand. In general, one may safely use an amplifier with a continuous power rating considerably above the speaker's, however, it is wise to protect the speakers with fuses or circuit breakers if this is done.

²Frequency response data for kits is highly approximate and can't be guaranteed; therefore, a number of manufacturers prefer to omit it (as indicated by "N.A." on the chart). In addition, dispute over the correlation between frequency response data and audible per-

formance in an average listening room results in some manufacturers' not publicizing this specification.

³Although these drivers are listed as "full-range," the high frequency response of systems utilizing them may be augmented through the use of Electro-Voice's High-Frequency Building Block Kits.

⁴The JBL model "names" actually refer to the model numbers of the crossovers used in the systems.

⁵At this writing, Speakerkit's product line is not complete. Five more kits should be available in September.

You're looking at the world's best-designed tonearm.

This is a Dual tonearm. It can make a big difference in the way your records sound. And how long they last.

The four-point gyroscopic gimbal is widely acknowledged to be the finest suspension system for a tonearm. It pivots the tonearm precisely where the vertical and horizontal axes intersect. The arm remains perfectly balanced in all planes of movement.

Further, the straight-line tubular design achieves the shortest distance between pivot and stylus. That's basic geometry. Curving the tonearm adds mass, decreases rigidity and makes the arm prone to lateral imbalance.

The vernier counterbalance permits you to balance the tonearm with micrometer-like precision. Tracking force is applied so that the stylus remains perpendicular to the record, even if the chassis is not level.

All this serves to establish and maintain the correct cartridge-to-groove relationship. So the stylus can trace the rapidly changing undulations of the groove walls freely, precisely and with the lowest practical force. In short, flawless tracking.

Despite the advantages of the gimbal-mounted tonearm, you won't find many around. But now, you will find one on every Dual turntable. Even our lowest-priced model, the new, fully automatic 1237.*

It's one more example of Dual's total commitment to engineering excellence.

CIRCLE NO. 56 ON READER SERVICE CARD



Dual

United Audio Products
120 So. Columbus Ave., Mt. Vernon, N.Y. 10553
Exclusive U.S. Distribution Agency for Dual

*Less than \$135. Other Duals to \$400. Actual resale prices are determined individually by and at the sole discretion of authorized Dual dealers.

**“The Ohm F
may well be the
finest speaker
on the market
and is certainly
without a doubt
among the
top few.”**

Reprinted from the 1977 edition of THE
COMPLETE BUYER'S GUIDE TO STEREO/HI-FI
EQUIPMENT.

If you'd like to find out what hi-fi experts from all
around the world have to say about the patented
Ohm F coherent sound loudspeaker, please visit
your Ohm dealer or write to us at the address
below. An informative full-line brochure that
explains how the Ohm F works is also available.



Ohm Acoustics Corp.

241 Taaffe Place, Brooklyn, N.Y. 11205

Ohm Canada Ltd.

9 Oriole Crescent, Toronto, Ontario M5P 1L6



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



The Merry Wives of Windsor: the Sort of Work Schumann or Mendelssohn Might Have Composed If They'd Had Nicolai's Sense of Theater

THE recorded repertoire may be vast, but there is still room for exploration and joyous discoveries. I am sure that the first complete recording in some twenty-five years of Otto Nicolai's *The Merry Wives of Windsor* (we have had good "highlights" on Angel and Deutsche Grammophon, but they are gone now, too . . .) will fall into the latter category for many opera lovers. This brightly melodious masterpiece by the greatly gifted but short-lived (1810-1849) Nicolai is the German answer to the comic operas of Rossini and Donizetti, the kind of work such contemporaries as Schumann or Mendelssohn might have composed had they possessed Nicolai's sense of the theater. Indeed, the best pages of Nicolai's score bring Mendelssohn to mind with the transparency of the writing and constant flow of witty inspiration.

Comparison with Verdi's *Falstaff*, which is based on the same Shakespeare play, is unavoidable, but those who are prompted to look patronizingly at Nicolai miss the point. The decades that separate the two operas (1849 to 1893) were crucial in musical history. In contrast to the harmonic advances and overall sophistication of the Verdi-Boito masterpiece, Nicolai gives us the traditional *Singspiel* of Mozart and Weber. And so, where the music of *Falstaff* flows with a mercurial continuity, that of *The Merry Wives of Windsor* is frequently halted by long stretches of spoken dialogue. Furthermore, as the title implies, the central interest in the Nicolai opera lies in the charming and conniving wives; Sir John goes through the familiar indignities, but he remains only a foil for the formidable females.

The Deutsche Grammophon set is a virtual triumph. Bernhard Klee's lovingly paced direction is perhaps a shade too meticulous at the expense of exu-

The Merry Wives: Mistress Page and Mistress Ford compare notes (engraving after a painting by Wm. Peters).





Bettmann Archive

OTTO NICOLAI (1810-1849)

A Schubert *Missa Solemnis* as Jubilant, Lyrical, and Engagingly Colorful as *Rosamunde*

ALL six of Schubert's Masses have been almost as neglected on records as they have been in live performance, though Seraphim's recent reinstatement of Erich Leinsdorf's fine Berlin recording of the last in the cycle (the E-flat, D. 950, on S-60243) brought to a total of three the number of versions of that work listed in the current issue of Schwann. Unlisted in those pages for several years has been the E-flat's immediate predecessor, the Mass No. 5, in A-flat (D. 678); it has just turned up on a new Nonesuch disc, conducted by Dennis Russell Davies,

and it is one of the nicest surprises of the year.

The Mass in A-flat was completed in 1822, the year of the *Unfinished Symphony*. It is a *Missa solemnis*, contemporaneous with the more grandly scaled one by Beethoven. Actually, the designation more aptly suits the E-flat Mass, for the A-flat is more jubilant than solemn, a most attractive blend of Schubert's characteristic lyricism with the theatrical/virtuoso elements in the Masses of Mozart and Haydn. (Indeed, in view of Schubert's curious omission of portions of the text, one might even question whether his Masses were really intended for actual liturgical use.) The scoring, for the winds in particular, is as engagingly colorful as that of the *Rosamunde* music composed the following year. (The *Osanna* is surely a shepherds' chorus, the *Benedictus* a flowing romance that opens out into another woodland fantasy.)

Davies' expert and communicative

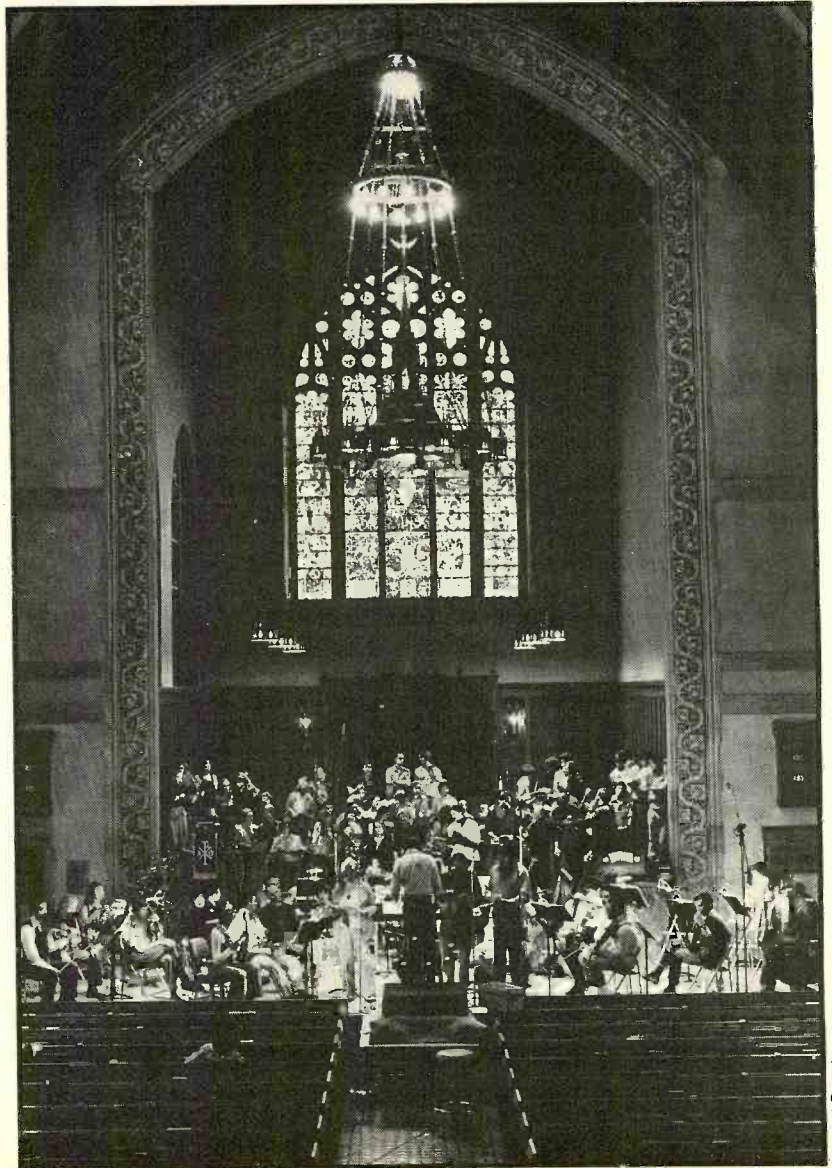
berant spontaneity, but he draws a precise and radiant-sounding performance from orchestra and singers alike. The casting could hardly be bettered. The voice of Edith Mathis is a trifle light for Frau Fluth (more girlish than womanly), but it projects all the wit and charm the role requires and is handled with perfect accuracy in the florid passages. Helen Donath and Hanna Schwarz complete the trio of Merry Wives; they are as excellent in all their individual opportunities as they are ravishing in ensemble.

Kurt Moll is an outstanding Falstaff, pouring out solid, rich tones with grave pomposity, liquid ease, and in unwavering observance of perfectly centered intonation. He is effectively contrasted to Bernd Weikl, a Fluth attractive in his sound and convincing in his outrage. Memories of Fritz Wunderlich (the Fenton on the deleted Angel disc of highlights) intrude on my appreciation of Peter Schreier's contribution: he is a good singer who nearly matches Wunderlich's technique, but not his warm, ingratiating timbre.

The spoken dialogue in this opera causes a bit of a problem with non-German-speaking audiences. Deutsche Grammophon has provided a narration (in German) as a means of streamlining the spoken passages between musical numbers. It is not a very good solution, but this minor flaw should not be held against the total effort: a delightful opera brilliantly performed and recorded. The album presentation, too, is admirably done. —George Jellinek

NICOLAI: *The Merry Wives of Windsor*. Kurt Moll (bass), Sir John Falstaff; Bernd Weikl (baritone), Herr Fluth; Siegfried Vogel (bass), Herr Reich; Edith Mathis (soprano), Frau Fluth; Hanna Schwarz (mezzo-soprano), Frau Reich; Helen Donath (soprano), Anna; Peter Schreier (tenor), Fenton; Karl-Ernst Mercker (tenor), Spärlich; Claude Dormoy (tenor), Dr. Cajus. Chorus and Orchestra of the German State Opera, Bernhard Klee cond. DEUTSCHE GRAMMOPHON 2709 065 three discs \$23.94.

St. Paul Chamber Orchestra recording in the House of Hope Presbyterian Church



Nonesuch Records

performance represents much more than the filling of a gap in the catalog. Though unlisted in Schwann, the Angelicum recording under Antonio Janigro has been available on MHS 878 for nearly a decade, and it is by no means unpleasing. But the new version knocks it out of court in just about every respect. First of all, good as Janigro's concept is, Davies' is more inspiring still; in place of the nondescript Italian soloists, Davies has a first-rate quartet; his choral forces are at least equal to Janigro's, and his Saint Paul Chamber Orchestra conspicuously outshines the Milanese ensemble in both the brilliance and the warmth of its playing. Enfolding it all is the rich and realistic sound, which leaves the competition even further behind. All in all, a stunning production, one that should go a long way toward making this splendid work as familiar and beloved as Schubert's instrumental compositions and songs. —Richard Freed

SCHUBERT: *Mass No. 5, in A-flat Major (D. 678)*. Marlee Sabo (soprano); Jan DeGaetani (mezzo-soprano); Paul Sperry (tenor); Leslie Guinn (baritone); Carleton College Choir, Chamber Singers, and Festival Chorus; Saint Paul Chamber Orchestra, Dennis Russell Davies cond. NONESUCH H-71135 \$3.96.

John Cale's Best Cuts: A Welcome Combination Of Rock, Brains, And Guts

JOHN CALE's music is not for everybody. Born in Wales and conservatory trained, he studied under John Cage until the early Sixties, when he decided rock-'n'-roll was more adventurous than contemporary "serious" music. He founded the Velvet Underground with Lou Reed and mostly defined the electronic drone of their first two albums.

It took the outside world about eight years to catch up with what the Velvets were doing; David Bowie, Mott the Hoople, and Roxy Music were some of the results. John has been making solo albums since 1970's "Vintage Violence," most of them as brilliantly idiosyncratic (if commercially unsuccessful) as Reed's were mindless and self-compromising, and now it looks as though the world of mainstream music

and John Cale are finally ready for each other.

It must get tiresome working perpetually in the future. Aside from his solo projects, Cale produced the Stooges' first album (in 1969, and effectively the birth of punk rock as it exists today), Nico, the Modern Lovers, and Patti Smith. Always associated with the rock avant-garde, his music now has real pop elements as well; it rocks hard, and many of the lyrics reflect a mature-adolescent sensibility akin to that of, say, the poet Charles Bukowski or novelist Henry Miller. Meanwhile, his musical discipline is constant, and his rich musical background informs everything he does with an intelligence, a sense of sonic nuance, that nobody else in rock quite matches. He consistently pulls off the rare feat of making solid rock-'n'-roll that's literate without being collegiate, complex without being show-offish.

"Guts" is a compilation of the best cuts from his three previously released Island albums. I would have liked to see them release his British-only "Helen of Troy" album (his best work) instead, but this one will serve as a fine introduction. Not averse to doing covers, he takes to its logical conclusion the depression Elvis' macho yowl fought against in the original version of *Heartbreak Hotel*, and his interpretation simply plows under Jonathan Richman's original of *Pablo Picasso*.

Of Cale's own songs, *Leaving It All Up to You* is at once the strangest and the most characteristic. Angry, confused, and controversial (it was originally deleted from "Helen of Troy" because of a reference to Sharon Tate), it's a masterful juxtaposition of total musical discipline with attitudinal frenzy that even manages to make Charles Manson funny without offending (and I'm easily offended by cheap



JOHN CALE: "guts" is what it takes



BONNIE
RAITT:
a voice
that's
salty but
pretty

Warner/Reprise

nihilism these days). In *Guts*, the protagonist knows another man is bedding his wife. Although he still loves her anyway, he'd like to kill them both and himself as well. But, like the rest of us, he's paralyzed by his civilization and even perhaps by his better instincts. He finally decides that both his rival's blandishments and his own paranoid fantasies are "familiar hyperbole." *Guts* is what it takes, I'd say, to let songs like this out of yourself in public in the first place. In that light, *Fear Is a Man's Best Friend* speaks well for itself by title alone.

Cale sings most of this stuff like a Jim Morrison with self-critical faculties. Though there is neuroticism in this music, he's not narcissistic about it (that's rare these days), and his honesty and sense of humor bring a warming universality to everything he does. Meanwhile, he's got the chops to orchestrate this vision on a level I can only compare (in rock terms) to Bernard Herrmann. John Cale will probably never be a superstar—he's too subtle, for one thing. But this isn't coming from the obscure fringes of the rock avant-garde either—it's simply some of the most viscerally intelligent rock made in years. If you pick up on it, shout it from the housetops. John deserves that much. —Lester Bangs

JOHN CALE: *Guts*. John Cale (vocals, guitars, bass, keyboards, percussion); vocal and instrumental accompaniment. *Guts*; *Helen of Troy*; *Pablo Picasso*; *Fear Is a Man's Best Friend*; *Mary Lou*; *Leaving It All Up to You*; *Gun*; *Dirtyass Rock 'n' Roll*; *Heartbreak Hotel*. ISLAND ILPS 9459 \$6.98, © Y81-9459 \$7.98.

Bonnie Raitt: Getting More Impressive All the Time

BONNIE RAITT has got to be one of the very best. She has a great voice that's salty but pretty, good taste in music, great credibility with people who live with music, and an ability to convey the essence of a song that's getting more impressive all the time. "Sweet Forgiveness," her latest album for Warner Bros., has all these elements and backs them with extraordinary instrumentals.

Bonnie's interpretive skills—and her band's rhythm section—come to the fore in *Runaway*, the old Del Shannon-Max Crook song, which she redefines in such a way as to discover real emotional quality. For the first time, the words and the phrasing make sense together.

She's picked out other good songs, too. Jackson Browne's *My Opening Farewell* is an excellent one. Paul Siebel's *Louise*, which Bonnie has been doing on stage for some time, is given simple and perfect acoustic backing and a compassionate but not overly mushy reading; you may never hear a better one.

From that pastoral folkie extreme, she moves with no apparent difficulty and nary a hitch to a rhythm-and-blues stomper, *About to Make Me Leave Home*, on through Browne's interlaced lyrics, on through the hard-rock piece *Three Time Loser*, and eventually to the kind of post-rock pop song Karla Bonoff (of Linda Ronstadt album fame) writes. A couple of the songs—*Three Time Loser*, which attempts too little, and the title song, which attempts too much—aren't up to the standard of the others, but then they aren't bad either.

Raitt is the kind of performer who has a reason for recording every song she records—a reason beyond merely

Gahr/CBS



BARBARA
COOK:
absolute
mistress
of her
talent

filling up albums—and it shows. This is one of those albums I'll play on my own time. A lot. —Noel Coppage

BONNIE RAITT: *Sweet Forgiveness*. Bonnie Raitt (vocals, guitar); Will McFarlane (guitar); Jeff Labes (keyboards); Dennis Whitted (drums); Freebo (bass). *Sweet Forgiveness; Gamblin' Man; Runaway; Two Lives; About to Make Me Leave Home; Three Time Loser; My Opening Farewell; Takin' My Time; Louise; Home*. WARNER BROS. BS 2990 \$6.98, ® M82990 \$7.97, © M52990 \$7.97.

The New Barbara Cook's New Recording: Superb Musicianship and Bittersweet Wisdom

WILL wonders never cease? Well, sometimes they pause for a little. The wonder that was Barbara Cook, the singing ingenue of all those Broadway shows (*The Music Man, She*

Loves Me, The Gay Life, and so many others), dropped out of theatrical sight and hearing for several years, leaving behind only the memory of some spectacular evenings. Her eight-show-a-week performance as Cunegonde in Leonard Bernstein's *Candide* (which included her unforgettable *Glitter and Be Gay* aria, the *Sempre Libera* of American lyric theater) remains an incredible feat to this day.

I can't say that I missed her very much while she was away, however. She had always seemed to be a super-competent performer: I always responded strongly to the Puccini-esque vibrato of emotion she poured into such things as *'Til There Was You*, and the very real heart-wrencher she made out of the Dietz-Schwartz *Magic Moment* still gets me every time I hear it. But she also had a touch of steely unreality about her—she was going to get it right, by God, or strangle in the attempt. She had a rigid, Olympian quality that somehow made her work seem impersonal.

When Barbara Cook returned to performing a few years ago it was as a cabaret and concert artist, and she revealed herself as a wonder of a totally different kind, no longer the cool vocal acrobat I remembered. First, there was a womanliness in place of the ingenue-

girlishness; then there was the bitter-sweet wisdom of her lyric readings; and finally there was the same superb musicianship, now suffused with light and shade that put a personal signature on every piece of material she touched. She had filled out in oils the angular pencil sketch that was her talent.

That she's lost none of the strength or immediacy of her earlier performing style but only enriched and enlarged upon it can be heard, and gorgeously, on her new Columbia release "*As of Today*." It contains magnificent performances that range all the way from Irving Berlin standards (*What'll I Do* and *Let Me Sing and I'm Happy*) to the demanding, cerebral intensity of Janis Ian's *Stars* and the throwaway charm of Leslie Bricusse's *You and I*. She's on top of it all all the way, absolute mistress of the music, the lyrics, and her own wide-ranging talent. Trot on down to your local record store and salute the return of a fine singing artist.

—Peter Reilly

BARBARA COOK: *As of Today*. Barbara Cook (vocals); orchestra. *Ain't Love Easy; Why Did You Promise Me the World?; You and I; Sing a Song with Me/Let Me Sing and I'm Happy; It Was; One More Love Song/What'll I Do; Waiting; Candlelight; Stars*. COLUMBIA PC-34493 \$6.98, ® PCA-34493 \$6.98, © PCT-34493 \$6.98.

After people learn what we've done, no one will heckle our speakers.

We're as close to the impossible as possible.

Our new speakers color sound. Anybody's speakers do.

Should someone tell you otherwise, they speak with forked frequency response.

We at Sony approached the development of our new speaker line with this grim reality in mind.

Thus our goal was to create speakers with a minimum of coloration. With a frequency response flat and wide. With low distortion. And with repeatability. Which is critical. Which means that each speaker we turn out will sound like the one before and the one after.

Searching and researching.

Our basic dilemma was that speaker specs don't specify much.

You can build two speakers with identical specs, and find they'll sound non-identical.

That's because your sophisticated ear can pick up differences our clumsy measurements can't.

Some examples:

You can hear how pure water is. The purity of the water in which the pulp for the speaker cone is pressed will influence the sound. (Spring water is the best.)

But water purity would hardly change the frequency response—or any other measurable characteristic.

Nor would the dye used to color the cone—or the glue used in gluing the cabinet.

But you'd hear the dye and the glue.

And there are dozens and dozens of elements that interact this way.

So our job was mammoth. To correlate these factors in order to reach the goal we outlined earlier. Changing one

changes the other and almost changed our minds about going into the speaker business.

But we stuck it out. And found the answer to the juggling of these variables thanks to a major technological innovation.

Trial and error.

That's why we labored for three years to bring you our speakers. While other manufacturers rushed frantically to market with theirs.

We keep the whole world in our hands.

Once we understood how to control the sound of our speakers, we realized we had to control what went into our speakers.

So we did the only logical thing.

We built a plant.

And pursuing that logic, we built it at a place called Kofu. Which is at the base of Mt. Fuji. Where we can get all the spring water we want.

This factory does nothing but produce—under outrageously close control—the components for our speakers.

Whatever we do buy, we specify so carefully that our vendors have nightmares about us. (It's unfortunate that we can't make *everything* ourselves, but only God can make a tree, and only wood can make a fine cabinet.)

Few companies make this effort.

So it's safe to say that when it comes to exercising this kind of control, our speakers are a voice in the dark.

Improvements that are heard and not seen.

As you can see, there's a lot that goes into producing a speaker that's not easily seen. (One beautiful exception—the handsome finish on our cabinets.)

That includes the carbon fiber that we mix into the speaker cone paper.

Carbon fiber is light and strong. (Why they don't use it in girdles we'll never know)

Light, so our speaker is more efficient. Meaning you need less power to operate it. Meaning you are closer to the ideal of converting electrical energy to mechanical energy without a loss of power.

Light, so our speaker cone reacts quickly to stops and starts in the signal. The result: improved transient response.

Strong, to prevent the cone from bending out of shape in the high frequency range.

Moreover, carbon fiber doesn't resonate much. It has what's called a low Q, and it took someone with a high IQ to realize it would absorb the unwanted vibration rather than transmit it down the cone.

We also cut down on unwanted vibration (as opposed to the wanted vibration, which is music), by using a cast aluminum basket rather than a stamped, shoddy cheap metal one.

We could go on, but at this point the best thing would be for you to move on to your nearest Sony dealer. And listen.

Because the results of our three years of labor will be clear after three minutes of listening.

At which point, far from heckling our speakers, you'll be tempted to give them a standing ovation.

SONY®

© 1977 Sony Corp. of America, Sony, 9 W. 57 St., N.Y., N.Y. 10019
SONY is a trademark of Sony Corp.

Suggested retail prices: SSU-3000, \$300 each; SSU-4000, \$400 each.

CIRCLE NO. 36 ON READER SERVICE CARD



The SSU-3000 and SSU-4000.
Great speakers like these deserve an audience.

Rediscovered Historical Beatlefacts



HISTORY, as the mother of a friend of mine once observed, is a thing of the past. Thus, two hitherto unreleased live albums documenting the major pop phenomenon of the last decade are, logically, mere historical artifacts. But the strange thing is that the Beatles, who no longer exist as a unit and have not made a new record together in seven years, resolutely refuse to lie down and become history.

Despite the best revisionist efforts of various pop-music critics and musicians, high-school kids far too young to have experienced the Beatles firsthand still find them "relevant" and have, in droves, shelled out money for last year's Capitol repackaging ("Rock and Roll Music," SKBO-11537). Even John Lennon is a Beatles fan again. Consider this: what *Seventies* performer's formative work could be released more than twelve years later and stir up anywhere near this much excitement and anticipation? "Elton John's Basement Tapes"? "Bette Midler at the Improv"? "The Eagles in Linda Ronstadt's Kitchen"? But the Beatles are as vital a pop presence as ever, and the question of their ultimate significance—whether they were merely one generation's kitsch or real music makers—is still unanswered.

AND NOW, the rumors behind the news. Both of the new sets have existed for quite a while in one form or another, attaining an almost legendary status. The Capitol package, "At the Hollywood Bowl," was originally recorded—at two live shows, in 1964 and 1965—with an eye to release and, in fact, actually reached the acetate stage long ago (and went on to become the most widely circulated of all Beatles bootlegs). A snippet from it has been in the catalog for lo, these many years as part of the still available schlock "documentary" Capitol whipped together called "The Beatles Story" (STBO-2222). But now, original Beatles producer George Martin has taken the old three-channel masters, cleaned them up as best he could, mixed them for stereo, and sequenced the cuts intelligently. The resulting new disc is highly listenable, if not quite up to contemporary sonic standards. But it certainly stands comparison technically with any other live album from the same period—"Five Live Yardbirds" or "Beach Boys Concert," for example.

"Live! at the Star-Club," on the European Bellaphon label, distributed here by Atlantic records on the Lingasong label, is far more primitive. It was recorded with a single microphone on a nonprofessional machine in the crowded club in Hamburg, West Germany, where the Beatles worked out in the days before they became international celebs. The sound, unsurprisingly, is pretty rank, although the club atmosphere is faithfully caught. The Beatles themselves are reportedly pleased with the Capitol release, but the Hamburg set is a bit too raw for them. The P.A. doesn't cut through the audience hubbub very well, although the instruments are loud and clear (the drums overpoweringly so). The whole thing sounds pretty much like the recordings you might make of your own garage band with a portable cassette machine.

The music? Well, it's delightful on both recordings. The sheer energy and drive of the group are so winning that even the technical deficiencies of the Hamburg set are almost forgivable. Both John and Paul are in superb vocal shape; listen to John in *Twist and Shout* or Paul in *Long Tall Sally* on the Capitol release—and they were singing without monitors, remember, so from their perspective it was in effect a *cappella*. Ringo demonstrates why two whole generations of session drummers have felt compelled to cop his style. George plays with the kind of youthful fire that he now seems unable to summon up, and Paul was already the superb bassist he is today (the major revelation of the German tapes). At least judging from this recorded evidence, John and George are merely waxing nostalgic when they claim that the Beatles declined as a performing band once they became famous. In terms of tightness and overall musicianship, the 1964 and 1965 concerts are clearly superior to the group's earlier work. When David Crosby described the Beatles'

interaction at their height as "telepathic," he wasn't far off.

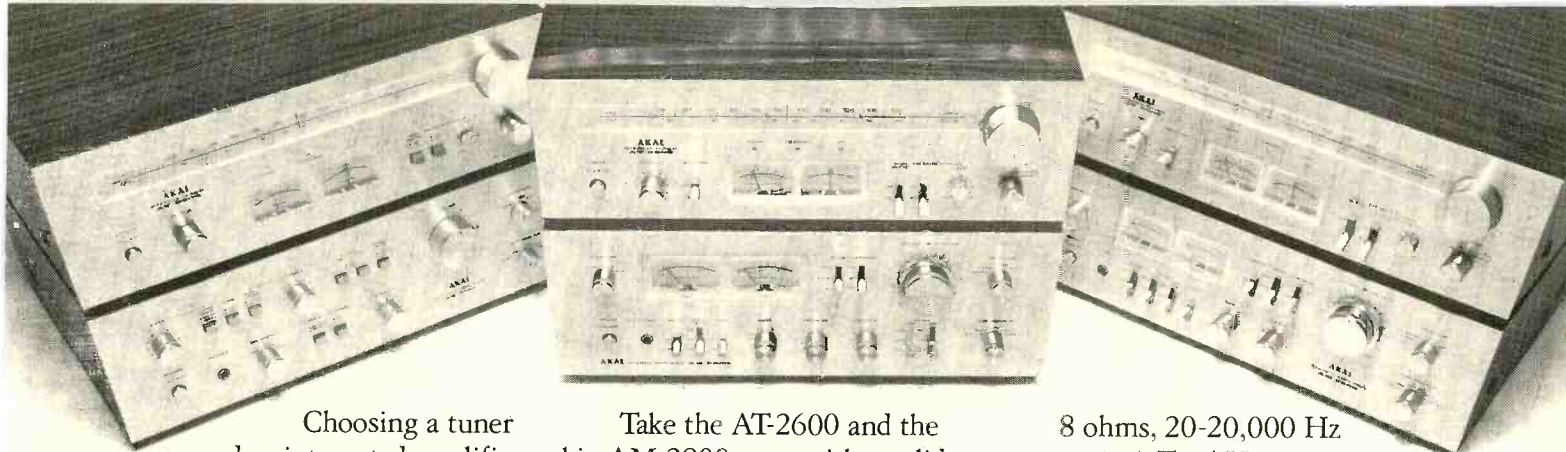
I've deliberately resisted the temptation to indulge in any of the standard socio-musical yammer that discussions of the Beatles usually bring forth from even the most sober observers. At this point, another Wilfrid Mellers tome on Dorian Modes and the Loss of Innocence is the very last thing we need. What's important, I think, about both these albums is that . . . well, they're *fun*. I defy you to listen to them without grinning, especially if you were around at the height of Beatlemania. Even if you're too young to be in that category, you'll probably still have the same reaction, except that your appetite will be whetted for more—in which case, Lord knows, there's a big enough catalog for you to investigate. In the meantime, regardless of what *It All Meant*, it's good to have both "Live! at the Star-Club" and "The Beatles at the Hollywood Bowl" around. Thanks again, lads.

—Steve Simels

THE BEATLES: At the Hollywood Bowl. The Beatles (vocals and instrumentals). *Twist and Shout*; *She's a Woman*; *Dizzy Miss Lizzy*; *Ticket to Ride*; *Can't Buy Me Love*; *Things We Said Today*; *Roll Over Beethoven*; *Boys*; *A Hard Day's Night*; *Help! All My Loving*; *She Loves You*; *Long Tall Sally*. CAPITOL SMAS-11638 \$6.98, © 8XW-11638 \$7.98, © 4XW-11638 \$7.98.

THE BEATLES: Live! at the Star-Club in Hamburg, Germany, 1962. The Beatles (vocals and instrumentals). *I Saw Her Standing There*; *Roll Over Beethoven*; *Hippy Hippy Shake*; *Sweet Little Sixteen*; *Lend Me Your Comb*; *Your Feet's Too Big*; *Red Sails in the Sunset*; *Everybody's Trying to Be My Baby*; *Matchbox*; *Talkin' 'Bout You*; *Shimmy Shake*; *Long Tall Sally*; *Remember You*; *Twist and Shout*; *Mr. Moonlight*; *A Taste of Honey*; *Besame Mucho*; *Reminiscing*; *Kansas City*; *Ain't Nothing Shakin' Like the Leaves on a Tree*; *To Know Her Is to Love Her*; *Little Queenie*; *Falling in Love Again*; *Ask Me Why*; *Be Bop a Lula*; *Hallelujah, I Love Her So*. LINGASONG LS-2-7001 two discs \$13.98, or BELLAPHON BLS 5560 two discs \$11.98 (from Jem Records, Import Record Service, P.O. Box 343, 9001 Hadley Road, South Plainfield, N.J. 07080; include 70¢ handling charge).

. . . what's important
about these albums
is that they're fun . . .



Choosing a tuner and an integrated amplifier is a lot like choosing a mate. You look for things like compatibility, performance, appearance and, of course, fidelity.

AKAI just made the process of matching component separates foolproof with a new line of tuners and integrated amplifiers. Paired on the grounds of total compatibility. And priced to be affordable.

Take the AT-2600 and the big AM-2800 amp, with a solid 80 watts, RMS per channel, 8 ohms, 20-20,000 Hz at .08% Total Harmonic Distortion.

Or the AM-2600 amp at 60 watts, RMS per channel, 8 ohms, 20-20,000 Hz at .1% Total Harmonic Distortion. And match it with the AT-2600 tuner.

Or maybe the AM-2400 amp at 40 watts, RMS per channel,

8 ohms, 20-20,000 Hz at .15% Total Harmonic Distortion. And the AT-2400 tuner.

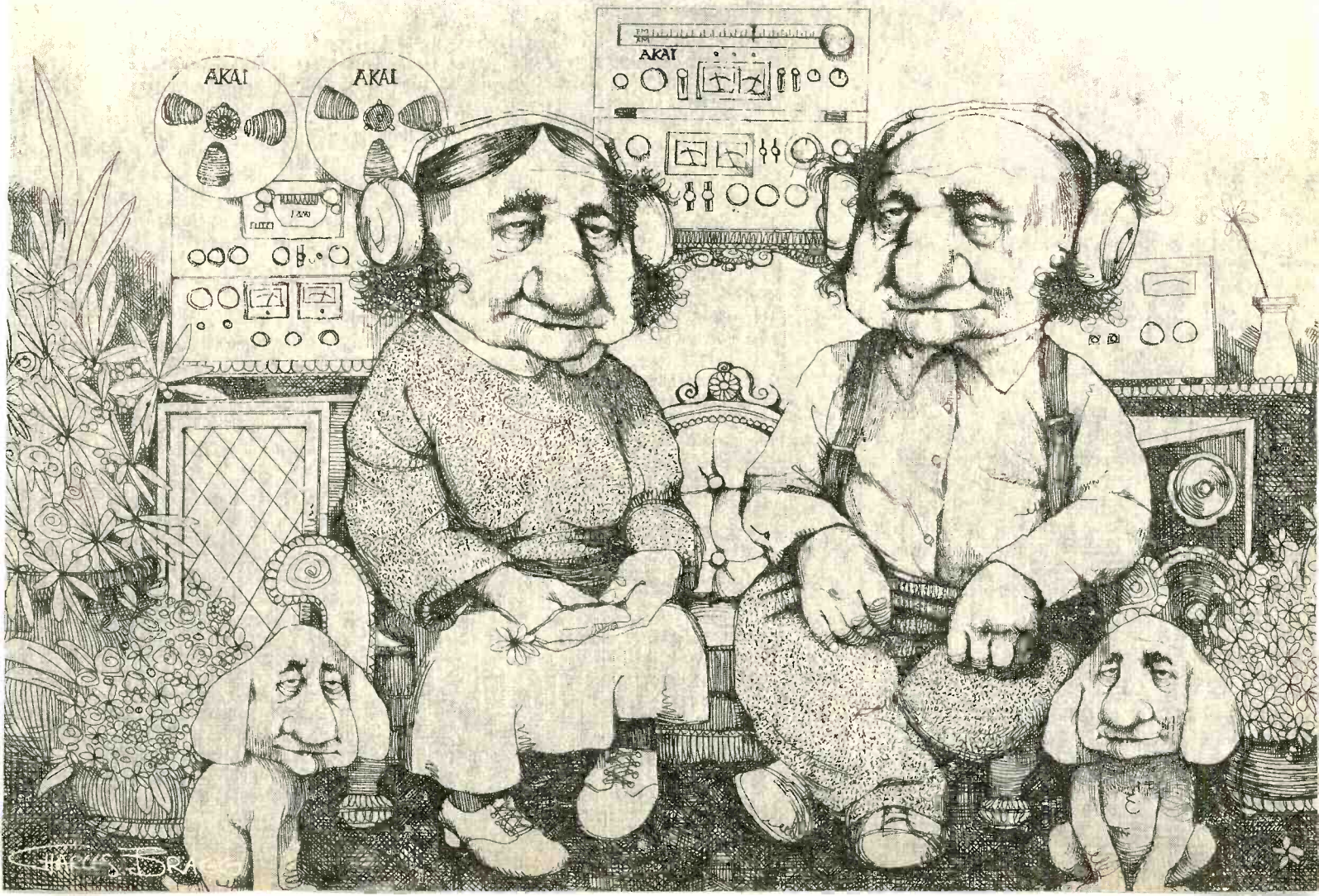
No matter which of the perfect AKAI couples you choose, you get specs and features not found on all-in-one receivers in the same price category. Improvements you can hear. With clean, clear power per channel.

To hear the new separates, see your AKAI dealer. And live in perfect harmony.



For a 18 " x 24" poster of this Charles Bragg etching, send \$2 to AKAI, Dept. SR, 2139 E. Del Arno Blvd., P.O. Box 6010, Compton, CA 90224, ATTN: Couples.

AKAI INTRODUCES THE PERFECT COUPLES.



This is an

AIR MATTRESS



Like Discwasher, this mat gives you more for your money.

- heavy vinyl construction
- 3' x 6' size (20% more than usual)
- super floating!

Send \$8.50 (\$7.00 plus \$1.50 shipping) to:



discwasher, inc.

1407 N. Providence Rd.
Columbia, Missouri 65201

CIRCLE NO. 10 ON READER SERVICE CARD

ant surprise. Sure, lead singer Willy DeVille has pinched his entire vocal style from Mick Jagger, and the band, in part because of Jack Nitzsche's production, has the same kind of crude, ragged sound found on the albums Neil Young made with Crazy Horse. Still, overall, DeVille's sound is closer to that of Ben E. King's *Spanish Harlem* and Jay and the Americans than it is to, say, Television or the Ramones. Call me a terminal Sixties type if you will, but I rather like Mink DeVille for just that reason.

This isn't music for everybody; there's a lot of posturing here that isn't totally believable, and these boys are certainly not slick enough to impress the Aerosmith fans whose attention they'll have to attract if they're ever going to make it big. Still, I'm predicting that, provided they don't start believing their own hype too soon, Mink DeVille is going to be



Swan Song Records

DAVE EDMUNDS
Guitar-wizard/one-man-band/producer

around for a while. They sound like New York, not just the Bowery. S.S.

RECORDING OF SPECIAL MERIT

DAVE EDMUNDS: *Get It*. Dave Edmunds (guitar, keyboards, bass, drums, vocals); other musicians. *Get Out of Denver*; *I Knew the Bride*; *Back to School Days*; *Here Comes the Weekend*; *Worn Out Suits*, *Brand New Pockets*; *Where or When*; *Juju Man*; *Git It*; and five others. SWANSONG SS 8418 \$6.98, © TP-8418 \$7.97, © CS-8418 \$7.97.

Performance: **Terrific**, but . . .
Recording: **Excellent**

It's hard to know what to make of Dave Edmunds once you get over your initial awe at the scope of his talents. I've enjoyed every one of his all too rare records, and they invariably create instant fans anytime I play them for other people, but I'm beginning to think that the reason he isn't a household word goes beyond a mere lack of promotion. Maybe some people are just born to be cult figures.

Anyway, for the uninitiated, Edmunds is sort of a combination Eric Clapton and Roy Wood, the ultimate guitar-wizard/one-man-band/producer. With deceptive ease, he can reproduce the sound and style of literally any-

one in rock. He's already done Chuck Berry, the Everly Brothers, Bob Dylan, and the Phil Spector girl groups (!), and on "Get It" he takes on Elvis, Hank Williams, the Beach Boys, Dion and the Belmonts, and a few others so obscure I haven't been able to place them. If that sounds as if he's too clever for his own good, it's meant to; such imitation merely requires facility, and only Edmunds' total commitment to the music keeps him from being nothing more than the Todd Rundgren of the Rock Revival.

There are, however, some indications here that he's beginning to find his own voice at last. There are more originals than usual, and while they're all period evocations (surf stuff, rockabilly, straight country) they have a marvelously relaxed groove to them that recalls such early-Seventies pub bands as Brinsley Schwartz and the current Graham Parker (not surprising, really, since Edmunds has worked with both of those outfits). If this is the direction he's going to explore in the future, we should be in for a treat. On this album, he has as usual displayed remarkable intelligence in the choice of cover material (*Get Out of Denver*, an early Bob Seger tune) and in matching the production approach to individual songs; the Dion thing is rearranged à la Phil Spector, the Hank Williams updated a few years to sound like Carl Perkins, and so forth.

I really hate to nitpick about Edmunds, because he deserves a much wider audience. Lord knows this is a terrific album—honest, unpretentious, and entertaining—and I wouldn't like to frighten anybody away from it by voicing my reservations. Let's simply say that one senses here an unrealized potential, that Edmunds has it in him to make a truly classic record that will succeed in synthesizing all the different kinds of music he loves. While "Get It" isn't that album, it's close enough for you to take the title literally. All he needs, I suspect, is a bit of audience feedback. S.S.

BRYAN FERRY: *In Your Mind*. Bryan Ferry (vocals); Chris Spedding (guitar); Paul Thompson (drums); other musicians. *This Is Tomorrow*; *All Night Operator*; *One Kiss*; *Love Me Madly Again*; and four others. ATLANTIC SD 18216 \$6.98, © TP-18216 \$7.97, © CS-18216 \$7.97.

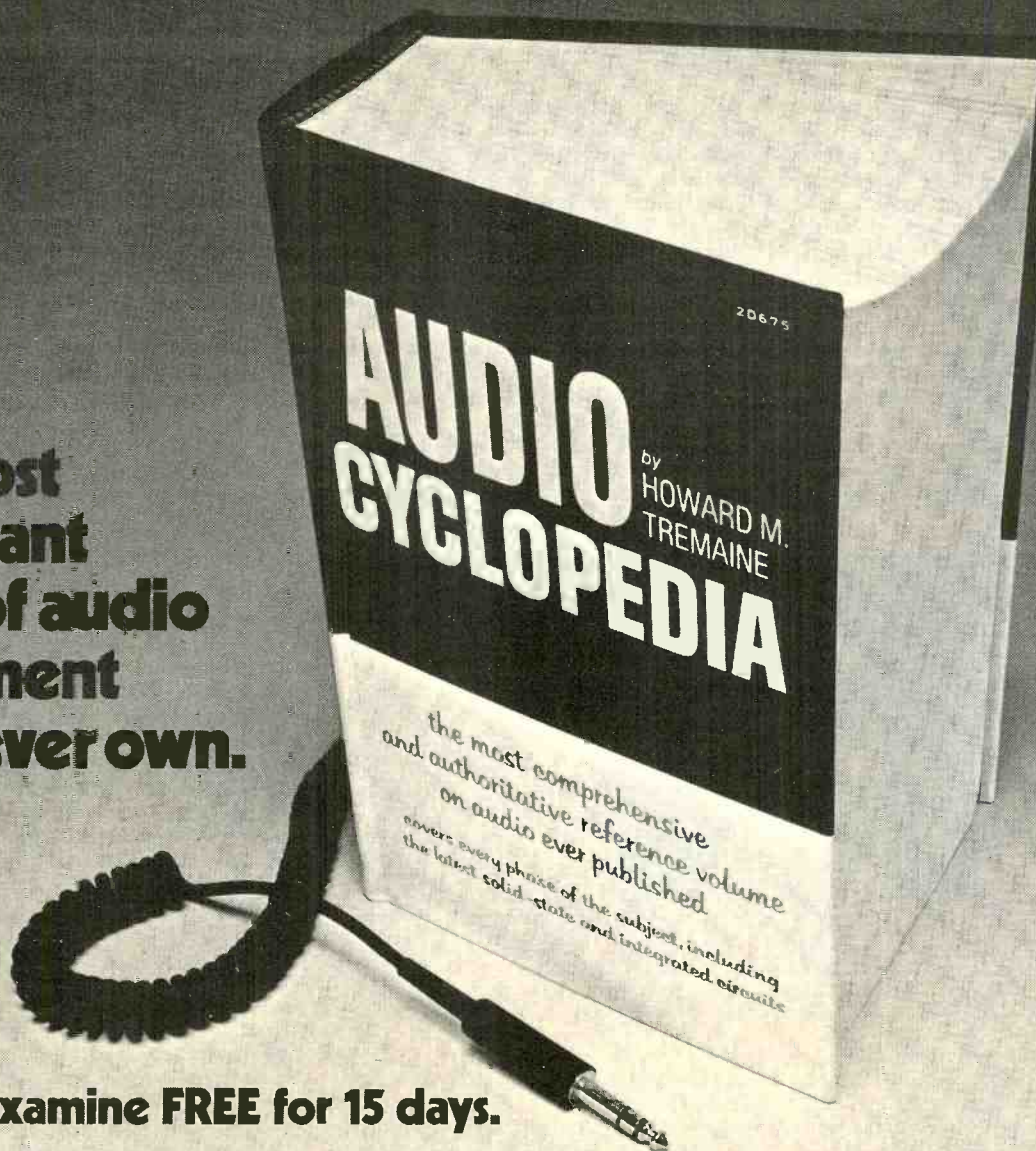
Performance: **Not half bad**
Recording: **Good**

I must be mellowing or something. I was all prepared, you see, to have the time of my life blasting this record with my heaviest, snidest ammunition. I had a score to settle and was even ready to use such cheap shots as suggesting that Bryan and his new bride Geri name their first kid Staten Island. After all, this is the man whose avant-garde pretension, fashionable *Angst*, and impossibly mannered vocals resulted in an incredibly overrated string of recorded embarrassments that made me long for a Tiny Tim comeback.

But, as I said, I must be mellowing, because I actually like "In Your Mind." It doesn't sound a bit like Bryan Ferry (well, maybe a little). It sounds like a limited but imaginative singer rooted in r-&-b (the skeleton in Ferry's closet is that his college band used to do James Brown material) singing some attractive, quirky tunes backed by one of the solidest session aggregates I've heard in some time. Guitar whiz kid Chris Spedding and ex-Roxy thumper Paul Thompson are particular-

(Continued on page 92)

The most important piece of audio equipment you'll ever own.



Yours to examine FREE for 15 days.

25 FACT-FILLED CHAPTERS ARRANGED IN "EASY-TO-FIND" QUESTION AND ANSWER FORM

- Basic Principles of Sound
- Acoustics, Studio techniques, and Equipment
- Constant-Speed Devices, Motors, and Generators
- Microphones
- Attenuators
- Equalizers
- Wave Filters
- Transformers and Coils
- Sound Mixers
- VU and Volume Indicator Meters
- Vacuum Tubes, Transistors, and Diodes
- Audio Amplifiers
- Disc Recording
- Cutting Heads
- Recording and Reproducing Stylus
- Pickups
- Magnetic Recording
- Optical Film Recording
- Motion Picture Projection Equipment
- Loudspeakers, Enclosures, Headphones, and Hearing Aids
- Power Supplies
- Test Equipment
- Audio-Frequency Measurements
- Installation Techniques
- General Information, Charts and Tables

Be our guest. Examine the AUDIO CYCLOPEDIA free for 15 days. You'll find out why it is considered the most comprehensive and authoritative book ever written on the subject. And you'll get a FREE \$3.50 bonus book to keep no matter what!

The AUDIO CYCLOPEDIA is literally a one-book audio library. It has long been considered "the bible" by amateur stereo buffs as well as professional technicians. That's why you'll find it in constant use not only in home workshops and at stereo centers, but also in recording studios, broadcast booths and concert halls.

This giant reference book is over 3" thick,

and packed with 1,757 illustrated pages. It features 3,645 questions and answers and a 50 page "instant-find" index for subject identification. It is truly the big one in audio electronics and it puts all the information you'll ever need right at your fingertips, chapter by chapter.

Send for the AUDIO CYCLOPEDIA today. If you don't agree that it's the most important piece of audio equipment you own, just return it within 15 days. You won't owe a cent. And no matter what you decide, you'll get a free \$3.50 copy of *The ABC's of Tape Recording* to keep just for mailing the coupon.

FREE-BOOK FREE-TRIAL COUPON



Save postage & handling costs. Full payment enclosed (plus tax where applicable). 15-day return privilege still applies.

Yes, please rush me the AUDIO CYCLOPEDIA (#21455) for my free trial. I understand if not completely satisfied, I may return it within 15 days, and owe nothing. Otherwise, it's mine to keep for only \$34.00 plus postage and handling and local taxes (where applicable). **And, whatever I decide, a copy of "The ABC's of Tape Recording" (valued at \$3.50) is mine free!**

Name _____
 Address _____
 City _____
 State _____ Zip _____



Mail to Audel
 4300 W. 62nd Street
 Indianapolis, Indiana 46206
 A Division of Howard W. Sams & Co., Inc. BD32

OVER the last decade or so, Burt Bacharach has been demonstrating not only that he can make charming music, but also that old smoothies can still make out like cat burglars in the tough, "thug"-dominated world of pop. "Futures," the Master's newest offering on A&M, is another engaging, smoothly clicking piece of stagecraft cannily designed to satisfy the tastes of his large and admiring audience.

For several years, while she trooped her one-woman show from Pasadena to Poland, Marlene Dietrich—old Madame Perfectionist herself—employed Bacharach as her musical director. One lesson he seems to have learned well from the experience is to make the action fit the image. As a result, Bacharach's music

that at length it is not even that. The good news about "Futures" (which bodes well for Bacharach's own) is that he has once again teamed with Hal David, along with two other writer friends, James Kavanaugh and Neil Simon.

Simon's contribution is the lyrics for *Seconds* ("Seconds, I missed him just by seconds . . ."). The song is a pretty good tear-jerker, but its mean-minded, cleverness-at-any-cost tag lines ("And all the men I've met since then/Were seconds") reveal a vulgarity that probably accounts for Simon's phenomenal commercial success. On the other hand, Kavanaugh's two songs—*The Young Grow Younger Every Day* and *We Should Have Met Sooner*—are both very, very good. *Sooner* is

ly good. This kind of thing is palpably unfair to reviewers, like me, who don't like having their preconceptions shattered, but obviously a much better deal for the listener. Two years ago, when panning one of his earlier albums, I joked that Ferry was the first rock star to raise sneakiness to the level of genius. I guess I was more on target than I realized, for in making an *almost* delightful album Bryan has pulled off the sneakiest move of his career. S.S.

RECORDING OF SPECIAL MERIT

GRACIE FIELDS: *The Amazing Gracie Fields.* Gracie Fields (vocals); orchestra. *Sally; Wish Me Luck; Danny Boy; Ave Maria; Sing as We Go; Heaven Will Protect an Honest Girl;* and six others. MONMOUTH-EVERGREEN MES/7079 \$6.98.

Performance: **Immortal**
Recording: **Well restored**

Gracie Fields—"Our Gracie" to her huge British audiences—is probably the greatest star the English music halls have come up with in this century. At her peak in the Thirties, when most of these recordings were produced, her films and radio appearances made her the highest paid and easily the best loved performer in Britain. The only American equivalent to her particular kind of National Treasure status would be Will Rogers. Well, it's easy to hear what all the fuss was about in this marvelous collection of her work (it unfortunately leaves out her post-war resurgence as a top star in England and America based on her hit *Now Is the Hour*, but perhaps that will appear at a later date). Here Gracie is often simply glorious as she runs through such classics as *The Biggest Aspidistra in the World*, *Will You Love Me When I'm Mutton?*, and *Heaven Will Protect an Honest Girl* in her broad Lancashire accent and her gamely love-lorn style. And, like all great stars, she can be gloriously awful too, as in such gaspers as *Danny Boy*, *Annie Laurie*, and (hold on!) *Ave Maria* (sung in Latin!). This is an album to make you star-crazy all over again even though we live in an era when the number of real stars seems to have shrunk to almost nothing. P.R.

PETER GABRIEL. Peter Gabriel (vocals, keyboard, flute, recorder); vocal and instrumental accompaniment. *Moribund the Burgermeister; Humdrum; Slowburn; Down the Dolce Vita; Waiting for the Big One;* and four others. ATCO SD 36-147 \$6.98, © TP 36-147 \$7.97, © CS 36-147 \$7.97.

Performance: **De Milleau**
Recording: **Kubrickian**

Peter Gabriel used to be the lead singer for Genesis, which, like Yes and Queen, specialized in loud, heavily ornamented rock, full of sonic filigree and tinsel, colored bulbs and twinkling lights. Only in Genesis' case somebody forgot to include a Christmas tree to hang it all on. Santa never came for Genesis as he did for Yes (which didn't have a tree either but was sly enough to hang it all on an organ player named Rick Wakeman). Genesis had no sold-out arenas, no stockings bulging with fat royalty checks, just glitter.

So Gabriel departed Genesis (leaving their prospects even bleaker) to make his way as a Solo Artist. His debut album was extravagantly produced by Bob Ezrin, who can do no wrong in my book since he manages to put the voices of his self-sired moppets somewhere



Burt Bacharach's Back

sounds just like he looks—a look we're repeatedly exposed to as this jet-setting composer/personality turns up on TV commercials, in fan magazines, on talk shows, in tennis exhibitions, at star-studded movie premieres, or posing in front of his own racing stables.

Bacharach is the sun-tanned darling of the God of Singles Bars. He's The Guy Who Always Makes Out—certainly in his business life, but, even more important, in his "relationships." He floats easily from invitation to invitation, suavely plying his practiced charm on any female within range of his dazzling smile. Willing to be little boy, father, or brother as the occasion demands, he always, *always* keeps his cool, always has it made.

His music reflects this sort of "attitude dancing." The nervous, carefully crafted, completely contemporary (though a bit square) style, based on rapid successions of crescendos, is more concerned with flashy dramatic effect than with either content or melody. It accurately typifies those restless, searching people, intent on attaining the good (material) life, who buy all that stuff advertised on TV.

One of the ways Bacharach had it made was his fortunate association with lyricist Hal David, a highlight of which was their brilliant score for *Promises, Promises*. But the two have taken mostly separate paths in recent years, and it's become evident that when he's not supported by a writer with gifts equal to David's, Bacharach tends to lapse into a musical rhetoric that is so *merely* "charming"

about two people who settled for the suburban dream and now can't escape it, while *Young* is a finely crafted song about promise and hope that is beautifully performed here by Peter Yarrow. But the blockbuster of the album is Hal David's *No One Remembers My Name*, a you-can't-go-home-again song that ends with the triumphant realization that the present is just fine and the struggle to get away from home was well worth it after all.

IF I seem to be damning Bacharach with faint praise, it may be because, when I used to hit the bars myself, I generally got drunk, stepped on feet, tried to talk to everyone about Camus, and went home alone—and all the while there was some guy like Bacharach in the crowd, smilingly accepting the easy homage offered him. Dyspepsia may be linked to envy, but we must leave room for the possibility that one man's musical celebration of life(style) may be just so much rice pudding to another. Sorry, Burt. —Peter Reilly

BURT BACHARACH: *Futures.* Burt Bacharach (keyboards); James Anders, Peter Yarrow, Joshie Armstead, Melissa Mackay, Sally Stevens, Marti McCall (vocals); orchestra. *I Took My Strength from You; Us; Futures; Where Are You?; We Should Have Met Sooner; No One Remembers My Name; The Young Grow Younger Every Day; Another Spring Will Rise; Seconds; When You Bring Your Sweet Love to Me; Time and Tenderness.* A&M SP-4622 \$6.98, © 8T-4622 \$7.98, © CS-4622 \$7.98.

on every album he does—proof positive that the nuclear family is *not* dead. In Ezrin's extended family are a group of prodigious Toronto-based musicians, including guitarists Steve Hunter and Dick Wagner and drummer Joey Chirowski. But, because of the strict rules of the Ezrin family, they don't always get to display their talents very much, which is a shame.

Gabriel's album is produced so elaborately that everybody involved but Ezrin plays second fiddle. Gabriel does a semi-credible impersonation of Randy Newman as he sings about the big Southern California earthquake, but that's about the extent of his vocal ability, and his original compositions are . . . well, somehow I can't see *Moribund the Burgermeister* becoming a standard—or even a future K-Tel nostalgia item. On stage with Genesis, Gabriel used to dress up as a toadstool, and such experiences tend to leave their mark. Come to think of it, this album isn't all that different from Genesis, at that—more tinsel without a tree.

Lester Bangs

MARVIN GAYE: *Live at the London Palladium*. Marvin Gaye (vocals); vocal and instrumental accompaniment. *All the Way 'Round; Since I Had You; Come Get to This; Let's Get It On; Got to Give It Up; Trouble Man*; and three medleys. TAMLA T7-352R two discs \$7.98, © 9-352NT \$9.98, © 9-352NC \$9.98.

Performance: **Lackluster**
Recording: **Good**

Marvin Gaye has recorded a score of great performances since the 1960's—*Hitch Hike, I Heard It Through the Grapevine, Ain't That Peculiar, Inner City Blues, and You're All I Need to Get By* are among them—but his craftsmanship belongs more to the recording studio than the stage. Three sides of this double-disc album are of a live performance in which Gaye sings medleys of his long string of hits, but the pedestrian arrangements make them all sound like the same song; the dynamics, twists and turns, and gritty moods of the original studio performances are pressed flat as a Peking duck. The fourth side, thrown in for good (and commercial) measure, is the unedited eleven-minute-plus version of *Got to Give It Up*, which has been a hit in the discos. There is nothing to commend here except the drummer, who should receive an award for devotion to duty. Gaye is better than this album shows, and he deserves better.

J. V.

THE STEVE GIBBONS BAND: *Rollin' On*. The Steve Gibbons Band (vocals and instrumentals). *Wild Flowers; Light Up Your Face; Now You Know Me; Mr. Jones; Till the Well Runs Dry; Tulane*; and eight others. MCA MCA-2243 \$6.98, © MCAT-2243 \$7.98.

Performance: **Energetic**
Recording: **Good**

Here is an album that answers a burning question: "What ever happened to Trevor Burton?" Burton, you may recall, was the original bassist with the Move (he did the Eddy Cochran imitations on their first album) who quit that group long before they became cult heroes in America. Move drummer Bev Bevan characterized him as "a great musician who's never found himself." Where he finds himself now is with an aggressive rock band from his home town that makes likable but forgettable noises. Gibbons is an okay singer, and the Trevor Burton fans out there (all six of you) will doubtless be reassured to know that your

hero is playing well, but "Rollin' On" isn't much of an album. There's a nice version of *Tulane* (the last good song Chuck Berry wrote) that shows the band's heart is in the right place, though, so I think I'll keep it. One-song albums like this are cropping up with increasing frequency lately, by the way; it's a pity the industry seems to want to phase out singles entirely.

S.S.

RECORDING OF SPECIAL MERIT

WAYLON JENNINGS: *Ol' Waylon*. Waylon Jennings (vocals, guitar); Richie Albright (drums); Ralph Mooney (steel guitar); Sherman Hayes (bass); Clifford Robertson (keyboards); other musicians. *Luckenbach, Texas; If You See Me Getting Smaller; Lucille;*

Sweet Caroline; I Think I'm Gonna Kill Myself; Tilt I Gain Control Again; Satin Sheets; and four others. RCA APL1-2317 \$6.98, © APS1-2317 \$7.98, © APK1-2317 \$7.98.

Performance: **Authoritative**
Recording: **Very good**

Waylon's last album was hurt by having too many vaguely similar songs in it, and this one is quite a radical departure from that: here is what they used to call a mixed bag. Mostly it's a good one, much more interesting than "Are You Ready for the Country," and only a little too interesting in a negative way a few times. These have to do not with versatility—Waylon has the vocal prowess to handle tougher and even more "foreign" stuff than this—but with how he identifies with a particular song:

Soundcraftsmen presents... a NEW CLASS super-power amp,

with fantastic performance because its revolutionary new Patent Pending VARI-POROTIONAL® system uses Analog Logic Circuitry to anticipate, control and supply only the exact amount of power required for most efficient performance . . . Conventional Class AB amplifiers with 250 watt power ratings, operating at 1/3 power in accordance with FTC test requirements, WILL CONSUME OVER 40% MORE ENERGY than the Soundcraftsmen "NEW CLASS" amplifier . . . Here are just a few "NEW CLASS" benefits: 1. Greatly reduced average current drain resulting in SUBSTANTIAL ELECTRICAL ENERGY SAVINGS. 2. Reduced heat dissipation for cooler operation assuring trouble-free reliability and no need for noisy fans. 3. And perhaps the greatest benefit of all, manufacturing cost savings meaning more power, and more features for fewer dollars . . . SPECIFICATIONS: 250 watts per channel RMS 20Hz-20KHz both channels driven into 8 ohms, less than 0.1% THD. Noise - 105dB, Damping factor 100, Slow rate 50, Frequency response ±1/4 dB 20Hz-20KHz. Size 7" x 19" x 15" deep. Side panels included. Suggested price \$699.00

PREAMPLIFIERS

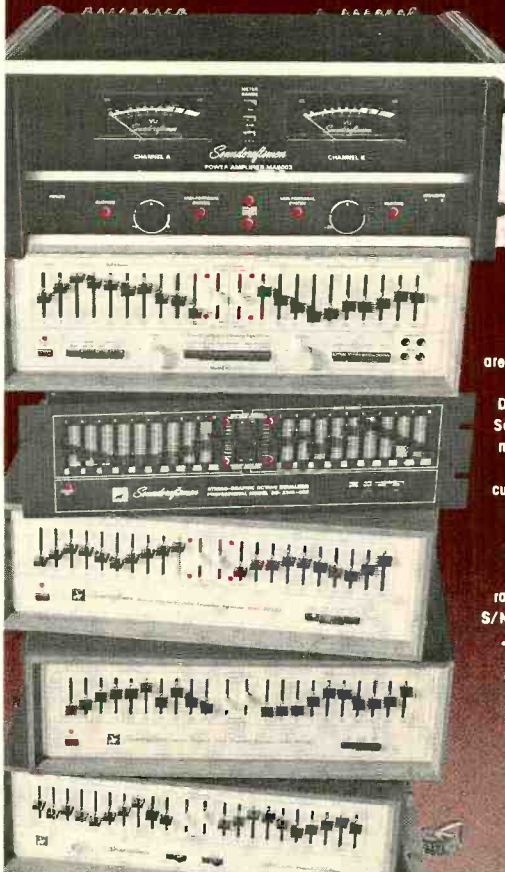
the PE2217 offers more flexibility and control than preamps costing twice the price. The 20-band OCTAVE EQUALIZER uniquely coupled with a versatile combination PUSHBUTTON PATCH PANEL and advanced phono preamp section (84dB S/N) allows you the capability of graphic "EQ" during the playback and recording process. Dual phono and triple tape control with 84 and 106dB S/N specs makes the PE2217 an unsurpassed preamp value at \$529.50. And now the PE2217, rated "STATE-OF-THE-ART" and "BEST-BUY" in magazine Test Reports, is also available as the PE2217-R (not shown) in rackmount silver-black form as a matching mate for our new amplifier, priced at only \$549.00.

EQUALIZERS

We INCLUDE all the accessories and features that are a MUST to make equalizing easy, as well as an amazingly rewarding new experience . . . An Environmental Do-It-Yourself TEST RECORD edited and announced by Soundcraftsmen especially for use with the Soundcraftsmen equalizer . . . COMPUTOME CHARTS for making a record of, and resetting in seconds, any desired EQ curve . . . a Full-Channel Frequency SPECTRUM LEVEL CONTROL on each channel for instant "no distortion" in/out balancing . . . LIGHT-EMITTING DIODES for precise visual signal level balancing . . . A Graphic Display of each EQ curve . . . And a minimum 24dB range of adjustment for each octave . . . Specifications: S/N: better than 106dB at full output . . . THD: less than .05% @ 1v . . . Filter type: Toroidal and Ferrite Core. Prices start at \$299.50.

FREE BROCHURE

• The WHY's and HOW's of EQUALIZATION
• CHECKLIST for your EQUALIZATION-EVALUATION
• 10-point "TOTAL-SYSTEM" EQUALIZATION program
Soundcraftsmen Instructional Test Record Room Equalization Instructions



Mfg. in JSA by Soundcraftsmen, Cal. 92705. For NEAREST DEALER ph. 714 - 556-6192

CIRCLE NO. 37 ON READER SERVICE CARD

SPECIAL
ANNOUNCEMENT
FOR READERS OF
Stereo Review
MAGAZINE

THE
1978 TAPE
RECORDING &
BUYING GUIDE
IS SCHEDULED TO GO ON
SALE NATIONALLY
AUGUST,
1977.

This all-new edition will provide information on virtually everything you'll want and need to know about tape recording. It's loaded with helpful hints and tips on how and what to buy, including a directory of equipment complete with photographs, model numbers, specs, descriptions and prices. Features include a Tape Deck Buying Guide • Testing Tape Recorder Performance • Maintaining Tape Recorders • Microphone Buying Tips • Going Mobile With Audio • Tape Deck Test Reports • Creative Recording Tips • plus much more.

You can
reserve your copy
now at the
pre-publication price
of only \$1.95

This offer is being made to readers of Stereo Review Magazine only. Regular price is \$2.50; mail order price \$3. Save money and enjoy the convenience of having the 1978 TAPE RECORDING & BUYING GUIDE mailed to you from first-off-the-press copies when published. Complete the Reservation Form and return it promptly with your remittance.

PRE-PUBLICATION RESERVATION FORM

TAPE RECORDING & BUYING GUIDE,
Consumer Service Division,
595 Broadway, New York, N.Y. 10012

Enclosed is \$1.95 (outside U.S.A. \$2.50) for my copy of the 1978 TAPE RECORDING & BUYING GUIDE to be mailed to me in August, 1977 when published.

Residents of CA, CO, FL, IL, MI, MO, NY STATE, DC and TX add applicable sales tax.

Print Name _____

Address _____

City _____

State _____ Zip _____

SR-87

Luckenbach, Texas and *If You See Me Getting Smaller* portray characters he can get into playing; *Lucille* (which first caught on for Kenny Rogers) and *Sweet Caroline* (a golden oldie by Neil Diamond) are supposed to come out of the heads of characters Waylon can't quite see himself being. So he takes *Lucille* out on a prolonged, spaced-out guitar solo that reinforces the ambiguity you can hear in his voice about doing this thing at all. The guitar break almost says it was all a joke. Well, it's good he can't identify with these types, I say—*Caroline* does have a nice melody, but the wording of the refrain, as it is revealed here where you can hear it, is clumsy and lazy. The good news includes another cover, of *Till I Gain Control Again*, which doesn't cut Emmylou Harris' cover but makes some interesting expressions in its own way, and one of those with which Waylon does identify, all the way, *Brand New Goodbye Song*. In between, there's piano and there's even a brief blare of horns, but mostly it's the same basic band going through a series of new turns to suit new twists of melody and beat. It's not a great Waylon album but it's a good Waylon album. N.C.

JETHRO TULL: *Songs from the Wood*. Jethro Tull (vocals and instrumentals). *Jack-in-the-Green; Cup of Wonder; Ring Out, Solstice Bells;* and six others. CHRYSALIS CHR 1132 \$6.98.

Performance: **Hollow**
Recording: **Slightly hollow**

One nice trend I've noticed among the poseurs who sometimes dominate contemporary music: sooner or later, they always tip their hand, and you find that you no longer have to spend quite so much time explaining to earnest acquaintances exactly why you know in your gut that groups like Jethro Tull are shams. (Or else you find after a while that you just don't care, since you know that anybody with any sensitivity will eventually make the same discovery.) These guys tip their hand, in their over-zealous efforts to keep the old Man-for-All-Musical-Seasons puff inflated, by opening their mouths to pontificate about music and inadvertently revealing that they don't know a damn thing about it.

(Once I interviewed Jethro Tull's leader, Ian Anderson. Asked what he thought of jazz, he replied that he didn't understand it but suspected it was all a fake, some kind of hoax perpetrated on the public. "What about Roland Kirk?" I asked. "Oh yes, I did hear one song by him once—*Song for a Cuckoo*. Quite liked it." That was nice of Anderson, considering that anybody familiar with both performers could tell that he stole his entire flute style from Kirk—from just one song, according to his own admission.)

On the surface, this new Jethro Tull LP is a sylvan romp, more genial and less curmudgeonly than its predecessors. But you don't have to listen to it very long to pick up on the underlying attitude, which is as up-tight, pretentious, and haughty as ever. This music and its creator's pose have never been anything but ugly and trite. Lester Bangs

DOUG KERSHAW: *Flip, Flop & Fly*. Doug Kershaw (vocals, fiddle, accordion, viola-electra); Johnny Sandlin (guitar); Neil Larson (keyboards); other musicians. *Rag Mama Rag; Louisiana Blues; Twenty-Three; You Won't Let Me; Bad News; Black Rose; I'm Walkin';* and four others. WARNER Bros. BS 3025 \$6.98, ® M83025 \$7.97, © M53025 \$7.97.

Performance: **Good**
Recording: **Good**

The ragin' Cajun seems fairly tame here, but after listening a while you realize he's made an absolutely unclassifiable album, ranging all over the place for sources if not whole songs. His is a visual act; even on television you can tell he's pretty rough as a fiddler (that's masked here by fairly dense arrangements), but his antics are so distracting you may not be able to tell how well he sings. Here you can, yet here he really doesn't get into some of the songs with the gusto they deserve. Waylon Jennings outclasses him on Billy Joe Shaver's *Black Rose*, Fats Domino does likewise on *I'm Walkin'*, so does Joe Turner on the title song, and so forth. What's missing from the Kershaw versions is not style or soul but, of all things, fire. Still, his singing is impressive when you consider *all* the material (Continued on page 98)

DOUG KERSHAW: the ragin' Cajun comes up with an unclassifiable album



AT LAST, EAST MEETS WEST.

Traditionally, the audiophile has had to choose between the East Coast Sound and the West Coast Sound, each with its own particular advantages and disadvantages:

The East Coast Sound is extremely accurate. The dispersion characteristics of East Coast speakers are, as a rule, excellent. Unfortunately, they usually need a lot of power to perform.

West Coast speakers are noted for their efficiency and volume. Unfortunately, accuracy isn't one of their strong suits.

Introducing the EPI 200.

After years of research and development, the engineers at EPI have created a speaker that combines the best qualities of East and West.

With its 12-inch passive radiator, the EPI 200 has all the efficiency of the most popular West Coast speakers.

A 30-watt receiver powers it with ease.

With that power, the EPI 200 produces the kind of sound EPI is famous for: Linear Sound. A pure, rich, accurate sound from 20,000 Hz all the way down to 34 Hz.

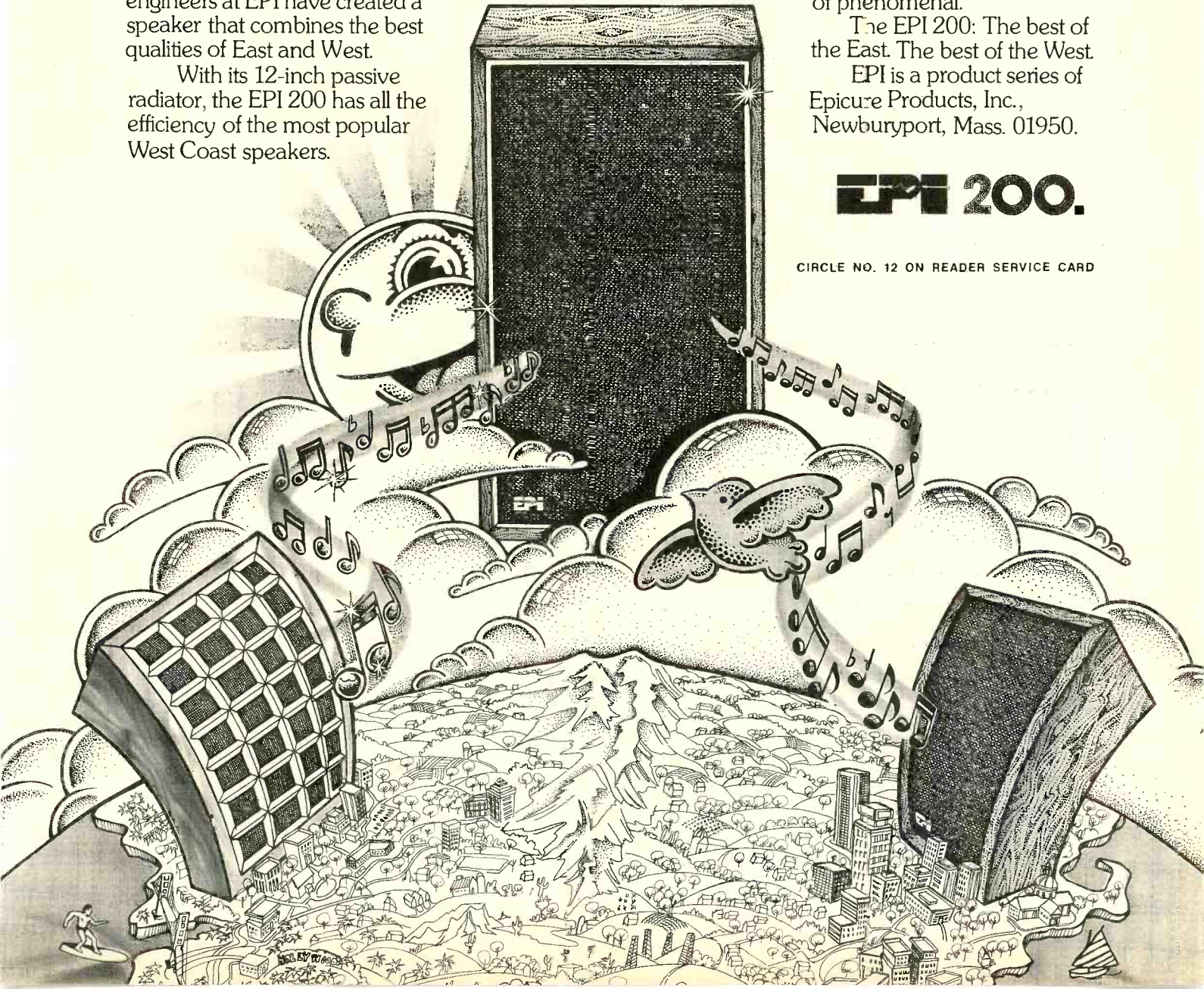
And dispersion? In a word, the Model 200's dispersion characteristics are *superb*. Up to 15,000 Hz, the speaker's off-axis dispersion is down an average of only 3db — a performance even other East Coast speaker makers can only dream about.

At \$400, the EPI 200 would be an exceptional value. But at under \$300, it is nothing short of phenomenal.

The EPI 200: The best of the East. The best of the West. EPI is a product series of Epicure Products, Inc., Newburyport, Mass. 01950.

EPI 200.

CIRCLE NO. 12 ON READER SERVICE CARD



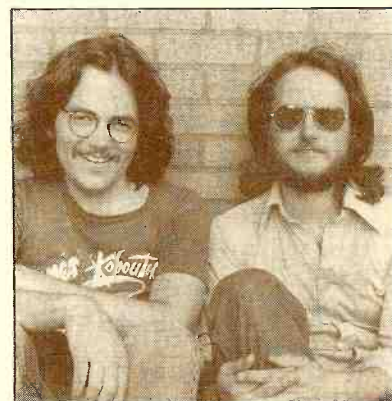


□ There are three of them—Gary Herb, Michael Pace, David McDaniel. They call themselves Gotham, and they talk so much and so briskly that you can't tell one from the other from the other. Recently, they stopped talking long enough to concentrate on singing, and managed to record an album that will be released in twenty-seven countries, but not in the U.S. They had this to say about that: "On the album, we do *all* kinds of music—the Boswell Sisters, Elton John, Dorothy Loudon, Billy Joel. The problem, you see, is that we're all gay—but we're not a gay act, if you see the difference. We're just entertainers. American record companies are worried that we'd only appeal to gay audiences, that there aren't enough of us in the world to buy the record, that sort of thing . . . none of which, of course, is true." Despite all the negative chatter, Gotham thinks they're pretty close to getting an American recording contract, but all thirty fingers are crossed.

□ Galdston and Thom is not the name of an intestinal disease or an English meal of eggs and sausages, but rather a new pop duo. Besides being grand prize winners in the American Song Festival, Phil Galdston and Peter Thom are feminists. You may have thought all women's liberationists were women, but Thom says, "Men can be feminists too." Galdston adds, "We see sexism all the time in the music world—music businessmen tell dirty, degrading stories at meetings before they get down to work." So, what are they going to do about it? "Well," says Thom, "there's not much we can do about it now. But when we're important, when we have influence. . . ." In the meantime, G&T have written two feminist songs, *It's a Man's World* and *De Lady Delayed*, neither of which made it onto their new debut album "American Gypsies" (Warner Bros. BS 3037).

POP ROTOGRAVURE

By Rick Mitz



□ Pop singer Steve March, who lists Stevie Wonder and Joni Mitchell among those who influenced him, claims that another influence is Mel Tormé. *Mel Tormé!*? "Mel Tormé's my father," March says. Then why is March *March* instead of Tormé? Because, he says, after his parents were divorced, his mother married actor Hal March, who became Steve's legal guardian. "But I realized I was going to have to

make it on my own if I was going to make it at all." One thing Steve March made was an album called "Lucky," and maybe he is and maybe he isn't. He's pictured here with dad Mel on a Dinah Shore TV show that featured famous folk and their offspring. Standing left to right are Steve, Mel, Pam Tillis (daughter of country singer Mel Tillis), Pearl Bailey, her daughter Dee Dee Belson, and Dinah.



□ Stephanie Mills, who plays Dorothy in Broadway's *The Wiz* (and the matching Atlantic Records original-cast album), has nearly as much determination as she has vocal power. "I have two dreams," she said a while back. "One is to meet Diana Ross. The other is to star in the movie version of *The Wiz*." As this photograph proves, Mills met Ross. Recently, however, it was announced that Ross will play the part of Dorothy in the movie, beating out Mills for the part. Just goes to show that even that Yellow Brick Road has a few rocks in it. And guess who's going to appear in the role of the Good Witch? None other than the eternally youthful Lena Horne.

□ The latest sibling to emerge in the record business is Sylvester (*Rocky*) Stallone's brother Frank. RCA has taken on Frank Stallone and his rock group Valentine, but RCA spokesmen say that the contract was signed well before the

movie *Rocky* was released. Maybe so, but the group's first album will contain *Take You Back*, a song Frank and his band sang in the film. Rumors that the album will be called "Rocky's Brother Sings!" are unfounded.



□ Singer Cleo Laine has a new sideline. She is the head of the Luton Women's Aid, a group that is based near her home in England and is dedicated to helping women who are beaten by their husbands. Is Cleo, who is married to bandleader John Dankworth, a battered wife? She laughs. "No. They just wanted someone with a well-known name to head their group." Says husband John: "They should also have an organization for battered husbands."



□ Martin Mull, whose latest album is called "I'm Everyone I Ever Loved" (ABC AB 997), and who was a featured member of the *Mary Hartman, Mary Hartman* players and currently star of its spinoff, *Fernwood Tonight*, had a little real-life soap opera experience of his own recently. Seems that one afternoon Mull was having a drink in a Manhattan bar. When he left, three overdressed young women approached him and made a few offers, which he refused. Whereupon one of the ladies stole his wallet. A nearby policeman saw the whole thing and got Mull into his police truck; they barreled down the street after the hookpockets and . . . um . . . grabbed them. On the way to the police station, they picked up another prossy who, upon getting into the truck, stepped on the toe of the woman who had taken Martin's wallet. She got angry enough to beat up on the latecomer and set her hair on fire. After a few hours in court, Martin retrieved his wallet, and the girls were hustled off to the pokey. Now, in the next episode. . . .



□ Carole Bayer Sager, who wrote the words to the hit *Midnight Blue*, and Marvin Hamlisch, who wrote the music to just about everything else, have begun collaborating. They have written a song for Aretha Franklin, another one for Sager's debut solo album, "Carole Bayer Sager" (Elektra 1100), and the theme song for the new rough and tough James Bond film. No, the theme song is not to be called *Midnight Black and Blue*. Its actual title is *Nobody Does It Better*, and, performed by Carly Simon, it will soon be released as a single.



□ Judy Collins says that one of her goals for 1977 is to perform in Las Vegas. *Las Vegas?* "I'm no longer a folk singer," Collins claims. "I sing all kinds of songs by all kinds of artists." One of the more distinctly non-folk songs in her repertoire is *Send In the Clowns* by Stephen Sondheim, who recently sent Judy a letter saying: "Thank you for giving me my first hit song." Judy has been asked to sing a command performance at the end of the summer for Queen Elizabeth, but she's not sure she wants to do it.

□ Talk about crossovers. Boy! Dolly Parton, country star, is trying to branch out into other kinds of music. And Carol Channing is branching out into country—she's even been recording tunes in Nashville. Channing plans to return soon to Broadway in yet another revival of *Hello, Dolly!*—could it be a country version? And does this mean Parton will open on Broadway in a new musical called *Hello, Carol!*? Boy! Talk about crossovers.



HPR-12 Magnum by RTR

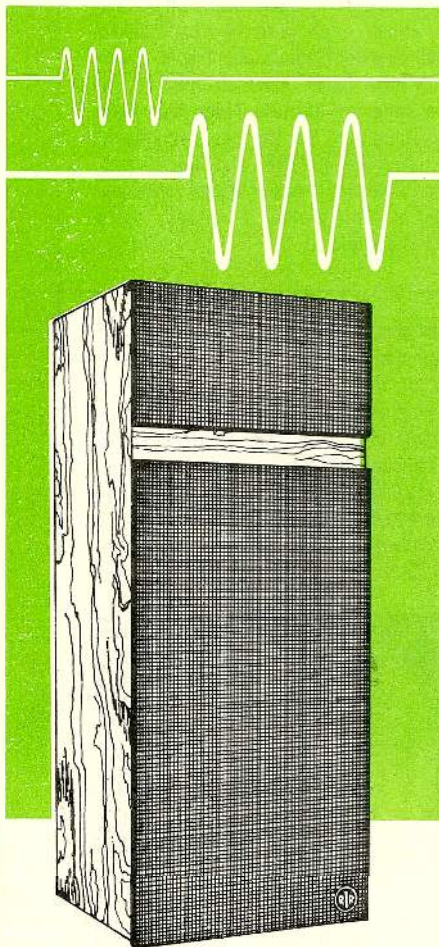
The Efficiency Expert

1 watt drives the system to 92 dB

How do you judge an efficient speaker? Audiophiles conclude speaker system efficiency reflects the total output of all components. And that's what makes the new HPR-12 Magnum by RTR a remarkably efficient system. The speaker can handle 100 watts of program material—one watt will drive it to 92dB. That's efficiency!

HPR-12 Magnum displays equally impressive linearity performance characteristics. The 12" Helmholtz-driven passive radiator combines with an active 12" woofer and 3" voice coil to deliver the power of many ported systems while maintaining a solid bottom end. High frequencies handled by two tweeters and one piezo-electric super tweeter complete the overall balance and smoothness. A rarity in a super efficient speaker.

If efficiency, smoothness and balance are your goals, audition the new HPR-12 Magnum at your RTR dealer.



RTR Industries
For dealer list, write
RTR, Dept. SR, 8116 Deering Avenue
Canoga Park, CA 91304

CIRCLE NO. 31 ON READER SERVICE CARD



BROWNIE MCGHEE:
polished, warm,
urbane vocals

and what diversity there is. The arrangements are a little bulky, though, and try to be too many things to too many people. Taking on all kinds of songs is one thing, taking on one song in all kinds of ways is another. Without the visual element, the strong personality that's supposed to be the thing about a Kershaw performance is buried. Less ambition! More enthusiasm! An occasional "Aaaiieeee" does not a ragin' Cajun make. N.C.

IAN MATTHEWS: *Hit and Run*. Ian Matthews (vocals, guitar); instrumental accompaniment. *Tigers Will Survive; Just One Look; Help to Guide Me; Shuffle; Hit and Run; The Frame;* and three others. COLUMBIA PC-34671 \$6.98, © PCA-34671 \$6.98, © PCT-34671 \$6.98.

Performance: **Overproduced**
Recording: **Good**

I've liked most Ian Matthews albums and thought the arrangements were among their strong points, but here the arrangements seem overdone. Matthews has crossed the line where the fancy stuff starts to interfere with the singer's emotional contact with the song. Not in every track, of course; he's a fine singer who obviously still wants to get into the meaning of the words. But here he's making certain adjustments, apparently to change with what he takes to be the times, and a lot of fake jazz riffing by guitar and sax seems to be a major element of the attempted change. Too much stuff is played with technique exalted over feeling, and that eventually overpowers the way a lot of it is sung. The song selection is a little weird, too, compared to the kind of stuff Matthews has written and sung in the past. Again, it suggests that he suspects people don't pay a hell of a lot of attention to the words any more. The opening song by Terry Reid, *The Frame*, is particularly sloppy. It's as if the whole thing were calculatedly lightweight, and it doesn't figure. Matthews will have to do at least one more album before we can get a fix, through triangulation, on his present position. N.C.

BROWNIE MCGHEE: *Blues Is Truth*. Brownie McGhee (vocals, guitar, piano); instrumental accompaniment. *The Blues Had a Baby;*

I'm Going to Keep on Loving; Walk On; Rainy Day; Christina; Wine Sporty Orty (Drinkin' Wine Spo-Dee-O-Dee); and six others. BLUE LABOR BL 117 \$6.98.

Performance: **McGhee 10, sidemen 0**
Recording: **Good**

Brownie McGhee is a superior blues singer of vast experience. Much of his career has been well spent in company with Sonny Terry, whose blues harmonica playing pretty much defines that art form.

Without Terry this time around, McGhee is backed by several sidemen, among them Louisiana Red on guitar and a harmonica player named Sugar Blue. Nearly all the songs are McGhee's own, and they are sturdy material, especially the title tune and *The Blues Had a Baby (and They Called It Rock and Roll)*. McGhee's vocals are polished, warm, forceful, and urbane. What detracts from the album is the looseness of the sessions; they are so loose that the band never seems to be quite able to end a tune together. McGhee kiddingly points this out on *Key to the Highway* when he says, "Now we goin' out together—for once." (They don't.) Still, McGhee's own performances more than make up for the sloppiness of the sidemen. J.V.

ELLIOTT MURPHY: *Just a Story from America*. Elliott Murphy (vocals, guitars, Farfisa organ, marimba, harmonica, tambourine, harmonium); vocal and instrumental accompaniment. *Drive All Night; Summer House; Rock Ballad; Think Too Hard; Anastasia;* and four others. COLUMBIA PC-34653 \$6.98, © PCA-34653 \$6.98, © PCT-34653 \$6.98.

Performance: **He thinks too much**
Recording: **Fine**

There's absolutely no point to delving into an album as deep as Elliott Murphy (the self-proclaimed "F. Scott Fitzgerald of rock") claims this one is until we've paused a bit to scratch the surface. I mean, the guy's promoters actually try to sell this record with the line that "He could write a book. But he chose rock and roll instead." This raises the question of just which book he would have honored us with had rock-and-roll not claimed his talents:

(Continued on page 100)

HIGH BIAS.

**These cassette deck
manufacturers are highly biased for SA:**

AIWA · AKAI · DOKORDER · JVC
KENWOOD · MERITON · NAKAMICHI
OPTONICA · PIONEER · SANSUI
SHARP · TANDBERG · TEAC
TOSHIBA · UHER · YAMAHA

**And are joined by these
in recommending SA for use in their decks:**

BANG & OLUFSEN · DUAL · FISHER
HARMAN/KARDON · LAFAYETTE
ROYAL SOUND · SANKYO
AND MANY OTHERS.



There's been a quiet revolution going on in the cassette world. □ Leading makers of quality cassette decks have adopted TDK SA as their reference standard tape for high (CrO₂) bias and equalization settings. Why TDK SA? Because TDK SA's advanced tape formulation and super precision cassette mechanism let them (and you) take full advantage of today's advanced cassette deck technology. □ In addition, a growing number of other companies are recommending SA for use with their machines. □ So for the ultimate in cassette sound and performance, load your deck with SA and switch to the "High" or "CrO₂" bias/EQ settings. You'll consistently get less noise, highest saturation and output levels, lowest distortion and the widest dynamic range to let you get the best performance from any quality machine. □ But you needn't believe all this just because we say so. All you have to do is check our references.

 **TDK**®

The machine for your machine.

TDK Electronics Corp., 755 Eastgate Blvd., Garden City, N.Y. 11530.
In Canada: Superior Electronics Industries, Ltd.

CIRCLE NO. 40 ON READER SERVICE CARD

Tender Is the Night? The Decline of the West? Principia Mathematica? Miss McIntosh, My Darling?

I suppose we will never know, which is actually a kind of relief. After being sandbagged by such heavy recent books as *JR* and *Gravity's Rainbow*, both of which I miserably failed to comprehend, I just don't think I'm up to another masterpiece. I was going to settle for watching Captain Kangaroo when a batch of review albums arrived and I was able to seize upon "Just a Story from America" as the solution to my problem: culture without pain. Right on this record we get references to Anastasia (pretender to the throne of all the Russias), Errol Flynn, and Rhett Butler. Not exactly Spengler, Marx, and Freud, of course, but Murphy does try; in the past he's written songs to, about, or with passing mentions of Eva Braun, Marilyn Monroe, Patti Smith, and Danny Fields, among others. Before Bruce Springsteen broke through, certain rock critics were tentatively elevating Murphy to Next Dylan status, just because his lyrics were fairly literate and his songs sounded like "Blonde on Blonde" played by a radio station getting leakage from a Lou Reed broadcast.

The trouble is, Murphy's modern in just the way that Springsteen is not. While Springsteen actually believes and feels all that hubcap chivalry stuff, Murphy is cool and sophisticated—so cool and sophisticated that his last two albums consisted mainly of namedropping (Patti Smith was "Lady Stiletto"), lit-major purges, and ever-so-sincere songs about how much he really wants to be a famous superstar but, y'know, gee, he's getting all these ambivalent feelings.

"Just a Story from America" is Murphy's best album yet, though that isn't saying much. If you can get past the Springsteen-steal car song and the weird sense of history that produces such lines as "Anastasia please come home/Your daddy the Czar is on the telephone/His little girl so lost and alone/It makes him cry," you'll still have to contend with the fact that his singing sounds affected from first note to last. Murphy is the Al Stewart of counterfeit street-poets. *Lester Bangs*

BONNIE RAITT: *Sweet Forgiveness* (see Best of the Month, page 82)

RECORDING OF SPECIAL MERIT

LOU RAWLS: *Unmistakably Lou*. Lou Rawls (vocals); instrumental accompaniment. *Spring Again; Early Morning Love; Some Day You'll Be Old; Secret Tears; All the Way;* and four others. PHILADELPHIA INTERNATIONAL PZ-34488 \$6.98, (R) PZA-34488 \$6.98, (C) PZT-34488 \$6.98, (Q) PZQ-34488 \$7.98, (R) PZQ-34488 \$8.98.

Performance: **Excellent**
Recording: **Very good**

"Unmistakably" is one of the best albums Lou Rawls has made in years. He's singing out better and bigger than ever, and the result is a delightful, old-timey jaunt reminiscent of years-ago Nat "King" Cole in one of his more exuberant moods. The big-band sound, provided by the arrangements of Bobby Martin and Jack Faith, and the production work of the omnipresent Gamble-Huff, who are also responsible for six of the songs here, glides along behind Rawls with the silvery purr of a brand-new 1953 T-Bird. As bad as the material often is—and it can be woeful in such

things as *We Understand Each Other*, a song about "communicating," or *Early Morning Love*—Rawls flies high, wide, and frolicsomely above it. Rawls never made it on records on the scale that everyone thought he would at the beginning of his career, but now that several years have passed and there is a whole new audience that has nothing to compare him with, he might just make it very big indeed (as the success of his disco hit *You'll Never Find Another Love Like Mine* from his last album intimated). He certainly deserves to on the basis of the kind of loose-jointed, easy entertainment he offers here. *P.R.*

MINNIE RIPERTON: *Stay in Love*. Minnie Riperton (vocals); orchestra. *Young, Willing, and Able; Could It Be I'm in Love; Can You Feel What I'm Saying; Stick Together; Gettin' Ready for Your Love;* and four others. Epic



LOU RAWLS
Like Nat "King" Cole with gusto

PE-34191 \$6.98, (R) PEA-34191 \$6.98, (C) PET-34191 \$6.98.

Performance: **Very good**
Recording: **Good**

Minnie Riperton has one of the truly unique voices in pop: dramatic, warm, and highly expressive even into the upper reaches of what sounds like a real coloratura soprano. It's mostly wasted here, though, in what is billed as "a romantic fantasy set to music." It's actually an assortment of sodden ballads, all co-authored by Minnie, that would sink a combination of Ella Fitzgerald and Mado Robin. Riperton's singing is, as usual, just fine—it's the rest you'll have to block out. *P.R.*

MARLENA SHAW: *Sweet Beginnings*. Marlena Shaw (vocals); orchestra. *Pictures and Memories; Yu-Ma; Walk Softly; I Think I'll Tell Him; No Deposit, No Return;* and five others. COLUMBIA PC-34458 \$6.98, (R) PCA-34458 \$6.98, (C) PCT-34458 \$6.98.

Performance: **Good**
Recording: **Good**

Marlena Shaw has been around for a while. Starting as a child performer at the Apollo in Harlem, she went on to sing with the Count Basie Orchestra, tour the night-club circuits,

and cut recordings for several small labels. The experience shows, and in all the right ways. She's easy and assured, with a generous jazz-pop style that can handle almost anything. Unfortunately, "almost anything" is just about what she's been given here in the way of repertoire. Only the title song, *Sweet Beginnings*, is worthy of her talents—everything else seems like a prolonged vamp. Bert deCoteaux's production, arrangements, and conducting don't give her much room to swing out, but then what's there to swing out about? This is a disappointing major-label debut. *P.R.*

MEL TILLIS: *Heart Healer*. Mel Tillis (vocals, guitar); instrumental accompaniment. *Heart Healer; Wedding Bells; Play It Again, Sam; Someone Else Tends the Garden; Burning Memories;* and five others. MCA MCA-2252 \$6.98, (R) T-2252 \$7.98, (C) C-2252 \$7.98.

Performance: **Coolish**
Recording: **Good**

Mel Tillis has a fine, smooth voice and is a groundbreaking, though not very prolific, songwriter. His arrangements have been getting slicker and slicker lately, though, and my overall impression of this one is that it is standoffish and cool. I wonder whether being on television a lot lately could be having an effect on him, since you probably have to be cool in the more cutthroat outlets of showbiz, like TV, to keep from getting eaten alive. A couple of years ago Tillis could sing about working at the sawmill and make me believe he'd been there; this time it sounds more like he's dutifully reporting on some movie he saw and found mildly interesting. Real life, Mel, give us real life . . . more about Ruby taking her love to town and that sort of thing. *N.C.*

UTOPIA: *Ra*. Todd Rundgren (vocals and instrumentals); Utopia (vocal and instrumental accompaniment). *Overture/Communion with the Sun; Magic Dragon Theatre; Jealousy; Eternal Love; Sunburst Finish; Hiroshima; Singing and the Glass Guitar.* BEARSVILLE BR 6965 \$6.98, (R) M8-6965 \$7.97, (C) M5-6965 \$7.97.

Performance: **Synthedelia**
Recording: **Equal to the purpose**

Tapes played backwards, fourteen-minute electric fairy tales, songs about the sun god and how your mind is flying, unnecessary sound effects—these are a few of the elements in Todd Rundgren's sonic wonderland. This sort of stuff was popular among rock musicians, from the Beatles on down, around 1967-1968, but at the time Rundgren was apparently too busy to listen as he was trying to make it in a fine Philadelphia band called the Nazz. Now, a decade later, he has finally harkened to the psychedelic call. It's a long way from the Nazz to Utopia, but the worst of the old ersatz psychedelia had more charm than Rundgren's current musical tirades. The world did not make him the superstar he deserved to be for writing winsomely wimpy love ballads such as *Hello, It's Me*, and I suspect that Utopia is his revenge. It's too bad, because a great talent is going to waste, but at this point it doesn't look as if things will ever get any better for either Rundgren or the people who admire his gifts. *Lester Bangs*

BEN VEREEN: Ben Vereen (vocals); orchestra. *By Your Side; You and I; What's the Rea-*

son; *Guess You Know Me Girl*; and three others. BUDDAH BDS 5680 \$6.98.

Performance: **Restrained**
Recording: **Clattering and busy**

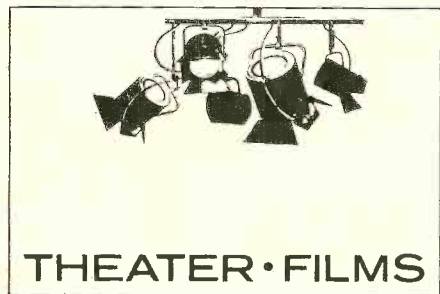
Ben Vereen seems oddly restrained in this overproduced bit of slickery. His TV appearances are so full of "lovingness" that you can't escape his moist rapture at being Ben Vereen In Person. Here, though, plowing through enormous arrangements with a flotilla of back, side, and foreground singers swooping around him, he sounds distantly over-tracked and puny. Most of the material is as weak-kneed as the performances, but *Stop Your Half Steppin' Ma Ma* has a clattering energy and at least sounds as if Vereen were in the same studio as everyone else. P.R.



RECOMMENDED DISCO HITS

- **KEITH BARROW.** COLUMBIA PC-34465 \$6.98, Ⓜ PCA-34465 \$7.98, Ⓞ PCT-34465 \$7.98.
- **CAMOUFLAGE: *A Disco Symphony.*** HONEY BEE HB 24001 \$6.98.
- **GIORGIO MORODER: *Munich Machine.*** CASABLANCA NBLT 7058 \$6.98.
- **MORNING, NOON & NIGHT.** ROADSHOW RSLA 726-G \$6.98, Ⓜ EA 726-H \$7.98.
- **NEW YORK COMMUNITY CHOIR.** RCA APL 1-2293 \$6.98.

(List compiled by David Mancuso, owner of the Loft, one of New York City's top discos.)



RECORDING OF SPECIAL MERIT

YOUR ARMS TOO SHORT TO BOX WITH GOD (Alex Bradford-Micki Grant-Vinnette Carrol). Original-cast recording. Salome Bey, Clinton Derricks-Carroll, Vinnette Carroll, Sheila Ellis, Delores Hall, William Hardy, Jr., Hector Jaime Mercado, Stanley Perryman, Mabel Robinson, William Thomas, Jr. (vocals); chorus and stage band, Eddie Brown
(Continued on page 103)



Model AT15Sa/H Dual Magnet Stereo Cartridge pre-mounted in Universal tone arm head shell.

To find out how much better our cartridge sounds, play their demonstration record!

There are some very good test and demonstration records available. Some are designed to show off the capabilities of better-than-average cartridges... and reveal the weaknesses of inferior models. We love them all.

Because the tougher the record, the better our Dual Magnet™ cartridges perform. Bring on the most stringent test record you can find. Or a demanding direct-to-disc recording if you will. Choose the

Audio-Technica cartridge that meets your cost and performance objectives. Then listen.

Find out for yourself that when it comes to a duel between our cartridge and theirs... we're ready. Even when they choose the weapons!

What you'll hear is the best kind of proof that our Dual Magnet design and uncompromising craftsmanship is one of the most attractive values in high fidelity. For their records... and yours!



audio-technica®
INNOVATION □ PRECISION □ INTEGRITY

AUDIO-TECHNICA U.S., INC.
Dept. 87F, 33 Shiawassee Avenue, Fairlawn, Ohio 44313
In Canada: Superior Electronics, Inc.

Annie (Andrea McArdle),
Sandy, and Daddy Warbucks
(Reid Shelton).



Annie

CHARLES Strouse and Martin Charnin's *Annie* is probably the squarest, most conventional thing to hit Broadway since the palmier days of George M. Cohan. But no matter how far you have your sophisticated musical lip curled in advance, and no matter how oh-God-not-another-quaint-little-million-dollar-musical you've allowed your head to get, it's ten to one that you'll be as entirely captivated ("Gloriosky!") by *Annie's* genuine charm and great big ricky-tick musical heart as I am.

First off, this is one of those superbly well done Columbia original-cast albums, in the tradition of *My Fair Lady*, *Mame*, and *Cabaret*. that almost make the need to see the show itself superfluous. Larry Morton and Charles Strouse's production couldn't be improved on: the listener is thrust directly into the center-stage action, and as the slight, sentimental tale of Annie's being rescued from the orphanage by Daddy Warbucks, her search for her real folks, the machinations of Miss Hannigan and her cohorts to pass off a false couple, their come-uppance at Warbucks' mansion in the presence of none other than FDR and his entire cabinet—and at Christmas!—unfolds, you begin to feel as close and as tail-waggingly friendly to the characters as dear old ("Arf!") Sandy (who, unfortunately, does make an appearance here vocally).

Moreover, *Annie*, with all its easy virtues, elephantine airs and graces, absolute technical perfection, and warmth (to say nothing of the Swiss-watch organization of all of its elements), is *The Broadway Musical*. That unique, and uniquely American, contribution to the world lyric theater has taken an awful drubbing in the last few years; one of the quickest ways to show you were *in* was to declare that Broadway—particularly its musicals—was *out*. If you had to like something, well, you just might admit that *Chicago* has a certain Brechtian *validity*—I mean, after all, the Ebb-Kander score does have a kind of

sour-ass *message*: none of us are any damned good and the only way to beat the system is to join it and then give lessons in corruption. But *Annie* gives that whole cynical cliché a wonderfully raucous send-up in a Weillish number called *We'd Like to Thank You (Herbert Hoover)*. It is sung in fine proletarian style by the residents of a sub-pontine Hooverville, particularly by one anonymous Mother Courage in the chorus who asks melodramatically, "Whoever thought I could steal!!"

About a minute into the overture, right after the signature song (called *Tomorrow*—a bit droopy and inspirational, but it'll do, it'll do), the orchestra cranks up, lets out, and starts to soar with *You're Never Fully Dressed Without a Smile*. And man, Broadway Is Back! All I could picture was hundreds—count 'em—hundreds of chorus girls hoofing up a storm, but the reality of it is that in the show the song is performed first by a typical radio "charm" singer (Rudy Vallee?) of the

... music that is
meant purely and
simply to entertain ...

Thirties and then segues back to the orphanage where the kids do their own interpretation of what they've just heard on the radio.

From that moment on I was a pushover for all that followed, including *It's the Hard-knock Life*, done by the same kids; the hilarious *Little Girls*, in which, as the dreadful Miss Hannigan who is in charge of the orphanage, Dorothy Loudon tells of her premonition of

someday winding up in the nut house because, while other women seem to be dripping in diamonds and pearls, all she seems to be doing is "dripping with girls"; *I Think I'm Gonna Like It Here*, where Annie is first introduced to the splendors of Daddy Warbucks' palatial Fifth Avenue mansion; *Easy Street*, in which Miss Hannigan, her rotten-rotten brother Rooster, and his shady lady Lily plot together how they're going to get there; *Something Was Missing*, Daddy Warbucks' sentimental little lilac-colored-spotlight ode to Annie; and even the finale, a deliriously corny and endearing Big Number called *A New Deal for Christmas*, featuring FDR and cabinet members ("Sing up, Harold!") Ickes and Frances Perkins. About the only number in the show that just wouldn't go down is a bumper called *N.Y.C.*; it's about the joys of New York (there are some), but it sounds as if it were whipped up between crises for the re-election campaign of Hizzoner Abe Beame.

Andrea McArdle, in the title role, sings her songs with an unaffected, genuinely childlike charm, and aside from an at times disconcerting vocal resemblance to Bernadette Peters she's an ideal non-camp Annie. Reid Shelton as Daddy Warbucks is good verging on excellent, but it is Sandy Faison as Grace, Warbucks' secretary, who makes the single strongest impression as one of the new breed of Broadway singers. She has no solo number of her own, but she's heard in several of the group songs, and she's very, very good. Dorothy Loudon, who doesn't seem to have been around for several years, is back with a resounding boom, and she's only superb as Miss Hannigan: scheming, selfish, querulous, with a heart and a world-view of pure lead.

Charles Strouse's credits go back to include such hit shows as *Bye, Bye Birdie*, *Applause*, and *Golden Boy*, and in *Annie* he has hit an easy stride, composing music that is meant purely and simply to *entertain*. That writing such music is by no means purely simple can be evidenced by the fact that no one since Irving Berlin seems to have been able to make a consistent career out of it. Martin Charnin's lyrics are thoroughly professional, wisely avoiding camping up the subject or the era and graced with a nicely felt tinge of admiration for a simpler—or so it seems now—time.

ANNIE is, of course, based on Harold Gray's famous comic-strip. But there was an earlier "Little Orphant Annie," a poem in dialect by James Whitcomb Riley, about a little housemaid who "come to our house to stay, / An' wash the cups and saucers up, an' brush the crumbs away." Riley's Annie told absolutely enthralling ghost stories. Gray-Strouse-Charnin's *Annie* simply spins out a little fable and charms us. But no matter how high your musical brow or how sophisticated your taste, this album will surely seduce you "Ef you

Don't
Watch
Out!"

—Peter Reilly

ANNIE (Charles Strouse-Martin Charnin). Original Broadway-cast recording. Andrea McArdle, Reid Shelton, Sandy Faison, Robert Fitch, Dorothy Loudon, others (vocals); orchestra, Peter Howard cond. COLUMBIA PS 34712 \$7.98.

cond. ABC AB-1004 \$7.98, © 8020-1004N \$8.95, © 5020-1004N \$8.95.

Performance: **Glorious**
Recording: **Excellent**

I put this record on my turntable with trepidation. I hated the title, and anyhow, I wasn't sure I'd be able to endure still another passion play brought up to date with noisy music. I needn't have worried. *Your Arms Too Short* is often tumultuous, but it is never noisy. In this high-spirited treatment of the Book of Matthew, the Gospel is in good hands. The hands are largely those of Vinnette Carroll (*Don't Bother Me, I Can't Cope*), who wrote the book (with a little help from St. Matthew), directed the show, and also appears in it, but the songs are by Micki Grand and Alex Bradford, and they are pretty wonderful.

Much of the score is preserved intact here, and it's a glowing experience, a constant celebration weaving in the story of Jesus from His early triumphs in Jerusalem through the Crucifixion and the Resurrection, with the emphasis on the joys of faith rather than the sorrows the Saviour endured. Delores Hall and Salome Bey are two strong gospel singers with a sure grasp of the idiom, while Clinton Derriks-Carroll, the son of a Knoxville preacher (and the stepson of Vinnette Carroll), knows exactly how to convey the fervor of sermons, psalms, and songs such as *We're Gonna Have a Good Time*, the exuberant finale that makes you want to stand up and stomp and clap with the whole ensemble. P.K.

of Braxton's pieces—starts off a bit disjointedly and then suddenly comes together, making uncanny sense. Sides three and four are more of the same—yet completely different, if you know what I mean—making this a set no Braxton devotee ought to be without. C.A.

FIRST COSINS JAZZ ENSEMBLE: *For the Cos of Jazz.* First Cosins Jazz Ensemble (instrumentals). *Psalm; Flat Meat; I Don't Know;* and seven others. CAPITOL ST-11589 \$6.98, © 8XT-11589 \$7.98.

Performance: **Lethargic**
Recording: **Good**

Capitol—a company on whose records one could once find such names as Art Tatum, Duke Ellington, and Leadbelly—recently announced that it was returning to jazz, but if this lethargic excursion to Muzakville is any indication of what they have in mind, they might as well go back to whatever it was they were doing before. The percussion section sounds like one of those awful rhythm devices that are built into electric home organs these days, and saxophonist Rudy Johnson, the album's featured horn player, plays solos of the Grover Washington, Jr., variety. In case you might be wondering what the Cos is all about, Bill Cosby is credited as music consultant. I used to be a disc jockey in Philadelphia, and when I played Louis Armstrong's Hot Five recordings, Bessie Smith, or early Ellington, Cosby (then a student at Temple University) frequently complained that I was playing "Mickey Mouse music." Need I say more? C.A.



The New Basic Repertoire

STEREO REVIEW again presents the annual revision of the Basic Repertoire. In pamphlet form, it includes 1977 disc and tape recommendations for 173 standard musical works. For your copy, send 25¢ in coin, plus a stamped, self-addressed No. 10 envelope (9 1/2 x 4 1/8 in.), to Esther Maldonado, STEREO REVIEW, 1 Park Avenue, New York, N.Y. 10016.



JAZZ

RECORDING OF SPECIAL MERIT

ANTHONY BRAXTON: *The Montreux/Berlin Concerts.* Anthony Braxton (sopranino, alto, and bass saxophones; clarinet; flute); Kenny Wheeler (trumpet); George Lewis (trombone); Dave Holland (bass); Barry Altschul (drums, percussion). H-46M . . . B-BW4; 84°-KELVIN . . . G; and five others. ARISTA AL 5002 two discs \$9.98.

Performance: **Braxtonian**
Recording: **Very good remotes**

I was somewhat disappointed by Anthony Braxton's last Arista release ("Duets 1976"—AL 4101), but he redeems himself with this two-record set of concert performances from the Montreux and Berlin festivals. Those pretentious diagrams identifying each selection are back, but the music is without pretense. There's some wonderful work by trumpeter Kenny Wheeler, and Dave Holland and Barry Altschul build a solid rhythmic foundation. The selection that ends the first side has some particularly effective—and very swinging—ensemble playing by Wheeler and Braxton. Whimsey and Weill (Kurt, that is) enter into the last cut of side two, which—like so many

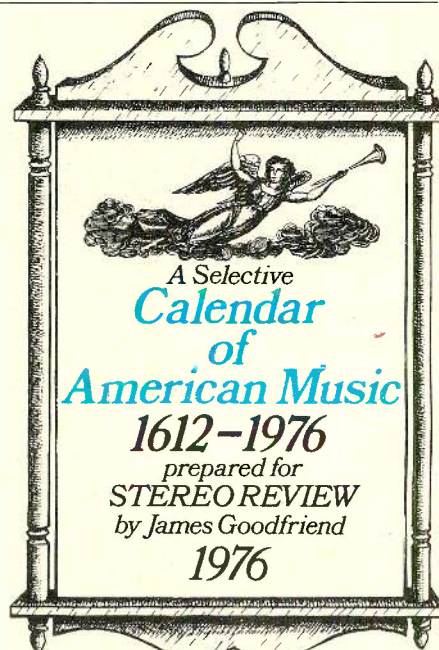
RECORDING OF SPECIAL MERIT

DIZZY GILLESPIE: *The Development of an American Artist, 1940-1946.* Dizzy Gillespie (trumpet); with His Sextet, His All-Stars, the Tempo Jazzmen, the Joe Marsala Sextet, Sarah Vaughan, and the orchestras of Cab Calloway, Les Hite, Coleman Hawkins, Billy Eckstine, Oscar Pettiford, Boyd Raeburn, Lucky Millinder, and Georgie Auld. *Pickin' the Cabbage; Kerouac (two excerpts): Good Bait; Interlude (Night in Tunisia); Disorder at the Border; Co-Pilot; Confirmation; 'Round Midnight;* and twenty-five others. SMITHSONIAN COLLECTION R 004 two discs \$9.00 (from the Smithsonian Collection, P.O. Box 1641, Washington, D.C. 20013).

Performance: **Sparkling**
Recording: **Good transfers**

Truly innovative jazz musicians—I mean the kind who turn the music itself around—seem to be an endangered species. Where are the Armstrongs, Youngs, Christians, Parkers, and Coltranes of today? Well, if their equivalents are to be found among the younger generation of musicians, I have yet to hear them, which is not to say that we haven't seen some extraordinary new talent emerge in recent years. Of the surviving innovators of old, none has had the impact of John Birks "Dizzy" Gillespie, who came out of the Swing Era sounding like Roy Eldridge and developed a style that became the model for all modern jazz trumpet players. Gillespie not only set the pace for his own instrument, he was also a major force in developing modern jazz, or bebop, as it was called.

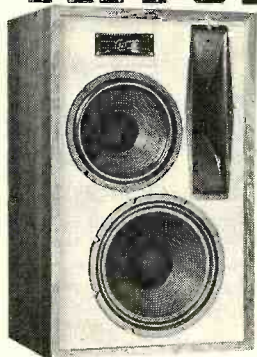
This album traces Gillespie's development from 1940 to 1946, a period that saw him help build and cross the bridge from swing to bebop. It was a period of confusion and polarization



REPRINTS NOW AVAILABLE

This useful, information-packed, and attractive (suitable for framing) feature from our July 1976 Bicentennial Issue is printed in four colors on 11" x 16" stock and includes Music Editor Goodfriend's introduction. For your copy send 25¢ to: American Music Calendar, Stereo Review, 1 Park Avenue, New York, N.Y. 10016.

SPEAKER KITS.



Money-saving, multi-element stereo speaker kits. Build them yourself to save up to half the retail cost of comparable ready-built systems. And get great sound in the bargain.

Send us your name and address and we'll mail you our free 44-page catalog of speaker kits, raw speakers, crossovers, enclosures and tips on design and construction. It's practically a manual on speaker building.

Speakerlab®
Dept. SR-B, 5500 35th N.E., Seattle, WA 98105

during which the walls of style grew more and more impenetrable as young musicians joined with defectors in a direction that had the traditionalists (some of whom even considered swing a betrayal of jazz) screaming heresy. But as the jazz war raged, some great music was being created on both sides, and the thirty-three selections assembled for this set by Martin Williams make up a generous sample of a music in transition. We hear Dizzy in a traditional big-band setting with Cab Calloway (who called Dizzy's music "Chinese" and eventually fired him for throwing a spitball) and in an informal session at Monroe's Uptown House as captured by Jerry Newman's portable disc-cutter in 1941. We hear him with Billy Eckstine and Sarah Vaughan, the vocalists of the Bop Era, and in the unlikely company of stride pianist Cliff Jackson on a session that demonstrates the stylistic transition that was taking place. But we do *not* hear Gillespie with Charlie Parker, a celebrated association that was recorded early enough for inclusion in this set and would have been excellently represented by a selection from the November 1945 Savoy session (with Miles Davis) that yielded *Billie's Bounce* and *Ko Ko*. That session is, of course, available now on a Savoy album ("Bird/The Savoy Recordings"—Savoy SJL 2201), but I still think one of the alternate takes might well have been used by Williams in place of one of the four Cab Calloway sides. Nevertheless, this is a fine album filled with outstanding music, annotated in a scholarly way by Williams (with interesting comments by Gillespie himself), richly illustrated with photographs (the double album has a four-page insert), and generously endowed with discographical data. Most important, it delivers what it promises.

C.A.

BOB JAMES: Three. Bob James (keyboards); Grover Washington, Jr. (soprano and tenor saxophones, tin whistle); orchestra. *One Mint Julep*; *Jamaica Farewell*; and three others. CTI CTI-6063 \$6.98, © CT8-6063 \$7.98, © CTC-6063 \$7.98.

Performance: **Spiritless**
Recording: **Very good**

BOB JAMES: Four. Bob James (keyboards); orchestra. *Pure Imagination*; *Tappan Zee*; *El*

Verano; and three others. CTI CTI-7074 \$6.98, © CT8-7074 \$7.98, © CTC-7074 \$7.98.

Performance: **Less spiritless**
Recording: **Very good**

Since he signed with the CTI label, Bob James has given his unabashed commercial touch to countless albums, including two, titled simply "One" and "Two," under his own leadership. When I reviewed "One," I called it "a fine example of lush, jazz-flavored pop" and expressed a hope that it would soon be followed by "Two." It was, and now we have—you guessed it—"Three" and "Four." I should be in seventh heaven, but I'm not. Enough is enough, and four albums of this sort of slightly-hipper-than-Mantovani mood music is more than enough.

"Three" features Grover Washington, Jr., who has had exaggerated success playing the saxophone in a manner that would pale in comparison with a Lester Young warm-up. It is a plodding, monotonous thirty-six minutes of lush, predictable James arrangements played with apathy by a large assemblage that includes such CTI regulars as Hubert Laws, Eric Gale, and Ralph MacDonald plus twelve strings and a harp. Get the picture?

"Four" is essentially more of the same, though there are moments when some of the musicians actually seem to show some interest in what they are doing. Both these albums are very slick, well produced, and obviously high-budget excursions destined for that wide market of people who want little more out of music than a beat to gyrate to. But when I look at the talent on hand and imagine what music it *could* have created, I have to regard "Three" and "Four" as meaningless waste. Bob James, for the moment at least, is on a treadmill. I understand he has now left CTI. Perhaps the split will be good for both of them.

C.A.

RECORDING OF SPECIAL MERIT

EDDIE JEFFERSON: The Jazz Singer. Eddie Jefferson (vocals); various instrumental groups, including Howard McGhee (trumpet), James Moody (tenor saxophone), and Osie Johnson (drums). *Body and Soul*; *So What?*; *Moody's Mood for Love*; *Sister Sadie*; and eight others. INNER CITY IC 1016 \$6.98 (from

EDDIE JEFFERSON:
he started it all
with Moody's Mood



Inner City Records

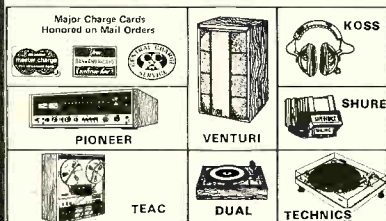
DIXIE HI-FI SAVE ON

Brand Name Audio Components

BY MAIL

Write Today for Our
FREE Audio Catalog

DIXIE is one of the oldest and largest stereo mail order houses in the country. Our lower prices on brand name components can save you real money. Call us today for a price quote, toll free (800)446-7925. In Virginia call (804) 257-4241. Everything shipped in factory sealed cartons with manufacturer's warranty.



DIXIE HI-FI

P.O. Box 6496
Richmond, Va. 23230

SR-8

Please rush me your FREE Audio Catalog and complete information. I understand there is no obligation.

Name _____

Address _____

City _____ State _____ Zip _____

Phone () - _____
A.C.

Inner City Records, 43 West 61st Street, New York, N.Y. 10023).

Performance: **The source**

Recording: **Very good**

King Pleasure's recording of *Moody's Mood for Love*—a 1952 vocal version of James Moody's 1949 solo on *I'm in the Mood for Love*—established Pleasure as a jazz singer and introduced a novel vocal concept that was carried further by Annie Ross, perfected by Lambert, Hendricks & Ross, and recently bastardized by a French vocal group called Quire. Though Pleasure is often believed to have originated the concept of setting lyrics to improvised instrumental solos, the man who started it all—by writing the *Moody's Mood* lyrics sung by Pleasure—is Eddie Jefferson, who recalls singing this sort of thing for friends as far back as 1939. Jefferson, now fifty-nine, began recording twenty-five years ago, but he never had a hit to equal the one he had helped King Pleasure create. Still active today, he is frequently heard at informal sessions in Greenwich Village lofts, and he has recently continued his recording career on the Muse label.

Except for *Body and Soul* and one other selection (I believe it was *Now Is the Time*), which appeared as a single on the Triumph label in 1961, the recordings in this album—made at three different sessions in 1959 and 1961—are now being released for the first time. The overall sound is a bit dated, as are some of the lyrics (it is, of course, the pre-electronic Miles Davis that Jefferson describes in *So What?*), but this music was meant to be heard at another time, when it would have been considered very hip. I don't know why it took so long to make this album available, but it deserves to be heard; indeed, if it had been released in 1961, a reissue at this time would not have seemed inappropriate. Eddie Jefferson is in good form here, the repertoire runs the gamut from Pine Top Smith to Charlie Parker, and the accompanying groups include enough formidable soloists to stand on their own. Jefferson's vocal style does not lend itself to the instrumental style of today, but just as we can still enjoy the oral wah-wahs and growls of Baby Cox on those Ellington sides of the Twenties, Jefferson's vocal twists and turns will continue to please generations to come. They typify vocal jazz of the Fifties as much as the scat singing of Leo Watson—Jefferson's prime inspiration—typifies the heyday of 52nd Street. C.A.

JONES/BROWN/SMITH. Hank Jones (piano); Ray Brown (bass); Jimmie Smith (drums). *My Ship; Alone Together; Rockin' in Rhythm;* and five others. CONCORD JAZZ CJ-32 \$6.98 (from Concord Jazz, Inc., P.O. Box 845, Concord, Calif. 94522).

Performance: **Smooth**

Recording: **Good**

It is only to be expected that a trio made up of pianist Hank Jones, bassist Ray Brown, and drummer Jimmie Smith would play good, sometimes excellent, and always tasteful jazz, as they do here. Anything less than good from these men would have given me something to write about. The only news I can report about this album is that Hank Jones plays electric piano on four of the tracks, and he does that very well indeed. C.A.

OLIVER LAKE: *Holding Together.* Oliver Lake (soprano and alto saxophones, flute,

percussion); Michael G. Jackson (guitars, mandolin, flute, percussion, vocals); Fred Hopkins (bass); Paul Maddox (drums, percussion). *Machine Wing; Usta B; Hasan;* and three others. BLACK SAINT BSR 0009 \$7.98 (from J.C.O.A., 6 West 95th Street, New York, N.Y. 10025).

Performance: **Multifaceted**

Recording: **Good**

Oliver Lake, having banged a bass drum and clashed cymbals in a drum and bugle corps, took up the alto saxophone in 1960. His inspiration was Paul Desmond, then going full guns with the Dave Brubeck Quartet, but any traces of Desmond that might have been found in Lake's playing have long since vanished. Lake, who is a major force in BAG

(Black Artist Group), the St. Louis equivalent to Chicago's AACM avant-garde movement, cites Jackie McLean as a major influence, but that, too, seems to have passed and he is very much his own man on this album. I don't think I have ever previously heard anything played by the three men who complete this quartet, but they are all excellent musicians. There is wonderful unity throughout this set of intensely personal, free-flowing, free-form music. Though some of the sounds might grate on the ears of a purist, the quartet never resorts to the kind of tasteless gimmickry that so often mars music of this genre.

Two earlier Oliver Lake albums have been released in this country on the Arista label, but this one—though recorded in New York last year—is an Italian import. I believe the



At Audioanalyst, stereo imaging is more than a two dimensional matter. Our Phase Matrix speakers pinpoint performers in space with new accuracy. It is as if they were reassembled in their places before you, to the left, the right, even in front of or behind where the speakers actually stand.

The Phase Matrix Group includes four elegant loudspeakers with a family appearance. All offer smooth, extended bass response and a neutral, uncolored midrange. Add to this optimum dispersion characteristics which, in conjunction with our unique Phase Matrix (patent pending), virtually eliminate phase cancellation for exact, three dimensional imaging unsurpassed by speakers costing far more.

The Phase Matrix Group of loudspeakers is available only through a select network of audio specialist retailers, all noted for offering exceptional service to their customers. For the name of the dealer nearest you, please contact us at the address below. Your reply will be given immediate attention.

Audioanalyst

Audioanalyst, Inc., P.O. Box 262, Brookfield, Conn. 06804.

Arista albums are also of European origin. A group of this caliber should not have to look outside the U.S. for a recording contract, and I hope their next album appears on a label that can give it the distribution and promotion it deserves. C.A.

RECORDING OF SPECIAL MERIT

MARKY MARKOWITZ: *Marky's Vibes*. Marky Markowitz (trumpet, flugelhorn); Urbie Green (trombone); Al Cohn (tenor saxophone); John Bunch (piano); Milt Hinton (bass); Mousey Alexander (drums). *Four Flights Up; On the Alamo; Over the Rainbow*; and three others. FAMOUS DOOR HL-111 \$6.98 (from Harry Lim Productions, 40-08 155th Street, Flushing, N.Y. 11354).

Performance: **Fine mainstream**
Recording: **Very good**

Irvin "Marky" Markowitz, now approaching fifty-four, came up through the ranks of the big bands (Dorsey, Raeburn, and Herman). Unlike many of his fellow sidemen, however, he remained in the background, making his living as a virtually anonymous studio musician. Now, thanks to veteran producer Harry Lim, Marky has come forward to do an album of his own—his first, I believe. It speaks well for Lim, long a friend of good, straightforward jazz, that he has turned an album over to a relatively unknown musician while underplaying the presence on it of such established

participants as Al Cohn, Urbie Green, and Milt Hinton, who could surely sell more records for Lim's small but dedicated Famous Door label. Markowitz may not have the name, but he does have the skill: good technique, rich tone, and a relaxed style rooted in the swing tradition. And his colleagues all seem to be enjoying themselves, which makes this a most pleasant album in a small-band tradition that will remain with us as long as jazz musicians are around. C.A.

CARMEN McRAE: *At the Great American Music Hall*. Carmen McRae (vocals); instrumental accompaniment. *Them There Eyes; Paint Your Pretty Picture; On Green Dolphin Street; A Song for You; On a Clear Day*; and fifteen others. BLUE NOTE LA-709-H2 two discs \$7.98, ® EA-709-1 \$7.98, © CA-709-1 \$7.98.

Performance: **Unflappable**
Recording: **Very good**

Carmen McRae is one of those legendary singers with a supple style who seems to have been born into the world full-blown. Hasn't there *always* been a Carmen McRae to come on loud, lamenting, bluesy, and lyrical with all those songs about the agony of love? Such voices seem not to have evolved, but to have been with us from the start. McRae is heard here in a huge San Francisco music hall where she was recorded live in 1976. After a while it all begins to seem excessive, since the mood

is largely lovelorn and the cheering from the gallery becomes increasingly difficult to tolerate by the fourth side.

But the singer herself is unflappable throughout; mesmerically moving in such ballads as *On a Clear Day, Never Let Me Go*, and *A Song for You*; saucy and insouciant in *T'Ain't Nobody's Bizness If I Do*; and almost a match for Ethel Waters herself in a curiously earnest version of *Miss Otis Regrets*. She gets support from some of the best jazz musicians in the business—Dizzy Gillespie on trumpet, Marshall Otwell on keyboards, Ed Bennett on acoustic and fender bass, Joey Baron on percussion. Too much of a good thing, perhaps, but a good thing for sure. P.K.

RECORDING OF SPECIAL MERIT

CHARLIE ROUSE: *Cinnamon Flower*. Charlie Rouse (tenor saxophone); various orchestras. *Waiting in the Corner; Roots*; and five others. DOUGLAS NBLP 7044 \$6.98.

Performance: **Rousing**
Recording: **Very good**

Tenor saxophonist Charlie Rouse played in the bands of Billy Eckstine and Dizzy Gillespie in the mid-Forties, but he is best known for the ten years or so he spent with the Thelonious Monk group. When Monk faded from the scene in the early Seventies, Rouse began free-lancing, and in 1975 he formed a sextet that put heavy emphasis on Brazilian music. This album features Rouse in various combinations, ranging from seven to ten players, performing (with one exception) compositions and arrangements by Dom Salvador and Amaury Tristau—who, judging by their sound, I presume are Brazilian. The result is a superb blend of wild rhythms and hot, bop-rock tenor that is bound to get your whole body in motion, and it's all done with much taste and skill. Grover Washington, Jr., and Bob James should be locked up with this record for a very long time. Maybe they'd learn something. C.A.

RALPH TOWNER: *Diary*. Ralph Towner (twelve-string and classical guitar, piano, gongs). *Dark Spirit; Icarus; Erg; Ogden Road*; and four others. ECM ECM-1032 ST \$7.98, ® 8T-1-1032 \$7.98, © CT-1-1032 \$7.98.

Performance: **Fine entry**
Recording: **Very good**

With so many young guitarists these days hiding their weaknesses behind electronic accessories, it is always refreshing to hear Ralph Towner play *au naturel*, so to speak. Not that I like everything he does—what he did when he teamed up with John Abercrombie bored me—but most of his work is engrossing.

"Diary" is Towner's latest ECM release in this country, but it was recorded over four years ago. A multiple-track technique allows him to play piano, guitar, and gongs simultaneously. As a rule, this sort of thing does not work—there is none of the rapport that, ideally, develops between musicians in a studio—but I have no qualms about anything that is happening here. Towner is a versatile player, and his musical mind has explored many varied directions. Raga, rock, Baroque, blues—all come together here in a well-proportioned blend that Ralph Towner enters in his "Diary" with skill and feeling. C.A.



JOHN LEWIS, HELEN MERRILL

*With Merrill
And Lewis the
Rapport Is
Just Fine*

IT took a long time for old friends Helen Merrill and John Lewis to get together in a recording studio, but their new Mercury album was well worth waiting for. Merrill and Lewis are alone together on all but three of the selections, and whether they're alone or with the excellent trio of Hubert Laws, Richard Davis, and Connie Kay, their rapport is just fine.

Hearing Merrill's voice rise and fall effortlessly in unison with Laws' flute on Lewis' *The Singer* (originally titled *La Cantatrice*) and *Django* is pure joy after one's ears have been assaulted by the likes of Flora Purim and Ursula Dudziak. *Django*, a hauntingly beautiful tribute to the late Belgian guitarist Django Reinhardt, opens this wonderful album with a sound that is very reminiscent of a passage in Villa-Lobos' *Bachianas Brasilieras* No. 5, but is also a throwback to some of Ellington's early scores for soprano voice and clarinet. The relaxed, ethereal mood that prevails throughout this Merrill-Lewis encounter is set by *Django*, and if you are as taken by what follows it as I was, you'll have your stylus right back at the start of the first groove before the last dulcet note of Noël Coward's *Mad About the Boy* has dissolved from your tranquilized mind. Encore!
—Chris Albertson

HELEN MERRILL/JOHN LEWIS. Helen Merrill (vocals); John Lewis (piano); Hubert Laws (flute); Richard Davis (bass); Connie Kay (drums). *Django; I Didn't Know What Time It Was; Angel Eyes; Close Your Eyes; Alone Together; Yesterdays; The Singer; How Long Has This Been Going On?; Mad About the Boy*. MERCURY SRM-1-1150 \$6.98, ® MC-8-1-1150 \$7.95, © MCR-4-1-1150 \$7.95.

(Continued on page 109)

SAVE

CONSUMER STEREO
PROFESSIONAL STEREO
OVER 80 BRANDS STOCKED

PHASE LINEAR	SHURE
PIONEER	DUAL
DYNACO	BIC
KENWOOD	TEAC
AKAI	A-R
SANSUI	SONY
ALTEC-LANSING	

Wisconsin Audio

Please write or phone for price
quotations on your choice
of audio equipment

303 West Johnson Street
Madison, Wisconsin 53703
608 — 257-6320

CIRCLE NO. 47 ON READER SERVICE CARD

Audio Discount WAREHOUSE SALES

DIRECT TO PUBLIC
"HOT STUFF"
IF YOU CAN BUY IT
ANY CHEAPER YOU COULD
DO 2 TO 5 YEARS



CALL THE HOTLINE TOLL FREE
OUT OF STATE
800-631-2175
IN NEW JERSEY
800-822-8926

Write Today FREE Audio Catalog

MASTER CHARGE/BANKAMERICARD
HONORED ON
MAIL & PHONE ORDERS

AUDIO DISCOUNT  
WAREHOUSE SALES
175 Monmouth Rd. W. Long Branch, N.J. 07764
Please rush me your FREE Audio Catalog.

Name _____
Address _____
City _____
State _____ Zip _____

CIRCLE NO. 3 ON READER SERVICE CARD

LOUIS VAN DYKE: 'Round Midnight. Louis van Dyke (piano); bass and drum accompaniment. *Django; The Entertainer; Valse; Sweet Georgie Fame;* and six others. COLUMBIA M-34511 \$6.98.

Performance: **Cocktail time in Amsterdam**
Recording: **Good**

Reading Peter Venudor's notes to this album made me suspect a put-on, another attempt by Columbia's Masterworks department to break into the pop field. After all, calling Louis van Dyke "the most brilliant of the current generation of Dutch piano players" is just about equivalent to calling me "the most gifted jazz writer born in Iceland." I don't recall that encomium doing anything for my ego, and Holland hasn't exactly been a breeding ground for jazz pianists. The line that really got me, however, was the one boasting that Mr. Van Dyke had been "invited to accompany such great vocalists [my italics] as the Anita Kerr Singers, Salena Jones, and Coretta King." Now I simply had to hear this record. Was it actually a humorous aside by Horowitz? Was it André Watts baring his roots? Did it mark the return of Jonathan Edwards? Well, any of the above would have been preferable to what I heard when I played "Round Midnight." I guess there really is a Louis van Dyke, a capable technician who plays pretty but without verve and—for someone billed as "Europe's foremost jazz pianist"—with a surprising lack of feeling. What next, Masterworks? "Coretta King's Greatest Hits"?? C.A.

LEE WILEY: On the Air. Lee Wiley (vocals); instrumental accompaniment. *You Came to My Rescue; Three Little Words; You Turned the Tables on Me; Here's Love in Your Eyes; The South in My Soul; I'm Comin' Virginia; A Thousand Good Nights;* and seven others. TOTEM 1021 \$6.98 (from Kiner Distribution Co., P.O. Box 742, Redmond, Wash. 98052).

Performance: **Excellent**
Recording: **Variable reprocessing**

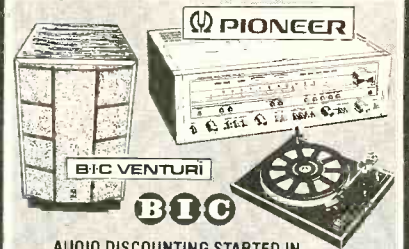
Lee Wiley was a precocious, gifted, and very womanly balladeer who never quite made it to the top in the Thirties and Forties but was well regarded by jazz musicians for her phrasing, feeling, and impeccable timing. She could take a lyric line and extend it to the utmost limits imposed on it by a given tune, then snap it back on the beat like a rubber band. She was a "discovery" of bandleader Paul Whiteman, who had also "discovered" Mildred Bailey.

Though Wiley's career did not take fire the way it might have, she always kept the respect of musicians and knowledgeable fans. Her recording dates after the Thirties were sporadic, mostly as a guest artist or as the star on semi-private and limited-edition sessions. She died in 1975, a minor legend whose performances remain highly prized.

The recordings in this archive set are taken from radio-broadcast airchecks between 1932 and 1936, some made with the Whiteman orchestra and some with Rudy Vallee's band. Many of them were made when Wiley had not yet reached twenty. Her vocals are canny, fluid, and tempting; her voice, style, and intent are not those of the radio vamp singer, but of a "nice" girl who would do anything for her man. The tunes and lyrics, of course, are from an era of American songwriting that has never been equaled for sentimentality, sophisticated bathos, and pure emotional tug. I recommend the singer and the songs. J.V.

PRICE WAR

AMERICA'S #1 VALUE LEADER
STEREO CORPORATION OF AMERICA



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 60 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. DON'T DELAY!!!

WRITE US NOW FOR LOWEST PRICE QUOTE

WRITE OR CALL
For FREE
STEREO
PRICE CATALOG

SHOP BY PHONE!
(212) 253-8888
N.Y. TIME
9-5 MON. THRU SAT.
Mastercharge/BankAmericard

STEREO CORPORATION OF AMERICA



S-R 1629 Flatbush Ave.
Brooklyn, New York 11210



CIRCLE NO. 38 ON READER SERVICE CARD

TOP Discount AUDIO

Your **NATIONAL HEADQUARTERS**

For Famous Brand
Electronics By Mail

1150 N. Powis Rd., West Chicago,
Ill 60185 • (312) 293-1825

All Orders Shipped In
Factory-Sealed Cartons

Write Or Call For
The Lowest Prices
Anywhere!

MILLION \$\$\$ INVENTORY

LOWEST PRICES ON

RECEIVERS	TURNTABLES	TUNERS
SPEAKERS	CHANGERS	CARTRIDGES
TAPE DECKS	AMPLIFIERS	HEADPHONES
CALCULATORS	COMPACTS	CAR AUDIO

Top Discount Audio  
1150 N. Powis Rd.
West Chicago, Ill. 60185
SR-8 (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. 43 ON READER SERVICE CARD



CLASSICAL DISCS AND TAPES

Reviewed by RICHARD FREED • DAVID HALL • GEORGE JELLINEK • PAUL KRESH
STODDARD LINCOLN • ERIC SALZMAN

ALBÉNIZ: *Iberia, Books 1 and 2.* Michel Block (piano). CONNOISSEUR SOCIETY CS 2120 \$7.98.

ALBÉNIZ: *Iberia, Books 3 and 4; Navarra.* Michel Block (piano). CONNOISSEUR SOCIETY SC 2121 \$7.98.

Performance: **Frequently poetic**
Recording: **Excellent**

ALBÉNIZ: *Iberia, Books 1-4.* Aldo Ciccolini (piano). SERAPHIM SIB-6091 two discs \$7.98.

Performance: **Crisp**
Recording: **Very good**

Aldo Ciccolini, always a more than dependable performer, gives us a crisp, generally enjoyable account of Albéniz's masterwork, not without occasional flashes of elegance; the recorded sound of his piano is very good indeed, and the Seraphim price makes the set still more attractive. Michel Block, however, seems to me to go a good deal deeper into the essence of this music; his playing is more flexible and frequently poetic, with a conspicuously wider range of both color and mood. Moreover, he benefits from even finer sound, the Connoisseur issue includes the supplementary piece *Navarra*, and it is further enhanced by Peter Eliot Stone's exceptional annotations. Block's *Iberia* is a thoroughly satisfying presentation in its own right—more so than Francisco Aybar's, issued on the same label about two years ago, but inevitably less

so than Alicia de Larrocha's magical performance in London set CSA-2235 (wherein she includes not only *Navarra* but the entire suite *Cantos de España*). Attractive as the various other versions may be, it is Larrocha's that remains the most fulfilling. R.F.

C. P. E. BACH: *Trio Sonatas in C Major, B Minor, and B-Flat Major.* Eugenia Zukerman (flute); Pinchas Zukerman (violin); Samuel Sanders (harpichord); Timothy Eddy (cello). COLUMBIA M-34216 \$6.98.

Performance: **Pushy**
Recording: **Dry**

If you are seeking the *Sturm und Drang*, the sentimental, the bizarre and spastic writing usually associated with Bach's second-eldest son, stay away from this disc. Here the innovator is writing in an archaic trio-sonata idiom that lacks the strength of the Baroque and has not yet caught the elegance and clarity of the Classical style. The music simply plods along without climax or shape.

In a brave attempt to make these pieces interesting, the Zukermans force the tempos and play with an aggressiveness that is entirely unbecoming to the placid, dull music. Since C. P. E. himself left explicit performance instructions and Quantz bequeathed us an equally detailed account of how to play the flute in the appropriate style, it seems rather strange that the Zukermans perform the music as they do. If the music is to come off at all, it will come off only in the original style, about which we know more, perhaps, than we do of any other. S.L.

J. C. BACH: *Sinfonia in D Major, Op. 18, No. 4; Sinfonia in D Major, Op. 18, No. 6; Sinfonia in B-flat Major, Op. 18, No. 2.* TELEMANN: *Don Quichotte Suite.* Stuttgart Chamber Orchestra, Karl Münchinger cond. LONDON CS 6988 \$7.98.

Performance: **Excellent**
Recording: **Rich**

Johann Christian Bach is one of the few men who comes off well in Mozart's letters. Mozart loved him as a person, admired his music, and, with the possible exception of Haydn,

learned more from him than from any other of his contemporaries. Yet today most people ignore "the London Bach" or pass him off with the old "Mozart without soul" cliché. Admittedly, Johann Christian was no Mozart, but he did write music of a noble simplicity, filled with elegant melodies, that deserves a wider audience than it presently enjoys. We should be grateful to Karl Münchinger for recording these beautiful works and lavishing on them the loving care that is so often reserved for Mozart.

So many conductors, when confronted with relaxed, spacious music of the Classical era (these relatively late works of the London Bach are truly Classical), feel the need to push it forward, as though to apologize for the very quality that is its essence. Münchinger does not fall into that trap, bless him, but rather brings out the long-lined, free melodies Bach spent so much time and care to create. Yet he never lets the fabric go slack: the textures are well articulated, and there is a constant sense of direction that points up the beautifully molded contours of the music. Johann Christian is here served with the opulence his music deserves.

After hearing the three Bach pieces, one wishes Münchinger had offered us a fourth instead of the Telemann suite. *Don Quichotte* is always a winner because of its good-natured fun and wit, but the Stuttgart outfit simply is not as convincing in Baroque music as it is in Classical. S.L.

J. S. BACH: *Arias* (see Collections—Janet Baker)

J. S. BACH: *Tocatta and Fugue in D Minor (BWV 565); Tocatta, Adagio, and Fugue in C Major (BWV 564); Tocatta and Fugue in D Minor ("Dorian," BWV 538); Tocatta and Fugue in F Major (BWV 540).* Lionel Rogg (organ). ANGEL □ S-37265 \$7.98.

Performance: **Mixed**
Recording: **Spendid**

One of the most striking characteristics of Baroque instrumental music is its dramatic juxtaposition of the rhapsodic and the well-ordered. The form most apt to make an issue

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.

of this sharp stylistic contrast is the toccata and fugue. Lionel Rogg is excellent in the well-ordered parts: his performances of the fugues are strong, rhythmically well-marked, and clearly articulated. When it comes to the rhapsodic, however, he is too strongly attached to the written page. The broad gestures and fanciful flights of figuration in Bach's toccatas suffer from a literal reading of the rhythm markings; they fall on each other in spastic gasps because of a lack of space between them, space the listener needs to register the full impact of the music's constantly changing moods.

The sound of the organ at St. Peter's Cathedral, Geneva, is a fine, robust, Romantic one, excellently captured in this four-channel recording. Mr. Rogg prefers it full most of the time, though, and rarely treats us to the highly colored solo stops so frequently required by this music. S.L.

BARBER: Excursions (see MACDOWELL)

BEETHOVEN: String Quartet No. 15, in A Minor, Op. 132. La Salle Quartet. DEUTSCHE GRAMMOPHON 2530 728 \$7.98.

Performance: **Impeccable but bland**
Recording: **Excellent**

The La Salle Quartet is a splendid ensemble, but one whose energies, as suggested by this release and an earlier one of the Op. 130 Quartet and *Grosse Fuge*, are more effectively directed to material other than the late Beethoven quartets. To be sure, what is bland to one listener may be "straightforward" to another, and what one finds expressive may strike another as overindulgent, but I cannot help feeling that the hasty traversal of the *Heiliger Dankgesang* here simply misses the point of the work. Were these fine musicians afraid a confrontation with what we may call (for lack of a better term) the "mystique" of Beethoven's valedictory quartets might tempt them into the self-conscious bathos that is the opposite extreme of the note-perfect blandness they have settled for here? Whatever the reason, while there is an abundance of first-rate playing per se, there is precious little sense of real involvement, and what ought to be one of the most sublime and fulfilling experiences music has to offer comes out instead merely as a demonstration of impeccable bowing and fingering. The Quartetto Italiano (Philips 802.806) probably balances polish and *Innigkeit* more successfully than any other foursome currently represented in a recording of Op. 132, though the Végh Quartet, displaying a bit less of the former quality, shines with still more of the latter (in Telefunken 6.35040). The lower-price versions by the Hungarian Quartet (in Seraphim SID-6007) and the Yale Quartet (Vanguard VCS-10005) also yield more of the Beethoven essence than this handsomely played but curiously unmoving new entry. R.F.

BLOCH: Schelomo. SCHUMANN: *Cello Concerto in A Minor, Op. 129.* Mstislav Rostropovich (cello); Orchestre National de France, Leonard Bernstein cond. ANGEL □ S-37256 \$7.98.

Performance: **Expansive**
Recording: **Very good**

The combination of Rostropovich and Bernstein in Bloch's *Schelomo* led me to expect something like the epochal Feuermann-Stokowski-Philadelphia Orchestra collabora-

tion of 1940, which for fiery dramatic impact and urgency has never been equaled. As it turns out, there are differences, but the new team does come close. The major point of difference lies in the more expansive view of the music taken by Rostropovich and Bernstein—and, of course, there is the difference that comes from the finest current recording technology, enhanced by effective use of four-channel ambiance. The end result is a mind-boggling experience in sonic richness, together with a projection of musical detail (inner voices, subtle but significant figurations, and the like) far surpassing that of any previous recording of *Schelomo* I have heard. The final climactic statement of the main theme, which paves the way for the "all is vanity" epilogue, is just plain shattering in its musical-dramatic impact.

When it comes to the Schumann concerto, though, I find the similarly expansive treatment rather too much for the essentially intimate, almost frail, substance of the work. I lean toward the Walevska-Inbal version on Philips—a disc that offers as coupling, by the way, a fine and somewhat tauter treatment of *Schelomo*. D.H.

DVOŘÁK: Suite in A Major, Op. 98 ("American"). Berlin Radio Symphony Orchestra, Michael Tilson Thomas cond. **The American Flag.** Joseph Evans (tenor); Barry McDaniel (baritone); St. Hedwig's Cathedral Choir; RIAS Chamber Choir; Berlin Radio Symphony Orchestra, Michael Tilson Thomas cond. COLUMBIA M-34513 \$6.98.

Performance: **Energetic**
Recording: **Crisp but crackly**

The story of how Antonin Dvořák came to write his *American Suite* and *The American Flag* is almost more interesting than the music. As Andrew Cosgrove puts it in his fascinating liner notes, in June 1891 "the son of a Bohemian butcher received a telegram from the wife of a New York grocer" that led to the composition of the *New World* Symphony as well as the two works presented here. The butcher's son was Dvořák, the grocer's wife a Mrs. Jeanette Thurber, who was offering the composer the director's chair at her National Conservatory in New York City. A year later, Dvořák took up the offer. When he arrived, it was the four-hundredth anniversary of Co-

(Continued on page 114)

American Art Songs



Soprano Beardsley, pianist Helps: exceptional involvement

THE title of this collection of American songs is the last line of Paul Bowles' *Once a Lady Was Here* (to his own verse). Another composer who is as active in the realm of words as in that of music is also involved in this production: Ned Rorem has contributed a fascinating "personal survey" of "The American Art Song from 1930 to 1960" that should be required reading for anyone interested in this still largely neglected (on the part of the public) segment of American music, and he has also provided thoughtful and provocative introductions to the songs recorded here. I mention Rorem's essay before discussing the music because it is every bit as valuable as the

songs themselves, and it should by all means be read thoroughly before the record is heard. Perhaps few of the songs tremble on the edge of greatness, but there could hardly be more representative illustrations of the variety of styles and the level of craftsmanship that went into defining a specifically American school of art song (relying not a whit on folk material). The Chanler and Citkowitz songs in particular should come as both a discovery and an embarrassment to those who pride themselves on being connoisseurs of *mélodies* and *lieder*. The degree of identification and involvement on the part of the interpreters here, pianists as well as singers, is also exceptional. There is not only an example of performance participation by a composer (Helps at the piano in his own very effective little cycle at the end of the recital), but a brief vocal duet that Gramm sings with himself (via overdubbing) in Chanler's *Moo Is a Cow*. Copyright problems, apparently, kept some of the texts from being printed, but the unusually thorough documentation includes information on just where to find them. A valuable and most enjoyable production. —Richard Freed

BUT YESTERDAY IS NOT TODAY. Chanler: *The Children; Once upon a Time; The Rose; Moo Is a Cow; Thomas Logge.* Bowles: *Once a Lady Was Here; Song of an Old Woman.* Duke: *Richard Cory; Luke Havergal; Miniver Cheevy.* Donald Gramm (baritone); Donald Hassard (piano). Citkowitz: *Five Songs from "Chamber Music."* Copland: *Song.* Sessions: *On the Beach at Fontana.* Chanler: *These, My Ophelia.* Barber: *Sure on This Shining Night.* Helps: *The Running Sun.* Bethany Beardslee (soprano); Robert Helps (piano). NEW WORLD RECORDS NW 243 \$8.98.



Late G&S: The Grand Duke

THE curtain went up on the marketplace of Speisesaal, in the imaginary Grand Duchy of Pfennig Halbpennig, on March 7, 1896, when *The Grand Duke, or The Statutory Duel* opened at the Savoy Theatre in London. After that curtain went down 123 performances later, the D'Oyly Carte Opera Company didn't produce this last of the Gilbert and Sullivan operas again until April 5, 1975. The success of the revival led to the decision to record the score, thus making complete on the London label the entire cycle of Gilbert and Sullivan collaborations in D'Oyly Carte productions—with the exception of their earliest effort, *Thespis*, for which most of the music seems to be missing.

For the plot of *The Grand Duke*, Gilbert went all the way back to *Thespis*, which dealt with a company of actors taking over the roles of the gods on Olympus. In *The Grand Duke* the setting is around 1750, and a theatrical troupe, headed by an ambitious manager named Ernest Dummkopf, is involved in a plot to assume positions of royalty in a Ruritania duchy. From then on, the story grows hopelessly complicated, involving the statutory duel of the subtitle, wherein the drawing of cards decides a duel's outcome rather than the shedding of blood; the machinations of the cheap Grand Duke Rudolph and his penny-pinching fiancée the Baroness von Krakenfeldt; a court coup in which the company of theatrical imposters appear in costumes for *Troilus and Cressida* so as to look like ancient Greeks; the ducal aspirations of the company's comedian Ludwig; a whole rigmarole having to do with the eating of sausage rolls as a conspiratorial ritual; and a mass wedding at which the Prince of Monte Carlo appears to invent the game of roulette.

MANY people feel that *The Grand Duke* is the one Gilbert and Sullivan opera that failed, but if that is so, it is certainly one of the theater's most delightful failures. I have heard the entire work, including spoken dialogue, as produced for the BBC by Stanford Robinson, and it holds up absorbingly. On the new London release we have the score alone, and an

exhilarating score it is. This is a more continental Sullivan than we are accustomed to hearing, one who takes advantage of the play's locale to supply lilting waltzes and dances as well as a spectacular Roulette Song that is hard to get out of your head once you've heard it. Gilbert's lyrics are surely as brilliant as their predecessors, the highlights being Ernest Dummkopf's "Were I a king in very truth," the Grand Duke Rudolph's "When you find you're a broken-down critter," and a melodramatic dissertation by Julia, the troupe's leading lady, on what constitutes a first-rate part for the stage. The choral and orchestral passages glitter with Offenbachian effervescence—and here is where the D'Oyly Carte really shines. Anyone who has heard previous rather amateur attempts to commit this piece to records is sure to be thrilled by the difference.

The Grand Duke, though, is more ambitiously operatically than anything else in the series except for *Princess Ida*, and it makes vocal demands on the singers that the D'Oyly Carte's soloists today cannot always match. Julia Goss is surprisingly adept at meeting the challenges of her coloratura role, but John Ayldon doesn't have quite the honeyed baritone needed to bring off the Roulette Song as well as I have heard it done by others. (Yet, like so many of the D'Oyly Carte principals, he makes up in enthusiasm what he lacks in vocal prowess.) As Rudolph, John Reed is his usual chuckling self, much improved in comic presence over the years but still a bit too leering in his approach. Meston Reid makes an excellent, imperturbable Ernest Dummkopf, company veteran Kenneth Sandford is splendidly droll as Ludwig, and Lyndsie Holland is perfectly cast as the miserly Baroness, whose parties are ruined for her by her guests' appetites but who loves a glass of good wine when it's provided out of somebody else's budget. Conductor Royston Nash, though a mite too military at times in his beat, has proved him-

... certainly one of
the theater's most
delightful failures . . .

self a worthy successor to the adroit Isidore Godfrey (who directed most of the other London recordings of Gilbert and Sullivan).

Now that the D'Oyly Carte's version of the series is complete on discs in stereo (a number of the operas are also available on excellent-sounding cassettes, and more, including *The Grand Duke*, are reportedly on the way), it is possible to look back on it as a whole. The main things that stand out in such an overview are the enthusiasm of the presentations, the brilliance of the orchestral playing and the choral singing, the excellence of the recorded sound, and—above all—the marvelously preserved sense of style. Earlier versions provided stronger comedians—Martyn Green and Peter Pratt—and there were better endowed, real opera singers such as Elsie Morison on hand when Sir Malcolm Sargent put his series together for Angel. But for overall precision and panache nothing matches these latest tries. It's too bad the complete dialogue has been included in only a handful of the sets (*H.M.S. Pinafore*, *The Pirates of Penzance*, *Patience*, *Iolanthe*, and *The Gondoliers*), but perhaps the D'Oyly Carte will take care of that lack in future recordings. —Paul Kresh

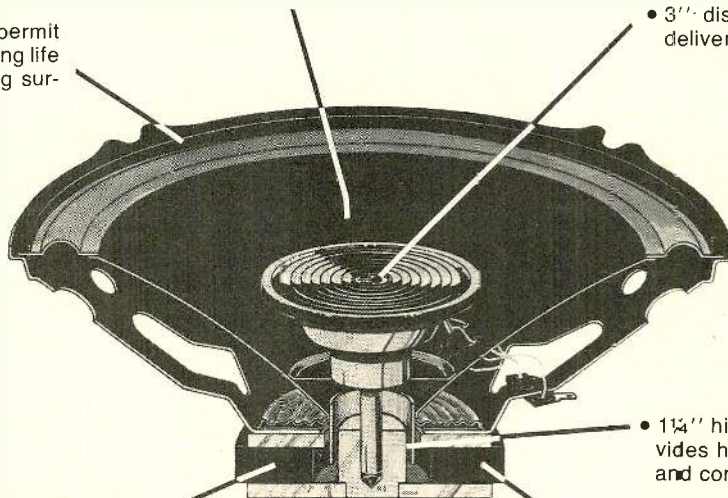
GILBERT AND SULLIVAN: *The Grand Duke, or The Statutory Duel*. John Reed (baritone), Rudolph; Meston Reid (tenor), Ernest Dummkopf; Kenneth Sandford (baritone), Ludwig; Michael Rayner (tenor), Dr. Tannhäuser; John Ayldon (baritone), Prince of Monte Carlo; Jon Ellison (baritone), Ben Hashbaz; James Conroy-Ward (baritone), Herald; Barbara Lilley (soprano), Princess of Monte Carlo; Lyndsie Holland (contralto), Baroness von Krakenfeldt; Julia Goss (soprano), Julia Jellicoe; Jane Metcalfe (soprano), Lisa; Patricia Leonard (mezzo-soprano), Elsa, Second Girl; Anne Egglestone (mezzo-soprano), Gretchen, First Girl; Beti Lloyd-Jones (mezzo-soprano), Bertha, Third Girl; Glynis Prendergast (soprano), Olga. D'Oyly Carte Opera Company and Royal Philharmonic Orchestra, Royston Nash cond. LONDON OSA 12106 two discs \$13.96.

[For the seasoned Savoyard who would like to indulge in a luxurious retrospective of the entire collection, the American Heritage Society has produced a spectacular package containing a superbly illustrated book on Gilbert and Sullivan (by Christopher Hibbert) and a three-record set (drawn from the London series) of excerpts from all the operas right through *The Grand Duke* reviewed above—and including a trio from *Cox and Box*, the tuneful result of Sullivan's early collaboration with Francis Burnand. The selections, ranging from individual patter songs to the complete first-act finale of *Iolanthe*, have been chosen with exceptional intelligence (and are clearly set in the context of the action by Richard Traubner's lucid descriptions in the notes). The surfaces are flawless. To obtain this treasure-box of splendors, send \$37.50 to the American Heritage Catalogue Department, P.O. Box 1776, Marion, Ohio 43302. That's real coin, and they could never have shaken it loose from the purse of the Baroness von Krakenfeldt, but for the devotee—or the novice seeking to get better acquainted with the G&S repertoire—it's worth every pfennig. —P.K.]

Who says you can't

match the quality of your home stereo in your car, truck or van?

- 6'' x 9'' air suspension woofer delivers deep, rich bass tones.
- 3'' distortion-free tweeter assembly delivers sparkling highs.
- 1 1/4'' high temperature voice coil provides high power handling capability and continued reliable operation.
- 20 oz. magnet.
- Speaker design assures consistently smooth frequency response throughout the audible spectrum and performance stability in all weather conditions.
- Powerful, precision-ground molded ferrite magnet provides peak flux density and uniquely high efficiency.
- Extra thick mounting gaskets permit long cone excursions, assure long life free of friction against mounting surfaces.



EVERYBODY EXCEPT AFS—makers of the KRIKET® KLASSIC™

“Perfect Balance”™ car stereo speaker

Here's what the features of our 6'' x 9'' coaxial speaker, Model 8972, mean to you. Our woofer captures all the low and midrange tones worth hearing. Our highly sensitive tweeter mounts independent of a bulky superstructure known to shield wanted sound in speakers of the past. A full 20 oz. magnet (not two stacked 10's) and aluminum voice coil assure efficiency and superb sound definition from the smallest units to the large 60 watt power boosters so popular today.

Outstanding sound reproduction and rugged, long lasting performance are standard in all KLASSIC™ speakers. Frequency response, power handling and efficiency are balance-blended in a unique new way.

Because the art of speaker making is compromise. When you add to the bass, for example, you must compensate for loss in the high end. We have. Every component in every KLASSIC™ speaker has been exhaustively tested to work in harmony, each with the other.

The result is sheer, unadulterated, pure music reproduction. Put our KLASSIC™ speaker to the test. Let your ears be the judge of all we say. If you listen to a KLASSIC™ speaker, you'll buy it.



Available at car stereo dealers everywhere.

afs/Kriket

Acoustic Fiber Sound Systems, Inc.
Indianapolis, Indiana

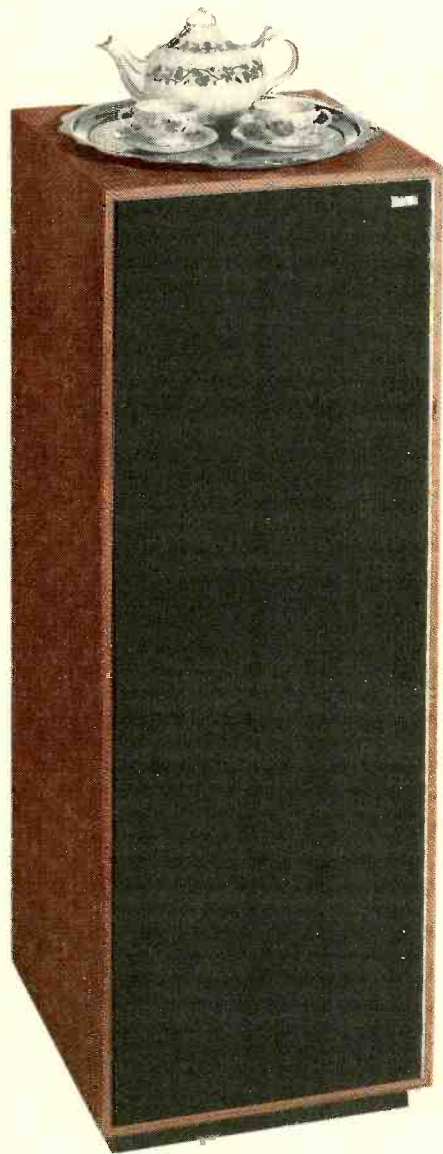
All afs®/Kriket® products are manufactured in the U.S.A.

Copyright 1977, Acoustic Fiber Sound Systems, Inc.

CIRCLE NO. 1 ON READER SERVICE CARD

Lentek

From England With Love.



The Lentek Speaker System—elegant in appearance, impeccable in sound. The Lentek Monitor is a four-way system with a nine-foot transmission-line for extremely tight and flat bass response.

Lentek—so well reviewed by the cryptic journal *Gramophone* that we were accused of bribery!—from England, with love.

D At American Audiopoint Dealers.
1407 N. PROVIDENCE RD.
COLUMBIA, MO 65201

Circle 11 on reader service card



London Records

LORIN MAAZEL:
a remarkably fresh
presentation of the
Franck symphony

lumbus' discovery of America. Mrs. Thurber had found just the poem for him to set for the occasion, an eight-part patriotic piece out of which the composer somehow managed to create a rhapsodic cantata for chorus and orchestra, on an oversize scale and in a rather Teutonic idiom. The poetry by Joseph Rodman Drake, with its overblown lines about the standard of Freedom, "the azure robe of night," and the "stars of glory," is fustian stuff, yet the music has stretches of striking eloquence. It is sung and played with hearty enthusiasm by the combined forces here, but it is not likely to replace *The Star Spangled Banner*.

The *American Suite*, which started out as a five-movement piano work, contains a greater measure of the characteristic Dvořák charm, including the sort of American Indian melodic material he used to even more telling advantage in his *American Quartet*. Thomas again delivers an enthusiastic reading. Dvořák never heard either of these works in his lifetime. Both bear his imprint and contain some inspired pages; even so, and even with such enthusiastic performances as these, one has the feeling that he didn't miss too much. The surfaces on my review copy crackle almost to the point of unacceptability. P.K.

RECORDING OF SPECIAL MERIT

FAURÉ: *La Bonne Chanson*, Op. 61. RAVEL: *Chansons Madécasses*. POULENC: *Le Bal Masqué*. Dietrich Fischer-Dieskau (baritone); Wolfgang Sawallisch (piano); soloists from the Berlin Philharmonic. BASF G22765 \$6.98.

Performance: **Excellent**
Recording: **Very good**

It has been more than sixteen years since Fischer-Dieskau recorded French songs (a Debussy/Ravel collection on Deutsche Grammophon, deleted years ago), and I don't believe *La Bonne Chanson* has been recorded before in its chamber-music instrumentation (string quartet and double bass added to the piano). Nor, for that matter, has Sawallisch appeared as pianist on a record issued in this country until now. More to the point than such statistical observations, this fresh new release is a splendid package in which the performances of the two longer works are downright stunning. Fischer-Dieskau does not match Souzay's extraordinary feeling for the *Chansons Madécasses* (Philips 839.733LY), and perhaps no non-Frenchman can hope to, though he is more successful here than in his earlier try for DG. But he sounds thoroughly

at home in the Fauré and the Poulenc. *La Bonne Chanson* gains, I think, in the warmer-textured setting with strings, and *Le Bal Masqué* as heard here is a special delight for the period music-hall flavor projected by the instrumental octet as well as Fischer-Dieskau's uninhibited identification with the satirical spirit of the texts. The recording is close-up but very well balanced, the pressings quiet, and full trilingual texts are included. R.F.

FAURÉ: *Pelléas et Mélisande—Suite, Op. 80* (see FRANCK)

FRANCK: *Symphony in D Minor*. FAURÉ: *Pelléas et Mélisande—Suite, Op. 80*. New Philharmonia Orchestra, Andrew Davis cond. COLUMBIA M-34506 \$6.98, © MT-34506 \$7.98.

Performance: **Good**
Recording: **Good**

RECORDING OF SPECIAL MERIT

FRANCK: *Symphony in D Minor; Symphonic Variations for Piano and Orchestra*. Pascal Rogé (piano); Cleveland Orchestra, Lorin Maazel cond. LONDON CS-7044 \$7.98.

Performance: **Superb**
Recording: **Gorgeous**

Maazel's earlier recording of the Franck symphony, made with the RIAS Orchestra for Deutsche Grammophon more than fifteen years ago, was one of the best of its time, but I do not remember its being as good as this new Cleveland version, which strikes me as a more than reasonable candidate for the top of the current list. It is surely the finest thing Maazel has done in Cleveland since his first recording there (the Prokofiev *Romeo and Juliet* issued four years ago); he has the orchestra at the very top of its form, and his reading informs the work with great dignity and credibility. He seems to have found the ideal tempo for each of the three movements, pressing on just enough to sustain momentum and convey an exceptional sense of alertness, but never enough to counter the essentially expansive character of the work. Rhythms are secure; sensitively handled dynamic contrast is used as an effective expressive device. Every big moment makes its proper point; none is overindulged. What it all adds up to is a remarkably fresh presentation of an extremely familiar work—without being a self-consciously "different" one—and London/Decca has provided a gorgeous but unexaggerated sonic frame for the superb playing that is

heard from every orchestral choir and section soloist.

Andrew Davis' Franck is the sort of performance anyone would be delighted to hear in the concert hall, but it is not really exceptional. His view of the work, too, is generally clean and unsentimentalized, with well-judged tempos and tidy playing, but his version misses the conviction and elegance of Maazel's or the older ones of Monteux, Beecham, and Martinon. The New Philharmonia in this instance shows less spirit than the Clevelanders and is far less richly recorded.

Of the two fillers, neither of which is likely to sway a decision one way or the other, Davis' Fauré is the more imaginative choice, and it is beautifully played; I hope Columbia recouples it with something other than the Franck symphony. On the Maazel disc, Pascal Rogé, in his first recording with orchestra, does very well indeed by the Symphonic Variations, and the orchestra's participation in this work, too, is unusually eloquent. R.F.

GLINKA: *Songs* (see Collections—Galina Vishnevskaya)

RECORDING OF SPECIAL MERIT

HAYDN: *La Vera Costanza*. Jessye Norman (soprano), Rosina; Helen Donath (soprano), Lisetta; Claes H. Ahnsjö (tenor), Count Errico; Wladimiro Ganzarolli (bass), Villotto Villano; Domenico Trimarchi (baritone), Masino; Kari Lövaas (soprano), Baroness Irene; Anthony Rolfe Johnson (tenor), Ernesto. Orchestre de Chambre de Lausanne. Antal Dorati cond. PHILIPS 6703.077 three discs \$20.94.

Performance: **Very good**
Recording: **Excellent**

The steady routine and relative security Haydn enjoyed in the Esterházy Castle were clearly beneficial to his productivity in the field of orchestral and instrumental music. His development as an opera composer, on the other hand, suffered because of it. There was a wealth of operatic activity at the castle, and the performances under Haydn were probably as good as could be found anywhere in Europe during that period (1760-1780). But the prince did not like comic operas (for which Haydn exhibited a decided flair), and librettists for entertaining and sophisticated "semi-serious" opera were, apparently, not available. *La Vera Costanza* (1779) is typical of the necessary dramatic compromises: the *buffa* elements are not funny enough, while the heroic and even cruel gestures are not convincing.

This set is the second in a series undertaken by Philips in association with Radio Suisse Romande, a project that may lead to recordings of all Haydn's operas. The performances are so painstakingly prepared and beautifully executed that I find myself torn between gratitude and frustration. Again and again we are regaled with evidence of Haydn's craft, imagination, wit, and ingenuity, yet the end result is an unsuccessful opera. There are some inspired arias and beautifully constructed ensemble finales, but the lacunae between these high points seem endless. In general, the ratio here between action and padding seems the opposite of what it should be.

The performance, however, is remarkable. Dorati's leadership is a model of elegance and precision, considerate of the expert and musically singers but equally devoted to the real-

ization of Haydn's delicious orchestral writing. Above all, he obtains an animated *ensemble* performance that deserves uniform praise. The rich and finely detailed recorded sound permits clean continuo registration (Maestro Dorati is at the harpsichord). This is not for the average opera lover, but as documentation of a little-known phase of Haydn's encyclopedic activity it is peerless. G.J.

RECORDING OF SPECIAL MERIT

LEONI: *L'Oracolo*. Joan Sutherland (soprano), Ah-Yoe; Tito Gobbi (baritone), Chim-Fen; Richard Van Allan (bass), Win-Shee; Ryland Davies (tenor), San-Lui; Clifford Grant (bass), Hu-Tsin; Huguette Tourangeau (mezzo-soprano), Hua-Qui. John Alldis

Choir; National Symphony Orchestra, Richard Bonyngne cond. LONDON OSA 12107 two discs \$15.96.

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

Set in San Francisco's Chinatown around the turn of the century, Franco Leoni's *L'Oracolo*, a grisly one-acter, served for many years as a vehicle for Antonio Scotti. It has received few performances anywhere since 1933, when the great baritone chose it for his historic farewell to the Metropolitan. On the occasion of this rediscovery I am happy to say that Richard Bonyngne, that imaginative searcher for opera's lost treasures, has struck . . . well, silver, at least.

L'Oracolo takes a little more than an hour

**Call The Discount
Sound Hot Line!
Toll-Free!
800-638-6666**

**IF YOU WANT
THE LOWEST POSSIBLE
PRICE PLUS THE FASTEST
DELIVERY — YOU'LL JUST HAVE
TO SHOP DISCOUNT SOUND.**

PIONEER

SX-750



\$279

Discount Sound's huge buying power guarantees that we will meet or beat any price! **Discount Sound** will ship it to you fast! Incredible? Call our toll-free number **800-638-6666**. If you're going to buy audio equipment—you can't afford to pass us by!!

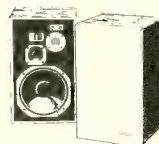
marantz

1070 AMP



\$155

PIONEER



HPM-100 \$330 pr.

Technics
by Panasonic

marantz

112 Tuner



\$138

PIONEER

PL-530



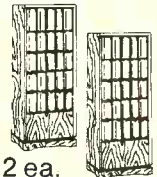
\$171

We discount the full line of Pioneer. Call or write

Call or write for the lowest prices on Technics receivers, turntables, and tape decks.

marantz

HD-88



\$212 ea.



**discount
sound**

**301-881-8890
800-638-6666**

5618 RANDOLPH RD., ROCKVILLE, MD. 20852
All orders shipped immediately • Phone orders accepted • Use your BankAmericard or Master Charge • Call or write for price quotes on all the top audio brands • Write for free catalog • All merchandise in factory sealed cartons with full manufacturer's warranty.

to perform, and there is never a dull moment. Musically, it shows a definite indebtedness to Puccini (*La Bohème*, mainly), a graceful gift of melodic expression, little in the way of an individual profile, but great skill in fusing voices, chorus, and off-stage effects into a flowing and always colorful continuity. These qualities were perhaps not appreciated when the opera was new (1905) and Puccini, Mascagni, Leoncavallo, Giordano, and Cilèa were also enriching the repertoire. Considering the current state of operatic writing, Franco Leoni may yet be given grateful recognition.

Tito Gobbi is a singing actor in the Scotti mold; his portrayal of the murderous, despicable Chim-Fen is commanding and terrifyingly real. Joan Sutherland sings prettily in the love scene and with convincing delirium in the sordid final moments. As her doomed lover, San-Lui, Ryland Davies is refined, but too

unaccounted for in the catalog. It seems a strange lapse in this age of the "Complete Set," but the continued neglect of No. 1 does not make Leon Bates' fine account of No. 4 any less welcome. MacDowell dedicated this work (together with its immediate predecessor, the *Norse Sonata*) to Grieg, a composer with whom he had more than a few characteristics in common; we are reminded of this particularly in the opening movement of this 1901 sonata, while in the tempestuous final movement there seem to be thinly disguised allusions to MacDowell's own Second Piano Concerto. Bates deals effortlessly with the work's technical demands and is almost equally successful in realizing the element of fantasy underlying its three movements. He makes so strong a case for the Fourth Sonata, in fact, that I wish he had given us the *Sonata Tragica* on the other side of the disc instead of the

takeover of Austria—to this latest one almost forty years later, the Mahler Ninth has been fortunate in most of its recorded realizations. During the stereo era alone we have had at least three of the very top rank: Columbia's with Bruno Walter, Angel's with Otto Klemperer, and Philips' with Bernard Haitink. And now we have yet another to equal those, but with a difference.

The difference is in the singing quality Giulini brings to the end movement, a quality that takes precedence even over the compassion of Walter, the starkness of Klemperer, or the stern control of Haitink. Not that Giulini can't bring stern control into play when the musical situation so demands: the *Rondo-Burleske* is here as gnarly and rough-hewn as one could ever want, and it is played with surpassing brilliance. But it is in the last movement that Giulini and the Chicagoans come through in altogether inspired fashion. The lambency that has already distinguished the performance here bursts into a sustained tonal glow equaled in my memory only by the greatest public performances of Stokowski's Philadelphia Orchestra or Koussevitsky's Boston Symphony. Rarely indeed does one hear such string sound as in the opening pages of the finale in this recording. Indeed, the performance as a whole has much in common with my remembered impressions of Koussevitsky's, who had his own special flair for the work. In all, then, this is another outstanding recorded performance of Mahler's Ninth to add to the extensive roster of splendid ones already available.

D.H.

RECORDING OF SPECIAL MERIT

MESSIAEN: *Vingt Regards sur l'Enfant Jésus*. Michel Béroff (piano). CONNOISSEUR SOCIETY CS2-2133 two discs \$15.96.

Performance: **Superb**
Recording: **Excellent**

If anyone can make the unique style and substance of Messiaen's musical language palatable, it is certainly Michel Béroff, as he has already proved in the Angel recording of the *Quartet for the End of Time*. Quite simply, there are marvelous sonic events in the *Vingt Regards*, events that receive a most remarkable realization through the wizardry of Béroff's fingers and his command of the pedals. Whether or not one cares for Messiaen's aesthetic as expressed in his somewhat hyperbolic expatiations on his own music, one can only be impressed by his command of all the sonic resources of the keyboard medium—timbre, rhythm, commanding line, harmonic tension-relaxation, and the rest—drawing freely as well on Gregorian chant, Oriental music, bird song, and other exotica. And yet the whole thing is no hodgepodge but a coherent listening experience, aided in this instance, I must admit, by the composer's own vivid program annotations included in the Connoisseur Society album. This *Vingt Regards* was, moreover, excellently recorded by Pathé Marconi in France and splendidly mastered by Connoisseur Society over here. Clearly the album's *Grand Prix du Disque* was well deserved.

D.H.

MONTEVERDI: *Vespro Della Beata Vergine* (*Vespers, 1610*). Elly Ameling, Norma Burrowes (sopranos); Charles Brett (alto); Anthony Rolfe Johnson, Robert Tear, Martyn Hill (tenors); Peter Knapp, John Noble (basses);

(Continued on page 118)

LEON BATES:
making a case
for MacDowell's
Fourth Sonata on
a fine debut disc



Joanne Rife Management

light in tone. Richard Van Allan's peculiar tone production distorts his vowel sounds in the low range, but he handles the upper part of his demanding music impressively. Good contributions by Huguette Tourangeau and Clifford Grant round out the cast. Richard Bonyngé underplays the shock effects and concentrates, successfully, on obtaining a polished and transparent realization of what turns out to be a very rewarding score. The fourth side of the two-disc set contains orchestral "Reminiscences" of Leoni's music for James Bernard Fagan's play *The Prayer of the Sword*. There are six brief sections, all engagingly melodious in a lighter vein, all beautifully played.

G.J.

MACDOWELL: *Piano Sonata No. 4, Op. 59* ("Keltic"). **BARBER: *Excursions*.** **WALKER: *Sonata No. 3*.** Leon Bates (piano). ORION ORS 76237 \$7.98.

Performance: **Good**
Recording: **Good**

For years there has been talk of an "integral" recording of MacDowell's four piano sonatas, but no such project has yet materialized, and the *Sonata Tragica* (No. 1) even now remains

Barber and Walker pieces. Not that he does any less well by them than he does by the MacDowell, but Zola Shaulis' somewhat more persuasive (and more richly recorded) version of the *Excursions* is part of a disc made indispensable by the inclusion of the Bloch sonata (CRI SD 295), and George Walker's *Sonata No. 3*, unlike his stimulating Trombone Concerto, gives the impression that the composer was more interested in effects for their own sake than in communicating with his listeners. The three performances, though, add up to quite a debut disc for Bates, from whom we shall surely be hearing more.

R.F.

RECORDING OF SPECIAL MERIT

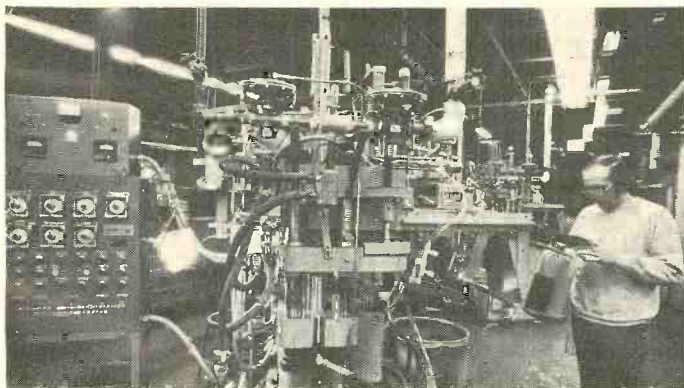
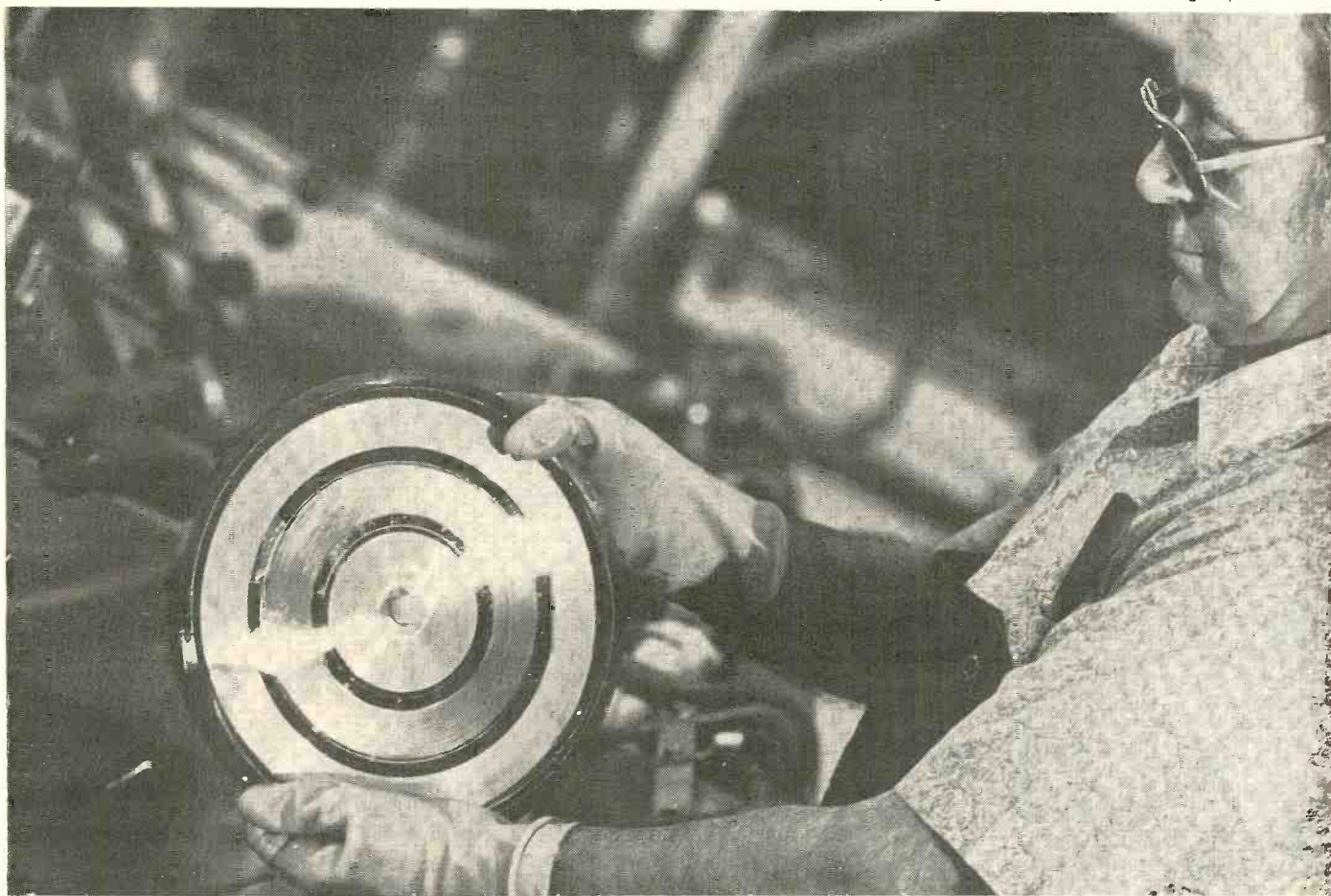
MAHLER: *Symphony No. 9, in D Major*. Chicago Symphony Orchestra, Carlo Maria Giulini cond. DEUTSCHE GRAMMOPHON 2707 097 two discs \$15.96, © 3370 018 \$15.96.

Performance: **Superb**
Recording: **Superb**

From its very first disc documentation—with Bruno Walter and the Vienna Philharmonic in a public performance on the eve of the Nazi

The importance of precision in quality control and accurate playback for analysis of sound, are the reasons MCA states... "Stanton is totally reliable, we depend on it" .

Inspecting a metal mother in the Plating Department.



MCA (Music Corporation of America) is one of the truly big ones in record production. Quality control in every aspect of their manufacturing, plating and printing is of crucial importance. That is why they use Stanton's Calibrated 681 Series, both in their quality control operation and in their playback for analysis of audio quality.

They even go so far as to "use the needle to test the Mother (Nickel) . . . and it stands the wear"

Throughout the recording industry, both the large and

the small depend on Stanton for every aspect of the record-producing operation. Each of the 681 Calibration Series is guaranteed to meet its specifications within exacting limits and the most meaningful warranty possible . . . individual calibration test results comes packed with each unit.

Whether your usage involves recording, broadcast, or home entertainment, your choice should be the choice of the professionals . . . the **Stanton 681**.



For further information write to: Stanton Magnetics, Terminal Drive, Plainview, N. Y. 11803

CIRCLE NO. 44 ON READER SERVICE CARD

© 1977 STANTON MAGNETICS

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. 15 ON READER SERVICE CARD

BIG DISCOUNTS

STEREO COMPONENTS

Largest selection of top name brands... try us and see...

It's worth a call
(301) 488-9600

INTERNATIONAL W/RE

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. 16 ON READER SERVICE CARD

Choir of King's College, Cambridge; Early Music Consort of London, Philip Ledger cond. ANGEL □ SB-3837 two discs \$15.96.

Performance: **Aggressive**
Recording: **Reverberant**

In an attempt to overcome the stodginess of the traditional interpretations of early sacred music, many conductors and choirmasters have infused vitality into the genre by means of quicker tempos and more vigorous rhythms. In other words, they have quite rightly begun to treat the music as music rather than as fervent expressions of religious dogma. But Philip Ledger, in this reading of the Monteverdi Vespers, seems to have gone too far in that direction. In striving for brilliance, he has pushed the tempos beyond the point of vigor into downright skittishness, forcing the chorus to the point where the boys sound raucous and on the verge of cracking. This drive is also reflected in the solo pieces, and it results in some rather ugly sounds there too. The aggressiveness has turned the smooth Renaissance lines into a jagged, contourless muddle, especially in the instrumentally conceived rhythmic modifications, which frequently come out like yelps. Although there are a few passages that tolerate such exaggeration ("*Lauda Jerusalem*," for example), the overall effect is simply frantic.

Left to their own devices in the concertos, the soloists are generally excellent. Elly Ameling loses her vibrato and produces the sensitive singing we expect of her. Robert Tear, right at home in this florid idiom, is thrilling in the almost Oriental coloratura of the final Gloria, in which he is joined by Anthony Rolfe Johnson. Also notable is the performance of the *Duo Seraphim* by all three tenors. And the Early Music Consort of London turns in a performance of such accurate intonation and brilliance that the musical climax of the recording occurs in the instrumental *Sonata Sopra "Sancta Maria."* S.L.

MORALES: *Magnificat Secundi Toni. Motets: Emendemus in melius; Lamentabatur Jacob; Andreas Christi famulus; Jubilate Deo omnibus terra; Pastores, dicite, quidnam vidistis.* Pro Cantione Antiqua, London, Bruno Turner cond. DEUTSCHE GRAMMOPHON ARCHIV 2533 321 \$7.98.

Performance: **Very good**
Recording: **Excellent**

The Pro Cantione Antiqua comprises a small, all-male chorus and a supporting group of ear-

ly-instrument players. The sound of this recording is quite different from the more commonly heard unaccompanied choral readings that were until recent years considered appropriate for the performance of Renaissance sacred music. The exclusive use of male voices (countertenors replacing women) produces a rich, full sound, and the instrumental doubling, besides creating intriguing coloration, also adds rhythmic vigor to the music and greatly contributes to the articulation of the vocal lines. These forces especially enhance the Morales Magnificat, which alternates the Gregorian chant for this text with polyphonic settings of it that embody the chant melody in carefully woven imitative textures. Each verse is treated to a different instrumentation, which not only lends tonal variety but also reflects the moods of the individual verses. The excellent performance helps one realize why it was that Morales was so renowned for his Magnificats.

Of the motets on the album, two are sung without instruments. The performances remind one that voices are infinitely more supple and expressive when left to their own devices than when accompanied. Only winds are used to accompany the other motets, and, while they add to the sound, the old instruments are necessarily rather stiff and cumbersome, which takes away from the highly expressive vocal writing. The true artistry of the vocalists here is best displayed without the instruments. But both accompanied and unaccompanied performances are historically correct, and if the use of one seems to preclude the advantages of the other, this record at least lets us sample both ways. S.L.

MOZART: *Arias* (see Collections—Stuart Burrows)

RECORDING OF SPECIAL MERIT

MOZART: *Flute Concerto No. 1, in G Major (K. 313); Flute Concerto No. 2, in D Major (K. 314); Andante in C Major for Flute and Orchestra (K. 315).* James Galway (flute); Lucerne Festival Strings, Rudolf Baumgartner cond. RCA ARL1-2159 \$7.98, © ARS1-2159 \$7.98, © ARK1-2159 \$7.98.

Performance: **Marvelous**
Recording: **Good**

RCA must be out to corner the market in Mozart flute concertos, having issued the same program with Rampal less than two years ago (FRL1-5330) and now giving us a no less mar-



PRO CANTIONE ANTIQUA: demonstrating Morales' just renown

velous package with Galway. Both flutists are superb, of course, so it is very much a matter of "How happy could I be with either. . . ." Aside from the cadenzas (each plays his own, equally tasteful), the most conspicuous differences are to be noted in the slow movements of the two concertos and the finale of K. 313. The slow movement of the latter is an *Adagio non troppo* in which Galway seems to ignore the "non troppo" and offers instead a very slow and dreamy nocturne, whose hypnotic effect is actually enhanced by the slight haze over the orchestra from the somewhat over-reverberant acoustics (but not by the noisy surfaces of the two copies I received). In the finale Galway's pacing, less perky than Rampal's, seems closer to the *Tempo di menuetto* marking, while in the slow movement of K. 314 (Mozart's transcription of his Oboe Concerto) it is Rampal who is more expansive and dreamlike. Both soloists enjoy first-rate collaboration from their respective conductors, and both discs are so enticing that the differences between them may simply be seized upon as an excuse for acquiring them both. (It should be noted that the Rampal recording is also available on MHS 863 at much less than the RCA price.) - R.F.

NICOLAI: *The Merry Wives of Windsor* (see Best of the Month, page 79)

POULENC: *Le Bal Masqué* (see FAURÉ)

PUCCINI: *Messa di Gloria*. Kari Lövaas (soprano); Werner Hollweg (tenor); Barry McDaniel (baritone); Chorus of the West German Radio, Cologne; Frankfurt Radio Symphony Orchestra, Eliahu Inbal cond. PHILIPS 9500 009 \$7.98.

Performance: **Good**
Recording: **Excellent**

Here is an enjoyable rendering of a thoroughly ingratiating piece of music that all Puccini enthusiasts should own without trying to find in it more than the earmarks of an immensely gifted youth (it was his graduation exercise, completed in 1880 at age twenty-two). Melodic felicities abound in the Mass, though at times they are compromised by youthful insensitivity. The jaunty dance tune Puccini uses for his *Agnus Dei* illustrates this problem, and yet the way he brings back an initially insignificant march theme for the blazing conclusion of the *Gloria* already foreshadows the theatrical genius to come.

The choral and orchestral performances are very good throughout. Tenor Hollweg is the most effective of the three soloists. Miss Lövaas is entirely competent, and Mr. McDaniel sings stylishly but without enough sonority in his solos. The recording is faultless. G.J.

PUCCINI: *Tosca (Highlights)*. Vladimir Atlantov (tenor), Mario Cavaradossi; Tamara Milashkina (soprano), *Tosca*. Orchestra of the Bolshoi Theater, Mark Ermler cond. COLUMBIA M-34516 \$6.98.

Performance: **Disappointing**
Recording: **Mediocre**

This disc includes virtually all the music of *Tosca* and Cavaradossi except the *Scarpia* scenes. It was meant to be released in time for Vladimir Atlantov's Metropolitan debut as Cavaradossi last March, but that event failed to materialize. I wish I could say the same about the recording, for it does little for the (Continued on page 122)

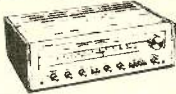
There are many reasons why DISTRICT SOUND IS THE LEADER

BIC

PIONEER

Technics
by Panasonic

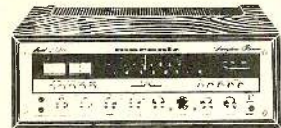
marantz
are just a few.



PIONEER
SX-650
AM/FM
STEREO RECEIVER

Continuous power output 35 watts per channel minimum RMS at 8 ohms load from 20 to 20,000 Hz with no more than 0.3% total harmonic distortion.
List \$300.00.

199⁵⁰



MARANTZ
2330 AM/FM
STEREO
RECEIVER

130 watts per channel into 8 ohms, minimum continuous power output from 20Hz to 20kHz, with no more than 0.07% Total Harmonic Distortion.

BIC

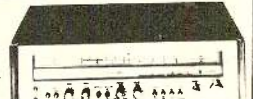
MULTIPLE PLAY
MANUAL
TURNTABLES
960 CHANGER/
SINGLE PLAY



Record-changing turntable with belt drive; features low-speed synchronous motor; isolated tonearm with Base, Dust Cover and Shure M91ED
CART. List \$241.00.

136⁰⁰

Technics
TECHNICS
SA 5370
AM/FM STEREO
RECEIVER



48 watts per channel, minimum RMS, both channels driven at 8 ohms 20 Hz to 20 kHz, with no more than 0.1% total harmonic distortion.

List \$330.00.

225⁰⁰

**THERE IS
ONLY
ONE**



**SEND FOR FREE
CATALOG
TODAY!**

District Sound inc.

2316 RHODE ISLAND AVENUE N.E.,
WASHINGTON D.C. 20018 (202) 832-1900



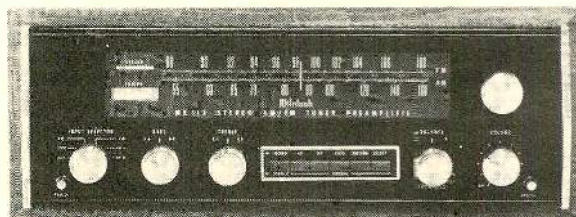
**BIG
DISCOUNTS
ON 40 OTHER
BRANDS**
featuring a complete line of
audio components to suit
every budget.

CIRCLE NO. 9 ON READER SERVICE CARD

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. 24 ON READER SERVICE CARD

ASKED how fast a song of his should go, Gabriel Fauré replied: "When the singer is bad—very fast." The quip sounds glib. But remember, composers do have fewer preconceptions about their songs than about their sonatas; song is subject to legitimate distortion by virtue of a singer's range and sex. On a more personal level, and surely unbeknownst to Fauré, the quip suggests a shady truth: maybe his songs are all intrinsically slow. Music necessarily reflects the humor of its composers. Those of broad scope, like Chopin and Strauss, are choleric-melancholics capable of both the inherently fast and the inherently slow. Narrower sanguinaries like Rossini or Scarlatti conceive only allegros (their slow pieces being really fast pieces played slow), while phlegmatics like Delius and Fauré are men whose fast pieces are really slow pieces played fast.

Or so I had always believed.

Already at twenty, confusing love with knowledge, I cast myself as an American authority on French song. Ravel and Poulenc sat at the top of the ladder, Debussy and Duparc on middle rungs, and at the bottom, with Gounod, crouched Fauré. Those dozen Fauré chestnuts that I knew (*Prison, Au Cimetière, Le Secret*, etc.) seemed mere bloodless models for Poulenc's vital copies. During the next decades my closed mind gave the composer nary a thought.

Now, two recorded sets of Fauré's "Complete Songs," both originating in France, have come out in the United States in honor of the fiftieth anniversary (three years late) of Fauré's death. Having listened to all 104 songs twice through, with a blush of surprise I realize what I've been missing.

Yes, he does compose basically slow music. Even in *La Bonne Chanson* with its busy piano, the voice never patters *à la* Poulenc, but moves at the "sensible" speed of conversation. Within the slowness there is not much variety—little rhythmic invention, no contrapuntal curiosity. Nor is Fauré tunefully spacious. His famed graceful vocal lines are graceful by dint of exquisite prosody, pregnant pauses, "telling" twists of phrase. They do not soar in the Puccinian sense, are not obviously virtuosic, do not "show off" the voice. The French word for song is *mélodie* (a tune is an *air*). But song writers, unlike opera writers, seldom compose a *sweeping* melody in the English sense of that word. Poems can't sweep; only prose, bolstered by orchestra, can.

BEING decorated emissions of the verse he admired, Fauré's songs are exclusively declamatory, one note to a syllable. And they lack guts. Then why can one listen, hour after hour, to song after song, without indigestion but with quickening delight? For the reason that one can stroll through room after room of Renoirs with a growing sense of welcome. Hunger, as the French say, comes with eating, and familiarity breeds not contempt but more familiarity. Fauré's uniqueness, like Renoir's, lies in the flawlessness of his jewels, which, though they resemble each other, are self-contained. Perfection may be a minor virtue (greatness always walks with a limp), but a virtue it remains. Fauré is a harmonist. Though he is known as a tunesmith, his craft shows less in tune itself than in chords rising

from below, like sap through a lily's stem, to color the pitch or figure—and, by extension, the word, thereby changing or at least heightening the poem's meaning.

The world's best song composers of the past always majored in poetry, either contemporary or of the preceding generation. Invariably, though, they ventured toward—even dwelt long among—more distant poets: Debussy to Charles d'Orléans, Ravel and Poulenc to Ronsard. Fauré is the only prolific song composer I can think of whose texts, with one brief exception (Molière), are drawn exclusively from his own century. The statistic is noble, the details plebeian.

People always ask if second-rate poems can make first-rate songs. Yes, but only if the composer *thinks* the poems are first-rate. Fauré was known to be cultured and up-to-

panist. "Accompanist" has servile overtones. I prefer simply pianist. Still, if accompanist may pertain to pianist *and* singer (who accompany each other through an adventure wherein their instruments mesh), then Dalton Baldwin is the best since Gerald Moore. He can play. He is not self-effacing. In those many moments where the piano is in fact an accompaniment—a strumming, an ostinato, a flow—Baldwin becomes more than mere support: he is the velvet upon which rubies are offered, the landscape against which portraits are sketched. Fauré, however, was the first *mélo-diste* to give the keyboard an identity. Even in the relatively early *Claire de Lune* and *Nocturne* the vocal lines seem afterthoughts imposed on a self-styled piano solo, while in the icy *Chanson d'Eve* voice and piano form complements of independent counterpoint—the



G. Fauré E. Ameling G. Souzay

Complete Songs of Fauré
*"Fauré's uniqueness . . . lies in the
 flawlessness of his jewels."*
 By Ned Rorem

date, frequenting both Mallarmé's "Tuesdays" and Robert de Montesquiou (the model for Proust's Baron de Charlus), who showed him Verlaine's verse. Yet the composer never set Mallarmé, and, except for Verlaine, the *great* poetry he did use fell flat. As experienced through Fauré, Victor Hugo seems too weak and Baudelaire too strong. Unlike Debussy, Fauré is not devious; he says what he says. He preferred now-dim poetasters such as Prudhomme (Nobel laureate though he was), Bussine, Samain, Mendès; and also one Louis Pommeny, official supplier of verse to soprano-composer Pauline Viardot, who was mistress to Turgenev and the first bigtime performer of Fauré's songs. Their paraphernalia was quaint: endless perfumes, dreams, girls, sighs, sorrow, dead leaves, living waters, tears, roses, moons and dawns and graveyards. But Fauré's staunch conviction, through his convincing gifts, convinces us.

The first and much better of the sets of "Complete Songs" is a two-volume set (four discs) issued by Connoisseur Society, originally recorded by Pathé-Marconi in France. It features baritone Gérard Souzay and soprano Elly Ameling, with Dalton Baldwin as accom-

panist. Closest Fauré, or indeed any Frenchman of the period, came to straight polyphony. When Dalton Baldwin plays with an Achilles heel, it is precisely during these rare linear sections (such as the inexpert twos-against-threes in *Comme Rayonne*). He is otherwise accurate, economical, generous, tasteful without passivity, and (especially with Souzay) his daily collaborator for twenty-five years) persuasively inevitable—assets which make him, although he is American, ever so French, at least on the surface.

French too (although she is Dutch) is Elly Ameling, at least on the surface, with her neat-tailored, non-vibrato concepts. The sound is sapphirine, all notes (except an unstable middle C) being more gleamingly focused than any light soprano's since Teresa Stich-Randall. Her diction is dutifully clean in French, as indeed it is in English here (*Mélisande's Song* is Fauré's one foray into English—and, incidentally, in harmonic and thematic plotting; it is an *esquisse* for the later *Chanson d'Eve*). Ameling's main fault is her faultlessness. You wait in vain for a risk, an eccentricity. Listen to her bland and proper *Nell*, then recall (if you are lucky) the *Nell* of

Nell Tangeman or of Povla Frijsh with their hot enthusiastic swoops. Yet, if Ameling's *Chanson d'Ève*, for ripeness and energy, falls short of Phyllis Curtin's (Cambridge Records, 1964), it is nevertheless there that her nubile hues glimmer most favorably. The cycle is Fauré's only extended vocal piece that does not sound better in a masculine voice. Insofar as the suite of poems is intoned by, and mirrors, what is often called Feminine Viewpoint, one might be tempted to name it Female Art, were not both composer and poet (Belgium's symbolist, Charles van Lerberghe) men. Yet what woman composer today would select such fragile texts, or dare to concoct such scented sonorities as have come to be known, erroneously, as Ladies' Music? Other centuries, other stigmas. Fauré the man, with that Mark Twain face and irreproachable domesticity, was bourgeois to the teeth, as were virtually all French composers (though not poets or painters) of the nineteenth century. His dialect was delicate, like Monet's or Mallarmé's, but no less manly than Berlioz's or Delacroix's, for art, though sexual, is without sex. Fauré is never ribald like Ravel and Poulenc. Unlike Ravel and Debussy, but like Poulenc, he is often religious. Debussy's only known public reaction to Fauré is ambiguous: "We heard a Ballade by the Master of Charms, almost as lovely as pianist Mme. Hasselmans herself who kept having to straighten her shoulder straps, as they fell down at every scale. I somehow associate these gestures with the music of Fauré himself. The play of fleeting curves that is the essence of his music can be compared to the movements of a beautiful woman without either suffering from the comparison."

The male timbre was, in fact, Fauré's ruling texture. His metabolism, his heartbeat, his humor (mentioned earlier) are baritone by nature—that is, words sung which are slower, not faster, than words spoken. During his final years the composer adopted as his protégé Charles Panzéra, to whom *L'Horizon Chimérique* is dedicated. Panzéra in turn inaugurated the age of the French song recital, establishing a convention by which "Fauré" became synonymous with "baritone." Pierre Bernac a generation later inherited the mantle. Eventually his protégé, Gérard Souzay, took over. Years have passed.

THAT Souzay's voice is no longer young alters our pleasure no more than do evening shadows in a gorgeous oak. Among such shadows the *mélodie* comes to roost. Souzay's sound gives off an exhausted hint of nasal sadness which to me is quintessentially French. The cycle *Mirages* was composed for Madeleine Grey (still indomitable in the Rue Blanche when last heard from), but can you imagine another voice than Souzay's inflecting those bittersweet opening bars? As the Baronne de Brimont's harmonious swan glides forth from Souzay's lips, the whole land of France somehow fans out the same way all of America is echoed on those last discs of Billie Holiday—not through sense but through sound. Listen to the unfolding of the nine moods in *La Bonne Chanson*: how the voice swerves in and out of the shade like the tinted edges of a Rouault pastel fading imperceptibly from midnight blue to cobalt to azure.

Purple metaphors do not a critic make. But just as Souzay's most singular quality—the *Frenchness* of his musicality—cannot be taught, neither can it be described except through comparison. His least singular quality is all too describable, if harmless. In contrast to Ameling, who inclines to underdo, Souzay sometimes tries too hard. *Après un Rêve* is a case: he will not let the words sing themselves, he must feel them, *interpret* them. Interpretation, of course, is the forte of Bernac, who is the only reliable teacher of French song literature in the world today. But what works for the teacher may not be needed when a pupil's voice, in itself, is evocative.

Souzay commits likable word-errors here and there, substituting an *et* for an *ou*, a *quand* for a *lorsque*, a *front* for a *coeur* (Frijsh used to do this too, accidentally on purpose maybe, to prove that her comprehension wasn't rote). With Ameling we have an agreeable Fauré performer, but with Souzay we have the definitive one. And with Dalton Baldwin as the equalizing force in this healthy *ménage à trois nations*, we have a magic keyboardist.

The accompanying notes contain a spirited essay by one Jean-Michel Nectoux; it is translated by Royal S. Brown, who also provides clear, knowledgeable translations of all the songs, including the just-discovered unpublished *L'Aurare*. The surface sound is smooth.

THE second version of Fauré's "Complete Songs" is the Musical Heritage Society's set of six discs which offers (except for *L'Aurare*) the identical repertoire in much the same chronology. The major cycles, *Poème d'un Jour*, *La Chanson d'Ève*, *La Bonne Chanson*, *Le Jardin Clos*, *Mirages*, and *L'Horizon Chimérique*, are interspersed with the sixty-odd miscellaneous songs. Except for *La Chanson d'Ève*, sung with studently style by Anne-Marie Rodde in a not especially nice soprano, the burden of performance falls on Jacques Herbillon. Herbillon's baritone is exact, his diction admirable, but after Souzay the effects are lame, the sound precious.

In the duets, Rodde is joined by Sonia Nigoghossian (on the Connoisseur Society set Ameling is dubbed with herself). The pianist, Theodore Paraskivesco, is capable. The record sound is hard. Included in the album is an intelligent and opinionated article by a Philippe Olivier idiosyncratically translated by David M. Greene. Greene also made the poem translations, which are more comprehensible in their bilingual layout than those with the Connoisseur set.

FAURÉ: *Songs (Complete)*. Gérard Souzay (baritone); Elly Ameling (soprano); Dalton Baldwin (piano). CONNOISSEUR SOCIETY CS-2127 (Volume 1) two discs \$15.96; CS-2128 (Volume 2) two discs \$15.96.

FAURÉ: *Mémoires (Complete)*. Jacques Herbillon (baritone); Anne-Marie Rodde (soprano); Sonia Nigoghossian (soprano); Theodore Paraskivesco (piano). MUSICAL HERITAGE SOCIETY 3438/3448 six discs \$29.70 (plus 95¢ handling charge from the Musical Heritage Society, Inc., Oakhurst, N.J. 07755).

In The Company Of Great Instrumentalists

IGOR KIPNIS (Harpisichord)

SB-3796
"Kipnis is enlightened style incarnate... he need bow to no one" N.Y. Times. Seven Angel albums already confirm his position among music history's greatest harpischord virtuosos.



GARRICK OHLSSON (Piano)

S-37219
15 Rachmaninoff ovation winners! As expected, Ohlsson plays them with impeccable precision and technical brilliance. Clarity and eloquence. He does it all, magnificently.



ITZHAK PERLMAN (Violin)

S-37254
At 31, he is already a master fiddler in the tradition of Heifetz and Oistrakh. His Kreisler, too, is dazzling, contagious listening.



ANGEL ROMERO (Guitar)

S-36094
Purely stated, Romero is a "star among virtuosos" N.Y. Times. Two solo LPs ascribe to his expertise in the Spanish and Classical repertoire, and the breadth of his musical heart.



LIONEL ROGG (Organ)

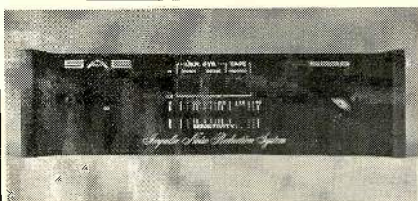
S-37264
An exemplary partnership. Rogg excels as master organist in the service of Bach. Major *Fantasias* in Volume I; the formidable *Toccatas* in Volume II.



The "Click and Pop" machine

only by

SAE



Ever since the invention of the recorded disc annoying "clicks" and "pops" caused by scratches, static and imperfections have consistently disturbed the listening pleasure of music lovers.

Now, SAE introduces the unique model 5000, an Impulse Noise Reduction System which eliminates those unwanted sounds with no adverse effect on the quality of the recorded material.

This breakthrough in electronic circuitry is so demonstrably effective that the SAE 5000 is destined to become an essential part of any sound system.

The SAE 5000 is compact and sleek, built to SAE's exacting standards, and ready to enhance the performance of any system, from the standard receiver/turntable combination, to the most sophisticated audiophile components.

SAE is proud to add the 5000 to their broad line of *Components for the Connoisseur*.

SAE

Scientific Audio Electronics, Inc.
P.O. Box 60271, Terminal Annex
Los Angeles, Cal. 90060

Please send more information on the 5000.

Name _____

Address _____

City _____

State _____ Zip _____

SR-877

CIRCLE NO. 32 ON READER SERVICE CARD

reputation of the Bolshoi's two illustrious singers or that of the distinguished Ermler, to say nothing of Puccini.

Soprano Milashkina offers her best singing in the moving, truly prayerful "*Vissi d'arte*." Elsewhere, though, she sounds tired and strident, and her top notes are wanting in freedom. Atlantov has voice in abundance, but on this occasion his singing is bereft of subtlety, charm, and musicianship. Coarse sound reproduction and sluggish conducting complete the dismal picture.

G.J.

RECORDING OF SPECIAL MERIT

PURCELL: *Birthday Odes for Queen Mary: Come Ye Sons of Art; Love's Goddess Sure*. Norma Burrowes (soprano); James Bowman and Charles Brett (countertenors); Robert Lloyd (bass); Early Music Consort of London, David Munrow cond. ANGEL □ S-37251 \$7.98.

Performance: **Elegant**
Recording: **Like a bell**

The most striking quality of this recording is the ravishing sound: the balance between the vocal forces and the ensemble of early instruments is perfect, and the result is a melting sonority rare to the world of records. In the performances ease prevails, nothing is forced, each phrase is lovingly turned, and gentle elegance wins the day. We are also blessed with two equally matched countertenors, James Bowman and Charles Brett. Each is capable of handling detailed ornamentation, and when singing together they blend into one sound in music that ranges from vigorous trumpet melodies to chains of drooping thirds. The singing of Norma Burrowes and Robert Lloyd is of such excellence that their every verse is a joy. Not a weak link mars this beautiful, curiously wrought chain of solos, duets, choruses, and ritornellos.

As for the music, it is Purcell at his best. The well-known *Come Ye Sons of Art* reveals the English fascination with Italian music, while *Love's Goddess Sure* demonstrates the more typical penchant for the French style. The styles, of course, have profited from the sea change and are wedded to a harmonic idiom that only Restoration England could produce. Purcell must have admired his queen greatly and been particularly fond of her to write her such exquisite music for a routine, commissioned birthday offering.

S.L.

RACHMANINOFF: *Songs* (see Collections—Galina Vishnevskaya)

RAVEL: *Chansons Madécasses* (see FAURÉ)

RIMSKY-KORSAKOV: *Scheherazade*, Op. 35. Saint Louis Symphony Orchestra, Jerzy Semkow cond. TURNABOUT □ QTV-S 34667 \$3.98.

Performance: **Rather prosaic**
Recording: **Extraordinary**

If recorded sound were the only factor under consideration here, this would rank very near the top of the roster of the twenty or so disc versions of Rimsky's colorful warhorse. The sonic realism achieved by Marc Aubort and Joanna Nickrenz in taping this performance can only be described as startling, especially in four-channel playback. There is a splendid richness to the climaxes, a fine sense of space, and an elegant capturing of detail without outside exaggeration.

Regrettably, Jerzy Semkow and his players have to compete against recorded versions by the world's finest virtuoso orchestras. I'm afraid it's a losing battle.

D.H.

SCHUBERT: *Mass No. 5, in A-flat Major* (see Best of the Month, page 80)

SCHUMANN: *Cello Concerto in A Minor, Op. 129* (see BLOCH)

RECORDING OF SPECIAL MERIT

SCHUMANN: *Quartet in E-flat Major for Piano and Strings, Op. 47; Quintet in E-flat Major for Piano and Strings, Op. 44*. Beaux Arts Trio; Samuel Rhodes (viola); Dolf Bettelheim (violin in Op. 44). PHILIPS 9500.065 \$7.98.

Performance: **Outstanding**
Recording: **Warm and full**

Last November, in reviewing this same coupling by Thomas Rajna and the Albeni Quartet on CRD 1024, I found it more pleasing than any other current pairing of these two works. I enjoy it no less now than I did then, but the new Philips release is more persuasive still, and may well represent the finest version of each of the two works considered individually as well as of the pair in tandem. The approach is similar to that of the English players—bristling energy in the fast movements and a tasteful caressing of Schumann's plaintive themes in the slow ones—but how the deeper maturity and refinement of the Beaux Arts team tell at every point! It is partly that—a matter of seasoning—and partly, too, simply a more subtle kind of intensity and more eloquent phrasing on the part of the individual players. A Pressler and a Greenhouse do make a difference, after all, in the marvelous material Schumann wrote for their instruments in these works, and so does the way they and their associates "breathe together." Beautiful sound, too—warm, full, and well balanced.

R.F.

TCHAIKOVSKY: *Swan Lake*, Op. 20. London Symphony Orchestra, André Previn cond. ANGEL □ SCLX-3834 three discs \$24.98, © 4X3S-3834 \$23.98.

Performance: **Lacks momentum**
Recording: **Very good**

Previn's recording of *The Nutcracker* (Angel SB-3788) was such an all-round winner that expectations were high for his coverage of Tchaikovsky's other, rather grander ballets. His *Sleeping Beauty* (Angel SCLX-3812), however, proved disappointing, with only its smoother sound (and its four-channel capacity, for those so inclined) to recommend it over Ernest Ansermet's altogether more elegant account of that score (London CSA-2304). Part and parcel of Ansermet's elegance are the thrust, momentum, and vitality that fail to make themselves felt in Previn's version—and so it is again with the new *Swan Lake*. It is all quite handsomely played (and how nice to have violinist Ida Haendel on records again), but it just doesn't come to life.

R.F.

TELEMANN: *Don Quichotte Suite* (see J. C. BACH)

WALKER: *Sonata No. 3 for Piano* (see MACDOWELL)

(Continued on page 124)

If you're surprised to learn that tubes solve some amplifier problems best, you have something to learn about amplifiers.

And about LUX.

It may seem courageously retrogressive for a company to introduce a *tube* amplifier—even a highly advanced type—to the semiconductor audio world of 1976. Especially for a company only recently established in the U.S. market with a comprehensive line of solid-state amplifiers and tuners. But for LUX, it is simply consistent with our philosophy: whatever path may lead to improvement in the accuracy of music reproduction will be explored by our audiophile/engineers. Whether it leads to transistors or tubes.

Certainly, transistors are not about to be obsoleted by tubes. However, there are some amplifier problems that tubes still handle better than transistors. Overloading is one such problem.

When a solid-state amplifier is driven beyond its rated power, it clips abruptly. Engineers call it "hard" clipping. The term is apt, as the sound from the spurious high-order odd harmonics is raspy and irritating. Further, if the overall circuitry is not stable, and the protective circuits not very well-designed, the distortion is extended in time beyond the moment of overload. Drive a tube amplifier beyond its rated power and it too clips the waveform, but gently and smoothly. This "soft" clipping introduces much smaller amounts of odd harmonics. The distortion is far less irritating, hence less noticeable.

Notch (or crossover) distortion, present in many transistor amplifiers, is another source of spurious high-order odd harmonics. It occurs when the transistor output circuits are not able to follow the musical waveform accurately at the points where it changes from positive to negative and back again. Since notch distortion, unlike clipping, is at a constant level regardless of the power the amplifier is delivering, the ratio of this distortion to signal is worse at lower power. The gritty quality heard from many transistor amplifiers, particularly when they are playing at low levels, is usually due to crossover distortion.

Of course, tubes also have *their* limitations. Especially

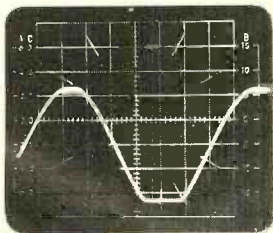
conventional tubes. The only tube previously capable of high-power amplification—the pentode—has inherently higher levels of distortion than the triode. Existing lower-distortion triode tubes cannot deliver sufficiently high power as a simple push-pull pair. But LUX, together with NEC engineers, has developed the first of a new breed of triode tube, the 8045G, which with other related technological advances, makes possible a high-power, low-distortion triode amplifier—the Luxman MB-3045. Among the differences in this new triode: the plate-electrode uses a special bonded metal with high heat-radiation characteristics. Also, the fin structure further aids heat dissipation.

LUX also developed a low-distortion high-voltage driver tube, the 6240G, capable of delivering over 200 volts of audio signal to the output triodes. Also, a new output transformer (LUX's long-time special area of expertise) has been designed to take optimal advantage of the triode configuration feeding it. The quadrifilar winding and core technology of this transformer represents another breakthrough. Overall, from input to output, the use of advanced design direct-coupled and self-balancing differential amplifier stages ensures stability and minimum phase shift.

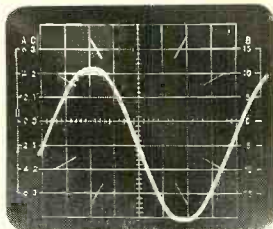
The MB-3045 produces a minimum of 50 watts continuous power into 4, 8, or 16 ohms, at any frequency from 20 to 20,000 Hz, with total harmonic distortion no more than 0.3%. As the MB-3045 is monophonic, a pair of them connected to a stereophonic preamplifier will not be subject to stereo power-supply interaction.

Now, we don't expect the MB-3045 to become the world's best-selling amplifier, any more than our highest-power solid state power amplifier, the M-6000 priced at nearly \$3000.

You'll find both at our carefully selected LUX dealers who will be pleased to demonstrate them for you. And any of the other dozen or so LUX models. It's why they're LUX dealers in the first place.



When a typical transistorized amplifier tries to deliver more power than it can, the top and bottom edges of the waveform "clip" sharply and abruptly, and not always symmetrically. Result: high-order harmonic distortion... raspy and irritating.



When a tube amplifier, such as the Luxman MB-3045, is driven into overload, the "clipping" is softer, with more rounded edges to the waveform. The resulting distortion is much less audibly bothersome.



Luxman MB-3045 monophonic tube power amplifier. 50 watts minimum continuous power into 4, 8, or 16 ohms, 20-20 kHz, total harmonic distortion no more than 0.3%. Frequency response: 10 to 40 kHz, ± 1 dB. Signal to noise ratio: 95 dB. Variable sensitivity, control for matching gain to any preamplifier. \$495.00 each. ■ Luxman CL-35 III stereo tube preamplifier. Total harmonic distortion: 0.06% at 2.0 V, 20-20 kHz, all

output signals. Frequency response: 2-80 kHz, $+0$ -0.5 dB. RIAA equalization: ± 0.3 dB. Features include: tape monitoring and dubbing, 6 selectable turnover frequencies, twin high and low noise filters, switchable phono-input impedance (30, 50, 100 kohms), variable input sensitivities. \$795.00.

LUX Audio of America, Ltd.

200 Aerial Way, Syosset, New York 11791 • In Canada: White Electronics Development Corp., Ontario

The Quintessence of Ives



Tom Turk/Nonesuch Records

GILBERT KALISH: *magical*

FOR me, the quintessence of Charles Ives' musical thought is embodied in this fabulous masterpiece evoking Emerson, Hawthorne, the Alcotts, and Thoreau. I felt this back in 1939 when I first heard John Kirkpatrick play the piece at Yale, and with all the Ivesiana since brought to light and documented on discs, I still feel that way. Not even the grandiose vistas of the Fourth Symphony match, in my estimation, the *Concord* Sonata, especially in compatibility of musical means and ends. And it is big enough, in every sense of the word, to be effective and moving in a variety of realizations—a view expressed by Ives himself at different times. Thus this Nonesuch disc with Gilbert Kalish, one of the most intelligent and sensitive of Ives inter-

preters, takes a place *beside* the magnificently architectural reading of John Kirkpatrick (Columbia) and the tautly nervous and brilliantly virtuosic one of Aloys Kontarsky (Mainstream). I would not be without Kirkpatrick's realization of the *Concord*, nor would I want to pass up the demonic Kontarsky version, but Gilbert Kalish's special brand of pianism adds another and deeper poetic dimension to this singular masterpiece of the keyboard literature. Kalish, like Kontarsky, includes the optional parts for other instruments; John Graham plays the few measures for viola, and Samuel Baron's flute is an utterly magical reincarnation of Thoreau's.

"Magical" is perhaps the best term to describe Kalish's traversal of the score. His *Emerson* is more stately and ruminative than most, the musical discourse becoming altogether spellbinding in the pages immediately following the carillon-like climax. His *Hawthorne* movement is not quite so phantasmagoric as some, but there is more humor, notably in the ragtime and Irish jig bits that crop up here and there. His performance of *The Alcotts* finds its match only in Ives' own, as documented in Columbia's four-disc centenary album. And as for the *Thoreau* movement, it is the most deeply poetic realization of this elusive and evanescent music I have yet to hear, thanks not only to Kalish's "fine-tuning" but also to Baron's flute in the final pages. But all this musical-poetic wizardry would go for nothing were it not for the painstaking work of recording engineers Marc J. Aubort and Joanna Nickrenz. With this disc they have added yet another to a long line of distinguished achievements. —David Hall

IVES: Piano Sonata No. 2 ("Concord, Mass., 1840-1860"). Gilbert Kalish (piano); John Graham (viola); Samuel Baron (flute). NONESUCH H-71227 \$3.96.

COLLECTIONS

JANET BAKER: *Bach Arias. Christmas-Oratorio: Bereite dich, Zion. Cantata No. 190: Lobe, Zion, deinen Gott. Cantata No. 129: Gelobet sei der Herr. Cantata No. 34: Wohl euch ihr auser wählten Seelen. St. John Passion: Es ist vollbracht. Anna Magdalena Notebook: Bist du bei mir. Cantata No. 6: Hochgelobter Gottessohn. Cantata No. 161: Komm, du süsse Todesstunde. Easter Oratorio: Saget, saget, mir geschwinde. Cantata No. 11: Ach, bleibe doch. Magnificat: Et exultavit.* Janet Baker (mezzo-soprano); Academy of St. Martin-in-the-Fields, Neville Marriner cond. ANGEL □ S-37229 \$7.98.

Performance: **Dull**
Recording: **Excellent**

Although Janet Baker is one of the finest singers on the scene today and Neville Marriner has a well-deserved reputation for his readings of Baroque music, this album is a disap-

pointment. I have nothing but admiration for Miss Baker's sumptuous, beautifully focused voice and technical accuracy, and Mr. Mariner provides good support with a praiseworthy precision of ensemble. But somehow everything sounds identical, submerged in a uniformly encompassing expressive style that is applied indiscriminately to each aria regardless of its musical content. The dullness this leads to is aggravated by the somber mood of almost all the arias the artists have selected. The inclusion of a few recitatives or some more joyous arias would have broken the monotony. Moreover, I am somewhat dubious about the musical validity of a recording of Bach arias out of context, especially when nothing new or exciting is brought to them. S.L.

RECORDING OF SPECIAL MERIT

STUART BURROWS: *Mozart Arias. Don Giovanni: Il mio tesoro; Dalla sua pace. Die*

Entführung aus dem Serail: Hier soll ich; Wenn der Freude; O wie ängstlich; Ich baue ganz. Die Zauberflöte: Dies Bildnis; Wie stark ist nicht dein Zauberton. Così Fan Tutte: Un' aura amorosa; Ah lo veggio; In qual fiero contrasto. Idomeneo: Fuor del mar. Stuart Burrows (tenor); London Philharmonic Orchestra and London Symphony Orchestra, John Pritchard cond. L'OISEAU LYRE DSLO 13 \$7.98.

Performance: **Elegant**
Recording: **Excellent**

Stuart Burrows is an exemplary vocalist: clean in his attacks, pure in intonation, elegant in his phrasing, and consistent in sustaining a legato line. Happily, he also avoids the trap of the overly instrumental approach: there are expression and emotion in his singing, but always sensitively controlled, staying clear of violent dynamic contrasts.

During the course of this generous display of Mozartian writing for tenor, the technical challenges include not only the familiar breath-defying "*Il mio tesoro*," but also the less well-known and quite hazardous "*Ah lo veggio*" (*Così Fan Tutte*) and the dramatic, almost Florestan-like "*Fuor del mar*" (*Idomeneo*). I wouldn't say that these are blithely tossed off, but Burrows copes with them capably, with unflinching musicianship and without ever compromising his manly, rounded, and agreeable tone quality. This is Mozart singing as good as we can get from a tenor today. Peter Schreier may run him a close second, but Burrows is far more idiomatic in the Italian arias. Excellent accompaniments, too.

G.J.

MUSIC OF THE MORAVIAN TROMBONE CHOIR. *Antes: Three Chorales. Cruse: Three Sonatas. Hus: Communion Hymn. Anon.: Moravian Funeral Chorales; The Liturgical Year; Moravian Chorale Cycle.* Los Angeles Philharmonic Trombone Ensemble, Jeffrey Reynolds cond. CRYSTAL S 222 \$6.98.

Performance: **For trombone lovers only**
Recording: **Very good**

If your idea of bliss is an hour-long concert of religious music drawn from old Moravian manuscripts and played by a choir of trombones, you should add this record of meticulously annotated chorales and anthems to your collection without delay. If, on the other hand, seventy-six trombones, or even five of them, send you diving for soundproof shelter, it might be advisable to let this one go.

Here is music drenched in religious history, much of it discovered in the archives of Moravian settlements in Pennsylvania towns with such Biblical names as Nazareth and Bethlehem, and in Salem, North Carolina. In their churches and musical colleges, the deeply religious settlers, having fled from persecution in Bohemia and Moravia, sang and played the distinctive music of their faith. The emphasis on brass instruments dated back to medieval Germany, when musicians would climb the towers of walled towns and play to announce religious and civic events or to warn of such catastrophes as fires. It is not music of much melodic or emotional interest, but it does possess an austere nobility, and there is a lot of it here. The trombone ensemble of the Los Angeles Philharmonic performs with great virtuosity. Over the long haul, though, a trombone is a trombone. P.K.

(Continued on page 130)

Discwasher

Where the audio industry finds its new ideas.



SC-1

The stylus cleaner
and magnifying mirror
that work



DiscTraker

Incredible tonearm
damping system



Discwasher
System

The Superior
Record Cleaner with
new D3 Fluoride



Pro-Disc

Freon-free dry film
micro-coating



Direct From
Cleveland

The world's first
direct-to-disc recording
of a full orchestra



discwasher[®] inc.

1407 N. Providence Rd.
Columbia, Missouri 65201

You've never heard anything like it. Not from us. Not from anyone. JBL's new L212: a totally new picture of high performance sound, from the people who wrote the book.

You hear the whole sound first. And when you catch your breath you search for words to describe the depth, the detail, the etched precision of the music.

That stunning pair of three-way speakers is sending clean, undistorted sound to every corner of the room. At every frequency. At every level. Loud or soft. High or low. It doesn't matter. The energy is constant.

You're experiencing three-dimensional imaging: Vocal up front. Lead guitar two steps back and one to the left. Drums further back. The piano closer, almost off the right edge of the sound.

Suddenly you're aware of a fullness in the music that you've heard before but never associated with recorded sound.

The bass! You've been hearing all of the bass, all of the fundamental tones you couldn't bring home from the concert. It's not only everything you've heard before. It's everything you haven't. The music is rich with sound at the lowest limit of your hearing.



Then you see the third speaker. The hero of the piece: The Ultrabass.

The Ultrabass is a system in itself—woofer, amplifier, equalizer and enclosure—designed, mated, blended to do one thing perfectly: reproduce sound at the threshold of sub-sonic frequencies.

It brings all the low frequency music within audible range, balancing it perfectly with the rest of the music. Without boominess. Without resonance. It also electronically sums left and right signals below 70 Hz—virtually eliminating turntable rumble and record warp noise. And, because of the non-directional character of the low frequency sound, the Ultrabass can be placed almost anywhere in the room. Without any loss of three-dimensional imaging.

The Ultrabass pays one final dividend: it allows the two three-way speakers to be specialists, too.

They can concentrate on the top 95% of the music. (Listen to the whole system, and you'll hear what that means. Even at a rug-curling, rock concert loudness, you'll get a clarity, a smoothness, an enthusiasm for detail you've never heard before.)

Finally, you look for the monster amplifier that's driving all that sound. There isn't one. The L212 takes one fourth the power you'd need with a conventional low efficiency loudspeaker.

That's the story. What you've been reading about is, essentially, a no-trade-off loudspeaker system. Now we'll tell you the trade-off: The price is \$1740. (The L212 may take a little while becoming a household word.)

In the meantime we have two suggestions:

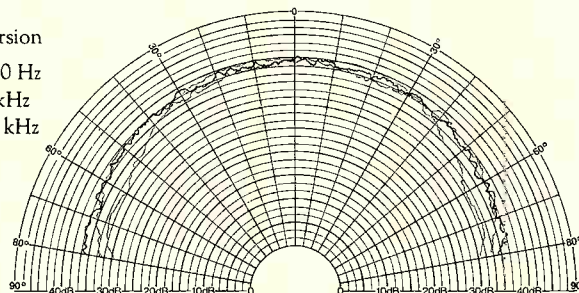
If you'd like a lot more technical information, write us and we'll send you an engineering staff report on the L212. Nothing fancy except the specs.

Or call your JBL dealer and ask him when you can hear the L212. You've never heard anything like it. Not from us. Not from anyone.

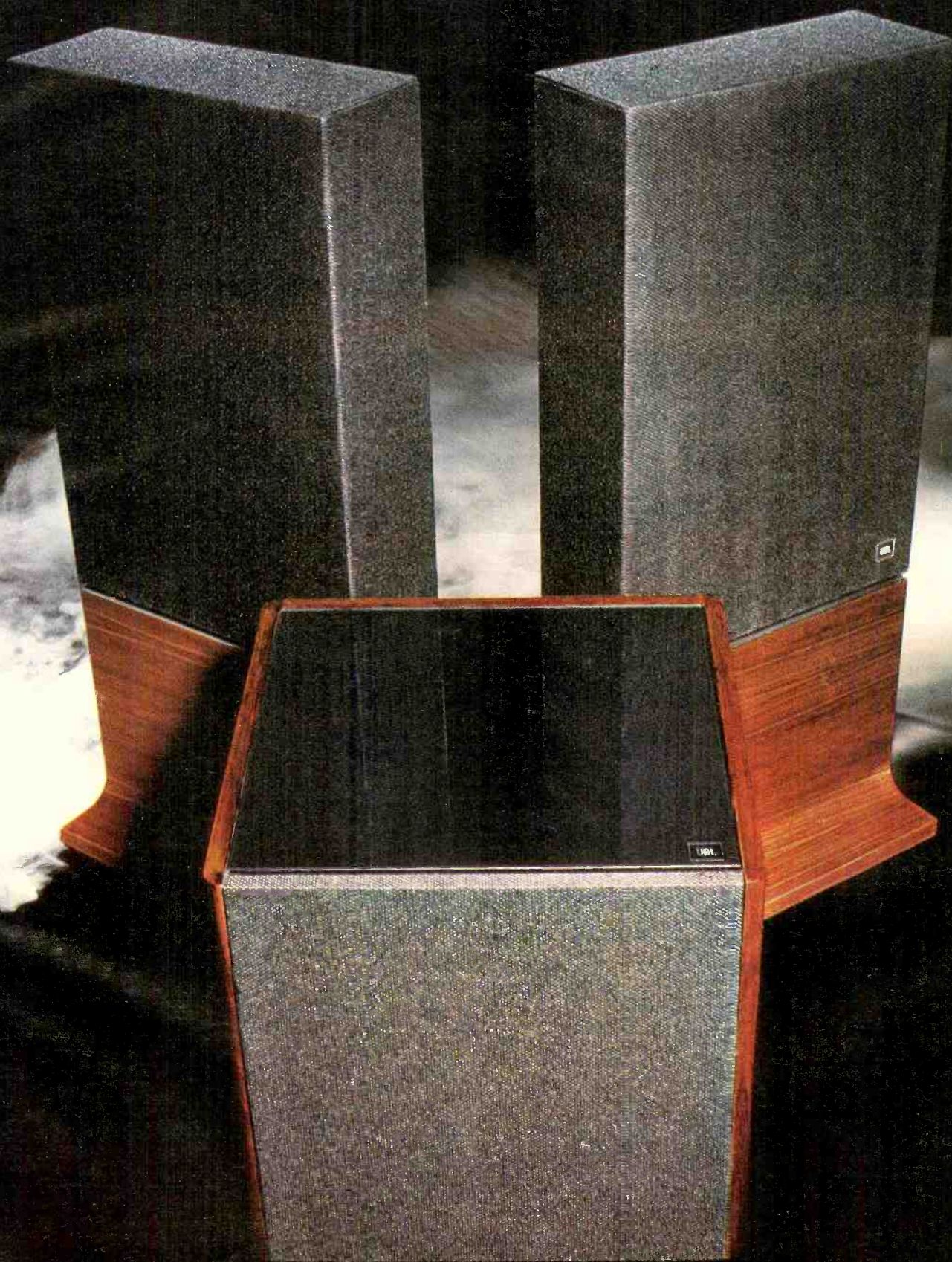


Frequency Dispersion

~~~~~ at 400 Hz  
~~~~~ at 2 kHz  
~~~~~ at 10 kHz



JBL CHANGES THE  
PICTURE OF SOUND.



# STEREO REVIEW MARKET PLACE


**REGULAR CLASSIFIED: COMMERCIAL RATES:** For firms or individuals offering commercial products or services, \$2.10 per word. Minimum order \$31.50. **EXPAND-AD CLASSIFIED RATE:** \$3.15 per word. Minimum \$47.25. 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, \$1.25 per word. No minimum! **DISPLAY CLASSIFIED:** One inch by one column, \$265.00. Two inches by one column, \$530.00. Column width 2-1/4". Advertiser to supply film positives. Please write or phone for frequency rates.

**GENERAL INFORMATION:** Payment must accompany copy except when ads are placed by accredited advertising agencies. First word in all ads set in caps. 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. Ads are not acknowledged. They will appear in the first issue to go to press after closing date. 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.

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.



**STEREO TV**

The TE-200 TELEADAPTER EASILY CONNECTS TO ANY TV & STEREO SYSTEM. Using our coupling 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 tinkle of bells or booming bass sounds as it happens on TV. With service warranty and hookup instructions \$19.95 pad. Guaranteed to make your TV 100% more enjoyable.

OUR NEW TE-300 VHF-UHF TELEVISION High Fidelity AUDIO TUNER is now available. Completely solid-state Recording and amp output jacks - Anodized Aluminum front panel and simulated Walnut Cabinet. 110 volt operation. \$169.95 pad.

SEND CHECK, M.O., MASTERCARD, or BANK/AMERICARD NO. and Expiration date TO RHOADES NATIONAL CORP DEPT NO. 5F 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.

CANADIAN Discount Catalog. Name brand stereo and 4-channel gear. Etco-3, 521 5th Ave, NYC 10017.

SAVE UP TO 69% on over 100 top brand audio components from Carston Studios, New England's Audio Supermarket, one of the oldest mail order firms (Est. 1952) and certainly one of the most reliable. All orders shipped from stocked warehouse. Send for price quote and price list. Carston Studios, Old Brookfield Rd., Danbury, Conn. 06810.

PROFESSIONAL HI-FI COURSE—Instructors include Len Feldman, Julian Hirsch, Larry Klein, and Larry Zide. Home study course also available. Send \$2.00 for full color AUDIO PRIMER and full information on joining Society Audio Consultants (SAC), 49 E 34th St., Dept. SR, New York, New York 10016.

PERFECTIONISTS PREFER DYNAKITS. Before Purchase You Owe Yourself Our Quote. Mainline Iir, 971 Fronheiser, Johnstown, PA 15902.

## BUILD YOUR OWN SPEAKERS AND SAVE UP TO 50%

Send for our free fact-packed 44-page catalog manual and learn how to assemble your own multi-element stereo speakers from scratch or from kits. Our catalog includes chapters on design, construction, x-overs, enclosures, midranges, woofers, tweeters and horns. Write us today.

SPEAKERLAB  
Dept. SR-A, 5500 35th N.E.  
Seattle, Washington 98105

AUDIO STEREO COMPONENTS and SONY TV's at rock bottom prices. Why pay up to 40% more? Arkay Audio, 68-A Watertown Street, (Route 16), Watertown, Mass. 02172.

SANSUI and PICKERING! BELOW mail order prices! Send to: GSH Super Savings, P.O. Box 86, Eden, N.C. 27288.

LOWEST PRICES on stereo-esoteric components!!! Over 150 brands. Audio Unlimited, 3386B Golf, San Jose, CA 95127. (408) 251-8776.

TASCAM, Sound Workshop, dbx, MXR, Otari, Eventide, etc. Send for price quotes. ZIMET PRO AUDIO, Dept. SR, 1038 Northern Blvd., Roslyn, N.Y. 11576.

STEREO TIMER ELECTRONIC DIGITAL CLOCK PCB, \$9.95. Kit \$99.95. Complete \$149.95. Cosmos Electronics, P.O. Box 33278, Seattle, WA 98133.

DYNAKITS, SHURE, SME—lowest prices. Underground HiFi Sales, 324a Broadwater Road, Arnold, MD 21012. (301) 647-0919.

**BUY HI-FI COMPONENTS THE MODERN WAY:**

**PHONE & MAIL**

Call TOLL FREE or write for LOW PRICES

Nationwide **800/854-7769**  
California **800/472-1783**

Approved by Phone

**MCK SALES**  
250 N THOMAS, PO BOX 2100  
POMONA CA 91766

ADC • AKAI • AR DUAL • KOSS • SONY SHERWOOD • SHURE TEAC • TDK • HY-GAIN (CB) MANY OTHERS

**SPEAKERKITS.** Free Catalog of professional quality stereo speakers built from kits. SOUNDMOVE, P.O. Box 236, Jericho, N.Y. 11753.

RECEIVER and INTEGRATED AMP owners. Our phono amp sounds better than yours. Play your records thru our phono pre-amp into your aux. input for a phenomenal improvement. If not amazed, return in ten days. List price \$89.95. Calif. residents add 6% sales tax. Write to us at PS Audio to order or ask for details. 2734 Industrial Parkway, Santa Maria, CA 93454.

MAYWARE Formula 4 PLS4/DII The best sounding universal tone arm, at U.S. Audio Dealers. Literature \$1 (bill). Mayware Ltd., 15 Heather Walk, Edgeware, Middlesex, England.

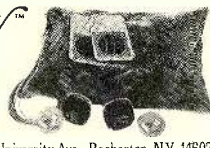
RECON YOUR SPEAKER? Send SASE. Speaker Clinic, 84-860 D Farrington Hwy., Waianae, HI 96792.

## The Comfortable Alternative to Headphones

YEAPLE **Stereopillow™**

Model 900—reviewed in High Fidelity, \$79.95 Stereo Review  
Model 400—New \$34.95 compact version

FREE reviews and dealer list from: Yeaple Corp., Dept. SR, 1255 University Ave., Rochester, NY 14607



PIRATE'S DEN — Lowest Prices INCLUDING SHIPPING in continental U.S. Pioneer, Kenwood, Teac, JBL, Shure, most others. SAMPLES: Scott R306 — \$149.00; Scott R326 — \$216.00. Write for quote. Pirate's Den, Box 10091, Elmwood, Connecticut 06110.

## discover Acusta Craft

**HI-FIDELITY SPEAKERS**  
Superior speaker systems at half the cost and with none of the hassle. Assemble your own from one of our 8 pre-constructed speaker kits or build from scratch using our fine selection of quality components. Send \$1 now (refundable with 1st order) for our comprehensive catalog. Catalog includes information on kits, raw speaker components, cabinets, crossovers, and our full guarantees.  
Write: Acusta Craft, Inc. P.O. Box 12030 Shawnee Mission, Kansas 66212

BARCLAY STEREO COMPONENTS for those who appreciate fine music: Audio Research, Crown, RTR, IMF, EMT, Denon, Luxman, KEF, Nakamichi, Magnaplanar. Request free catalog — 233 East Lancaster Avenue, Wynnwood, PA 19096. (215) 667-3048.

## A SINGER'S DREAM!



We actually invented a device that almost completely removes the main vocal from most stereo recordings & leaves background music intact! It's called THE T.V.E. Not an equalizer! A dream come true for singers & musicians. We can prove it works over the phone! Write for brochure & demo record. Incl. \$1.90 for materials & mailing (refundable with order). List \$149.95. Write to: L T SOUND, Dept. SE, 1833 Second Ave., Decatur, GA 30032. (404) 377-9595.

NEEDLE IN A HAYSTACK specializes in stereo styli and cartridges, accessories, special albums. All major brands and many hard-to-find replacements available. Free catalog. Dept. S, P.O. Box 17436, Washington, D.C. 20041.

SUBSTANTIAL SAVINGS on most High-End lines. The Sound Affair, 364 Mission Court, St. Louis, MO 63130.

## TAPE AND RECORDERS

GOLDEN AGE RADIO—your best source for radio tapes. Box 25215-T, Portland, Oregon 97225.

OPERA CLASSICAL MUSIC Open Reels. Rare mostly live free catalogue. K. Lohan Tapes, P.O. 298, Mastic Beach, N.Y. 11951.

TDK, BASF, Memorex, Maxell, cassettes, reels, 8-tracks. Lowest prices, new guaranteed. S&S Audio, P. O. Box 56039, Harwood Heights, Ill. 60656.

SCOTCH RECORDING TAPE, exclusively, all new, lowest prices. TAPE CENTER, Box 4305, Washington, D.C. 20012. 3600' FRESH Low Noise, High Output Ampex tape. 10-1/2" metal reel, 6 for \$35.00 plus \$3.50 UPS. Other tapes also on special, write for catalog. S.I.C., P.O. 88338, Atlanta, GA 30338.

RADIO'S GOLDEN DAYS on tape. Reel, Cassette, Cartridge catalog. Radio Memories, Box 2297, Newport News, VA 23602.

EVERYTHING ON OPEN REEL! Classical. Popular. Dolby. Quadraphonic. Latest releases. For "Reel News," send \$1.00. Barclay-Crocker, Room 857 S, 11 Broadway, New York 10004.

1930-1962 RADIO PROGRAMS. Tapes \$1.00 Hour! Established esteemed dealer. Informative 175 page catalog, \$1.25. AM Treasures, Box 192SR, Babylon, N.Y. 11702.

WE WILL BEAT any price sheet in America. Featuring TDK, MAXELL, and others. Tape World International, 220 Spring Street, Butler, PA 16001.

SONAR'S OPEN REEL TAPES. Duped one-to-one from master. All Formats. Highest quality anywhere! Send \$1.00 for catalog and mini stereo sample tape. Sonar Records, P.O. Box 455S, Kingsbridge Sta., Bronx, N.Y. 10463.

RADIO RERUNS best source for radio shows, remotes, chronologies, jazz, personalities. Box 724-SR, Redmond, WA 98052.

MAXELL, AMPEX, CAPITOL — Low Prices — excellent service. Write for complete tape & supplies catalog. Omega, Box 39253, Redford, MI 48239.

THRILLING Live Opera Tapes. Personal attention. Guaranteed! Incredible Variety. Enormous Free Catalogue. Live Opera, Box 3141, Steinway Station, L.I.C., N.Y. 11103.

BLANK TAPE BONANZA. TDK: 10 SAC-90 \$30.57, 10 SAC-60 \$21.57, MAXELL: 12 UDC-90 \$35.03, 10 UD35-90 \$49.74, 12 UDXL-C90 (I or II) \$41.15. All prices include shipping. (PA add 6% sales tax). Give us a try! Tape World International, 220 Spring St., Butler, PA 16001.

FIVE EXCITING NEW TITLES FROM ADVENT. New Process CR/70 cassette recordings include New World Symphony—Orchestre de Paris; Brahms Piano Concerto—Gelber; more. Write for free catalog and dealer list. Advent Corporation, Dept. CSR, 195 Albany Street, Cambridge, MA 02139.

HISTORICAL OPERA DISC & TAPE — Magnificent quality, speedy service. Greatest live performances of past 50 years. Reel, cassette, disc. Free catalog. Historical Recording Enterprises, Box 12, Kew Gardens, N.Y. 11415.

OLDTIME RADIO — original broadcasts on quality tapes. Free catalogue. Carl R. Froelich, Route One, New Freedom, Pennsylvania 17349.

LIVE OPERA TAPES. Reels — CASSETTES. Unbelievable treasure since 1926. Over 2,500 selections. Free DELUXE Catalog: Mr. Tape, Box 138, Murray Hill Station, N.Y. 10016.

BASF TAPE: All widths 40-55% off. All tapes guaranteed. INTERGALACTIC, 1043 Kirts, Troy, Michigan 48084.

FANTASTIC SAVINGS! 5,000 Albums — Tapes only \$1.99-\$2.99. Send stamp. RightPrice, Box 4783SJL, Des Moines, Iowa 50306.



VINTAGE RADIO BROADCASTS. Catalog \$1.50. BRC, 17173 Westbrook, Livonia, MI 48152.

40,000 OLD RADIO SHOWS on Tape. Jazz/Big Band remotes, Country/Western, discographies, anthologies, chronologies. Send \$2 for huge catalog (refundable). McCoy's Recording, Box 1069S, Richland, Washington 99352.  
 BLANK TAPE SPECIAL — TDK SA-90 \$30.00, MAXELL UDC-90 \$29.00, UDXL-C90 (I or II) \$34.00. Prepaid (IL add 5% sales tax). S&S Audio, P.O. Box 56039, Harwood Heights, IL 60656.

VIENNESE WALTZES, Polkas, Overtures on imported Dolby cassettes. Most non-Schwann. KC Company, Box 793, Augusta, Maine 04330.

## RECORDS

SHOW ALBUMS, Rare, Out-of-Print LP's. 64 pg. list. \$1.00.  
 ROBBER BRIDEGROOM 7" Stereo 33-1/3, 4 songs — Jerry Orbach; Virginia Vestoff \$3.95; La Strada, Mata Hari EP \$3.95; Bakers Wife cast LP \$9.95. Broadway/Hollywood Recordings, Georgetown, Conn. 06829.

PROTECT your LP'S—Poly sleeves for jackets 8 cents; Round Bottom Poly Inner sleeves 7 cents; Poly lined paper 15 cents; white jackets 35 cents. Postage \$1.50. Record House, Hillburn, N.Y. 10931.

COLLECTORS' Soundtracks. Mint. List 50 cents (refundable). Jemm's, P.O. Box 157, Glenview, Ill. 60025.

OLDIES oldies, 45rpm. Also current hits. Free Catalog. Corney's Record Shop, Box 166HF, Mason, Ohio 45040.

RARE RECORDS, 45's, 78's, 33's. Soundtracks, Original, Cast Personalities, all kinds, mostly mint, 5,000 record lists, \$2.00. Refundable. Dealers Welcomed. Gurley, Box A72, Princeton, N.C. 27569.

CLASSICAL RECORDINGS for collectors. Bi-monthly lists. Collections bought. ARS MUSICA, 13 Danie St., Larchmont, N.Y. 10538.

QUASI-RATIONAL PRODUCTS has everything in record protection; Liners, jackets for less — Discwasher, Maxell, Watts, Nortronics, Jensen, etc. Free catalog. QUASI-RATIONAL PRODUCTS, P.O. Box 171, Prospect Heights, Illinois 60070.

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, Box 654-A, Peoria, IL 61601.

PROTECT YOUR ALBUMS. White cardboard replacement jackets 35 cents. Plastic lined sleeves 15 cents. Postage \$1.25. Opera Boxes, 78 Sleeves. Free Catalog. CABCO 400-1, Box 8212, Columbus, Ohio 43201.

THOUSANDS of like new LPs and prerecorded tapes catalogue \$1.50. Records, Hillburn, New York 10931.

PHIL GLASS, Ives, Partch, Cage, Braxton, Don Cherry, Carla Bley, Pharoah Sanders — Contemporary classical and jazz. Free Catalog. NMDS, Dept. C, 6 West 95th St., N.Y., N.Y. 10025.

PRIVATE COLLECTION AUCTION — all speeds, list free. SASE. Bos-Beijer, Jaffrey, NH 03452.

**NOTICE: RECORD RATERS WANTED**  
 (No experience required) Each month you will receive nationally released albums to rate. THERE IS NO EXTRA CHARGE for the LP's you receive. You pay a small membership fee which covers all costs of the LP's. We pay postage. In return for your opinion, build your LP collection. "First come basis." For application write: EARS, INC. DEPT. SR Box 10245, 5521 Center St., Milwaukee, WI 53210.

FREE SOUNDTRACK/OC, PERSONALITIES CATALOGUE! 250,000 LP's! Soundtrack/OC valuebook — \$4.00. RTSR, 711 W. 17th, G-1, Costamesa, Calif. 92627.

AT LEAST 1/3 off all records at all times including imports. Write: Berkshire Record Outlet, 910 South St., Pittsfield, MA 01201 for details.

## 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 (1K8), 333 North Michigan, Chicago 60601.

GET RICH with Secret Law that smashes debts and brings you \$500 to \$5 Million cash. Free report! Credit 4K8, 333 North Michigan, Chicago 60601.

STEREO REPRESENTATIVES NEEDED!!! Sell 100 brands!! Lowest Possible Prices!! Krasco, 998 Orange Ave., West Haven, Conn. 06516.

NEW LUXURY Car without cost. Free Details! Codex-ZZ, Box 6073, Toledo, Ohio 43614.

MAKE BIG MONEY in spare time selling: Tubes, Antennas, Speakers, Test Equipment, Lite Bubs, Hi-Fi, etc. No investment. Free information: Allied Sales, Pimento, IN 47866. (812) 495-6555.

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) 926-6100.

HOW TO BORROW \$25,000 interest-free — indefinitely! Free Report: Executive-SR8, Box 368, Buford, Georgia 30518.

FANTASTIC MAILING Program brings huge profits fast! Also, sources of free mailing lists. Send \$1.00 and SASE No. 10 to Gray, Box 1752-MA, Fort Smith, AR 72902.

FREE REPORT: Big Money In Mail! Transworld-9K, Box 6226, Toledo, Ohio 43614.

AUDIOPHILES WANTED!! Put your knowledge to use, earn an excellent spare time income. We need campus Dealers to sell name brand stereo equipment at substantial discounts in your area. No investment necessary. For information and application please write: ABCO, Dept. SR, 1201 East Main Street, Meriden, Conn. 06450. Call (203) 238-7979.

MAJOR ENTERTAINMENT CO. offers you the opportunity to go into a business of your own making money from your music and hi-fi hobby. You can operate this business part-time or absentee management in a protected territory. It is a part of the biggest boom business of the decade as reported in Newsweek and Forbes magazines. Giant income potential. Requires \$7,950 capital and excellent references. MURRAY THE K's DISCO ON WHEELS, Dept. H, 405 Park Ave., N.Y., N.Y. 10022 or call Mr. Martin (212) 688-3760.

## TUBES

TV and Radio Tubes 36 cents. Free 48 page color catalog. Cornell, 4215-H University, San Diego, California 92105.

## 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.

CLASSES IN MUSIC RECORDING. Record production, publishing, disc mastering, film recording. Taught by famous engineers and producers. Held in 16/24 track recording studios. Contact: University of Sound Arts, 2040 Ave. of the Stars, 4th floor, Century City, California 90067. (213) 553-4742.

## MUSICAL INSTRUMENTS

UP TO 60% DISCOUNT. Name brand instruments Catalog. Freepost Music, 114 Q. Mahan St., W. Babylon, N.Y. 11704.

HARPSICORDS, Baroque models made from Zuckermann kits by Walter Bishop. 1859 Westminster Way, NE, Atlanta, GA 30307. (404) 325-4735.

## WANTED

GOLD, silver, platinum, mercury wanted. Highest prices paid by refinery. Ores assayed. Free circular. Mercury Terminal, Norwood, MA 02062.

## 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.

## RUBBER STAMPS

RUBBER STAMPS, BUSINESS CARDS. Many new products. Catalog. Jackson's, Dept. K, Brownsville Rd., Mt. Vernon, Ill. 62864.

## 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! Astonishing details, strange catalog free! Autosuggestion, Box 24-ZD, Olympia, Washington 98597.

## PERSONALS

MAKE FRIENDS WORLDWIDE through international correspondence. Illustrated brochure free. Hermes-Verlag, Box 110660/Z, D-1000 Berlin 11, Germany.

## MISCELLANEOUS

WINEMAKERS. Free illustrated catalog of yeasts, equipment. Semplex, Box 12276Q, Minneapolis, Minn. 55412.

## CLASSIFIED ADVERTISING ORDER FORM

|    |    |    |
|----|----|----|
| 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 |

Please refer to heading on first page of this section for complete data concerning terms, frequency discounts, closing dates, etc. WORD COUNT: 15 WORD MINIMUM. Include name and address. Name of city (Des Moines) or of state (New York) counts as one word each. Zip Code not counted. Count each abbreviation, initial, single figure or group of figures or letters as a word. Symbols such as 35mm, C&D, P.O., AC, etc., count as one word. Hyphenated words count as two words. Telephone numbers count as one word.

### Words

\$2.10 (Commercial Rate)  
 \$1.25 (Reader Rate)  
 \$3.15 (Expand-Ad Rate)

Payment of \$ \_\_\_\_\_ enclosed for \_\_\_\_\_ insertions.

AmEx  BAC

MC  Diners

CHARGE for \_\_\_\_\_ insertions.  
 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-877

**TDK AMPEX**  
Minimum Order 12 Tapes

**Blank Tapes**  
at wholesale prices!

**CASSETTE TAPES**

|                         |      |
|-------------------------|------|
| Ampex 371 C-90 3 Pak    | 3 79 |
| Audio C-60 3 Pak        | 1 39 |
| Audio C-90 3 Pak        | 1 79 |
| Maxell UDC-60           | 1 79 |
| Maxell UDC-90           | 2 59 |
| Maxell UDC-120          | 3 39 |
| Maxell UDXL 1 or 2 C-60 | 2 29 |
| Maxell UDXL 1 or 2 C-90 | 3 09 |
| Memorex C-90 3 Pak      | 4 99 |
| Scotch C-90 3 Pak       | 3 99 |
| Sony C-60               | 1 19 |
| Sony C-90               | 1 69 |
| TDK D C-60              | 99   |
| TDK D C-90              | 1 39 |
| TDK D C-120             | 1 99 |
| TDK D C-180             | 2 99 |
| TDK SD C-60             | 1 29 |
| TDK SD C-90             | 1 79 |
| TDK SA C-60             | 1 99 |
| TDK SA C-90             | 2 59 |

**8 TRACK TAPES**

|                      |      |
|----------------------|------|
| Memorex 2 Pak 90 Min | 3 59 |
| Scotch 2 Pak 90 Min  | 3 19 |
| Scotch 45 Min        | 1 59 |

**REEL-TO-REEL**

|                                |       |
|--------------------------------|-------|
| Maxell UD 50-60 1200'          | 3 99  |
| Maxell UD 35-90 1800'          | 4 39  |
| Maxell UD 35-180 3600' (110 #) | 11 99 |
| Scotch 206 1200'               | 3 99  |
| Scotch 207 1800'               | 4 39  |
| Scotch 212 1800'               | 3 59  |
| Scotch 214 3600'               | 7 99  |

**J & R Music World**  
33 Park Row N.Y.C. 10038  
(212) 732-8600

MAIL ORDERS ACCEPTED For shipment within 24 hours send money order or certified check. Two weeks delay on personal checks. Please add \$2.00 per order for shipping & handling. N.Y.S. Residents add applicable sales tax. NO C.O.D.'s  
Minimum Order 12 Tapes

Write for prices on other tapes

CIRCLE NO. 17 ON READER SERVICE CARD

RECORDING OF SPECIAL MERIT

ELIZABETHAN AND JACOBAN MAD-RIGALS. Dowland: *Fine Knack for Ladies*. Gibbons: *The Silver Swan*. Vautour: *Sweet Suffolk Owl*. Weelkes: *Since Robin Hood; Cease Sorrows Now; Come Sirrah, Jack Ho*. Mundy: *Were I a King*. Wilbye: *Thus Saith My Cloris Bright; Adieu Sweet Amarillis*. Morley: *Now Is the Month of Maying; April Is in My Mistress' Face; My Bonny Lass; Leave, Alas, This Tormenting; Though Philomela Lost Her Love; O Grief, Even on the Bud; Those Dainty Daffadillies; Daemon and Phyllis; I Love, Alas; Fire, Fire*. The Scholars. ENIGMA VAR 1017 \$7.98 (from HNH Distributors, P.O. Box 222, Evanston, Ill. 60204).

Performance: **Perfection itself**  
Recording: **Excellent**

This group of five talented singers may bill themselves as the Scholars because they are, but they are also superb musicians. They sing with instrumental precision and a rhythmic vitality that makes a fa-la-la dance with joy. Their intonation is perfect, their dynamics beautifully conceived and boldly executed. One's first inclination is to carp at the absence of printed texts with the record, but the singers' diction is so fine that texts are really not needed. In short, this is one of the finest recordings of English madrigals to come from the country of their origin. If you like madrigals, buy it; if you don't, buy it anyway. You'll like these. S.L.

GALINA VISHNEVSKAYA: *Songs by Rachmaninoff and Glinka*. Rachmaninoff: *Night Is Mournful; Oh, never sing to me again; Music; Spring Waters; Vocalise*. Glinka: *Doubt; I remember the wonderful moment; How sweet it is to be with you; To Her; No sooner did I know you; Night in Venice; The Lark; Barcarolle*. Galina Vishnevskaya (soprano); Mstislav Rostropovich (piano). DEUTSCHE GRAMMOPHON 2530 725 \$7.98.

Performance: **Vital**  
Recording: **Good**

Song specialists should welcome this recital, for its program has been well chosen. True, the Rachmaninoff side offers only two unusual songs, but I have not seen so many Glinka items on one disc since Boris Christoff's masterly—and inexcusably deleted—recital on Angel 36133.

Vishnevskaya, always a compelling if a somewhat uneven performer, is in good voice here. She is surprisingly restrained and inward in the Rachmaninoff songs and uses an almost vibrato-less sound for the near-impressionistic *Night Is Mournful* and *Music*. There are some exquisite tonal shadings and floated pianissimos, though I find her way with the lovely "Oh, never sing to me again" (perhaps better known as *O Cease Thy Singing, Maiden Fair*) uncharacteristically cool. She lets out all the stops for the Glinka songs, which are comparatively uncomplicated, highly emotional, and invariably haunting. The singing lacks neither fire nor spontaneity, though at times the passion interferes with the purity of the melodic line.

Rostropovich's piano accompaniments are solid and sensitive. The tempos are broad—in the case of the *Vocalise* damagingly so. The dedicatee of that song, incidentally, was Antonina Nezhdanova, an internationally celebrated lyric soprano. The trilingual liner notes thrice identify her as a mezzo. G.J.

STEREO REVIEW  
ADVERTISERS' INDEX  
AUGUST 1977

| READER SERVICE NO. | ADVERTISER                          | PAGE NUMBER  |
|--------------------|-------------------------------------|--------------|
| 5                  | ADC, Accutrac                       | 19           |
| 1                  | AFS Systems                         | 113          |
|                    | Akai America Ltd.                   | 89           |
| 2                  | Angel                               | 121          |
|                    | Audionalyt                          | 105          |
| 3                  | Audio Discount                      | 109          |
|                    | Audio Technica U.S., Inc.           | 24, 25, 101  |
|                    | BASF Systems                        | 41           |
|                    | Bose Corporation                    | 6, 7         |
| 4                  | British Industries Co., BIC Venturi | 2            |
|                    | Brown & Williamson/Kool Lights      | 16           |
|                    | Columbia House Record Club          | 46, 47       |
| 6                  | Crown International                 | 10           |
| 7                  | Discount Music Club                 | 14           |
| 8                  | Discount Sound                      | 115          |
| 10                 | Discwasher                          | 90           |
| 11                 | Discwasher                          | 114          |
| 48                 | Discwasher                          | 125          |
| 9                  | Disnet Sound                        | 119          |
|                    | Dixie Hi-Fi                         | 104          |
| 50                 | Dual                                | 77           |
| 21                 | Empire Scientific Corp.             | 39           |
| 12                 | Epicure Products, Inc.              | 95           |
|                    | Great Awards Collection             | 23           |
| 13                 | Hitachi                             | 55           |
| 15                 | Illinois Audio                      | 118          |
| 16                 | International Hi-Fi Distributors    | 118          |
|                    | JBL Sounds Inc.                     | 126, 127     |
|                    | Jensen Sound Laboratories           | 53           |
| 17                 | J&R Music World                     | 130          |
| 18                 | JVC America Co.                     | 15           |
|                    | Kerwood                             | 11           |
| 19                 | Koss Electronics                    | 56, 57       |
| 22                 | Koss Electronics                    | Cover 4      |
|                    | Lux Audio of America, Ltd.          | 123          |
| 23                 | Maxell Corporation of America       | 45           |
| 24                 | McIntosh Laboratory, Inc.           | 119          |
| 25                 | Memorex Corporation                 | 9            |
| 26                 | MGA                                 | 42, 43       |
| 27                 | Micro-Selki, division of Teac Corp. | 5            |
| 28                 | Ohm Acoustics Corp.                 | 78           |
| 29                 | Phase Linear                        | 29           |
| 30                 | Radio Shack                         | 27           |
| 31                 | RTR Industries                      | 98           |
| 32                 | S.A.E.                              | 122          |
|                    | Sams, Howard W. & Co., Inc.         | 91           |
| 33                 | Sansui Electronics Corp.            | 12, 13       |
| 34                 | Shure Brothers Inc.                 | 21           |
| 35                 | Sonic Research, Inc.                | 8            |
| 36                 | Sony Corporation of America         | 84, 85       |
|                    | Sony Superscope                     | 132, Cover 3 |
| 37                 | Soundcraftsmen                      | 93           |
|                    | Speakerlab                          | 104          |
| 44                 | Stanton Magnetics                   | 117          |
| 38                 | Stereo Corporation of America       | 109          |
| 39                 | Synergistics                        | 67           |
| 40                 | TDK Electronics                     | 99           |
| 41                 | Teac Corporation of America         | 51           |
| 42                 | Technics by Panasonic               | 36, 37       |
| 43                 | Top Discount Audio                  | 109          |
| 50                 | United Audio                        | 77           |
| 45                 | U.S. National Guard                 | 33, 34, 35   |
| 46                 | U.S. Pioneer                        | Cover 2, 1   |
| 47                 | Wisconsin Discount Audio            | 109          |
|                    | Yamaha International Corp.          | 49           |
|                    | Classified Advertising              | 128, 129     |

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 2772, Boulder, CO 80323, giving the following information:

Change address only  Extend my subscription

**ENTER NEW SUBSCRIPTION**

1 year \$7.98  Payment enclosed  
Allow 30-60 days for delivery. (1 extra BONUS issue)  
 Bill me later

NEW ADDRESS HERE

Name \_\_\_\_\_ 0407  
please print  
Address \_\_\_\_\_  
City \_\_\_\_\_  
State \_\_\_\_\_ Zip \_\_\_\_\_

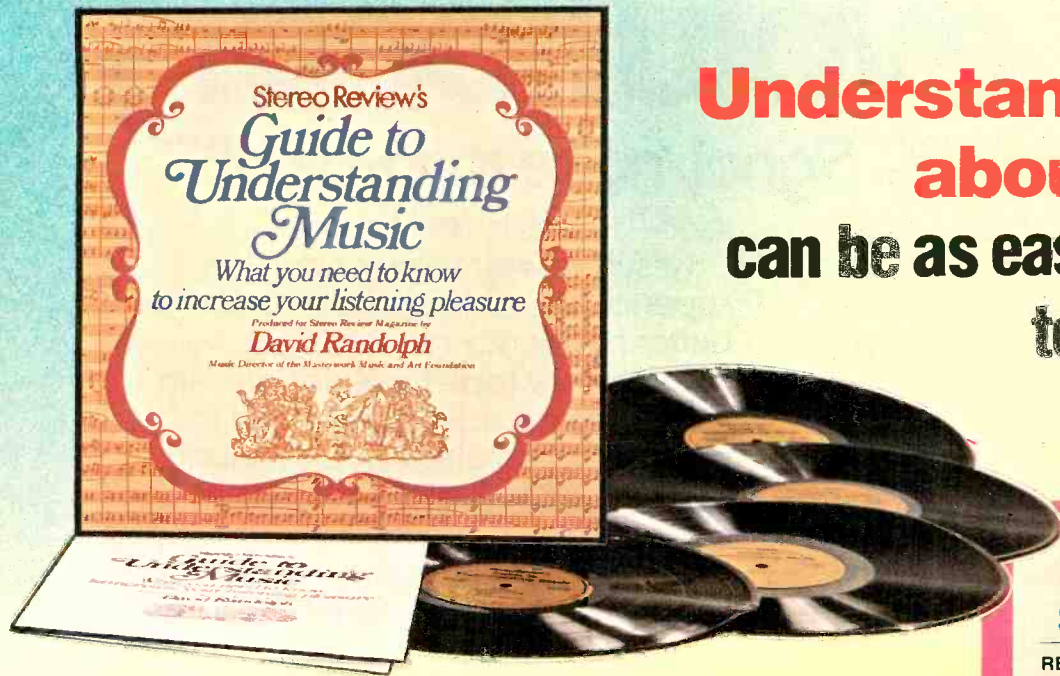
Additional postage per year: For Canada add \$3. For countries outside U.S. and Canada, add \$5—cash in U.S. currency only.

AFFIX OLD LABEL

If you have no label handy, print OLD address here.

Name \_\_\_\_\_  
please print  
Address \_\_\_\_\_  
City \_\_\_\_\_  
State \_\_\_\_\_ Zip \_\_\_\_\_

**Understanding more  
about music...  
can be as easy as listening  
to your favorite  
recordings**



*An important 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*

If you have wanted to know more about music—or simply to *enjoy* it more—Stereo Review's GUIDE TO UNDERSTANDING MUSIC will be the most rewarding step you can take in that direction.

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  
STEREO RECORDS**

**RECORD I**

The Elements of Music:  
1. Rhythm 3. Harmony  
2. Melody 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

**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.

**Booklet enclosed**

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.

If you already have some knowledge of music, the *Guide to Understanding Music* can expand and enrich that knowledge. If you've always wanted to understand music but have been discouraged because it looked to difficult and time-consuming, the *Guide to Understanding Music* can show you how easily and quickly you can make yourself at home with any music.

Charge your order to:



This exclusive four-disc recording is just . . .

**\$21.98 Postpaid**

for all four 33 1/3 rpm stereo long-play records, a price made possible by the availability of the consultative and production facilities of Stereo Review and its staff. Under ordinary auspices, a work of this nature and importance would cost much more.

GUM, CONSUMER PRODUCTS DIVISION, 595 Broadway, New York, N.Y. 10012 SR-87

Please send Guide To Understanding Music @ \$21.98, postpaid (\$26.98 outside U.S.A.)

Enclosed is \$ \_\_\_\_\_ Residents of CA, CO, FL, IL, MI, MO, NY STATE, DC AND TX add applicable sales tax.

CHARGE :  
 American Express     Master Charge  
 BankAmericard     Diners Club

Print Name \_\_\_\_\_

Address \_\_\_\_\_

Signature \_\_\_\_\_

City \_\_\_\_\_

Account # \_\_\_\_\_

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

Exp. Date \_\_\_\_\_

Master Charge Interbank # (4 #'s over your name) \_\_\_\_\_

# The Revolutionary

Wow & flutter: .04%\*. Signal/noise ratio: 62 dB.\*\*

Introducing the incredible Elcaset system. Developed by Sony to bring you unsurpassed cassette sound.

**1.** The Elcaset tape is as wide as reel-to-reel tape:  $\frac{1}{4}$ "

**2.** Tape moves twice as fast:  $3\frac{3}{4}$  ips. Result: the widest dynamic range, the widest frequency response, the cleanest sound ever offered in a cassette format. Unlike the standard cassette, the Sony Elcaset sound is not compressed, constrained. It's expansive and full. It "breathes." It's true high fidelity.

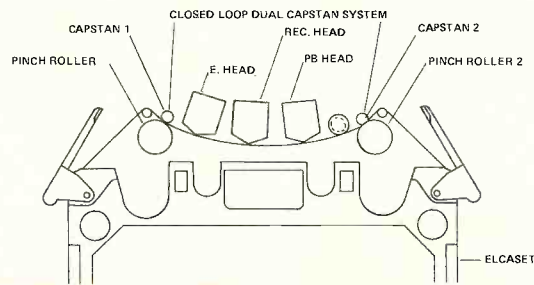
**3.** The tape is lifted out from the cassette and guided across the heads by a stabilizing pin in the deck

itself — just as in reel-to-reel.

Result: lowest wow and flutter, superior tape/head alignment, even better frequency response. (See diagram).

**4.** All-new tape formulation with thicker oxide coating and thicker polyester for highest quality sound.

**5.** Automatic tape formulation adjustment. Small holes encoded on the cassette case "tell" the Elcaset deck what type of tape is being used (SLH, FeCr). The Elcaset then automatically adjusts both bias and EQ for optimum performance.



**Tape** (Actual Size)



# Sony Elcaset System

Frequency response: 25 Hz-22 kHz,  $\pm 3$  dB\*\*\*

An engineering triumph, the Sony EL-7 Stereo Elcaset Deck was designed exclusively for the new Elcaset tape.

**1. Closed-loop dual capstan tape drive.** One of the most advanced tape drive systems now available, it assures constant tape-to-head contact pressure, low wow and flutter and virtually nonexistent modulation noise.

**2. The 3-motor system** starts with a **DC servo motor** for utmost reliability. A sophisticated feedback circuit corrects for line voltage fluctuations, and other speed-altering factors. This is the finest tape recorder motor system money can buy. Proof? Wow and flutter of only .04%.

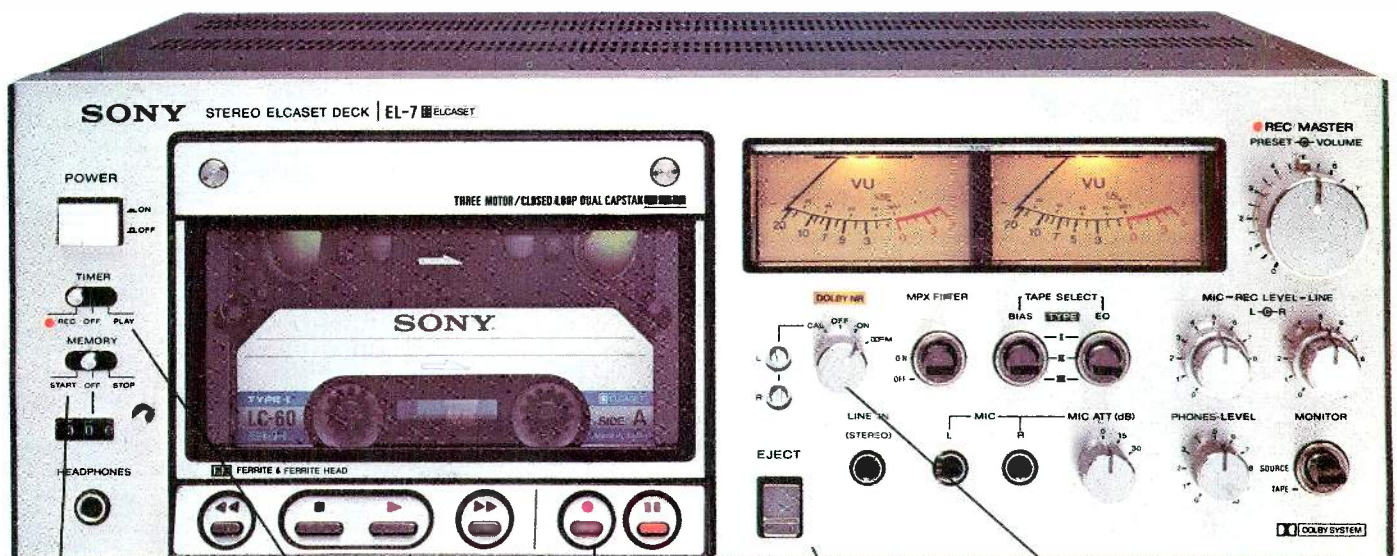
**3.** Sony's 3-head system offers the most precise tape/head alignment possible. All three heads are made of ferrite and ferrite — a super-strong formulation that lasts up to 200 times longer than standard perm-alloy. Head surfaces are mirror-smooth for friction-free tape travel and optimum tape/head contact. Incredibly close tolerances in the head gap assure widest frequency response.

**4.** Direct coupling of playback head with the FET first-stage reproduction amplifier significantly reduces distortion, improves signal/noise ratio and frequency response linearity.

Also available: The Sony EL-5 Stereo Elcaset Deck. Includes many of the same high performance features of the Sony EL-7, at a lower price.

## Deck

Brought to you by  
**SUPERSCOPE®**



Memory tape counter provides automatic sequential rewind and playback immediately after recording from a specific spot on the tape.

Timer activating capability, in conjunction with an external timer, turns on/off playback or record mode unattended.

Illuminated "feather-touch" solenoid operation. Logic-controlled system allows instantaneous mode change, bypassing stop.

Air-cushion eject slowly, softly opens tape compartment door, thus minimizing wear on eject system.

Dolby Noise Reduction System includes 25  $\mu$ S de-emphasis circuit for Dolby FM, as well as controls for standard Dolby applications.

# The new Auditor™ Series by Koss. Don't buy one unless your system is ready for it.

The pleasure of listening to unadulterated music is reserved for those who have carefully put together a system that delivers totally accurate reproduction. Now, for people who wish to explore and expand this realm of pure sound, Koss has designed their Auditor Stereo Headphones. Full, state of the art knowledge of perfect mechanical reproduction of music, and the psychoacoustics of the way the ear and mind respond to sound went into making these phones true to the most intense level of performance possible today.

## The sound.

The Auditor Dynamic/10 features an expansive frequency response range of 10-20,000 Hz, while dazzling any ear tuned to the delicate musical balance of a psychoacoustically pleasing sound, a way no other dynamic phone can

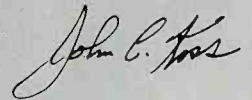
duplicate. They are designed to deliver the full impact of letter perfect sound reproduction characteristic of the finest equipment.

## And the fury.

On the other hand, for the most carefully designed and engineered excursion into sound ever, the Koss ESP™/10 Electrostatic Stereo Headphone is an unparalleled instrument of beauty. It is a perfectly articulated statement of technological and electronic genius so thoroughly sensitive it belongs in a recording studio serving as the last word in monitoring production. The ESP/10's almost boundless frequency response lays out the entire spectrum of sound for your scrutiny, bringing you every spark of timing, a deep, rich flood of bass, and a smooth, clear lake of treble, with every note balanced and defined.

So if you're content to live with the impurities in second best stereo, the

Koss Auditors aren't for you. Only the high-end connoisseur who has taken all the necessary steps toward putting together a system that is true to perfection will acknowledge and appreciate these precise products as breakthroughs in scientific musical development. The personal signature of John C. Koss says that these headphones are for the audiophile. So if you're ready for the best, and you think your system can measure up to the Sound of Koss, hear the headphones that are designed to put it to the test at a specialist in audio products near you. Or write to Fred Forbes, Audiophile Products Division, for more information on the new Auditor Series by Koss.



© 1977 Koss Corp.



Dynamic/10



ESP/10



## auditor™ series by Koss

KOSS® Corporation, Audiophile Products Division, 4129 N. Port Washington Ave., Milwaukee, Wisconsin 53212  
Koss International/London, Dublin, Paris, Frankfurt • Amsterdam • Koss Limited/Burlington, Ontario • Koss K.K./Tokyo

CIRCLE NO. 22 ON READER SERVICE CARD