



15 inches

The XP-9C is the only speaker system to incorporate a 15-inch woofer in an enclosure measuring only 27½" x 16¼" x 13" deep. Plus two 5" mid-range speakers and two 1½" dome-type tweeters (one for the lower treble, one for the lower treble, one for the highest frequencies). Crossovers at 500, 1200 and 5000 Hz. Frequency response from 28 to 22,000 Hz.



7

12 inches

In addition to its massive woofer with butyl rubber surround, the XP-7B has a 5¾" lower mid-range and a 5¾" upper-mid-range driver, plus two 3" tweeters. Crossovers at 350, 800 and 3500 Hz. Frequency response from 30 to 20,000 Hz. Cabinet size 24½" x 14" x 11%" deep.



12 inches

The 12-inch woofer of the XP-66B crosses over to a 5" mid-range driver at 500 Hz, which in turn crosses over to a 3" tweeter at 1000 Hz. The result is outstandingly smooth response from 32 to 20,000 Hz. Cabinet size 24%" x 13%" x 11%" deep.



10 inches

The XP-60B has a crossover point of 1000 Hz between the high-efficiency 10-inch woofer and the wide-dispersion 3" tweeter. Frequency response from 35 to 20,000 Hz, outstanding for a modestly priced speaker. Cabinet size 23" x 13" x 10" deep.

CIRCLE NO. 26 ON READER SERVICE CARD



Just look at the size of those woofers.

Fisher introduces four new bookshelf speakers, each with the largest, most sophisticated woofer in its class.

Good bass is like good health. If you have it, everything else will work out somehow. If you don't have it, everything else is irrelevant.

Because bass is literally the foundation of music. It gives the music structural support and body. If you can't hear the bass line, you're missing half the music. And if a speaker has inadequate bass, it's an inadequate speaker, no matter how good the mid-range or treble happens to be.

In designing bookshelf speakers, especially, the bass reproducer is considerably more than half the battle. Big, powerful woofers need elbow room, whereas the mid-range and tweeter units operate the same way in a compact enclosure as in the largest cabinet.

Mail this coupon for your free copy of The Fisher Handbook, 1970 edition. This reference guide to hi-fi and stereo also includes detailed information on all Fisher components.				
Fisher Radio 11-33 46th Avenue Long Island City, N.Y.11101				
Name				
Address				
CityS	ateZip			

OVERSEAS AND CANADIAN RESIDENTS PLEASE WRITE TO FISHER RADIO INTERNATIONAL, LONG ISLAND CITY, N.Y. 11101.

That's why, even though we're very proud of the advanced mid-range and treble drivers in our new line of bookshelf systems, we're even prouder of the woofers. They're just a bit bigger and better than you had the right to expect even in such sophisticated speakers.

The XP-9C is by far the most compact system ever to incorporate a 15-inch woofer. The XP-7B and XP-66B have 12-inch woofers, instead of the 10-inchers you'd normally find in their class. And the size and price of the XP-60B would seem to call for an 8-inch woofer, but we give you a 10-inch unit instead. All for the love of bass. (Believe us, it took some engineering.)

What's more, the cones, surrounds, spiders and voice coils of these new woofers reflect the most up-to-date concepts on the subject. In fact, the special construction of the surrounds is the main reason why the bookshelf-size enclosures can provide good loading down to the lowest bass frequencies. (We feel that sooner or later everybody else will be making woofers our way. But Fisher likes to do things sooner rather than later.)

In case you're interested in improving your stereo system with a pair of these new speakers, here's a useful suggestion:

Choose your turntable or record changer carefully. Our woofers respond impartially to the lowest musical bass or turntable rumble.





The new Fisher XP-9C four-way bookshelf speaker with five drivers, \$199.95.



The new Fisher XP-7B four-way bookshelf speaker with five drivers, \$149.95.*



The new Fisher XP-66B three-way bookshelf speaker with three drivers, \$99.95*



*Also available with wood-grain grille, \$10 extra. (Model K instead of B.) PRICES SLIGHTLY HIGHER IN THE FAR WEST

The new Fisher XP-60B two-way bookshelf speaker with two drivers, \$79.95.

How did KLH convince the skeptics?

The KLH Model Forty-One, a threespeed deck with the Dolby Audio Noise Reduction System 1, recording and playing back at 3¾ in/s, ¼ track, was pitted against a Professional Studio Deck operating at 15 in/s, ½ track. The source — in this case truly an "Acid Test" —was a second generation, 15 in/s, master tape, fully "Dolbyized," played back through the Professional Dolby A-301. Next to a "live" performance, there is nothing more demanding or difficult to duplicate. The direct comparison (no tricks or gimmicks) proved even to the skeptical, veteran listeners present that there were NO audible differences between this \$250 deck and a \$5000 Professional Recording System. For the first time, using Standard Formulation tape (3M 190/111), you, at home, can record any long playing record or broadcast for less than a dollar and the recording will be audibly identical to the source. The Model Forty-One is the first deck, at 3¾ in/s and using Standard

Formulation tape (both for economy), which will do full justice to any material available for recording in the home. The first machine, incidentally, that will, under these conditions, outperform *any* tape deck playing back at 7½ in/s — even if this other deck is adjusted for and uses low-noise, premium-priced tape. Incredible? Take one home and see.

KLH RESEARCH AND DEVELOPMENT CORP. 30 Cross Street. Cambridge, Massachusetts 02139



A Trademark of FLH Research and Development Corp.

Manufactured under license from Dolby Laboratories, Inc. "Dolby" is a trademark of Dolby Laboratories, Inc. CIRCLE NO. 22 ON READER SERVICE CARD

Suggested Retail Price \$249.95 STEREO REVIEW

Stereo Review Review JUNE 1970 · VOLUME 24 · NUMBER 6

THE MUSIC

SINGERS AND SINGING
A review of two books on the art and its practitioners
THE BASIC REPERTOIRE
Rachmaninoff's Second Symphony 55
STORING AND CATALOGING THE LARGE RECORD COLLECTION
A beleaguered collector's solution to a mounting problem
THE PIANO AS THE KEY TO "LATE" BEETHOVEN
The style of the late works analyzed by a leading pianist
STEREO REVIEW TALKS TO ROD MCKUEN
Continuing a series of interviews with recording artists
THE RECORDING ANGEL VISITS CLEVELAND AND CHICAGO
EMI records two American orchestras on home ground,
THE COUP THAT FAILED
What happened when Ed Sullivan took on the Beatles PETER REILLY 102
"THE STORY OF ROCK"
A new book by Carl Belz gets it all together 103
THE EQUIPMENT
NEW PRODUCTS
A roundup of the latest high-fidelity equipment
AUDIO QUESTIONS AND ANSWERS
Advice on readers' technical problems 24
AUDIO BASICS
Timbre
TECHNICAL TALK
Specifications 13-Tape-Recorder Speeds; Hirsch-Houck laboratory reports on the Recti-
linear Xa speaker system, the Crown D-40 stereo power amplifier, the Pioneer SX-1500TD
AM/stereo FM receiver, and the Tandberg 6000X stereo tape deckJulian D. Hirsch 31
FROM MASTER TAPE TO DISC: HOW RECORDS ARE MADE
Part Two: the pressing plant
INSTALLATION OF THE MONTH
Sit-Down Stereo
THE DOLBYIZED CASSETTE
What it is and what its prospects are
TAPE HORIZONS
Professional Recorders

THE REVIEWS

BEST RECORDINGS OF THE MONTH	73
CLASSICAL	79
ENTERTAINMENT	97
STEREO TAPE	07

THE REGULARS

ÉDITORIALLY SPEAKING	William Anderson
LETTERS TO THE EDITOR	<mark>.</mark>
GOING ON RECORD	. JAMES GOODFRIEND
INTRODUCING THE STAFF: Bernard Jacobson	JAMES GOODFRIEND
ADVERTISERS' INDEX; PRODUCT INDEX	

COVER: PHOTOGRAPH BY BRUCE PENDLETON; DESIGN BY BORYS PATCHOWSKY. SEE ALSO PAGE 16.

Copyright © 1970 by Ziff-Davis Publishing Company. All rights reserved. Stereo Review. June. 1970, Volume 24, Number 6, Published monthly at 307 North Michican Ave., Chicago Illinois 60601, by Ziff-Davis Publishing Company-also the publishers of Airling Management and the ropular Ejectronics. Popular Photography, Skilng Skilng Area News, Skilng Trade News, and Travel Weekly. One year subscription rate for U.S., U.S. Possessions and Canada, S7.00; all other countries. 88.00. Second class postage paid at Chicago. Illinois and at additional malling offices. Authorized as second class mail by the Post Office Department, Otawa, Canada, and for payment of bostage in cash. SUISCRIP-TION SERVICE: Forma 3579 and all subscription correspondence should be addressed to Stereo Review, Circulation Departence, Post SUISCRIP-Flushing, N.Y. 1752, Please allow at least six weeks for change of address. Include your old address, as well as new--enclosing if possible an address label from a recent issue.



MUSIC EDITOR JAMES GOODFRIEND

TECHNICAL EDITOR LARRY KLEIN

ASSOCIATE EDITOR ROBERT S. CLARK

ART DIRECTOR BORYS PATCHOWSKY

ASSISTANT TECHNICAL EDITOR RALPH HODGES

> PRODUCTION ASSISTANT MICHAEL MARK

CONTRIBUTING EDITORS CLIVE BARNES MARTIN BOOKSPAN NOEL COPPAGE HANS H. FANTEL DAVID HALL DON HECKMAN JULIAN D. HIRSCH BERNARD JACOBSON GEORGE JELLINEK IGOR KIPNIS PAUL KRESH REN REED PETER REILLY ERIC SALZMAN CRAIG STARK LESTER TRIMBLE

LONDON EDITOR HENRY PLEASANTS

ADVERTISING MANAGER JAMES J. SULLIVAN

MARKETING MANAGER ROBERT UR

ADVERTISING SERVICE MANAGER MARGARET DANIELLO

GROUP VICE PRESIDENT ELECTRONICS & PHOTOGRAPHIC FURMAN HEBB





21FF-DAVIS PUBLISHING COMPANY Willer Ziff, President W. Bradiord Briggs, Executive Vice President Beeshel B. Sarbin, Senior Vice President Stanley R. Greenfield, Senior Vice President Phillin Sine, Financial Vice President, Circulation Phillip T. Heffernan, Vice President, Circulation Phillip T. Heffernan, Vice President, Creative Services Arthur W. Butzow, Vice President, Production Edward D. Muhlfeld, Vice President, Production Irwin Robinson, Vice President Sydney H. Rogers, Vice President



EDITORIALLY SPEAKING AN EARLY LETTER TO SANTA CLAUS

THE American pragmatical philosopher William James is not, I would judge, much read these days, perhaps because of his habit of uttering unpalatable truths in disturbingly persuasive language. My commonplace book recently yielded up this provocative example: "Man's chief difference from the brutes lies in the exuberant excess of his subjective propensities—his pre-eminence over them simply and solely in the number and in the fantastic and unnecessary character of his wants, physical, moral, aesthetic, and intellectual." Try playing that back against a current hot topic, the American Space Program, or, as I am about to do, the "fantastic and unnecessary" proliferation of gadgets that satisfy our craving for music.

In the space of seventy-odd years, the cylinder has given away to the disc, acoustical recording to electrical, 78 rpm has stepped down for 331/3, mono for stereo, and both quadrasonics and the tape cassette format are lately making very strong claims on the future. At each of these technological junctures, certain brutes have not unexpectedly cried "Who needs it?" The answer (by James out of Mae West) is that *need* had nothing to do with it. Even among superfluities, however, it is possible to exercise selective judgment, and I would like, before we step over the threshold into the cassette era, to drop a few suggestions into the ear of Santa Claus.

Technical Editor Larry Klein's article on "The Dolbyized Cassette" in this issue brings news of the breakthrough in fidelity on which the viability of the cassette concept has for some time depended. The next step is a playback machine to exploit this capability. The ideal machine, however, will comprehend a joyous number of other possibilities. Quadrasonic playback of course (it is now feasible to record four channels in the same two tracks used for stereo), with a defeat switch for simple stereo; automatic reverse to do away with cartridge flipping (one up on the disc format); fast forward and reverse for searching out particular musical passages, *plus* prerecorded (inaudible) signal coding on the tape to facilitate automatic fastforwarding to a given musical selection (useful in popular-music and recital programs); a changer mechanism (a cassette will play for 120 minutes—not enough for an opera); and inputs for microphones, disc player, reel-to-reel tape, and tuner.

Santa will also have to face up shortly to the problems of packaging. The Recording Industry Association of America is already studying these, and a number of recording companies are experimenting as well. The plastic "jewel box" format now being used (by RCA, DGG, Nonesuch, and others) is a smashing success visually and tactually—it looks expensive and probably is—but its envelope-flap hinge seems to run counter to human-engineering principles. It opens as no other box ever did, and leaves many feeling perplexed and stupid. Ampex's plastic box is conventionally hinged, with an all but unreadable "press to open" message on the side; the result is aspirin-box frustration. A recent Angel effort is a simple plastic tray inserted in a cardboard box open at one end; ingenious, but the tray keeps falling out. What is needed here is a little old-fashioned friction; match-box manufacturers might be called in to exercise their wizardry with wood or cardboard.

Record companies seem so far to be lying doggo on the question of notes with their classical cassette releases, perhaps hoping the whole thing will go away. It won't. DGG is an exception, having bravely opted for a tiny pamphlet containing a condensed but adequate two-language version of the original disc writeup in a readable type face. The see-through jewel-box provides perfect protection for what we shall have to call for the nonce the "jacket cover" and "spine." But there should also be a pressure-sensitive label on the *short* end for quick identification. RCA and Nonesuch do this, and DGG has recently started to (on its new Heliodor releases). Ampex's box, however, is opaque, so the pressure-sensitive "cover" goes on the outside; risky, for time, temperature, humidity, and finger oils will cause it to lift off all too quickly. Finally, disc-jacket covers often fail to stand up to size reduction; new designs would be preferable. And how much all this is going to cost only Santa knows.

In 500 RADIO SHACK Stores LOW-COST HI-FI BY TREALISTIC

Duofone * under-chin stereo phones #33-196. Cheap isn't a word used by the Audio Establishment. But a no-no for them is a ves-yes for Realistic.* We have more hi-fi under \$100 than most folks have under \$200. Cheap? - yes! And great!



1**9**95

Omnidirectional **Speaker Systems**

Invented by Realistic to save space and money. 9¹/2" high, 6³/4" diameter sphere. Black and silver. Under \$40 a pair!

#40-1975

Modular 24-Watt 4995 Stereo Amplifier

The Realistic SA-175 has a magnetic phone preamplifier and our magic price includes the 7x10x 4" walnut case! #30-1973

Modular Stereo FM 5995 **Matching Funer**

Vernier tuning, center channel meter, FET circuit, and the Realistic TM-175 price includes the walnut case!

#31-2013

Modular 8-Track **59**95 Stereo Tape Deck

Play car stereo tapes on the Realistic TR-175. It matches amplifier, tuner at left, or anybody's. Wood case.

#30-1974

Auto-Turntable **Complete System**

3995

The Realistic Lab-6 includes custom British changer, Shure diamond magnetic cartridge, and base. No extras!

#42-2595



Minimus* -2 Little Speaker, per Pair:

Realistic acoustic suspension 7 x $7\frac{1}{2}$ x $15^{"}$ speakers with 2-way electronic equalization, in oiled walnut. #40- 1968



store very near you.

Full bandwidth power, every Realistic feature you need including 2 "mag" inputs and 10x 14x4" walnut case. #30-1970



9995

The Realistic TM-70 has dual center and signal-strength meters, not just one.' And the oiled walnut case is free! #31-2015

Stereo Cassette 9995 SCT-3 Tape Deck

Realistic "profes-sionalizes" cassette

performance. AC (not

DC) motor. Best flut-

ter/wow spec of any tested. #14-861



4995

The Realistic Lab-12 includes cueing, 4-pole motor, Shure diamond magnetic cartridge, and base. No extras! #42-2567



Free 1970 Color Catalog Mail to: Radio Shack Computer Center, Dept. BB 2727 West 7th St., Ft. Worth, Texas 76107 Name (print) _____ Street _

_ State ___

City . *Trade Mark

CIRCLE NO. 31 ON READER SERVICE CARD



Introducing... The Stereo "Deceiver"

It looks straightforward enough. But, the clean front panel of the new Sony 222 FM Stereo/FM-AM receiver hides a simple, but effective circuit. A tuner section sensitive enough (2.0uV for 30dB quieting) to bring in even the weakest stations free of distortion. An amplifier that puts out 24 watts IHF at less than 0.8% distortion both channels operating into 8 ohms. Plenty of power. And a frequency response of 20 to 50,000 Hz \pm 3dB for clean reproduction from the bottom to the top of the audible spectrum.

The Sony 222 is devoid of frills. But all of the essentials are there—even a few essential extras like speaker selector switch, a signal strength meter, a high filter, a stereo indicator light and a stereo headphone jack.

Now the grand deception. The \$149.50* price which includes the walnut case. It's far less than you would expect to pay for such performance. It sort of makes purchasing the Sony 222 a rather straightforward decision. Sony Corporation of America, 47-47 Van Dam Street, Long Island City, N.Y. 11101

SONY 222 FM STEREO/FM-AM RECEIVER





LETTERS TO THE EDITOR

Piston

• As a fan of both STEREO REVIEW and composer Walter Piston, I was delighted with Klaus George Roy's article (April) on the composer. In the list of recordings, mention is made of the European recording of the First Violin Concerto. Contrary to Mr. Roy's information, this performance was reissued in the United States by Mace Records (MXX-9089) in stereo, and I purchased a copy quite recently at Goody's in Philadelphia. As it is not listed in the Schwann catalog, its true status on the market is in question. Perhaps Mace Records and Mr. Schwann will settle the matter quickly and give others the opportunity to enjoy this brilliant piece.

Mr. Roy might like to know that a firstrate stereo recording of the Piston Sixth Symphony under the persuasive direction of Kiril Kondrashin can be obtained (not without some difficulty) from, of all places, the Soviet Union.

> JOHN W. WILLS Wilmington, Del.

Signal-to-Noise Ratio for Tapes

• Let me congratulate STEREO REVIEW, and in particular Craig Stark, on the excellent article "Laboratory Tests of Standard-Brand Tapes" in your March issue. I have been looking for just such an article for the nearly seven years I have been a tape hobbyist.

However, I did run into a bit of confusion when I tried to derive the unweighted comparative signal-to-noise ratios for the tapes tested. An example was given, comparing the standard Scotch 111 and Audiotape 3633T. I tried to follow the example to determine how the relative maximum-output figures were derived but seemed to get lost using the -6.6-dB 400-Hz output and the +9-dB 400-Hz input figures for the Audiotape. The article indicates +3.6 dB as being the highest output theoretically possible before 3 per cent distortion for the Audiotape at 400 Hz.

Please help me. How is the +3.6-dB figure derived? I kept coming up with +2.4 dB using simple addition.

TIBOR P. MAZAR Great Falls, Mon.

Mr. Mazar's answer—+2.4 dB—is of course the correct one. This is what comes of trying to do addition and subtraction at the typewriter.

Heckman and the Airplane

• In reference to Don Heckman's review of the most recent Jefferson Airplane release ("Volunteers," Best of the Month, March). I am extremely disappointed. First, I found the record unusually dull (for Jefferson Airplane), not only for the trite and boring view expressed, but also for the uninteresting melodies and improvisations. However, my main objection is not with the record; rather it is with Mr. Heckman's review. I certainly cannot be so presumptuous as to say Mr. Heckman is wrong in agreeing with the point of view expressed. However, it is also the reviewer's responsibility to comment on and criticize the music. Mr. Heckman made no mention of the music and therefore did not fulfill his duty as a critic. Please, Mr. Heckman, less political commentary and more of the intelligent reviews of music you have written in the past.

> BRIAN HUDKINS Towson, Md.

• It was encouraging to read Don Heckman's thoughtful review of the Jefferson Airplane. He really laid it on that old Art Linkletter who is so straight that he got all up-tight when his daughter jumped out of a window after a bad trip. Would Mr. Heckman have been so cool if it had been *his* daughter?

> JAMES M. SOMMERVILLE Los Altos, Cal.

• I was very much upset over some of the reviews in your March issue. I hope I am wrong, but the review of the Jefferson Airplane seems to advocate the use of drugs and revolution in this country.

The sneering remark about Art Linkletter in that review was in the very poorest of poor taste. Mr. Linkletter has had much sorrow and sadness thanks to drugs, and does not deserve this.

In Don Heckman's piece on the Rolling Stones at Madison Square Garden, there is also a sneering remark, this time about "Nixon America." This is pure political propaganda and does not belong in the pages of a music magazine.

> HAROLD W. JONES Santa Rosa, Cal.

• The review by Don Heckman of the latest Jefferson Airplane release is a frightening but fascinating example of the arrogance of those who espouse the acid-rock ethic. Without making a single reference to the music of the album, the reviewer has written a polemic in favor of the naïve social and political message of a group which he refers to as "a kind of corporeal projection of all the bubbling emotions of today's generation of youth." In so doing, Mr. Heckman has clearly revealed the rigid intolerance of his kind toward anyone who dares to criticize any aspect of the rock ethic.

Note his reference to Art Linkletter as "that paragon of up-tight, blameless, middle-class America." What did Linkletter do to elicit such epithers? As a grieving father he expressed genuine anguish over the LSD-induced suicide of his daughter, and he severely criticized the followers of the drug ethic. Any such criticism immediately evokes the bitter hatred of the "love generation."

Note also the pathetic rationale used to justify the wave of drug usage among young people. "Youth will have its own form of drugs," writes he, "different in kind and quality from their elders' choice of alcohol." The implication here is that the young have the right to abuse themselves mentally and physically with drugs because their elders overindulge in alcohol. As if the errors of one segment of society have ever justified (more tragic) errors on the part of another!

The ultimate absurdity of what is supposed to be a review of an album of music is Heckman's reference to "the symbolic Woodstock Nation" of last summer's Bethel rock festival. If the drug-induced euphoria of Woodstock is "with us to stay," Mr. Heckman's sophomoric arrogance will be a great asset to him.

STEPHEN J. GLAVIN Kanata, Ont.

Mr. Heckman replies: "If Mr. Glavin failed to see any reference to the album's 'musicality' in my review of the Jefferson Airplane's 'Volunteers,' his vision must have been affected by his own 'trip.'

"As far as Art Linkletter is concerned, I might be more inclined to sympathize with his quite understandable grief if he had indicated as much interest in his daughter's psychic health as he did in placing the blame squarely on her use of LSD. But apparently Messrs. Glavin, Sommerville, and Jones, like Mr. Linkletter, are more comfortable with simplistic solutions to complex problems.

"'Love generation?' Yes, indeed, I'm all for it—in all shapes, sizes, forms, and styles. But I'm especially in favor of the kind of love that brings understanding and brotherbood, rather than narrow-minded parochialism and cultural repression. And if that's 'arrogant' and 'propagandistic,' so be it.

"To attempt to review the music created by contemporary artists without acknowledging and commenting upon the political and social implications of its material would be irresponsible. Music has never existed in a passive social void, and it certainly doesn't today. If my correspondents listen to Beethoven quartets and Bach partitas without recognizing that they were made by human creatures who were very much involved in the cultural currents of their time, then I hope they will forgive me if I decline to join them in their fantasy world."

(Continued on page 12)



His and Hers Pioneer Outperformers

The honeymoon is over. She wants to listen to a Mendelssohn Prelude and Fugue and he's all set for an evening with Vivaldi. Pioneer has the perfect solution. His and Hers AM-FM stereo receivers.

The SX-1500TD, (shown above) with 180 watts (IHF) music power, is Pioneer's top of the line performer. In addition to the exclusive microphone mixing feature, this many-faceted unit provides six sets of inputs. Pre and main amplifiers may be used independently. You can connect up to three different speaker systems. Its advance design circuitry, employing an FET front end and four IC's in IF strip offers outstanding sensitivity, superior selectivity and superb signal to noise ratio. Housed in a hand-some oiled walnut cabinet, the SX-1500TD is priced at \$399.95, including microphone.

The SX-770 (shown below) offers 70 watts (IHF) of music power. You can build a complete stereo system around this versatile AM-FM receiver. It incorporates an FET front end and two IC's in IF strip. Two speaker outputs plus 5 sets of inputs promise endless hours of listening pleasure. Boasting many refinements found only in much more expensive units, the SX-770 features a Lunar Glow tuning scale. Elegantly styled in an oiled walnut cabinet. \$249.95. Of course, you'll have to decide who gets which Outperformer.

You may also wish to consider the SX-990 (130 watts—IHF, \$299.95) or the SX-440 (40 watts—IHF, \$199.95). Hear them all at your Pioneer dealer. For further information write direct.

PIONEER

PIONEER ELECTRONICS U.S.A. CORPORATION, 140 Smith St., Dept. S-6, Farmingdale, N.Y. 11735 • (516) 694-7720 West Coast: 1335 West 134th St., Gardena, Calif. 90247 • (213) 323-2374 & 321-1076 • In Canada: S. H. Parker Co., Province of Ontario



Record Piracy

• I am greatly indebted to the "pirate" record industry for helping me know more about the great works than can be found at a record dealer's shop. I think these people should be encouraged as long as they do not compete with commercial productions.

I suggest that an effort be made as soon as possible to forbid the broadcast of commercial recordings. I know personally more than ten people in comfortable circumstances who nonetheless record off the air the records they can well afford to buy. This prohibition should be spread through both the U.S. and Europe, and I am sure the record industry would increase its profits. This would force the radio networks to produce or relay more "live" opera, as in the first days of wireless. The important performances from opera houses should be broadcast more than just once and should be preserved on tape for future generations instead of being destroyed, as the RAI in Italy does, to respect copyright laws.

JEAN TAMVACO Orly, France

Brainwash

• Your attention is directed to the February issue of Psychology Today, which contains an article of seminal importance to music criticism.

Entitled "Brainwash: Familiarity Breeds Comfort," the article suggests that repeated exposure to almost anything may lead to 'imprinting' and cause a positive reaction which has no other basis than familiarity.

The author cites an experiment in which groups of rats were exposed to music for a concentrated period. One group listened to Mozart, another group heard Schoenberg exclusively. A third group heard no music and served as a control. Then each rat was placed in a chamber with a choice of two switches: one to activate music by Mozart, the other Schoenberg. Selections were used which the rats had not heard before.

As was expected, the Mozart-reared rats preferred Mozart, and the Schoenberg rats were clear in their preference for Schoenberg. But, significantly, the rats reared without music preferred Mozart to Schoenberg.

This suggests a truly objective form of musical criticism. Fire your critics and breed rats! The rats could rate each new release by their preference for it over a series of standard "control" records. For instance, if the majority of rats preferred the new release to, say, Screaming' Jay Hawkins. the record might get a "one" rating. This could be scaled up until a record given preference over Bach-even by a group of "Bach rats" -would earn a "ten" rating.

Perhaps you could try polling a series of musicians to see whether they would rather be rated by critics or rats. Possibly some would say that the distinction was a false one.

> JOHN D. HIRSCH Schenectady, N. Y.

It's rather unreasonable of us, we know, but we're just a little bit leery of rats with built-in prejudices either pro or con.

That "Got-to-Have-It" Feeling

• After reading through all the record reviews in your February issue, one stuck with me: George Jellinek's review of Nicolai Gedda's album "German Opera Arias." That

mark's "Magische Töne." Santana • In your April issue, in the "Entertainment" reviews, one of your writers reviewed a record by the group Santana. On the same page there is a picture of a group consisting of four guys and a girl, with the caption below it reading "Santana." I don't see Carlos

Santana or any of his group in this picture. AL MORALES Daly City, Cal.

LOU DI FAZIO

Greenwood, Ind.

Fans of both Santana and the Pentangle, the group whose picture appeared over the caption, have been quick to point out our error. Below: the real Santana, standing up.

evening I went to my music shop and pur-

chased that album. I want to thank Mr. Jel-

linek for his review, which prompted that "just-got-to-have-that" feeling. Gedda's per-

formance is truly inspiring. A most haunting

feeling of tranquility and wonder comes over

me every time I hear his singing of Gold-



Radical View of the S-SB

• I feel that your identification of Noel Coppage at the end of his article "Oh, Say Can You Sing the Star-Spangled Banner: (February), erred: whatever else he may be, a journalist he is not. A put-down artist, yes; a member of the Crybaby Generation, yes. But journalist? Come on !

We've learned what Coppage is against: the S-SB, war, unintentional irony, plagiarism, melodies covering intervals greater than an octave, Key's lyrics, Joyce Kilmer, flagwaving, the strategy of the War of 1812, the Administration, Hoover Congress—you name it. But what is he for? What does he offer in place of the S-SB? Nothing! One would think that such an eminent authority on everything from Depression politics, poetry, and song lyrics, through military strategy, to American social behavior from 1800 to the present would be able to come up with something positive and constructive.

I hasten to add that I also find the S-SB a vocal obstacle course and would much prefer a national anthem on the order of, say, America the Beautiful. But crying about it, putting it down, and then copping out when it comes to offering a constructive substitute is not only cowardly but pathetic.

> RICHARD F. OLES Baltimore, Md.

Mr. Coppage replies: "The plain fact is that after posing as a military expert, poetry expert, sociology expert, music expert, political expert, and an expert on the Oedipal relationship among wombats (I tried my darndest to keep my wombat expertise out of the S-SB article, with what success I do not know), I was just too exhausted to undertake the selection of my country's next national anthem. Mr. Oles must realize that all that posturing wears a man down. Fortytwo per cent of the kidding aside, I guess I favor something like a national referendum. with a runoff referendum if necessary, to choose among the various pieces likely to be considered as a national anthem. I favor America the Beautiful, an emotional decision because 'the purple mountains' majesties' it refers to are supposed to be connected with Pike's Peak, a slope on which I once homesteaded, but don't overlook Woody Guthrie's This Land is Your Land. It's a tough decision, but I gather not everyone is as tired as we pseudo-experts are."

 Benedict Coppage's diatribe denouncing our national anthem and its creator is definitely off key, and brings to mind Gilbert's line from The Mikado about the idiot who praises every country but his own.

Mr. Coppage, a so-called music-lover, thinks the Star-Spangled Banner a vulgar work. Mr. Giacomo Puccini, evidently not a music-lover, saw fit to include portions of this music in Madama Butterfly. What's that you say, Mr. Coppage? Who is Puccini?

> ROBERT P. HOGAN New Bedford, Pa.

• There are too many radical views associated with the so-called arts, including music of a sort-namely, Joan Baez and others. The straw that breaks the camel's back is the "half-truthed" article by Noel Coppage on our "National Anthem" (February). I heartilv agree with your correspondent Leonard L. McEvoy, and question Noel's intentions and yours in printing this propaganda. Unless you publish a retraction, I will not renew my subscription and be a party to further subversive brainwashing.

> HOWARD C. STEEL Rochester, N.Y.

We have tried, in all conscience, to develop a proper reverence for what some of our correspondents appear to regard as a sacred musical artifact, but we can't seem to get it out of our heads that the S-SB has as its origin the euphemious theme song of a bunch of womanizing tosspots ("entwine the mystle of Venus with Bacchus' vine"), Further, an "anthem" (see Webster's Collegiate dictionary) is designed to be sung, and an unsingable anthem is, at the very least. contradictory. Since Mr. Coppage's facts are documented, the untruthful half of his article must be his opinions; that Mr. Steel disagrees with them is obvious, but that hardly makes them "propaganda" or our intentions in publishing them "subversive brainwashing." Sorry, no retraction.

• Oh, really! Must you publish that sick, campy drivel of Mr. Coppage (February) attacking the Star-Spangled Banner for every fault, real or imagined? Couldn't you find even one other hack who sees the virtues of the Banner for equal time and space? How do you justify this attack devoid of any fairness or even a modicum of decency or knowledgeability? When I stop seeing "red," if you wish, I'll compose you a sane and rational rebuttal. In the meantime, I'm thinking that if Mr. Coppage has any pimples on his (Continued on page 16)

When professionals need a tuner, they choose Scott

"Your tuner means that for the first time we have been able to monitor and rebroadcast stereo signals from WFCR in Amherst, a distance of over 110 miles. The signal quality is as clear as if it had originated locally ... certainly a vast improvement over our earlier rebroadcast efforts."

> William Busick (Shown below) FM Engineering Supervisor Lowell Institute Cooperative Broadcasting Council Educational TV Channel 2 and WGBH-FM Boston, Massachusetts



(Tuner sensitivity curve)

A Scott tuner reaches full limiting at a much lower signal strength than competitive high quality tuners and receivers. Professionals agree, a Scott receives more listenable stations with minimum noise... in other words, more stations more clearly.

H. H. Scott, Ir.c., Maynard, Massachusetts 01754

CIRCLE NO. 100 ON READER SERVICE CARD



nakes you a cartridge pro!



ROBERTS Model 808 \$229.95

The sensational ROBERTS 808D 8-TRACK STEREO RECORDER/PLAYER CARTRIDGE DECK puts you in the professional recording class. You can now record 8-track cartridges for your auto stereo yourself ... and play them back in your car or through your hi fi system or console... for hours of uninterrupted stereo music. Equipped with solid state preamplifiers. Handsome genuine walnut cabinet.

Outstanding features!

FAST FORWARD CONTROL...selects desired portion of tape on any channel in a matter of seconds!

■ 1-MICRON GAP PLAY HEAD ... (1/25,000th of an inch)makes possible superb frequency response, and is guaranteed for the life of the recorder to the



original owner. (Replacement installation charges not included.) Plus...Two Linear Action Music Level Controls

*Automatic Stop *Automatic Channel Indicator Lights *Continuous Play Button *Stereo Headphone Jack*Record Indicator Light *2 VU Meters *Microphone & Radio/Phono Inputs *Stereo Line Outputs

Specifications include: Tape speed: 3-3/4 ips. *Fast Forward Speed: 15 ips *Frequency Response: 50-15,000Hz ±3db *Distortion: less than 4% *Signal-to-Noise Ratio: better than -44db *Channel Separation: better than 40db *Sensitivity: MIC better than 0.5mV @ 4.7K impedance; Line better than 50mV.

HIGH PERFORMANCE ROBERTS MODEL 808 8-TRACK CARTRIDGE STEREO TAPE RECORDER SYSTEM...same as Model 808D except with built-in power amplifiers and separate walnut-enclosed air suspension speaker system.

Enter ROBERTS' exciting "WIN A TRIP TO JAPAN — EXPO '70" Sweepstakes! Now through June 15!

For complete information, write

The Pro Line **BER** Div. of Rheem Manufacturing Company Los Angeles, California 90016

CIRCLE NO. 34 ON READER SERVICE CARD



The outdoor speaker that doesn't sound like one.

Altec's 829A Patio Speaker.

Most outdoor speakers sound pretty bad. The result of too many design compromises, they end up hardly hi-fi.

But, Altec has built an outdoor speaker with a quality rivaling some of our indoor models.

The secret is our famous 755E 8" full-range speaker. It fits neatly into a one-cubic-foot enclosure of a durable, cocoa-brown weather-resistant material.

Less than 15" high, our Patio Speaker will serve as a portable unit, complete with its own stand, or may be mounted on walls or beneath eaves.

With a frequency response from 70 to 15,000 Hz and a 90° dispersion of high frequencies, the Patio Speaker will provide you with beautiful music for balmy summer evenings outdoors.

See it at your Altec dealers. Or write us for our catalog which also describes other Altec Lansing speaker systems, including the world's finest - "The Voice of the Theatre®" systems.



A QUALITY COMPANY OF LTV LING ALTEC, INC. 1515 S. Manchester Ave., Anaheim, Ca. 92803 body comparable to those on his thinking, he should be done away with. Since imperfect things have no right to exist, nothing need be mentioned about any assets, real or imagined—just kaput!

MICHAEL IVOR Phoenix, Ariz,

No way out of it; we must all, like Hamlet, go eventually to our account with all our imperfections on our beads.

On the Contrary

• Though Paul Kresh called it "Best of the Month" (March), David Frye's album "I Am the President" had a few amusing points ("We've got to stop meeting like this, Strom!"), but most of the humor (?) would appeal only to Eastern liberals, and certainly not to many in the Silent Majority. But then most of your staff voted for Humphrey.

MICHAEL L. UPDIKE Detroit, Mich.

This Month's Cover

THE little game of "old" and "new" being played on our cover this month is intended to call attention by inference to a piece of news we have been expecting (although not quite this soon) for some time: the arrival of the first prerecorded cassettes that may legitimately claim to deliver true high-fidelity sound. In this issue, Technical Editor Larry Klein reports on the technical background of this startling breakthrough ("The Dolbyized Cassette," page 62), covering as well its implications for the immediate future of recording.

As the cover makes clear, we have come a long way in portable entertainment gear-from the quaint turn-ofcentury Mignonphone (Min-u-phone) disc player to the snappy Sony Model 124-CS stereo cassette unit upstaging it-with the end not yet in sight. Sony can give you no end of information about its player, but research has turned up little data on the Mignonphone. It was manufactured (distributed?) by Walker Products Co. of New York (formerly L. S. and E. H. Walker), has a "Swiss-made" acoustic pickup that mounts in a hole in the case, and fits (wind-up crank, turntable, and pickup, but not the horn, which is of later provenance) into a $3 \ge 5 \ge 8\frac{1}{2}$ -inch red leatherette box. It was rescued from neglect by a staff member at an auction in Illinois, and came complete with an odd-ball collection of 78-rpm discs, among them the oldest "demonstration disc" it has been our pleasure to hear, and we are happy to share its bizarre contents (as transcribed from playback on the Min-u-phone) below.

LABEL: Columbia Record—Columbia Phonograph Company/Gen'l. Pat. Dec. 10, 1901 Nov. 25, 1902 Nov. 30, 1909/ Other patents pending/Special Demonstration Double-Disc/This Record is NOT For Sale/Grand Prizes Paris 1900 St. Louis 1904 Milan 1906/impression number 16349-8-60.

To owners of talking machines: your dealer is authorized to give you this Columbia double-disc record free of charge except the incidental costs of packing and delivery.

SIDE ONE (announcer): The purpose of this record is to demonstrate the Columbia Double-Disc Record. It is not offered for sale. Columbia Double-Disc Records-music on both sides, a different selection on each side, two records at a few cents above the price of one. They may be played on any disc machine-the Columbia Graphophone or the Victor Talking Machine-and they give you double value for your money, plain as daylight. The music of Columbia Double-Disc Records is the music itself, not merely our idea of what we can make the people think the music ought to be. You are assured of as perfect a record on each side of the disc as you ever bought before under any name at any price. Perfect in surface, perfect in tone, and extraordinary in durability. The Columbia Double-Disc Record will unfailingly outwear any other disc record. This statement has been proved over and over again, and it is easy enough for you to prove it for yourself. The Columbia process of recording, as developed especially during the last two years, produces a naturalness and roundness and perfection of tone that is positively unequaled in any other. The singing voice, as recorded in the Columbia Laboratory, is the living voice of the artist, clear, flawless, and natural, and, from the simple brassy notes of the bugle to the delicate tone shading of the violin ... Columbia recording of instrumental music is marvelously true. Note the ringing clarity of the orchestra bells . the pure golden tone of the cornet the dulcet blending of the flute and the violin the bird-like warble of the piccolo the stately sonority of the trombone the reedy sweetness of the clarinet ... and now the splendid ensemble of the full orchestra Columbia Double-Disc Records: doubledisc, double value, double wear, double everything except price. Don't put your record money into any other.

SIDE TWO: Sleep Kentucky Babe, sung by the Columbia Male Quartette.

The suspension dots in the passage above indicate short instrumental interludes, and "bird-like warbles" they most certainly, one and all, are. Recorded sound has mercifully made great strides since then, but I must confess to a sneaking fondness for the tone of the sales pitch itself—hardsell, straight on, and just as "plain as daylight." —Editor



"...quite probably the best buy in high fidelity today."

"... we cannot see how any preamp, present or future, could surpass the PAT-4."

(\$89.95 kit, \$129.95 assembled)



"...makes most loudspeakers sound better."

The Dynaco Stereo 120 power amplifier (\$159.95 kit, \$199.95 assembled)

These opinions from The Stereophile are even more meaningful since it is the most respected journal in the audio field, whose sole source of revenue is from its subscriptions.

Over the years Dynaco has proved faithful to its philosophy of providing outstanding per-

NUNACO INC.

formance at a most moderate cost. Proper initial design eliminates the need for model changes. The savings achieved are passed on to you. What is "state-of-the-art" when you acquire it will still meet contemporary performance standards years later.

Send for literature or pick some up at your dealer where you can see and hear Dynaco equipment.

3060 JEFFERSON ST., PHILA., PA. 19121 IN EUROPE WRITE: DYNACO A/S, HUMLUM, STRUER, DENMARK

NEW PRODUCT A ROUNDUP OF THE LATEST HIGH-FIDELITY EQUIPMENT



• Roberts has introduced a new automatic-reverse threespeed (71/2, 33/4, and 17/8 ips), three-motor stereo tape recorder, the Model 800X. Frequency response is 30 to 22,000 Hz at 71/2 ips, 30 to 18,000 Hz at 33/4 ips, and 30 to 9,000 Hz at 17/8 ips, all ± 3 dB. Wow and flutter are under 0.18, 0.2, and 0.25 per cent for 71/2, 33/4, and 17/8 ips, respectively, and the signal-tonoise ratio is better than 50 dB.

Operating features of the 800X include automatic reversing in the playback mode (when sensing foil has been applied to the tape) and automatic shutoff (switchable). The transport has heads for erase, record/playback, and a third crossfield head on the opposite side of the tape path that applies a 100-kHz recording bias. Tape motion is controlled by two large levers, a pause control, and pushbuttons that select tape direction. There are separate record- and playback-level controls for each channel, two recording-level meters, bass and treble controls, and two front-panel headphone jacks. Inputs are provided for both line and microphones. The 800X has a pair of built-in 4 x 6-inch monitor speakers driven by solid-state power amplifiers rated at 40 watts peak music power. Reel diameters of up to 101/2 inches can be accommodated using outboard adapters. The 800X comes in a portable carrying case with cover that measures $18\frac{3}{4} \times 13\frac{3}{4} \times 9\frac{1}{2}$ inches overall. The recorder weighs 48 pounds. Price: \$539.95. Circle 145 on reader service card



Creighton Audio Labs is importing the Decca Mk 4 series of phono cartridges, which includes elliptical-stylus (C4E) and conicalstylus (4RC, shown) models. The Decca cartridges employ a vertically oriented stylus shank rather than the more common cantilever

movement. The elliptical-stylus C4E has an output of 5 millivolts at 5 centimeters per second (cm/sec) recorded velocity and a frequency response of 20 to 20,000 Hz ± 2 dB. The stylus has dimensions of 0.3 x 0.65 mil. The recommended tracking-force range is between 1 and 21/2 grams. The output of the conical-stylus 4RC is 7.5 millivolts at 5 cm/sec. Frequency response is 30 to 16,000 Hz ± 3 dB; the stylus is between 0.5 and 0.6 mil in diameter. The 4RC is designed to track at between 3 and 31/2 grams. Both cartridges are fully checked by the dealer before sale. Prices: C4E, \$80; 4RC, \$60.

Circle 146 on reader service card

• Koss is offering a free pamphlet illustrating their complete line of headphones and headphone accessories, which include junction boxes with various control facilities, transformers for matching low-impedance phones to high-impedance outputs, and a variety of cables and adapters. Prices and descriptions are given for all items. Circle 147 on reader service card

• Pioneer is marketing the Model SR-202 Reverberation Amplifier, a transistorized device that mixes in delayed portions of the opposite-channel signal with each stereo channel. The period over which the reverberations persist

is variable and can be adjusted by a front-panel knob over a range of 1.9 to 3.2 seconds at 1,000 Hz. Harmonic distortion is under 0.2 per cent. The output of the SR-202 is 330 millivolts for a 200-millivolt, 1,000-Hz input signal, with a signal-to-noise ratio of 65 dB. The unit will take a maximum input signal of 3 volts at 1,000 Hz (reverberation minimum). The SR-202 is connected to an amplifier or receiver through its tape-monitor facilities, and can then



be used to add reverberation to any program source. The rear panel of the SR-202 has inputs and outputs for two tape recorders, allowing reverberation to be recorded by either machine. A sliding indicator behind a front-panel window shows the position of the reverberation-time control. Besides the reverberation-time control there is a rotary selector for tape-recorder switching, a reverberation-mode control with positions for on, off, and record, and a power switch. The SR-202 can be switched to operate with the six a.c. line voltages in general use throughout the world. A special spring device provides the simulated reverberation and delay. The dimensions of the unit are $11\frac{3}{16} \times 4\frac{1}{2}$ x 913/16 inches overall. Price: \$99.95.

Circle 148 on reader service card



 GBC is marketing the VR-50 record/ playback videotape system, a three-unit package (camera, recorder, and monitor) available at an unusually low

price. The recorder, a Sony machine distributed in this country by General Electric, is a helical-scan type that



uses 1/2-inch tape. The solid-state recorder is compatible with all other Sony ½-inch video tape systems. The GBC model VX-922 camera is also transistorized, and has a resolution of 550 lines per inch, dual focus, and 4,000-

to-1 automatic light compensation. It uses a 25-millimeter, J1.8 lens. The Sony 9-inch receiver/monitor can be used



for monitoring and playback and as a recording-signal source for standard TV broadcasts. The VR-50 system comes with the appropriate cables and connectors; a microphone can be added for synchronized audio recording. Approximate overall dimensions: camera, 101/4 x 6 x 31/4 inches; recorder, 16 x 14 x 8³/₄ inches; receiver/monitor, 10 x 10 x 9³/₄ inches. Price of the entire system: \$595.

Circle 149 on reader service card

• Harman-Kardon has revived their Citation line of high-fidelity electronics with the Citation Twelve stereo power amplifier, available both factory-wired and as a kit. With both channels driven into 8-ohm loads, the Citation Twelve delivers 60 watts continuous power per channel (Continued on page 22)

Kentucky straight bourbon whiskeys. 86 proof and 100 proof bottled in bond. Old Grand-Dad Distillery Co., Frankfort, Ky.

716 Bourbons cost less.



We have to charge more because smoother Grand-Dad costs more to make. But that's the price we have to pay to be head of the Bourbon family.

Old Grand-Dad Head of the Bourbon Family



Listen. It's tomorrow.

If you don't know anything about stereo, the new JBL Aquarius is easy to explain.

If you know a lot, it's going to take a little longer.

There are seven new JBL Aquarius speakers. They range from a very modest cost to very expensive.

They're a new sound. Environmental sound. (Close your eyes and those beautiful new speakers go away.)

Is it better than directional sound? No. It's different. All the lefts and the rights are gone. No ping-pong.

Is it different from omnidirectional sound? Yes. And it's better. And, you can put Aquarius where you want it. Like a painting or a print or vase. It doesn't care about walls or 45° angles. All the engineering is inside. Play it softly. The sound goes more places.

Ask your favorite high fidelity specialist about "point source" and the "radial diffraction slot" and "overlapping frequencies." That'll shake him up.

Then listen to Aquarius. Everything you hear is true.

A[®]quarius by JBL. The next generation.

James B. Lansing Sound, Inc. • 3249 Casitas Avenue, Los Angeles, 90039 © A division of Jervis Coporation



over the full audio range at less than 0.2 per cent harmonic distortion. Intermodulation distortion is under 0.15 per cent at all output levels. The frequency response is 1 to 70,000 Hz \pm 0.5 dB, and the power bandwidth is 5 to 35,000 Hz. Hum and noise are --100 dB; the damping factor is 40.

The Citation Twelve has separate power supplies for each channel, both of which are fused. Its output stages



are protected by thermal cutouts and self-resetting circuit breakers that act when a short circuit exists across the speaker terminals. Inputs, outputs, and a pilot light are arrayed along the bottom edge of the amplifier's front panel. The speaker terminals, designed to be hand-tightened, will also accept banana plugs. There are no operating controls. The dimensions of the Citation Twelve are approximately $12\frac{1}{4} \ge 5\frac{1}{2} \ge 12\frac{1}{2}$ inches. Prices: \$225 in kit form; \$295 factory-wired.

Circle 150 on reader service card

• Utah is marketing a stereo speaker kit for car door installation called the SA-55. The kit includes two 5¼-inch dual-cone speakers, two chrome snap-on grilles that eliminate visible fasteners, hardware, wiring, and a cutting template for preparing the mounting holes. The speakers,



which have 5½-ounce ceramic magnets and rolled-cloth cone-edge suspensions, can be installed without removing the door panel. Power-handling capacity is 5 watts continuous. List price: \$29.95.

Circle 151 on reader service card

• James B. Lansing has added to its line of transistorized power amplifiers the SE460, a stereo power amplifier available in a flat-response version or with equalization circuit boards that alter the amplifier's output to comple-



ment the response of JBL and other popular speaker systems. With 8-ohm loads the output of the SE460 is 60 watts continuous power per channel, both channels driven, for any frequency from 10 to 30,000 Hz. Frequency response is 3 to 200,000 Hz ± 1.5 dB, and IM distortion is

under 0.2 per cent at rated power or below. The signal-tonoise ratio is 90 dB. The SE-460 has spring-loaded speaker terminals and separate gain controls for each channel. Since the amplifier draws a negligible amount of a.c. power when it is not handling an audio signal, it can be left permanently on even when not in use. The flat version of the SE-460 costs \$342; the equalized version is \$354. The speakers that are to be used must be specified.

Circle 152 on reader service card

• Sherwood has announced the introduction of their SEL-200 stereo FM receiver. The tuner section has a sensitivity of 1.5 microvolts, capture ratio of 1.7 dB, and 70-dB selectivity. Image rejection is 80 dB, and the stereo FM frequency response is 20 to 15,000 Hz ± 1 dB. Separate antenna inputs are provided for 300- and 75-ohm lead in. The amplifier section has a frequency response of 20 to 20,000 Hz ± 1 dB and an output of 60 watts continuous power per channel (both channels driven) into 8-ohm loads. Harmonic distortion is 0.2 per cent and IM distortion is 0.6 per cent, both at rated output. Hum and noise



are -65 dB at the phono input and -80 dB at the high-level inputs.

The controls and operating features of the SEL-200 include separate signal-strength and channel-center tuning meters, stereo- and mono-broadcast indicator lights, controls for bass, treble, volume, and balance, and a threeposition input-selector switch. Pushbuttons activate the interstation-noise muting circuit, high-cut filter, tape monitor, loudness, and a tuner circuit that rejects all mono broadcasts. Speaker switching is also controlled by pushbuttons. There are also a four-position mode switch, frontpanel input, output, and headphone jacks, and a continuously variable control for tuning-dial illumination. On the rear panel are outputs for main and remote speakers, a mono output that will drive a center-channel speaker, phono-sensitivity control, two convenience outlets, and a muting-threshold adjustment. Price of the SEL-200, including a walnut cabinet: \$599.

Circle 153 on reader service card

A Permanent Audio Exhibit

• Audiophiles in the New York area will be interested in visiting SEE-70 (Sound Electronics Exhibit 70), a permanent display of stereo components at 443 Park Avenue South (at 30th Street) in Manhattan. Some thirty-eight brand-name lines of components, equipment cabinets, and audio publications are scheduled to be displayed. In addition to the free exhibits of individual units and complete systems, SEE-70 will conduct demonstrations of speakers in a separate, acoustically isolated room and organize seminars on the care and use of high-fidelity equipment, tape-recording techniques, and decorating with sound equipment. Station WRFM will broadcast daily from the exhibit.



the clean machine

Power is cheap; *clean* power is rare. FM is commonplace; *distortion-free* FM is hard to find. For over twenty years, we at Sherwood have had a love affair with clean, distortionless tuner and amplifier design. This devotion has yielded many top ratings, awards, best-buy recommendations and — more important — the cleanest machines in all of high fidelity.

Like our model \$8900 pictured here. One of five brand new Sherwood receivers, it boasts the

lowest FM distortion in the industry — 0.15%. Plus 225 watts of cool clean power. Plus solid state CERAMIC FM IF filters (they do the job better than crystal filters). Plus an exclusive FM hush circuit that makes all others sound like hash, not hush.

There's much, much more.

We come clean. Visit your Sherwood dealer and see how clean. After all, isn't that what High Fidelity is all about?





AUDIO QUESTIONS & ANSWERS

Distortion Measurement

Q. I am confused about the relation of measurable distortion to audible distortion. I have read statements to the effect that some distortion is measurable but not audible, and that some types of distortion are more audible than others. How can this be—I thought distortion was distortion?

CHARLES KAUFMAN Redwood City, California

A. Distortion can be described, in general, as any difference between the original signal and its amplified or reproduced version. Distortion comes in a variety of types, and in addition to the commonly cited harmonic and intermodulation distortion, there are distortions of phase, transients, amplitude, frequency response, and so forth. Obviously, some of these distortions are going to be more audible and more disturbing than others.

As a clarifying example, let's suppose an amplifier bas frequency-response distortion in that it is unable to reproduce any frequency above 10,000 Hz. This high-frequency loss is readily measurable, but to an untrained listener, or one who simply can't hear the higher frequencies, the lack of highs may not be audible. In other words, there may be a question as to whether a particular kind of distortion is audible to a trained ear, an untrained ear, or perhaps to neither.

Another point concerns the techniques for measuring distortion. For example, there are two different kinds of intermodulation-distortion tests in common use. Even if performed on the same amplifier, these tests can produce different distortion figures. The commonly used SMPTE method (adopted by the Society of Motion Picture and Television Engineers) employs a test signal that consists of two separate tonesone low frequency (60 Hz) and the other high (7,000 Hz)-mixed in a 4to-1 amplitude ratio. When this composite test signal is applied to the input of an amplifier, any nonlinearity in the amplifier will cause intermodulation (interaction) of the two signals. This, in turn, results in the generation of spurious sum and difference frequencies.

The original test frequencies are fittered out by the distortion analyzer, and the remaining signals, which represent distortions, are measured and expressed as a percentage of the input signal.

The less-common CCIF intermodulation-measuring method also uses two frequencies, but in a different way than the SMPTE method, and it will provide higher or lower distortion figures for the same component under test.

Which technique is correct? It seems to me that the validity (I don't mean the accuracy) of any distortion-measuring technique depends on the degree to which its distortion figures correlate with the "displeasure" the distortion causes to trained listeners. At present, we seem to have some of the answers to the question, but certainly not all of them. The problem is one of correlating psychoacoustic factors—taste, training, and physiologically determined activy (if you can't hear above 8,000 Hz, you are not going to be sensitive to high-[requency distortion] with objective measurements.

I believe that engineers-to a certain degree-are overly concerned with distortions that are either too low in amplitude to be significant or are of the kinds that are not audible (to anybody), and are ignoring other distortions that are audible, but are much too difficult to measure or whose source is unknown. Understandably, most design engineers tend to confine their efforts to familiar parameters that are easily measured, with the result that further measurable -but not audible-improvements are made in areas that are already just fine. Most engineers spend little or no time considering the ultimate significance of their measurements in respect to what the listener hears. But after all, basic research is not what they are being paid for. And it's safer, I suppose, to confine one's efforts to the already well-explored areas where one knows his way around and where the techniques of test and measurement, as well as the interpretation of them, are already well established.

Which brings to mind the old story of the policeman who late one night encountered a drunk crawling around on his hands and knees under a street lamp. When asked what he was doing, the drunk replied that he was searching for a cufflink he had lost on 7th Street. "But you're on 8th Street," the cop pointed out. "Thas true," replied the drunk, "but the light's much brighter here."

High and Low Line Voltages

Q. I have a standard-brand stereo amplifier and it frequently blows out its output transistors. Here in this area we have extreme linevoltage variations, often with the voltage dropping down to 103 volts. Would this be the cause of my difficulty? I will soon be investing money in some new equipment and don't want the same problem again. Is it my amplifier or the voltage variation that is at fault?

> David Mann San Diego, Calif.

At this distance it is difficult to know exactly what is happening with your equipment, but I doubt that low voltage can be causing the blowouts —it should only reduce the amplifier's available output power and possibly introduce some distortion at normal listening levels. Excessively high line voltage, on the other hand, could cause damage, and perhaps that is the source of your difficulties.

Phono-Stylus Life

Q. Can you give me an estimate as to how long my elliptical diamond stylus should last if I play an average of ten records a week at a tracking force of 1.25 grams?

LEN BIRNBAUM Riverdale, N.Y.

A. There are too many factors that determine stylus life for me to give you a direct, simple answer. The basic factor is the overall stylus-assembly dynamics. This, in effect, determines how well—and how easily—the stylus is able to follow the groove walls and at what tracking force. The drag and mass of the tone arm would also have an influence.

Oddly enough, ellipticals seem to wear better than conical styli. Conicals develop flats on their playing-contact areas that present sharp edges to the high-frequency modulations in the groove. Ellipticals, on the other hand, develop smaller frontal radii as they wear, but the playing radii in contact with the groove wall don't acquire the groove-damaging flats.

It would probably be a good idea to check your stylus after it has been used for four or five bundred hours. Of course, the lower the tracking force, the longer the stylus life—provided the stylus accurately tracks the groove at the lower force and does not bounce from wall to wall as it does when a cartridge is used at too low a force.

The all new PE-2040 PErfection in PErformance

Your inevitable choice among automatic turntables. Sooner or later other automatic turntables will incorporate the exclusive features *now* available on the new PE-2040: Dial-a-Matic vertical tracking angle adjustment for all records ... Independent, ultra-gentle, fingertip cueing control ... Fail safe stylus protector ... Automatic record scanner ... Single lever control for all modes of operation ... Continuous record repeat. These are just some of the exclusive features. Stop by at your PE dealer for the complete story and a demonstration of PErfection in PErformance. PE-2040—\$145.00; PE-2038—\$115.00.

PErfection in PErformance

Elpa Marketing Industries, Inc., New Hyde Park, N.Y. 11040 CIRCLE NO. 13 ON READER SERVICE CARD



25

THE Professional Capability Factor

In an area where versatility and performance often tend to be nothing more than a set of written specifications, one tape recorder stands apart from all the rest, Revox.

Revox is built to such exacting standards that Julian Hirsch writing in Stereo Review was moved to comment, "We have never seen a recorder

that could match the performance of the Revox A77 in all respects, and very few that even come close."

But performance is only part of the story. When you've produced a truly professional quality machine you should be prepared to go all the way and provide complete professional capability. That's why Revox is the only machine in its price class (or anywhere near it) that's built to handle NARTB professional 10½" tape reels.

A 10¹/₂" reel offers twice the recording time of the standard 7" reel found on most tape recorders. And while much has been made of slower playing speeds and double-play tapes, the fact remains that frequency response, signal-to-noise ratio, dynamic range and a number of other important recording characteristics are adversely affected by slower speeds and thinner tapes.

Certainly smaller reels, slower speeds and thinner tapes have their place in home tape recording and Revox provides for them, but they have nothing to do with professional performance standards.





AUDIO BASICS

SUPPOSE you play middle C on a cello. Then play middle C on the trombone. The note is the same, but it certainly sounds different. The difference is one of *timbre*, or tone color. All differences in timbre are by no means as distinctive as those between cello and trombone violin and flute, or oboe and saxophone. Two musicians playing the same instrument may also elicit slightly different sounds from it because of their individual techniques of playing. And it is only by very subtle differences in timbre that the perceptive ear might tell a Steinway grand from a Baldwin. Timbre involves some of the subtlest physical factors in music, and reproducing them accurately is a primary requirement for any good high-fidelity system.

Differences in timbre, or tone color, stem from the fact that most musical instruments, even when playing only a single note, do not produce a single pure frequency. Rather, they emit a combination of frequencies of different intensities of which the lowest, called the *fundamental*, determines the pitch. In addition, the instrument produces a whole group of higher frequencies called overtones. Most of the overtones are simple multiples of the fundamental and are referred to as harmonics. For example, if you play the A-string of a violin, the fundamental frequency is 440 Hz. But the string also vibrates at 880 Hz (2 x 440), 1,320 Hz (3 x 440), 1,760 Hz (4 x 440), and so on up. The ear registers overtones not as separate sounds but, in toto, as a particular "tone-color" overlay on the fundamental. What determines the characteristic sound of an instrument is the particular mixture of its overtones and the strength of each in relation to the others and to the fundamental that is being played. Thus the reason why middle C on the trombone sounds so different from middle C on the cello is that the two instruments produce very different patterns of overtones in combination with the same fundamental.

Since the range of overtones in some instruments extends—though weakly to the upper limit of hearing, even though the instrument itself may be lowpitched, the lifelike reproduction of its sound requires audio equipment capable of reproducing frequencies up to at least 15,000 Hz. On equipment with restricted range, the tone colors in the orchestral palette cannot be fully displayed. The loss of upper harmonics typical of some equipment obscures the distinctive sound colorations, and the whole texture of the reproduced sound loses its naturalness and much of its detail.

Not only must audio equipment be capable of reproducing the whole range of overtones; each overtone within the range must be rendered in the same proportion to the others as it had in the original performance if the true tone color of the instruments is to be retained. This is one reason why frequency response must not only be wide, but must be uniform throughout the audible range. Otherwise, some harmonics will be improperly stressed while others are lost. This can result in harshness, stridency, and sometimes a blurred, muted quality. One excellent reason for buying component stereo is that the care—and expense—invested in its design enables it to reproduce instrumental timbre with high accuracy, a fine example of science in the service of art.

The Super Natural from JVC

S.E.A. CONTROL SYSTEM

10

8

Now, JVC brings you Super Natural Sound: From a bull frog's croak to a Beethoven Symphony, you can enjoy stereo so true to life that it's hard to tell from the real thing. All made possible by a revolutionary new development—a JVC exclusive—called the Sound Effect Amplifier (SEA), shown below. And SEA is just one of many great advanced features that you will find built right into JVC's 5001, 5003, and 5040 AM/FM stereo receivers, without extra charge.

SEA actually divides up the audio frequency range into five separate segments, with a tone con-



trol for each. So you can boost or decrease bass, middle ranges and ultra-high's, mix and match sounds, just like in a studio. And, you can compensate for component characteristics, balance acoustics of any room.

SEA stereo receivers also have the latest IC and FET circuitry. Extra-wide bandwidths, low distortion and excellent S/N ratios. Listen to them today at your local JVC dealer. Or write us direct for color brochure and the name of your nearest dealer.

10

250Hz

10

60Hz

15000Hz

8

10

5000Hz

FABULOUS SUCCESSOR TO THE



THE NEW SANSUI 2000A

AND STILL AT THE SAME PRICE

FABULOUS SANSUI 2000



\$299.95 can still go a long way in purchasing top notch high fidelity equipment. The exciting new 2000A has a wide dial FM linear scale plus a sensitivity of $1.8 \,\mu\text{V}(\text{IHF})$ for pin-point station selectivity with a clean crisp signal from even distant stations. Its powerful 120 watts (IHF) will easily handle 2 pairs of stereo speaker systems. The Sansui 2000A has inputs for 2 phonographs, tape recording and monitoring, headphones and auxiliary; and for the audiophile, pre- and main amplifiers may be used separately. Hear the new Sansui 2000A at your franchised Sansui dealer.



the AR receiver: the critics' choice



Stereo Review

"From 0.1 watt to 60 watts (both channels driven into 8-ohm loads), the harmonic distortion with a 1,000-Hz input signal fell from less than 0.2 per cent to less than 0.03 per cent ... IM distortion was under 0.1 per cent from 0.1 watt to well over 60 watts ... Previous experience with the AR amplifier suggests that the receiver's maximum 4-ohm output for normal operation on program material is in the vicinity of 100 watts per channel ... The tone controls of the AR receiver are certainly among the best we have ever used. They are meant to be used, and do not destroy musical values at any settings ... The FM sections measured IHF sensitivity was 1.8 microvolts (better than AR's specified 2 microvolts). Distortion was under 0.5 per cent - which is as low as our test equipment can measure . . . In short, the AR tuner section is, in a number of areas, simply better than we can measure The FM sound was notably clean, and tuning was non-critical. The flywheel tuning mechanism ranked with the best we have used ... Considering that their amplifier at \$250 is a very good value, one is effectively buying a first-rate FM tuner for \$170 more. We have yet to find a component tuner at anywhere near that price that can compare to the tuner section in the AR receiver."

record guide

"Power? There is plenty. AR advertises 60 watts into 4-ohm loads, 50 watts into 8 ohms, and 30 watts into 16 ohms.... I found AR to be extraordinarily conservative in its rating... at 4 ohms, my sample delivered 90 watts per channel over a 50-20,000 Hz range, 60 watts at 9 ohms, and 48 watts at 16 ohms. That is a lot of power! I have painted a purely technical picture. But that does not tell the whole story. Let me say that in practical performance, with *music*, it was simply flawless. I was also impressed by many little things, such as the fact that the unit really *is* flat at the indicated flat settings on the tone controls, and the fact that the tuning meter really does indicate the center of a channel accurately.

To sum up: AR's receiver is a handsome, impressively-powered unit that delivers fine performance at a reasonable price."

Popular Science

"An extraordinary approach to hi-fi design ... a superb high-power instrument that fulfills its *basic* functions in a way that few other receivers can match, much less exceed. The FM tuner incorporates the multisection crystal IF filter characteristic of the best and most expensive separate tuners. The amplifier section delivers an ultra-clear 60 watts per channel RMS into four ohms. (That's 120 watts total continuous power, not "music power.") And unlike many other transistor units, which show a severe rise in distortion at the upper end of the power curve and also as volume is reduced to low levels, the AR maintains a virtually flat (and very low) distortion profile down to inaudibility... I found the receiver effortless to use and (feeding into a pair of AR-3a speakers) a joy to listen to"

AUDIO

"... a basic honest design which meets or exceeds all its specifications ... demonstrates its more than adequate reserve power at all dynamic levels ... Transparency of sound and good transient response were in evidence throughout our listening tests. Calibration was just about perfect ..."

Full specifications of the AR receiver are available upon request. The AR Receiver has a suggested retail price of \$420. An optional walnut case is \$20 additional.



24 Thorndike Street, Cambridge, Massachusetts 02141 CIRCLE NO. 1 ON READER SERVICE CARD



• SPECIFICATIONS 13 - TAPE-RECORDER

SPEEDS: After the FM tuner and the record player, the most frequently used program source in home music systems is the tape recorder. For many people it is the preferred source. The theory of magnetic recording is quite complex, but fortunately a thorough understanding is not required for successful use of a tape recorder. Some of the basics were explained very well by Ralph Hodges in STEREO REVIEW for March, 1970. Our concern will be with the problems of specification and measurement of tape-recorder performance.

There are three distinct areas of tape-recorder performance: mechanical, electronic, and magnetic. The mechanical components of the recorder are those that stop and start the tape and move it at a constant speed across the heads, under controlled tension. The electrical circuits (the record and playback amplifiers and the bias oscillator) have their characteristics tailored to the requirements of the magnetic portions of the system. We do not normally test them as separate assemblies; their contribution to the recorder's performance—for better or worse—is lumped with that of the heads and tape.

The magnetic system of a tape recorder is by far the most important and least understood area, and the one that usually limits a machine's effectiveness as a high-

fidelity component. (I am not minimizing the importance of good transport design, of course, but in that area the principles are well established, and economic factors are the chief determinants of performance.) The magnetic components are the heads and the tape. The latter, unfortunately, is not

under the control of the head designer, who must content himself with recommending a specific type of tape for best performance with his product. Craig Stark's excellent survey of tapes in the March, 1970 STEREO REVIEW points out some of the factors than can influence one's choice of a recording tape.

The recorder specifications dealing with the mechanical system include tape speeds offered, speed accuracy, wow and flutter, rewind and fast-forward times, tape-tension control, and the method of operating the transport via pushbutton-controlled electrical solenoids or through direct mechanical linkage.

Standard tape speeds are related to each other by multiples of 2. In the early years of tape recording, high speeds were necessary to achieve good high-frequency reponse, and speeds of 30 and 15 ips were used for professional purposes (and still are). Even when not required for quality reasons, high tape speeds greatly simplify tape editing, since they spread out a given time segment of program over a greater length of tape. Perhaps ten years ago, $7\frac{1}{2}$ ips became the accepted speed for good-quality home recording, since it provided thirty minutes of playing time in each direction on a 1,200-foot, 7-inch diameter reel of 1.5-mil tape, thus paralleling the playing time of a 12-inch LP record side. Low-quality music and speech recording were possible at 33/4 ips, doubling the playing time for a given tape length. Eventually, some recorders appeared with a 17/8-ips speed, which generally provided sonic performance similar to that of a cheap AM table radio.

Continuing improvements in head and tape design in the last several years have made it possible to achieve quality at $3\frac{3}{4}$ ips that equals or surpasses that of some of the better $7\frac{1}{2}$ -ips recorders of only four or five years ago. Simultaneously, the $1\frac{7}{8}$ -ips speed became usable for low-quality music recording, and in at least one recorder we have tested the $1\frac{7}{8}$ -ips speed is capable of close to

> high-fidelity sound. A few recorders have been made with a 15/16-ips speed that is suitable for extended speech recording and dictation. Still lower (and higher) speeds than those mentioned are used for special applications, but they need not concern the tape hobbyist.

In general, home tape recorders offer a choice of two or three speeds. Most accomplish the speed change by shifting belts on a stepped shaft. Some two-speed recorders use special motors whose speed can be switched electrically. This eliminates some of the mechanical linkage in the recorder, but is not practical for more than two speeds without additional mechanical adaptation.

Tape-playing or recording speed can be measured for accuracy in several ways. The most precise requires a tape accurately prerecorded with a known frequency, such as 1,000 Hz. The frequency coming off the tape during playback is then measured. For example, if the recorded

TESTED THIS MONTH ● Rectilinear Xa Speaker System

Crown D-40 Stereo Power Amplifier Pioneer SX-1500TD AM/FM Receiver Tandberg 6000X Stereo Tape Deck signal is at exactly 1,000 Hz, and the playback signal is at 1,005 Hz, the recorder is fast by 0.5 per cent. An accurate electronic frequency counter to read out the signal frequency is required for this measurement. Another method uses a tape of a length (and therefore a playing time) that is known very accurately. If a ten-minute tape is played back in nine minutes and fifty-seven seconds, the recorder is fast by 0.5 per cent. Obviously, this is a time-consuming and relatively inaccurate method, but it has the virtue of requiring only a stop-watch.

The method used by H-H Labs involves a special stroboscope wheel, which operates on the same principle as the stroboscope used with turntables. Held lightly against the playing tape, it revolves without slippage, and a stationary pattern indicates correct speed. If the tape is fast, the pattern rotates in one direction; if it is slow, the rotation is opposite. By measuring the time for the pattern to rotate through a definite angle, such as 45 or 90 degrees, the percentage of speed error can be determined. This is difficult to calculate with precision, so we usually limit ourselves to commenting on whether the machine is fast or slow, and by approximately how much.

In general, a speed accuracy of 1 per cent or better is satisfactory for home recording, and will not introduce significant pitch errors. Most machines we have tested are better than this. For master recording or broadcast applications, however, exact timing is *very* important (imagine a thirty-minute program overrunning by ten seconds!), so that synchronous motors are used for the capstan drive. Some of the better home machines also use synchronous motors. They provide an unvarying speed, but their absolute speed accuracy is still a function of manufacturing tolerances. And aside from the accuracy of the capstan speed, there is still the problem of minimizing slippage of the tape between the capstan and rubber idler wheel, which also contributes to speed error. This usually occurs as the machine ages, and therefore is usually not a problem in our tests of new machines.

The high-speed winding operation of a recorder is an important consideration. Rewinding a 1,800-foot tape reel may require less than one minute on a fast machine. But on a slow machine it can take two or three minutes, which can seem like an interminable wait. Generally, machines with separate motors for the capstan and reel drive have the fastest rewind speeds. Some single-motor machines, which depend on belts, pulleys, and clutch systems for reel drive, may be undesirably slow. Incidentally, the number of motors used in a tape transport has no necessary relationship to its audible performance qualities. We have tested some three-motor machines that had mediocre performance, and some single-motor types that were excellent.

To check high-speed operation we simply run a 1,800foot (or 1,200-foot) reel of tape through at high speed and time it in both directions with a stop watch. Occasionally a recorder will slow down excessively near the end of a rewind operation, but this usually implies an incorrect adjustment rather than an inherent weakness.

By Hirsch-Houck Laboratories

RECTILINEAR Xa SPEAKER SYSTEM



• THIS speaker system is in outward appearance much like many other bookshelf units. It is fairly large as such systems go—25 by 14 by 103/4 inches—and weighs a solid 60 pounds. The designers of the Rectilinear Xa (the "X" is a Roman ten) were avowedly concerned not only with the usual amplitude and frequency-range distortions, but in addition tried to minimize what they referred to as timedelay distortion.

According to Rectilinear's research, time-delay distortion results from the fact that the different drivers in most speaker systems have differing reaction times. This, in turn, results in some parts of a complex musical waveform being shifted out of their proper sequential relationship with other parts of the waveform. The problem can be aggravated by phase shifts in crossover networks. Rectilinear claims that the audible effect of severe time-delay distortion is a loss of clarity when reproducing complex material. Rectilinear's primary approach to solving this problem was to use an unusually low crossover frequency only 100 Hz—between the woofer and mid-range speaker. The upper-end response of the 10-inch long-throw woofer, which operates in a sealed enclosure, is rolled off at 12 dB per octave by a crossover network using an air-gapped iron-core inductor.

The bulk of the program material—indeed, practically all the audible output of the system—is reproduced by a 5-inch mid-range driver with a 2-inch coaxially mounted "whizzer" cone. At higher frequencies, this small cone mechanically decouples from the main cone and takes over. The mid-range speaker actually operates over the range from 100 to 8,000 Hz, spanning more than six octaves. Above 8,000 Hz, the frequencies are fed via a 6-dB-peroctave crossover to a 2½-inch cone tweeter. The midrange and high-frequency speakers have individual level controls, and are enclosed in a separate subsection, isolated from the back pressure of the woofer. In Rectilinear's view, audible intermodulation and Doppler distortion of higher frequencies resulting from large cone excursions at very (Continued on page 34) A REPUTATION FOR

RECEIVERS BY KENWOOD

MCDEL TK-14CX 200 WATT • 3 FET 4 IC • SOLID STATE FM/AM STEREO RECEIVER \$349.95 including cabinet

> MDDEL KR-100 140 WATT • 2 FET • 4 IC SOLID STATE FM/AM STEREO RECEIVER \$299.95 including cabinet

TE D

UG.

SOUND TEST THESE.. AND CTHER KENWOOD RECEIVERS AMPLIFIERS AND TUNERS AT YOUR NEAREST AUTHORIZED KENWOOD DEALER...CR WRITE FOR COMPLETE SPECS TO the sound approach to seality



CIRCLE NO. 25 ON READER SERVICE CARD

Oscilloscope photos at (from left to right) 100, 600, and 3,000 Hz attest to the Rectilinear Xa's very good tone-burst response.



low frequencies are virtually eliminated, since the same driver does not handle both low bass and middle or high frequencies. And since practically all audible output originates from a single low-mass driver, differential time delay of the various frequencies in a complex signal is minimized.

The Rectilinear Xa is very low in efficiency, but the 4-ohm impedance of the system helps somewhat, since most transistor amplifiers can deliver from 40 to 100 per cent more power into 4-ohm loads than into 8. Rectilinear recommends a minimum amplifier power of 35 watts per channel (continuous), and suggests that powers of 50 to 100 watts per channel can be advantageous when the speakers are used in a large room or are played at louder than usual levels. We agree with these recommendations. We were able to drive the Rectilinear Xa to moderately loud volume levels with a good receiver capable of delivering 40 continuous watts per channel into 8 ohms, but this left no reserve, and we could hear occasional amplifier clipping.

According to our measurements, the flattest overall frequency response was obtained-and the speaker sounded best-with the mid-range and tweeter-level controls at their maximum settings. Over most of its range the speaker had a very smooth, flat response, notably free of holes or sharp peaks. There was a slight elevation in output (about 3 to 5 dB) between 400 and 1,500 Hz, but even with this the overall response was an excellent ± 3.5 dB from 55 to 15,000 Hz. Low-frequency output fell off smoothly below 70 Hz, and was down about 8 dB at 30 Hz. At the middle setting of the level controls, recommended by Rectilinear, the outputs of the tweeter and mid-range were reduced about 5 dB. With these settings, the overall frequency balance was not materially affected, but, because of the 100-Hz crossover, the frequencies below 100 Hz were raised by 5 dB relative to the rest of the spectrum. This added some bass solidity to the sound, which many people would doubtless prefer, but in effect reduced the overall efficiency



by another 5 dB. If you have plenty of amplifier power available, the recommended settings are probably the most satisfactory.

The high-frequency dispersion was good, but not as good as we have found on some other speakers. High-frequency output above about 3,000 Hz was typically down about 5 dB at 45 degrees off the speaker axis, and down about 10 dB at 90 degrees off axis.

Tone-burst response was very good. In fact, except for some ringing at 13,000 Hz, it was well-nigh perfect. Lowfrequency harmonic distortion was measured at a 10-watt input, since the output of the speaker at 1 watt was too low for satisfactory measurements. The distortion was very low, generally under 3 per cent from 30 to 100 Hz, except for a slight rise to 4.5 per cent at 95 Hz. It rose to 12 per cent at 20 Hz.

We listened to the Rectilinear Xa by itself and in A-B comparisons with a leading bookshelf system noted for its bass response. It was clear that the Rectilinear Xa was surpassed in respect to output and distortion in the low-bass frequencies below about 50 Hz. At the higher frequencies, its dispersion was also not quite as good as that of the competing speaker. However, we preferred the Rectilinear Xa in the areas of clarity and definition. In fact, we have heard few systems capable of comparable sonic detail, and most of them lack the bass of the Rectilinear Xa. Overall, we find it difficult to assign the Rectilinear Xa a precise position among its peers, but suffice it to say it does rank among the best bookshelf speakers we have had the pleasure of testing and hearing. It comes fairly close (but not quite!) to matching its older relative, the Rectilinear III, which is several times its size and considerably more expensive. If you have a really good, very powerful amplifier that can drive 4-ohm speakers, you should seriously consider the Rectilinear Xa. It sells for \$199.

For more information, circle 156 on reader service card

CROWN D-40 STEREO POWER AMPLIFIER



• WHEN WE received the Crown D-40 stereo power amplifier for testing, we were afraid that the single slim package contained only the manual and accessories, and that the amplifier had become misplaced in shipment. Picture, if you will, a flat module only nineteen inches wide by 13/4 inches thick by 75/8 inches deep, weighing a mere 81/4 pounds. Improbable as it seems, this houses an ultralow distortion stereo amplifier, capable of delivering over 30 watts per channel into 8-ohm loads! The Crown D-40 is designed to be mounted in tape-recorder systems, or in standard relay racks, where its panel height of only 13/4 inches can provide a prodigious power density in multichannel commercial and industrial installations. The D-40 has all-silicon solid-state circuits, with direct coupling from input stage to speaker. A blocking capacitor after the input connector prevents any d.c. component in the input signal from biasing the speaker cone off center.

The built-in power supply uses a remarkably compact power transformer with a low external hum field. The amplifiers are thoroughly fused and protected against almost any conceivable accidental or deliberate damage, including input overload, shorted and open-circuited outputs, and strong radio-frequency environments.

Apparently the only precaution to be observed is to keep the two speaker outputs separate—paralleling them will destroy the output transistors, as will happen with most transistor amplifiers—and Crown cautions against this. Even so, a procedure is shown in the manual for internally paralleling the channels to convert the amplifier to a singlechannel 60-watt unit.

The Crown D-40, as befits a basic power amplifier, is simple in appearance and operation. There are two input level controls on the panel, plus the power switch and pilot light, and a stereo-headphone monitor jack. All inputs and outputs are in the rear. Each input has a standard phono jack and a phone jack in parallel; each output has two phone jacks in parallel.

The specifications of the Crown D-40 are most impressive, and are thoroughly documented in the manual with a dozen sets of curves. Rather than repeat them here, (Continued on page 36)




A New Feature That Lets You Tune Faster and More Accurately

An Improved Version ... of A Widely Acclaimed Receiver!

Read what 'HIGH FIDELITY magazine had to say about the LR-1500T, based on unbiased tests conducted by CBS Labs: "High performance and an abundance of features . . . an excellent buy on today's market.

We Proudly Introduce

The LR-1500T 220-Watt AM/FM Stereo Receiver



First we introduced the LR-1500T which was an unqualified success. Now we present its successor . . . unmistakably, the LR-1500TA has the heritage of its predecessor, enriched by engineering improvements which establishes a new criteria of excellence in design, performance and operating convenience!

FEATURES

New Electronic "ACRI-TUNE" Circuit automatically actuates a front panel indicator light when the receiver is precisely tuned to the very center of an FM station. It offers a degree of tuning accuracy not pos-sible with other tuning meters, and assures best possible FM mono or New Silicon FET Front-End, plus the use of IC's in the IF, results in

dramatic improvements in FM reception, FET front end now has three FET's where formerly only two were used.

New FET Tone Controls offer greater flexibility and smoothness to

New FET Tone Controls offer greater flexibility and smootnness to custom tailor your sound. Fuseless COMPUTOR-MATIC^{IM} Overload Protection Circuit (Pat. Pend.) automatically guards against damage to drivers and output transistors. Other features include automatic FM mono-stereo switching, muting control, massive power supply, center channel output and AM/FM reception in the LR-1500TA. Add to this a full complement of controls, plus every needed imput and output for the ultimate in flexibility and operating convenience, and you have a receiver thats as modern as tomorrows design. Check the advanced features and specifications . . . then see your nearest Lafayette dealer for a sound demonstration.



SPECIFICATIONS

CIRCLE NO. 24 ON READER SERVICE CARD



we will describe our test results, which speak eloquently for themselves, and essentially confirm the published specifications. At the rated 30 watts per channel into 8 ohms (with both channels driven), the harmonic distortion was under 0.1 per cent from 60 to 11,000 Hz, and under 0.05 per cent over most of that range. At 20,000 Hz it reached 0.14 per cent—an insignificant amount by any standards. Low-frequency power was limited by power-supply capacity, so that distortion rose to several per cent below 45 Hz. Crown's ratings apply with only one channel driven (or the test signals out of phase), under which condition there was no significant increase in distortion down to 20 Hz. At half power or less, the distortion was under 0.04 per cent from 20 to 2,000 Hz, reaching a maximum of 0.16 per cent at 20,000 Hz.

The harmonic distortion at 1,000 Hz was 0.07 per cent at 0.1 watt, slightly over 0.03 per cent from 1 watt to beyond 20 watts, and 0.1 per cent at about 32 watts. Clipping occurred at 34.5 watts. IM distortion followed a similar pattern, falling from 0.2 per cent at 0.1 watt to 0.08 per

PIONEER SX-1500TD AM/STEREO FM RECEIVER



• THE styling of the SX-1500TD receiver (which replaces the SX-1500T reported on in the January 1969 issue) is completely new, following the format of Pioncer's latest product line. The pale gold satin-finish panel is set off by black and gold knobs and black pushbuttons, attractively and functionally grouped. The dial face (opaque when the set is off) presents a multicolored display when it is turned on. The tuning scales are illuminated in deep blue (with FM STEREO appearing in red when appropriate). The two tuning meters are lit in pale yellow and the selected input is identified by the legend FM (blue), AM (blue). PHONO 1 (green), PHONO 2 (green), or AUX (yellow). When the receiver is set for AM or FM reception, the dial pointer is illuminated in yellow; when the other inputs are switched in, it is invisible. Despite the overly colorful appearance that such a description might suggest, the Pioneer SX-1500TD is attractive and tasteful.

The FM-tuner section uses an FET r.f. amplifier and an i.f. strip with four IC amplifiers. The AM tuner has a tuned r.f. stage and two i.f. stages. In addition to the signal-strength tuning meter of the earlier SX-1500T, the TD model has a zero-center tuning meter for more precise FM



cent at 10 watts, and climbing to 0.17 per cent at the rated 30 watts. Into 4-ohm loads, the Crown D-40 delivered 45.4 watts per channel at the clipping point, and with 16-ohm loads the output was 21.5 watts. An input of 0.38 volt was needed to drive it to an output of 10 watts. Hum and noise were virtually unmeasurable with our test instruments, better than 93 dB below 10 watts. The frequency response was absolutely flat over the audible frequency range, and down 0.4 dB at 20 Hz and 50.000 Hz.

There is little we can add to the raw test data. The Crown D-40 is a superior amplifier by any standard. We found its size and weight difficult to reconcile with the performance of a truly husky amplifier which can drive almost any home speaker system with ease. It is, of course, ideal for adding sonic muscle to a good semi-pro tape recorder (such as the Crown 800, with which it is pictured in the instruction manual) without materially increasing its weight. The Crown D-40 sells for \$229. The optional walnut case shown in the lead photo is \$29 additional.

For more information, circle 157 on reader service card

tuning. The mode switch has positions for stereo, or either channel through both speakers, and in addition has a reversed-channel stereo position and an L + R (mono) position. The speaker-selector switch of the former model has had its functions expanded to control up to three pairs of speakers. The other front-panel controls are conventional—bass, treble, loudness, balance, high- and low-frequency filters, muting, and tape monitoring. The SX-1500TD has switched inputs for two magnetic cartridges.

In the rear, the Pioneer SX-1500TD offers the foolproof plug-in speaker connectors that we found to be so practical in other Pioneer products. The center-channel output is intended to feed a separate mono power amplifier. There are also separate preamplifier outputs and power amplifier inputs with an adjacent slide switch to join them for normal operation. If they are separated by moving the switch, the preamplifier outputs can be connected to an external electronic crossover network, the outputs of which are then connected to the SX-1500TD power amplifier inputs and to one or more external power amplifiers.

The SX-1500TD has a somewhat unusual capability: a microphone input, and a dynamic microphone is supplied with the unit. Although the microphone signal can be mixed with any of the selected inputs, and appears as a mono signal at both speakers, it is *not* present at the tape outputs. This means that it cannot be used normally to record a commentary with another program. But the microphone could be useful for public-address installations that incorporate the SX-1500TD.

In the realm of performance, the specifications of the (Continued on page 38)

Any high-power receiver gives you good midrange response,



Scott gives you power where it counts.



Today's low-efficiency speaker systems need plenty of clean, undistorted power to sound their best. And almost any modern receiver can put out the needed power in the midrange frequencies ... that's easy. Where the real test occurs is in the vital low and high frequency ranges ... that's where Scott beats any competition you can name.

For sustained undistorted power at low frequencies, Scott engineers have designed one of the heftiest, coolest-running power supplies in the business. The oversized transformer is specially designed for minimum heat rise and maximum efficiency. Giant power supply capacitors store more than adequate power for even the most strenuous bass passages. As you can see on the graph, Scott power is sustained even below 100 Hz, where other receivers tend to "sag."

Scott Full Complementary Output gives you lower distortion at critical high frequencies than any other amplifier circuit design. High-gain F/C/O transistors are specified by Scott for lower distortion at any given power output.

Laboratory test results and power charts can show you exactly where Scott receivers excel. But the most convincing proof is to listen to any Scott receiver connected to the speakers of your choice. Choose from three outstanding models: the 342C FM stereo receiver, at \$269.95; the 382C AM/FM stereo receiver, at \$299.95; and the 386 AM/FM stereo receiver, at \$395.95.



H. H. Scott, Inc., Dept. 245-06 111 Powdermill Road, Maynard, Massachusetts 01754 Export: Scott International Maynard, Massachusetts 01754

(c) 1970, H. H. Scott, Inc.

JUNE 1970

CIRCLE NO. 100 ON READER SERVICE CARD



SX-1500TD do not vary much from those of the SX-1500T. Since the previous model ranked with the best receivers available, one can hardly expect a dramatic improvement in performance. We measured the IHF FM sensitivity as 1.9 microvolts, and the new multiplex circuit in the TD model produced distinctly better channel separation, particularly at the higher frequencies. It was better than 35 dB at midfrequencies and 17.5 dB at the extremes of 30 and 15,000 Hz. The FM frequency response was +0, -2.5 dB from 30 to 15,000 Hz.

The SX-1500TD was also very good in its audio section. The RIAA equalization was within ± 1 dB from 30 to 15,000 Hz. The low-cut filter was no better than in the previous model, with a rather gradual, moderate action, but the high-cut filter was substantially improved. Its cut-off was an octave higher (6,500 Hz) and the slope was 12 dB per octave. We found it to be quite effective. The tone



controls had good characteristics, especially in the bass, where considerable effect could be achieved below 200 Hz with no influence on higher frequencies.

The 1,000-Hz harmonic distortion of the amplifiers was under 0.25 per cent up to about 43 watts output per channel, with both channels driven into 8 ohms. IM distortion was slightly higher, falling from 0.6 per cent at 0.1 watt to under 0.15 per cent between 7 and 25 watts, and rising to 1 per cent at 45 watts.

Since the maximum power output with reasonable distortion at very low frequencies is limited by power-supply design, we arbitrarily chose 35 watts as a reference "fullpower" level. At 35 watts per channel, the distortion was less than 0.25 per cent from 35 to 20,000 Hz, rising to 1 per cent at 25 Hz. At half power and less, the distortion was essentially under 0.2 per cent from 20 to 20,000 Hz. The SX-1500TD is clearly well above the average in power output and with very low distortion over its power-output range. It could deliver about 36 per cent more power into 4 ohms than into 8 ohms, and with 16-ohm loads the output was reduced by about 40 per cent. Hum and noise were extremely low-73 to 75 dB below 10 watts on both high-level and phono inputs. Even with a relatively high phono gain (1.8 millivolts provided a 10-watt output), the phono-overload level was a safe 70 millivolts.

When using the Pioneer SX-1500TD, we found it to be all that was promised—an excellent, flexible, fine-sounding receiver. Its FM interstation-noise muting operated smoothly, with little trace of thumps or noise bursts. The AM quality of this receiver (noise, frequency response, and distortion) was exceptionally good—so much so, in fact, that a listener might think he was hearing FM.

All in all, we liked the Pioneer SX-1500TD very much. It is a lot of receiver, hard to beat for flexibility, performance, and appearance. It sells for \$400, complete with rosewood end pieces and the dynamic microphone.

For more information, circle 158 on reader service card

TANDBERG 6000X STEREO TAPE DECK



• OUR recent tests of tape recorders have revealed a steady improvement in performance, which reflects progress in recording tape, head design, and other factors. Nothing illustrates this continuing upward trend in tape-recording technology better than the new Tandberg 6000X.

The 6000X has evolved from the Tandberg 64X, and, despite changes in styling and appearance, duplicates most of its control details and operating features. Like the 64X, the new machine offers three speeds (17/8, 33/4, and 71/2) ips) and cross-field recording bias, in which the bias signal is supplied through a fourth head contacting the back of the tape, opposite the recording head. The single-lever tape-transport control, used by Tandberg for many years, has been retained, together with a direct, straight-line tape-loading path. A single hysteresis synchronous motor is used, with very effective servo-controlled reel brakes.

Each channel has its own recording-interlock and playback pushbuttons. With the supplied jumper cables, special (Continued on page 40) The time is tomorrow. The name is TEAC. The machines are the Simul-trak[™] Series TCA-40. And they're here today.

This series of tape decks combines the best features of high-quality quarter-track, two-channel operation with four-channel stereo capability. It's the best of two worlds, in three versions, four channels.

All three models feature four-channel stereo playback, as well as regular two-channel playback with auto reverse. What's more, Models 40 and 41 can be modified later to the full four-channel capability of Model 42, at moderate cost. Meanwhile, any one of these machines is compatible with your present equipment; no modifications or reassembly are necessary.

So what are you waiting for?

Simul-trak^{**} surrounds you with sound – and gives you a headstart on tomorrow.

ANY NUMBER CAN PLAY.





TCA-40

- ¹ -track, 2-channel stereo playback, plus 4-channel stereo playback (in-line)
- ¹i-track, 2-channel erase and record heads for future "step-up"
- Automatic reverse for uninterrupted playback of conventional 2-channel tapes
- Readily modified to TCA-41 or 42
- Built-in solid-state preamplifiers
- Ideal for duplication master or copy deck

General Specifications

- Speeds -7^{1}_{2} and 3^{3}_{4} ips
- Motors 1 hyst. sync., 2 outer rotors
- Wow and Flutter $-0.12^{\rm G}$ (a $7^{\prime}{}_{\rm 2}~{\rm ips}$
- Freq. Response ± 3 dB 50-15,000 Hz (α 7¹₂ ips
- S/N Ratio 50 dB
- Crosstalk 48 dB

TEAC

TCA-41 (Illustrated)

- ¹₁-track, 2-channel stereo playback, plus 4-channel stereo playback (in-line)
- ¹₁-track, 2-channe[†] record
- Automatic reverse for uninterrupted playback of 2-channel tapes
- Readily modified to future 4-channel recording capability, or TCA-42
- · Solid-state playback and record preamplifiers
- Off-the-tape monitoring selector

TCA-42

- ¹₁-track, 2-channel stereo playback, plus 4-channel stereo playback (in-line)
- ¹₁-track 2-channel stereo record and 4-channel stereo record (in-line)
- Automatic reverse for uninterrupted playback of 2-channel tapes
- Total of 8 separate solid-state playback and record preamplifiers
- Off-the-tape monitor selectors

TEAC Corporation of America • 2000 Colorado Avenue • Santa Monica, California 90404



effects such as sound-on-sound, echo, and so forth can be achieved. A solenoid start/stop mechanism that is activated by a pushbutton operates positively and nearly instantly with practically no start-up "wow." On the front panel there are inputs for two low-impedance dynamic microphones and a jack for stereo headphones. The line and phono inputs, line outputs, and a connector for a remote-control start/stop accessory are in the rear.

The Model 64X was a hybrid design that used tubes for most functions. In the 6000X, Tandberg has gone to all solid-state electronics. This has necessitated replacing the electronic-eye level indicators with meters, since no high voltage was available to operate the tubes. However, a special driving circuit provides very fast meter response (about 50 milliseconds) with a slower decay, so that the meters indicate *peak* rather than *average* program level. Furthermore, in the recording mode, the meters monitor the signal directly at the recording head, so that the effect of equalization pre-emphasis on high-frequency levels is included in the meter readings. This minimizes the chance of high-frequency overload. The meters are illuminated while recording; in playback they are not illuminated, but they indicate the line-output levels.

The Tandberg 6000X has both line (high-level auxiliary) and RIAA-equalized magnetic-phono inputs. Each channel has concentric recording-level controls; one sets the microphone recording level, and the other level control is for either auxiliary or magnetic-phono inputs, depending on the setting of a switch near the level controls. The separate controls permit microphone signals to be mixed with other inputs. There is also a limiter circuit, switched in by a pushbutton, that prevents overdriving from excessive recording levels. It has negligible effect below the 0-dB (maximum) recording level, but signals that would cause overload distortion are limited in less than 5 milliseconds to a safe value, with a release time of 1 to 2 seconds.

The playback-level controls are also concentric. Next to them is a switch for A-B, NORMAL, or SOUND-ON-SOUND operation. In the A-B position, the incoming signal appears at the line outputs when the appropriate pushbuttons are up. When the buttons are down, the off-the-tape playbackamplifier outputs are available at the line outputs. In the NORMAL position, no signal is heard unless the playback buttons are pressed. In the SOUND-ON-SOUND position, one track (mono) can be transferred to the other while additional material is being added, and the combined signal can be monitored with headphones as it is being recorded. The front-panel headphone jack is designed for 200-ohm headphones, but will drive 8-ohm phones to a level that may be adequate for monitoring if not pushed to distortion.

The record-playback frequency response of the Tandberg 6000X proved to be outstandingly flat and wide—about a half octave wider than we had measured on the older Model 64X. We used 3M 202 low-noise tape for all measurements, since the recorder's bias and equalization are optimized for this and similar low-noise tapes.

At $7\frac{1}{2}$ ips, the record-playback response was ± 1.5 dB from 40 to 20,000 Hz. Most of the variation occurred below 500 Hz and was caused by head-contour effects. From 250 to beyond 20,000 Hz, the response varied less than ± 0.5 dB. Low-frequency response fell off smoothly below 40 Hz to -9 dB at 20 Hz. Between 20 and 20,000 Hz, the $3\frac{3}{4}$ -ips

record-playback response was essentially identical to that at $7\frac{1}{2}$ ips— ± 2 dB from 50 to 20,000 Hz!

The major surprise came at the slowest speed of 1% ips. On one channel the response was ± 2.5 dB from 52 to 11,500 Hz; on the other it was ± 2.5 dB from 50 to 15,500 Hz. It appears that Tandberg has achieved performance at 1% ips that not long ago would have required a 15-ips tape speed, and on most good recorders today can barely be matched at 3% ips.

The NAB playback response, measured with an Ampex quarter-track test tape, was -1.5, +5 dB from 50 to 15,000 Hz at 7½ ips. The response at 15,000 Hz could be flattened out easily with the treble tone controls of a system's amplifier, if necessary. The 3¾-ips playback response was +2, -1 dB from 50 to 7,000 Hz. Incidentally, the 7½ ips response, when measured with a *full-track* test tape, exactly matched Tandberg's specifications.

The signal-to-noise ratio of the Tandberg 6000X was as outstanding as its frequency response. It measured 52 to 53 dB (unweighted) at all speeds, referred to a 0-dB recording level. The distortion at this level was only 1.45 per cent (Tandberg specifies it at less than 3 per cent), and increased gradually to 2.1 per cent at +3 dB and to 4 per cent at +6 dB. If we used the conventional 3 per cent distortion point as a reference for the signal-to-noise specification, the figures would have been 57 to 58 dB.

Wow and flutter, though certainly satisfactory, were not quite as noteworthy as the other characteristics of the 6000X. They were, respectively, 0.02 and 0.1 per cent at $3\frac{3}{4}$ ips, and 0.01 and 0.085 per cent at $7\frac{1}{2}$ ips. At $1\frac{7}{8}$ ips, we measured 0.24 per cent combined wow and flutter. The $7\frac{1}{2}$ -ips playing speed was exact, and it was very slightly fast at the two slower speeds. The machine wound or rewound 1,200 feet of tape in about 85 seconds. An unusual feature, a mechanical cucing lever, permits listening to the tape during fast wind or rewind to help locate selections.

The recording amplifiers had very high gain, and required only 4.7 millivolts (line), 1 millivolt (phono), and 0.05 millivolt (microphone) to achieve a 0-dB record level. The output from a tape recorded at a 0-dB level was 1 volt. The limiter worked very well—with test-tone inputs, a \pm 16-dB signal resulted in less than 2 per cent distortion.

All these figures suggest that the Tandberg 6000X is something special, but the real proof was in the using. When recording FM broadcasts, in at least 90 per cent of the cases we were unable to hear the slightest difference between incoming and outgoing program signals—at 17% ips! There was no audible loss of highs, nor increase of hiss, distortion, or flutter. With interstation hiss (a sort of "white noise") as an input, the loss of highs was clearly audible, of course. However, at the two higher tape speeds, we could not hear any change of hiss character when switching between input and output in the recording and playback process. Needless to say, program material was completely unaffected.

Considering the above results, it seems to us that the $7\frac{1}{2}$ -ips speed is needed only for playing tapes previously recorded at that speed, and possibly for editing ease. The most critical recording, either live or dubbed, can be done at $3\frac{3}{4}$ ips, with no audible loss of quality. And for most FM broadcasts you can do your taping at $1\frac{7}{8}$ ips.

It is difficult to imagine how the Tandberg 6000X could be improved from the standpoint of listening quality. Of course, it doesn't have automatic tape reversal, 10½-inch reel capacity, or the super-fast rewind obtainable with a three-motor transport, which may be important to some users. But when it comes to making home tape recordings of the highest quality, we believe it sets a new standard for others to aim at. The Tandberg 6000X, complete with a walnut base, sells for \$499. A carrying case and various other accessories are available.

For more information, circle 159 on reader service card

The truth about sex, religion, love, peace, racial tensions, and the end of war. (Is there such a thing?)

Men have died barbarously for the truth.

Lived brilliantly in its defense. Sacked cities and burned books to suppress it.

Erected edifices of towering beauty to sing its praise.

But is there such a thing? Does truth exist?

If the answer can be found anywhere, it is in the Great Books.

And the key to the Great Books



Syntopicon.

is the

The Syntopicon is a two-volume idea index that enables you to look up, in minutes, every idea in the thousands of pages of the Great Books. And it's as easy as looking up a word in your dictionary. Every thought, every paragraph in the Great Books is indexed and crossindexed in the Syntopicon.

There is no other work like it. It is a magnificent reference, a guide, a teacher.

You can, for example, take the subject *peace*, and quickly trace through the thoughts of Plato, Freud, Tolstoy, Aquinas, Homer and fifty other great geniuses.

It costs you nothing to learn more about the Syntopicon and the fantastic library it comes with, the Great Books. A library developed over a period of seven years by Encyclopaedia Britannica in collaboration with the University of Chicago at a cost of two million dollars.

Free Offer: Simply send in the attached card. There is no obligation. Or write to Great Books, 425 N. Michigan Avenue Dept. 738-N, Chicago, Illinois 60611.





The Marantz Receiver. Now everybody can afford one.

STEREO

Once you had to be a cattle baron, a railroad heiress, or at least the duke of a small duchy to own a Marantz. But now our receivers begin at prices more suited to those who enjoy rich tastes but do nct have a princely pocketbook.

Until last year, the least-expensive Marantz stereo receiver you could buy cost \$695.00! Today, Marantz receivers are available in other than very-high price ranges. True, you can still invest \$995.00 for a Marantz receiver, but now we have receivers starting as low as \$209. For the budget-minded music -lover, the new Model 26 AM-FM Stereo Receiver is today's most powerful low-price buy. 20 watts RMS continuous 20-20 KHz (30 watts IHF) built with the same quality as our most expensive units. Price – only \$209

Looking for more than twice the power of the Model 26 at less than twice the cost? Then Marantz built the Model 27 just for you. Only \$299

Have a space problem? Own the versatile Marantz Model 25 AM-FM Sterec Receiver/Compact. It has room at the tor

OUT

DUBBING

to drop in your favorite Dual, Garrard, or Miracord record changer to form a complete compact system. Just \$339. Here is one of our most powerful popularpriced AM-FM Stereo Receivers. The Marantz Model 22. Eighty watts RMS continuous power (120 watts IHF). It features two sensitive tuning meters for precise station tuning and maximum signal strength. Yours for \$449.

And now the regent of receivers, the incomparable Marantz Model 19 FM Stereo, the world's only receiver with a built-in oscilloscope. It displays with a visual electronic pattern six separate characteristics needed to optimize FM and Stereo performance. Price? \$995.

Regardless of price, every Marantz component is built with the same painstaking craftsmanship and quality materials. That's why Marantz guarantees every instrument for three full years, parts and labor. Except speakers. They're guaranteed for five years. Your local dealer will be pleased to

demonstrate Marantz receivers. Then _et your ears make up your mind.

KARCH HOCH HAR EX

Hererphone Read

Components• Speaker Systems • Receivers

OMarantz Co., Inc., 1970. A subsidiary of Superscope, Inc., P. O. Box 99&, Sun Valley, Calif. 9 352. Send for free catalog.

333

ត្រីការបារ**ើ**

30

03



How to recognize a stacked deck.

No matter how elaborate your home stereo sound system is, it's incomplete without a tape deck. And Sony/Superscope brings you the most complete line of stereo tape decks in the world. Decks that fit all pocketbooks, that suit particular systems, that meet specific needs. And every Sony/Superscope deck-regardless of price-is the finest money can buy. Each instrument is flawlessly crafted, with rigorous testing at every step of construction. Then each instrument undergoes a complete series of qualityassurance tests – performed by skilled technicians at one of the most modern and sophisticated tape-recorder test facilities in the world. So you may be sure that the Sony/Superscope product you purchase will give you years of trouble-free service. The Sony/Superscope deck that's exactly right for you is at your dealer's now.

SONY SUPERSCOPE You never heard it so good.[®]



GOING ON RECORD

OBSERVATIONS ON THE CULTURE BUSINESS

THE word "culture" has several dif-ferent dictionary meanings. The one that most concerns us here is number four in Webster's Seventh New Collegiate Dictionary: "Enlightenment and excellence of taste acquired by intellectual and aesthetic training," and, by extension, the objects of that enlightenment and excellence of taste, and the media of that intellectual and aesthetic training. Such a definition implies many things, among them the idea that culture is an end and not a means to an end. Culture is not to be sought with any idea of making a monetary profit from it; it is concerned, in practical terms, with the spending of money rather than the earning of it. In that, it goes somewhat against the American grain, for the heritage of this country is one of industry and thrift-the making of moncy and the saving of it-and our educational system is directed toward the learning of more or less practical skills, practical in the sense that once acquired they can be hired out for money. On the other hand, the teaching of skills that produce "enlightenment and excellence of taste" is not pursued with vigor.

Although Webster's sixth definition of "culture"-"the cultivation of living material in prepared nutrient media"-is obviously meant to apply to another field, there is something to be said for taking it more broadly. People, when immersed in a life-medium rich in cultural products (definition four), tend to absorb those products as nutrients. Such an environment makes for a rich, artificial (as opposed to natural, animal) life. Bacteria, when not offered the luxury of artificially prepared nutrients, feed off whatever is available: garbage, earth, carcasses, living things. People too, when not immersed in culture, derive their psychological nutrients from other things, less artificial and more animalistic. And that is why professional soldiers, politicians, and revolutionaries-to name only three-are rarely interested in culture, and why cultured people are only rarely professional soldiers, politicians, or revolutionaries.

The culture business theoretically exists to satisfy, for a price, the desires of that small group of people interested directly in cultural matters. More realistically, its purpose is to sell a lot of culture to those who really want only a little of it, and some, at least, to those who don't want any at all. It is necessary to do it this way because of American industry, which is set up to produce a lot of something, but not a small amount of anything in particular. Books, catalogs, records, boxes, pedestals for sculpture, all the accessories of culture become realistic in manufacturing cost only when quantities are large. Reaching a potential audience is possible only through advertising, at high prices, that will confront multitudes. The cultural community of the United States is scattered through every city, town, and R.F.D. number in the more than three and one half million square miles of the country. The quantity of culture sold, then, must be large, because the selling of it is necessarily a large-scale and expensive operation.

SELLING a lot of culture to those who want a little is a well-developed business technique, within certain limitations. The "collecting" habit is a strong one, and so is the habit of going to cultural events. If it is present at all in a person, he can be persuaded to collect more and more, attend more and more.

Selling culture to those who don't want it is another matter entirely, one only partially explored to date. Two of the biggest techniques of the past are what might be called the "social hype" and the "educational hype." People used to attend concerts, go to art exhibits, listen to poetry readings because it was, socially, the genteel thing to do. After continuous exposure, a certain proportion of people actually grew to like the stuff, and for the others it was at least a topic of conversation, in a day when conversation meant something. The educational hype was one directed largely at parents: that it was educational, and somehow beneficial, for their children to

be exposed (always at a price) to certain cultural manifestations—in particular, those of which the parents themselves had never had the benefit.

These persuasive techniques are dying now as "culture" is being redefined. The motivation that is strongest today is that of investment. People uninterested in culture buy art because the price is going up, and art investment has shown signs of being both safer and more profitable than stocks or real estate. Now, of course, we are really dealing with culture (definition four) in a noncultural way—but that also is becoming part of the redefinition.

LODAY we can say that there are two types of culture: hard and soft. Hard culture is things, and they are very much in demand. Soft culture is experiences, and they are not so much in demand. Paintings, sculpture, graphics are all hard culture; when you buy one you have bought a thing, one that you may be able to resell at a higher price. And things have another advantage: they take up space rather than time. One does not have to study a painting to own it; one simply buys it and hangs it, and one can spend the rest of the evening watching television.

Music, theater, books to be read (as opposed to books to be collected), and records are all soft culture; they all, in one sense, take time rather than space, and once experienced have little or no market value. One of the record business' problems, as seen from this viewpoint, is that it has never been able to sell its products as collectible things (as the visual arts are) rather than as repeatable experiences. Soft culture is generally in trouble today just because it is soft. A redeemable cash value is not there, and the dying social and educational motivations no longer have the strength to overcome the disinclination to spend both the time and the money, or take the trouble (transportation, parking) often involved in undergoing the experience.

And yet there is still an overall uneasiness that even soft "culture" is somehow, some way, valuable. Therefore, we broaden the definition of culture to include those things for which we are willing to spend time, money, and effort, and now say that culture is that which takes place in cultural centers and in cultural media. Thus, we have the best of all possible worlds. We enjoy our televised variety shows and call them culture. We book rock bands into our college concert series and call them culture. We revel in propaganda and political opinion and call it culture. We build city halls, post offices, and bowling alleys and call them centers of culture. All we need do now is find a way to define war, pollution, and poverty as "culture," and we will have reached the millennium.

Have you really read what the critics are saying about the BOSE 901?

Norman Eisenberg — High Fidelity

".... Add to these virtues the utterly clean wide-range response of a 901, its neutral, well-balanced, transparent quality on all program material, and you feel you've made some sort of stereo discovery"

Julian Hirsch — Stereo Review

"... I have never heard a speaker system in my own home which could surpass or even equal, the BOSE 901 for overall 'realism' of sound."

Bert Whyte - Audio

"the illusion of an orchestra spread across the wall is uncanny ..., There is no doubt that the muchabused term, 'breakthrough,' applies to the BOSE 901 and its bold new concepts."

Stereo & Hi-Fi Times

".... What a lovely sound these speakers produce! ... Listen to Columbia's Carmina Burana on this speaker and hear what a chorus should sound like! these speakers provide a quality that is not to be matched."

You can hear the difference now.

THE BOOSTECORP. East Natick Industrial Park, Natick, Massachusetts 01760

Hi-Fi Buyers Guide

"... its over-all sound quality so clean that the listener is almost unaware of the electronics between him and the instruments ... The sound? The 901 is very possibly the only speaker to date to pour forth in true concert hall fashion."

Elementary Electronics

"Conclusion ... creating the illusion of being in a concert hall, with a uniformity of frequency response and freedom from distortion that is unbelievable ... It is our opinion that this is the speaker system to own, regardless of price, if one wants the ultimate in listening pleasure."

Larry Zide — American Record Guide

"... I urge that you listen for yourself. I think you will have to agree that Bose has, in a single giant step, produced one of the finest speaker systems ever made."

Your inquiry will bring you complete reprints of these unprecedented reviews and a list of franchised BOSE dealers in your area. Ask your dealer for an A-B comparison of the BOSE 901 with the best conventional speakers, regardless of their size or price. Then, go back to your present speakers — if you can. BOSE 901 DIRECT / REFLECTING[™] Speaker System. Stereo Pair, including Active Equalizer, \$476.

Pedestal base extra. Slightly higher south and west.

.....

THE EMPIRE 999VE CARTRIDGE

"Outstanding square waves · Tops in separation." by AUDIO MAGAZINE

Ranked *1 in lightweight tracking ability.

THE EMPIRE GOOVE CARTRIDGE

by STEREO REVIEW MAGAZINE

HE EMPIRE 999VE CARTRIDGE

"A real hi fi masterpiece." by HI FI SOUND MAGAZINE

THE EMPIRE 899VE CARTHIDE

"No high frequency peak. Flat response from 20- 20,000 Hz." by HIGH FIDELITY MAGAZINE

THE EMPIRE GOOVE CARTRIDGE

Chosen for "The stereo system I wish I owned." by POPULAR SCIENCE MAGAZINE

For technical details write: Empire Scientific Corp. 1055 Stewart Avenue, Garden City, N.Y. 11530



SINGERS AND SINGING:

A fine manual by Aksel Schiøtz and a vexing dictionary from Germany

Reviewed by ROBERT S. CLARK



Two dissimilar books with special appeal for singers and lovers of the art of singing have appeared in recent months. By far the more successful of the two is the great Danish tenor Aksel Schiøtz's *The Singer and His Art* (Harper & Row, 1970, \$6.95); the other is *A Concise Biographical Dictionary of Singers* by K. J. Kutsch and Leo Riemens, translated from the German and "expanded and annotated" by Harry Earl Jones (Chilton, 1969, \$14.95).

Aksel Schiøtz's book has a preface by Gerald Moore, and its dust jacket bears testimonials to its value by Dietrich Fischer-Dieskau, Jennie Tourel, Peter Pears, Irmgard Seefried, Charles Panzéra, and others. Who am I to disagree? And in fact I have no inclination to do so. During the Fifties and early Sixties, Schiøtz taught in Denmark and at several American universities, and gave master classes throughout this country-I had the privilege of attending some of his sessions at the Mannes College of Music in New York. The insight and practical wisdom of his book are the fruits of these experiences. The book is addressed to "the young singer who has the courage to enter this precarious profession," but the general reader will find pleasure and profit in it, too. After an initial chapter on "the functioning of the voice," a brief and undogmatic consideration of vocal training, talent, and musicianship, Schiøtz moves on to interpretation, and examines, often in detail, the leading works of the vocal repertoire. In the book's longest chapter, he deals with the German lied (taking the two major Schubert cycles-Die schöne Müllerin and Die Winterreisesong by song), the French mélodie from Berlioz to Poulenc, English songs from Dowland to Britten, and others. A chapter on oratorio singing follows-this was the area, with the lied, in which Schiøtz's exceptional gifts were best displayed-and then one on opera, the latter being distinguished by some particularly apt words about Mozart style. Schiotz suggests a metronome setting for practically every song and aria he treats in detail, and there are plentiful musical examples (in some cases not very clearly identified). The book closes with some good advice about recital programing, stage demeanor, and the correct pronunciation of Italian, French, and German vowels and consonants. There are three appendices, one of which contains "recommended listening," complete with record numbers, for the works dealt with in the text.

The animating principles of Schiøtz's approach to interpretation are thorough mastery of music and text and careful adherence to the composer's markings for tempo, dynamics, and expression. He goes so far as to assert that a singer should stick to the composer's dynamic indications no matter what his feeling about them, because "what the musician 'feels' is beside the point and reveals most frequently a lack of understanding"! But he does not stint the importance of the interpreter's individuality. and quotes approvingly Lotte Lehmann's dictum that "imitation is the enemy of artistry." The intention of his book, he says, is "to weigh the possibilities in the vocal music of all periods"-emphatically not to dictate just how a piece should go. An incidental point, but one very much worth remarking on, is that when Schiøtz says "of all periods" he means it. For a man whose career was associated with Handel, Mozart, and Schubert, he shows a singular feeling for both pre-Baroque and twentieth-century vocal music: for example, his brief discussion of Krzysztof Penderecki's Passion According to Saint Luke is more illuminating than most of what I have read about this composer.

HERE is just one thing I fervently wish he had not said-that he favors translating oratorio and opera into the language of the country in which they are performed. "The purpose in both cases," he claims, "is to reach a large number of people. In opera-the sung play-the plot must be clearly understood by everybody, and any foreign language is bound to prevent this." He concedes that art songs should be sung in their original language. But no one has yet persuaded me that words and music are any less closely wedded in opera than they are in song: La Traviata in English sounds just as bereft as Erlkönig in English. On top of this, I have never heard a performance of an opera in English, a translation or an original libretto, in which I understood more than an occasional word or phrase. For (Continued on page 52)

The independent test labs think as highly of the Dual 1219 as we do.

No surprise. Because with every Dual tested, every performance claim we've ever made has been confirmed by independent test labs. With no exceptions.

Four years ago, for example, we introduced our 1019. Audio experts rated it the finest automatic turntable ever made. But we were already hard



"anti-skating...reduced wear on the record grooves..."

at work on what was to become the Dual 1219. Is it the worthy successor to the 1019 we believed it would be?

Stereo Review says it is.

"The 1219 is a good illustration of how an already superior product (the 1019) can be further improved by intelligent and imaginative design and engineering."

High Fidelity also agreed, with such erformance as these:

specifics on the 1219's performance as these:

"Speed accuracy is greater (than the 1019), wow and flutter are a bit lower, tracking force and anti-skating adjustments are more precise...outstanding in all these characteristics."

As for the benefits of the 1219's gimbal-suspended 8-3/4" tonearm, The American Record Guide's results showed:

"The arm carries the cartridge in a way that permits it to extract every subtlety it possibly could from the record groove."

We actually felt the 1219 might have more precision than most people would ever need. But Audio disagreed, we're pleased to note:



"...novel adjustment for optimizing vertical tracking angle..." High Fidelity

"Whether or not the advantages of exact setting for vertical tracking and for anti-skating can be identified by the average listener, measurements show that there are improvements...reduction in distortion, and...reduced wear on the record grooves, particularly on the side of the groove nearest the center of the record."

Complete reprints of these test reports are yours for the asking. So is a 16-page booklet which reprints an informative Stereo Review article on turntables and tonearms.

After you look through all of this, you'll understand why most hi-fi experts have Duals in their own systems. And why every record you buy is one more reason to own the \$175 Dual 1219.

United Audio Products, Inc., 120 So. Columbus Ave., Mt. Vernon, New York 10553. [118]

"...four point gimbal-bearing system of extremely low friction." American Record Guide

will have greatest appeal to those who dislike

Stereo Review

any compromise ...



What's new Pussycat?

We hereby declare 1970 The Year of the Pussycat. Our national prize-winning drink has become a great success. No wonder. This sunny, orange-sweet sour makes you want to purr. And mixes up quick as a cat. Just combine a packet of "Instant Pussycat Mix," water and Early Times. Ask for Instant Pussycat Mix at your favorite food or liquor store.



To get a set of 4-10¹/₂ oz. Pussycat glasses and 4 packets of Instant Pussycat Mix⁺, send \$2.95 to: EARLY TIMES PUSSYCAT GLASSES, P.O. BOX 378, MAPLE PLAIN, MINN. 55359 CIRCLE NO. 12 ON READER SERVICE CARD 52 his understanding of the action of an opera, the listener cannot rely on the immediate apprehension of the text during performance, no matter what the language is. It is the responsibility of the listener to come to the opera house prepared to participate in the musical experience, not just to sop it up passively; and the burden of the audience's comprehension of a text in any language rests squarely with the audience.

Schiotz's prose style is serviceable rather than heightening and leavening; nonetheless, the book's two hundred or so pages are rich in both instruction and delight.

By comparison, A Concise Biographical Dictionary of Singers is fat, and seems to promise much. It delivers only fitfully. A translation of a book that appeared first in Germany in 1962, it purports to contain "full biographics on almost 1,500 world-famous artists," including descriptions of their voices, "brought up to date as of early winter, 1969." The reader need get no further than the title page before his guard is up, for there he sees that the book has a subtitle conspicuously absent from the dust jacket and spine: "From the Beginning of Recorded Sound to the Present." No one whose voice is not recorded is included—and that lops off a fascinating hunk of singing history. Even on its own terms, the book has grave limitations. English singers seem slighted, a result, perhaps, of the book's apparent bias in favor of operatic and lieder interpreters, for most of the missing Englishmen and Englishwomen (Isobel Baillie, Alexander Young, John Shirley-Quirk, Norma Procter, Astra Desmond, Elsie Suddaby) achieved renown in other kinds of music, principally oratorio. Then, too, in his "Notes for Users," Harry Earl Jones, the translator, says that the type of voice is listed "as given in the original text, although in the United States the term mezzo-soprano is more commonly used than that of contralto." The implication is that the terms are interchangeable. but Mr. Jones, who is on the faculty of Fresno State College, surely knows they are not. It soon appears that the classifying of lower female voices is quite haphazard. Jennie Tourel and Janet Baker are listed as sopranos, Elena Gerhardt (a carryover from the original) and Irma Kolassi (a new entry) as mezzosopranos, and Conchita Supervia, Nan Merriman, Fiorenza Cossotto, and Claire Croiza as contraltos! To add to the confusion, there are those indecisive ladies who get dual listings: Christa Ludwig, a mezzo-soprano who takes on occasional soprano roles, is dubbed a contraltosoprano, and Pia Tassinari, a soprano who found that tessitura hard to handle late in her career, is called a sopranocontralto. It's enough to induce vertigo. In fact, a lot of what the book tells us

about its subjects is misleading. There is a reluctance to reveal that anyone between its covers has been accorded less than a first-class reception. The Rumanian tenor Ion Piso, who appeared briefly at the Metropolitan Opera in the mid-Sixties and received rather devastating notices, is said to have made "a very successful debut" there, and of Galina Vishnevskaya's poorly received Met appearances in 1961 it is said that she "was very much liked." Another unset-tling tendency is that of leaving the current state of a singer's career in doubt: on the basis of what one reads here about Nan Merriman, Maria Callas, George London, and others, the unwary might conclude that they are all still singing. One of the first names I looked up was, of course, Aksel Schiøtz, and the last sentence about him reads, "After 1955 he was a professor at the University of Minnesota, but later returned to Denmark." This is true as far as it goes-but his tenure at Minnesota was brief, and most of his time between 1955 and his return to Denmark was spent at the University of Colorado at Boulder.

And finally one comes to the simple category of out-and-out errors: there are misspellings (Magda Oliviero and Maria Höffgen); Marilyn Horne's birthdate, taken straight from the German edition as "1929 (?)"-and that question mark should have sent Mr. Jones to another source without delay-is 1934; Bidú Sayão does not now live outside Rio de Janeiro, but in New York City; Oralia Dominguez appeared in Mexico City earlier than 1953, the date given here; Boris Christoff has never sung at the Met; Evelyn Lear's Met debut was not in a 1965 Barber of Seville, but in Mourning Becomes Electra in 1967; and so forth.

To be fair, I should say that the book contains a great deal of accurate information that is also very interesting, and, the previously cited scanting of English singers aside, the only significant omissions I could come up with were such recent arrivals on the international scene -all of them recorded-as Marie Collier, Luciano Pavarotti, Sherrill Milnes, Gabriel Bacquier, Gwyneth Jones, Martina Arroyo, Plácido Domingo, Josephine Veasey, Teresa Zylis-Gara, and Beverly Sills. But, come to think of it, why shouldn't these singers have made it? Doesn't Mr. Jones claim that the book has been brought up to date as of early winter, 1969? My complaints really boil down to this, I suppose: for the healthy bite the purchase of this book will take out of your pocketbook, it should have been better-a lot better.

One closing note: St. Martin's Press has reprinted the fifth edition of *Grove's Dictionary of Music and Musicians*, the ten volumes complete with illustrations (but no color), in paperback. The price is \$60. When you spend \$395.00 each on a speaker system for your home, you expect to get the same fine quality components that are used in "The Voice of the Theatre" systems and now performing in most theatres, recording studios and concert halls in the nation plus a wider angle of distribution through mids and highs for clearer sounds plus a smoother and flatter response plus an unbounded dynamic range plus a hand-rubbed-pecan-finished cabinet plus a high-relief-decorator design plus a lot of other things.

We don't think that's expecting too much.



Altec Lansing full-size speaker systems include the Milano in pecan (shown), \$395.00 each; the Valencia in walnut, \$339.00 each; the Flamenco in oak \$339.00 each. Hear them perform at your Altec Lansing dealer. Or write for a free catalog: 1515 South Manchester Avenue, Anaheim, California 92803. Attn: S-6.



For years, audio experts have been most generous in their praise of the "Citation Sound". But interestingly enough, Citation has virtually

no sound. When you listen to our new Citation Twelve Power Amplifier, all you are ever aware of is the music. In between each note, there is nothing but absolute quiet. It's as if you were listening through the electronics clear back to the original performance. The sound is spacious, transparent and lifelike. The finer nuances of tonal shading stand out clearly. You can almost feel the concert hall and the depth and breadth of the orchestra. The instruments have the same balance and perspective as at a live performance.

In truth, Citation is something more than high fidelity. For even the most sophisticated high

CITATION... a step beyond high fidelity.

fidelity enthusiasts have come to accept a certain amount of distortion in their equipment. But distortion in the Citation Twelve is literally nonexistent. All forms are at the residual levels of laboratory test equipment. There is nothing within the electronics to mask or color the sound. Stated simply, Citation brings you the music precisely the way it was originally performed.

But words will never adequately describe "Citation Sound". You have to hear it, or perhaps we should say not hear it, to totally understand and appreciate it. The Citation Twelve is at your Harman-Kardon dealer now. Visit him soon. We think you'll agree that Citation, indeed, takes you a step beyond traditional high fidelity. Minimum resale price—(kit) \$225. (wired) \$295.

For more technical information write to Harman-Kardon, Inc., 55 Ames Court, Plainview, N.Y. 11803, Dept. SR-6.





THE BASIC REPERTOIRE: Item One Hundred Twenty-five

By Martin Bookspan



SECOND SYMPHONY

I N 1895, during his twenty-third year, Sergei Rachmaninoff tried his hand at composing a symphony for the first time. He had already attracted considerable attention with his Prelude in C-sharp Minor for solo piano and *The Rock*, a symphonic poem which had won warm approval from Tchaikovsky. When Belaiev conducted the first performance of the new symphony in St. Petersburg, the result was a fiasco. Rachmaninoff himself wrote in his recollections: "Sometimes I stuck my fingers in my ears to prevent myself from hearing my own music, the discords of which absolutely tortured me. Only one thought hammered in my brain—'How is it possible? What is the cause of it?'—I had thought that I knew exactly where I stood. All my hopes, all belief in myself, had been destroyed."

Rachmaninoff promptly withdrew the First Symphony, and it was never again performed during his lifetime. In 1945 parts were discovered in Russia, and the score has since been performed there and in other countries; it is by no means the abject failure that Rachmaninoff's own words and the reactions of its first listeners would have us believe. But the symphony's failure plunged its composer into the depths of a depression from which he did not recover until 1900. Then, with the composition of his Second Piano Concerto in 1900-1901, Rachmaninoff seemed once again able to resume his musical activities with renewed confidence in his powers.

By 1906, Rachmaninoff had become the most famous young musician in Russia; he conducted at the opera, was in constant demand as a concert artist, and in general was committed to a career as a performer that left virtually no time for composition. He had married in 1902 and visited Dresden on his wedding trip. Now, in 1906, he decided that there was too much music in him that had to be written but could not emerge in the turmoil of his life in Moscow. He returned to Dresden, taking with him his wife and their small daughter, and they lived there from the autumn of 1906 to the summer of 1908. During that period Rachmaninoff composed a piano sonata, a set of songs, a portion of a never-completed opera titled *Mona Vanna*, the symphonic poem *Isle of the Dead*, and the Second Symphony.

Rachmaninoff introduced his Second Symphony to the world during the 1908-1909 season of the Moscow Philharmonic Society, and also conducted it in St. Petersburg. Unlike the First Symphony of a decade earlier, the Second



Sergei Rachmaninoff's sprawling Second Symphony is customarily cut in performance, much to its detriment. Among complete recordings, Paul Kletzki's (London) takes precedence by virtue of its superior stereo sonics. But both Eugene Ormandy (Columbia) and André Previn (RCA disc and tape) bring greater involvement to their shortened versions.

was an instantaneous and overwhelming success. It received the Glinka Prize of 1,000 rubles and began to make the rounds of symphony orchestras everywhere. In the six decades since the score was first performed, it has come to be Rachmaninoff's best-loved orchestral work, and its status as a full-blooded symphony in the best Russian Romantic tradition has long since been assured.

The first movement begins with a somber introductory Largo, made up of material that will figure later in the same movement and elsewhere in the score. The principal element is a theme in the violins that has about it the characteristics of a sigh. The main body of the movement is marked *allegro moderato* and is ushered in after four anticipatory measures (usually cut to two in performance). The second theme is shared by the winds and strings, and the development section is introduced by a solo violin. The first violins again announce the principal theme at the beginning of the recapitulation, and there is a brilliant, turbulent coda.

The second movement, *allegro molto*, is a vigorous scherzo. The principal theme first appears in the horns; then it is taken up by the violins, which also first proclaim the contrasting second theme. There is a return to the brilliance of the opening of the movement, and then a gradual dying away. The second violins, then the firsts, present the trio in a fugue-like working of materials marked *meno mosso*. Brasses, cymbals, and tambourine enter, in dialogue with the strings; then there is a return to the material of the opening of the movement, and near the end an allusion to the theme of the *largo* introduction from the first movement.

The *adagio* slow movement is a long rhapsodic song, beginning in the first violins and taken up by the solo clarinet. Violins and oboe share another thematic grouping, and later in the movement the principal theme of the symphony's introduction is again recalled.

The last movement, marked *allegro vivace*, opens with four anticipatory measures for the full orchestra, *fortissimo*, and then the main theme is heard, bold and heroic, with flourishes in the horns. There is a *fortissimo* development, then a *diminuendo* that introduces a march-like section given principally to the winds. Strings in octaves have the radiant and confident second theme, which then leads to an *adagio*. Material from the first and third movements is recalled, and the music moves toward its triumphant conclusion, with themes from the opening interwoven with the triplet figure of the final movement's principal theme.

As Rachmaninoff composed the score, the Second Symphony is a broad, sprawling work requiring nearly an hour of performance time. In a misguided effort to bring the symphony within "more reasonable" time limits, most conductors make cuts through the length and breadth of the score, chopping ten minutes or more out of it. In so doing, they eliminate much gorgeous music and undermine the solid structure of the symphony. I much prefer an uncut performance, good, bad, or indifferent, to one that tears the score apart, no matter how vital and perceptive such a performance may be.

Of the half-dozen recordings of the score currently available, only Paul Kletzki (London CS 6569) and Kurt Sanderling (Heliodor HS 25029) offer uncut performances. Sanderling's is by far the better played of the two, and it is also the more perceptive reading. But it suffers from rather cramped recorded sound that is not materially aided by the electronic stereo. Thus, by default, my first recommendation for a recorded version of the symphony would be Kletzki's.

Ormandy (Columbia MS 6110) and Previn (RCA LSC 2899) are easily the best of the cut recordings. Both conductors have virtuoso orchestras at their disposal (the Philadelphia and London Symphony orchestras, respectively) and both bring to their assignments greater fire and personal involvement than Kletzki. RCA would obviously be doing everyone a service if they rerecorded Ormandy and the Philadelphia Orchestra in the work, this time in an uncut performance.

Apparently, only Previn's performance is available to tape collectors (RCA TR 3 5030, a 3¾-ips twin-pack of reels that also contains Previn's LSO recordings of Rachmaninoff's Third Symphony and *The Rock*). It is a brilliantly incisive performance, superbly recorded and reproduced on the tape. But those cuts!

REPRINTS of the latest review of the complete "Basic Repertoire" are available without charge. Circle No. 160 on reader service card.

The "Mint 400" Del Webb Desert Rally

E BUGGY FTIMES WEIGHS 3/4 GRAM



TRACKABILITY CHART (1 GRAM STYLUS FORCE)

-11



The same inertial forces that make a vehicle airborne when cresting a hill affect the tracking force of the phono stylus. Record surfaces, unfortunately, are a morass of miniscule hills and valleys. When the stylus is nominally tracking at 1 gram, this force significantly increases as the stylus enters a "hill," and decreases as it begins the downward "plunge." In addition, frictional characteristics of the tone arm cr record changer mechanism may further affect uniformity of tracking forces; however, the Shure V-15 Type II Improved Cartridge retains its trackability throughout the audio spectrum. It accomplishes this difficult task within a critically determined latitude of tracking forces (34 to 11/2 grams) to insure continuous contact with the groove walls regardless of the varying tracking forces caused by the hills and valleys in a record groove.

Here is why fractions-of-a-gram are important to record and stylus-tip life: 34 gram tracking exerts a pressure of 60,000 lbs. per sq. in. on the groove walls—and this rises to 66,000 lbs. per sq. in. at 1 gram, and 83,000 lbs. per sq. in. at 2 grams. At 2 grams you have added over 111/2 tons per sq. in. to the groove walls over 3/4 gram tracking! Think about it.

5 TYPE II (IMPROVED)

Shure Brothers Inc., 222 Hartrey Avenue, Evanston, Illinois 60204 CIRCLE NO. 37 ON READER SERVICE CARD

FROM MASTER TAPE **TO DISC:** HOW RECORDS ARE MADE

Part 2: the pressing plant

By David Stevens

ESPITE the greatly increasing competition from magnetic-tape cartridges and cassettes, the phonograph disc still remains the best source of highfidelity sound available to the home listener. It is the quietest, from the standpoint of background noise; it is the widest in frequency range; and it is certainly the most convenient in terms of handling and playback. But perhaps the best testimony to the place it holds in our musical "economy" is its rate of production-the sprawling Columbia Records plant in Pitman, New Jersey, for example, is working three shifts a day, six days a week, to supply an ever-increasing demand.

About a thousand men and women operate the factory, which is claimed to have the largest output of long-play discs of any plant in the world. Peak capacity approaches a quarter of a million records per day-literally a lifetime of listening produced every twenty-four hours. And since the pressing machines do not eat lunch, they work even during meal times, tended by relief operators who take over while the regular workers are off.

The omnipresent technology of the age in which we live has taught us to regard even complicated plastic formulations as basic raw materials; in the case of records, this material is vinyl. Trucks deliver the vinyl as plastic "snow" in bulk from the plants in which it is produced, and it is stored in a silo until needed. Pure vinyl is nearly colorless, and it is almost never used in record manufacture without some coloring agent and lubricant to improve its moldability and playing characteristics. When a new batch of vinyl is needed at the start of the record-production chain, it is first mixed and heated with the proper additives in huge vats-giant, clanking machines in a steaming room full of deafening noise. Everywhere, on walls, ceiling, floors, and the rough metal sides of the machines, there is a layer of jet-black dust—pure carbon black. Finer than face powder, lighter than smoke, the carbon is stirred and ground by the mixing mills until it is one with the hot vinyl and forms with it a man-made mud of the blackest blackness.

Beneath the mixing room is a low-ceilinged chamber into which the mixture falls, like an entire truckload of shoe polish, onto a conveyor belt that carries it along entil it is drawn into the processing rollers. These, a foot thick and about five feet long, are at floor level, and from between them soon comes a thick blanket of rolled-out vinyl compound. Perhaps because of the magnitude of the materials being handled, the total impression is rather other-worldly and science fictional. The "struggles" of the blob as it shudders and twists to free itself from the rollers looks like nothing so much as the death throes of a menacing extraterrestrial blob from, say, the Star Trek TV series.

Record buyers may (or may not) be surprised to learn that there is a difference between the plastic stock used in the manufacture of classical records as opposed to that used for the pop product. Classical records are made of pure, virgin vinyl, while pop and rock records often contain a sizable percentage of what is known as "regrind"-ground-up rejects and trimmings from the record-manufacturing process, plus unsold copies returned by the record wholesalers. The reclaiming process, which provides the raw material for re-grind, consists of punching out the center label portion of the record and grinding up the rest. But even the center portion is reground, after the label is soaked off, in order to take every tenth of a cent possible off the cost of the finished pop-rock disc. The reason for this is the simplest of economic ones: in the all-time high profits reported by CBS last year, popular discs constituted the overwhelming majority of record sales-ninety-five per cent. Even small economies realized in this lion's share of total production amount to very impressive sums at the end of the line. Columbia's big number of the past year was undoubtedly "Switched-On Bach," and it used up some 100,000 pounds of vinyl all by itself (an average record weighs 5 or 6 ounces).

Once it is fully homogenized in the rolling mills, the black vinyl compound becomes, in a rather bizarre sense, the "life-blood" of the plant, and it is pumped through



The complexity and density of the record-pressing operation is apparent in this view of one small section of the CBS Pitman plant's 100-press production line. After sufficient hardening, the newly pressed discs are placed, stacking spindle and all, on a conveyor belt that will take them to the inspection area.

It is sometimes necessary, in advance of preparing a disc stamper, to make minor corrections of groove flaws in the "mother" with a steel stylus, as is being done below. In the detail photo at bottom (taken through the binocular microscope), the stylus is excising a "tick" from a groove previously marked with crayon.







In the record-press operator's right hand is a freshly pressed record, in her left is a spiral blob of vinyl that is about to become one. The process is precisely timed, since the dimensional stability of the discs depends on proper molding conditions.



After each disc is removed from the press and has cooled sufficiently, it is placed on a rotating platter. Excess vinyl squeezed out in the molding process is then automatically trimmed off.

heated pipes to outlets beside every one of the recordmaking presses in the factory. The presses are arranged in pairs, each pair being operated by a single attendant. The compound issues from an outlet—black as licorice and of the consistency of putty or taffy. It is first deposited on a conical mold as a carefully gauged spiral of three full turns and then flattened slightly to a "blob," "glob," or "biscuit" about 5 inches in diameter and half an inch thick. The press stands ready, rather like a waffle iron, with stamper and record label above, stamper and record label below, and the gloved operator places the still-warm glob in the center of the press. She then activates the timing cycle which automatically closes the press, heats the glob, forces it into every undulation of the grooves in both the top and bottom stampers, cools what is now a newly pressed record with cold water running through the press, and reopens the press in a precise sequence. And while one press is running through its cycle, the operator is loading another. When a press opens, she removes the warm and slightly limp disc with one hand, placing it on a cloth-covered platform to cool. She then loads the empty press with a new biscuit and labels and reactivates the timing cycle.

The cooled disc previously set aside is next placed on a special turntable with knife attached to trim off the "flash" or excess plastic squeezed out around its circumference by the press. The flash is, of course, put aside to be used again as re-grind. The finished discs are then stacked on spindles for "curing."

The whole operation is speedy, looking not unlike the factory sequences in the Charlie Chaplin film *Modern Times*, but though the girl operators are surrounded by a maze of hydraulic tubing and hissing, timer-operated machinery, it is really not a very difficult job, requiring only dexterity, efficiency, and care. During my visit, the atmosphere was relaxed and pleasant, with the girls somehow communicating across aisles of presses, exchanging small talk in the midst of the impressive racket. And out of all this comes music.

In the Pitman plant Columbia manufactures records for dozens of other companies, including some of their most vigorous competitors, all on the same presses and all with the same attention to quality. In the factory print shop, where labels are made ready for the record presses, the shelves contain large sheets printed with dozens of designs, in every color imaginable. Nearby, jackets are made by gluing slick four-color sheets onto coarse cardboard "shells" in a 50-foot-long machine that delivers a continuous stream of finished jackets. I picked up one of them but could not read the language in which it was printed—this batch was destined to contain discs for export.

The problem of tabulating and channeling the production of such a plant is enormous, and it is remarkable that record buyers do not find the wrong label on the right record, or the wrong record in the right jacket, more often than they do. One check on the creation of such errors is automatic tabulation, by remote control, of the activity of the presses as the records are being made. At one end of the pressing room, in a small room of its own, sits a console bristling with counters and blinking red and green lights. Through it moves a record of the output of every press, including a separate accounting of rejects. In an adjacent room, computer print-outs are scanned for information on the production status of orders being processed in the plant.

In another part of the plant, the finished records are inspected, both by visual examination and playback of samples from the production run. The "mothers" from which the stampers are made are also inspected here, both visually and by playback on a system no self-respecting music lover would own today: an obsolete turntable, an inexpensive amplifier, a run-of-the-mill cartridge, and two cheap coaxial twelve-inch loudspeakers in simple wallhung baffles. It is only fair to point out, however, that the inspectors are not listening for fidelity but for noise; the peaky highs in the speakers do serve to exaggerate certain defects which might slip by unnoticed on smooth, wide-range equipment.

When too many defects show up in a mother, it is discarded. But if there are only one or two clicks or pops, some "repair work" will be done on the metal itself. This consists of rubbing or burnishing off the defect a highly skilled technician viewing the mother through a binocular microscope works with a tool that is essentially a steel phonograph stylus mounted at the end of a handle.

HE major causes of flawed records, however, are not dust and scratches but warping and "dishing" of finished discs, both related to improper temperatures in the pressing operation's cooling cycle. In Columbia's new plant at Santa Maria, California, the pressing equipment is totally automated—no operators—and all manner of feedback sensors and detectors are used to control the presses precisely. Because of the accuracy with which the new equipment operates, it is possible to produce records at the new plant which are thinner than those made formerly-and with no increase in the incidence of warpage. This means that, say, a tenth of a cent can be shaved from the approximately five-cent cost of the vinyl in each disc-not much in terms of a single record, but it could add up to tens of thousands of dollars measured against a year's output.

A tape cassette currently costs about three times as much to manufacture as a record (musical-production costs, of course, remain the same) and somewhat more to distribute as well. And since any technical advancements that may be expected to achieve higher fidelity on tape will also increase its cost, the disc is likely to remain the consumer's best musical buy for some years to come.



INSTALLATION OF THE MONTH

HIS month's installation is described by its builder, Second Lieutenant James W. Press, as a combination of Early American decor and modular construction. Structurally it is based on eight vertical memberstwo on each side of the speaker systems-bridged by an asymmetrical, but balanced, arrangement of cabinets, shelves, and carpenter-Baroque arches. Two more beams extend half way to the floor from top center, supporting from above the interior sides of the cabinets that contain the preamplifier, tuner, and tape recorder. The lowest cabinet has been fitted with drawers and a desk top. In addition to serving as a shelf for the automatic turntable, it provides storage space for audio accessories and a convenient work surface for tape splicing and associated tasks. All control facilities are easily within reach from the chair in front of the installation.

Lt. Press has been assembling component kits since his junior year in an undergraduate engineering program at Texas Technological College. His first were the Dynaco PAS-3 preamplifier and FM-3 tuner seen in the present installation, along with a Stereo 70 amplifier, which occupies the top shelf of the upper right cabinet. (The same cabinet has two more shelves for phonograph discs.) The speaker enclosures house Allied 12-inch three-way drivers. The only components that do not directly bear the mark of Lt. Press' build-it-yourself approach are the Dual 1019 automatic turntable (with Shure M55E cartridge) and the vertically installed Sony 350 tape deck, the tapes for which are stored in the smaller cabinet above. Many of them are recordings of big-band jazz, an interest of the lieutenant's that dates from his trumpet-playing days with a stage band.

Lt. Press lives in an apartment at Vandenberg Air Force Base in California. Like most servicemen, he expects the address to be impermanent and has designed his installation to disassemble for transport and storage with a minimum of effort. -R. H.

Larry Klein reports on the latest news in tape **THE DOLBYIZED CASSETTE** THE CASSETTE-NOISE PROBLEM MEETS THE DOLBY SOLUTION:

WILL THEY MAKE BEAUTIFUL MUSIC TOGETHER EVER AFTER?

MONTH or so ago, at a New A York demonstration held by the Advent Corporation, I heard a special recording in cassette form of Stravinsky's l'Histoire du soldat. The cassette was played through a top-quality component system and then compared with an excellent commercial disc (Vanguard VRS 71165/66) made from the same master tape. After several A-B switches between the casssette and the disc, it became audibly obvious that the fidelity of the cassette was in every way the equal of and in two ways (lack of groove echo and inner-groove distortion) superior to that of the disc!

Readers who have been following my comments on the cassette scene know that in the past I have been somewhat less than enchanted by the fidelity available from the cassette medium. The problem is that it is horrendously difficult to achieve low noise and wide frequency response from a tape track only 0.026 inches wide running at 17/8 inches per second. In discussing the matter last March, I wrote that the key to cassette quality was not simply new tape coatings (such as Crolyn) but, in addition, improved electronics, better mechanical design, and the use of a Dolby-type noise-reduction system. Frankly, I didn't expect my crystal ball to be quite as on-target as it turned out to be the day of the Advent Corporation's demonstration

The main focus of Advent's press conference was their new add-on home Dolby accessory (see the New Products listing in the May issue). But they also had plans to produce, perhaps by June, a cassette deck with a built-in Dolby record/playback function. They therefore thought it worthwhile to demonstrate to the assembled technical people exactly what could be achieved by the cassette format when every factor was raised to the state-of-the-art level.

The l'Histoire du soldat cassette tape played that day was dubbed indirectly from the Vanguard master. Since the Vanguard master tape was already Dolby-equalized, it had to be fed through a professional four-band Dolby device to provide a flat dub of the master. The dub was then fed through a single-band Advent Dolby **

unit and recorded at 1% ips on a Crolyn tape cassette. The Wollensak Model 4700 deck used for both recording and playback of the cassette had its recording bias level raised to take full advantage of the chromiumdioxide tape characteristics. Despite all the copying steps, the cassette played back through the Advent Dolby unit was, as I indicated, as high in quality as any disc I have heard.

The Dolby Technique

It's worthwhile to examine the operating principles of the Dolby system, which, at the moment, seems to be the key to improved cassette performance. Briefly, the story is this. Ray Dolby, an American engineer working in Great Britain, developed what could be called a very sophisticated compressor/expander unit designed to produce a 10- to 15-dB improvement in signalto-noise ratio on master tapes, without introducing any detectable deterioration of the signal. The professional (or Type A) Dolby A301 device sells for about \$1,500 for a two-channel unit. It operates by dividing the audio band into four segments (below 80 Hz, 80 to 3,000 Hz, 3,000 Hz and up, and 9,000 Hz and up), each segment of which is treated individually. All signals whose strength is above a certain high level pass straight through the Dolby system unaltered. Signals whose strength is below a certain level are boosted (or "stretched" in Ray Dolby's term) by 10 or 15 dB depending on their frequency. The result is a tape with, in effect, no very weak signals on it-except noise.

For playback, the Dolby device is connected to the output of the tape recorder and set to reverse the procedure. All the low-level signals that were boosted before they were put on the tape are now cut back-by precisely the same degree that they were boosted-along with the unwanted low-level hiss, thumps, print-through, crosstalk, and hum that were not in the original signal, but were introduced by the tape recorder, tape, or problems in the recording process. What one ends up with is an across-the-board 10-to-15-dB improvement in signal-tonoise ratio over a non-Dolbyized recording. The Dolbyized master tape, of course, serves as source material for a disc or as the master for a conventional prerecorded tape. This brief description does not adequately describe the electronic and psychoacoustic sophistication of the Dolby design, but suffice it to say that it works.

The objection may be raised, of course, that whatever improvement the Dolby affords in the master tape will be wiped out in the redubbing of the masters and/or by surface noise on the disc. However, the proof of the pudding is in the listening, and to my ears there is no question that, in comparisons of discs mastered from Dolbyized tapes with conventional discs, the Dolby discs are by far the quieter. This is not to say that by the use of extreme care it is not possible for an engineer to approach the Dolby noise levels in a non-Dolby master tape. But most of his effort will probably be wiped out in the remastering and duplication of the tape. (In this connection, it's worth pointing out that what most listeners-including reviewers-take for disc surface noise is usually noise from the tape master.)

Not Just a Luxury

Since the original article on the Dolby noise-reduction system appeared in STEREO REVIEW (July 1967), a number of readers have written to ask whatever happened to the Dolby device. They no longer see it mentioned on record jackets or read about it in the technical press. The answer is simply that the Dolby noise-reduction system is no longer big news-or something that will give one record company a sales advantage over another-only because it is used so widely. Probably 75 per cent of the new classical releases in the United States and in Europe have been processed through Dolby A301 devices.

On the home high-fidelity equipment front, KLH quite a while back entered into a licensing agreement with Ray Dolby, and he developed for them a B-type Dolby system intended for use with home tape recorders. Since the major difficulty in home taping is hiss, pure and simple, the Dolby Type B unit was designed to deal specifically with that problem. This meant that a single-band (instead of a four-band) device could be used to deal with the frequencies from, say, 1,000 Hz upward. This, in turn, meant that cost could be reduced to the point where it was economically feasible to build it into a home machine. There is no question in my mind that the Dolbyequipped recorders do what they are supposed to do. There is a question (which I have yet to investigate) as to whether a Dolbyized tape recorder operating at 33/4 ips will produce audibly less noise than the best of the conventional home tape recorders operating at the same speed. However, at very low tape speeds there is no question that the Dolby comes into its own. It is not just a luxury; it is a necessity for low-noise 17/8-ips recording.

By a not-so-odd coincidence, cassette machines also operate at $1\frac{7}{8}$, and since their track width is less than half that of open-reel tapes, the cassette, as I have mentioned, has an exceptionally noisy row to hoe. So on the one hand we have the cassette, a record-playback system with lots of potential and lots of noise—and on the other hand we have a very effective noisereduction system. It was just a matter of time until someone brought together the cassette's problem with Ray Dolby's solution. And that is just what Advent did at its press conference.

I've been told-and have no reason to doubt it-that a cassette with lownoise (but not Crolyn) tape will produce very good results with a Dolby type-B setup. And Advent is shortly going to market such a cassette machine with a built-in Dolby circuit for about \$250. The basic performance difference between today's low-noise cassettes and the not yet commercially available Crolyn is in the area of frequency response. In a good machine, low-noise cassettes go out to perhaps 12,000 or 13,000 Hz, while Crolyn can add perhaps 3,000 or 4,000 Hz to that range. I would suggest that the loss of the frequencies above 13,000 Hz will be disturbing to few listeners.

What all this means is that, with a quality cassette recorder that has a Dolby device either built-in or as an accessory, you can record your own cassettes and (assuming you are using quality low-noise cassettes) get results at least as good as you can get at $3\frac{3}{4}$ ips on a very high-quality open-reel machine.

Crolyn and Prerecording

Meanwhile, everyone is wondering when Crolyn cassettes will become commercially available. Crolyn will make the *big* difference, and it seems to me that it behooves any company

manufacturing a quality cassette deck to consider adding a bias high/low switch against the day that Crolyn arrives. (Incidentally, Crolyn is Du Pont's trade name for their chromiumdioxide tape. The licensees that will be manufacturing it will doubtless come up with their own trade names.)

There is another part of the Dolby cassette story we haven't looked at. How about prerecorded Dolby cassettes—with or without Crolyn tape?

Judging from those I've been listening to, prerecorded cassettes have many of the same problems of mass duplication and quality that plagued prerecorded reel-to-reel tape six or seven years ago-meaning that you can usually get a better sounding cassette if you dub it from the disc yourself rather than buy it in prerecorded form. Today's commercial prerecorded cassettes, with few exceptions, are excessively hissy and lack high-frequency response above perhaps 9,000 Hz. However, since most inexpensive cassette machines lack high-frequency playback response, the presence of hiss and the absence of high frequencies (on the cassettes themselves) are on the one hand not heard, and on the other hand not missed. But how about the high-quality cassette-playback machines? What is the fidelity of a prerecorded cassette when played back on a good cassette deck through a home stereo system? Frankly, I prefer discs. To my ears, the high-frequency loss and the background hiss become obtrusive when the cassette is critically appraised on a wide-range setup.

It seems to me that the obvious technical solution to the noise problem is to manufacture all prerecorded cassettes with Dolby equalization. The playback machine with a Dolby "deequalizer" built-in (or attached) would restore flat frequency response and virtually wipe out tape hiss. Since the B-type Dolby system operates by boosting all low-level high-frequency signals put on the tape, a Dolbyized tape played back on a normal machine should logically be somewhat bright sounding. But the very sophistication of the Dolby device complicates the matter more than it appears to at first glance. Remember that the Dolby circuit acts in such a way that the stronger the high-frequency signals recorded, the less Dolby pre-equalization is applied. Because of this level-dependent operation, Dolbyized recordings of music whose dynamic range is limitedsuch as most rock material-should sound essentially the same whether played back through a Dolby device or not. As a matter of fact, I would guess that there would be little sonic benefit in Dolbyizing cassettes with

such program material. (There would still be good reasons for using the professional Dolby during the original recording process in the studio, however.) Small classical instrumental ensembles—and particularly solo piano works—benefit enormously from "Dolbyization" at *all* stages in the recording process. And by the same token, such material would be the most affected if Dolby equalized and then played through a non-Dolby player. The question is, how disturbing would this frequency-response distortion be?

"Compatible" Cassettes

Rather than simply theorize on the question, I obtained one of the Dolbyized cassettes used in the Advent demonstration. After several days of listening to it on a variety of machines, I can say that to my ears the Dolby cassettes are "compatible." When played on non-Dolby machines they sound no worse-and in one or two respects marginally better-than normal non-Dolby cassettes on non-Dolby machines. The improvement occurs because of the greater amount of highfrequency energy in the Dolby cassette. With cheap players this can help make up for the lack of highs characteristic of such machines. When played on a good stereo system, on the other hand, the excessive highs permit you to cut back on the treble tone control, which reduces the hiss level somewhat. In some cases there is a slight loss of brilliance on high-level passages (because the Dolby recording circuit does not boost loud high-frequency passages), but the difference is subtle enough to escape the ear if it is not deliberately listened for. What I'm saying is that I see no technical or aesthetic reason why all cassettes should not be Dolbyized. I would wager that no one but the audio purist would be aware of the difference on a non-Dolby playback machine-and if you're a purist you'll be listening to cassettes on a Dolbyized machine anyway.

As of this writing, I understand that three record companies (they prefer not to be named) are now "experimenting" with Dolbyized prerecorded cassettes, cautiously waiting for Dolbyized cassette-playback machines to appear. I urge those companies for the reasons stated above to start to record their cassettes with Dolby equalization right now. The owners of inexpensive playback equipment won't hear the difference, but the owners of the about-to-be-produced Dolbyized cassette players (and \$50 to \$250 adapters) will hear the difference-and a vast new quality-conscious audience will be opened up for the high-fidelity classical cassette.

Storing and Cataloging the Large Record Collection



LET's not quibble. Record collecting is a disease, an insidious growth and infectious aberration that cripples your pocketbook and paralyzes your better judgment. To say that you commenced record collecting for the purpose of enjoying music is equivalent to saying that you began life as a child. You are innocent to the point of irresponsibility, blithely unaware of the pitfalls that lie ahead.

In a recent STEREO REVIEW article, "On Filing Records," my favorite commentator, James Goodfriend, applied poultices to my affliction without effecting a cure: "The problem boils down to one of how to get the great mass of stuff onto those shelves with some hope of being able to extract a desired record when you desire it." James Goodfriend, your surname is well merited!

But then Jimmie's stylus skipped out of the groove. The cardinal rule, he said, is to file records where you know you are going to look for them. Come now, if I knew where to look, James, I wouldn't need a filing system. However, I understand what you are saying. If I file Wagner's Forest Murmurs in the woodshed and attach Offenbach's Grande Duchesse de Gérolstein to the crystal chandelier, I have a fighting chance of locating them. But think of the stable I'd need to house Auber's Bronze Horse, von Suppé's Light Cavalry, and Beethoven's Creatures of Prometheus. And think of the havoc I'd create if I were careless enough to place Handel's Fireworks within two decibels of these skittish creatures. The only rewards that I can foresee in such a filing system is that I could always manage room at the top for Lehár's Merry Widow and Nicolai's Merry Wives. But Carmen is persona non grata. Too temperamental.

Finally, it seems as if Jimmie just gave up on the whole idea of an integrated system. In a gesture of utter abandon, he said, "No single filing system suffices." He recommends a major filing method with one or more subsidiary systems. The subsidiary method may use dates as a filing device. But imagine the complications if you have to become a student of musical history before you can put your records away. And his final quote has a nonchalance that might better serve an owner whose new tuner has just blown a circuit: "You will get used to looking for Schoenberg under B." Sorry, James; *no* way!

N y own cardinal rule is drawn from the opposite side of the coin. I like a method of filing that tells someone *else* where to look. If it is clear to a stranger, then *I* have a chance. But first, to demonstrate the pitfalls of librarybuilding and the need for a personal approach, a random spot-check may be in order to show how old-line composers worked hand-in-pocket with modern recording companies and a-&-r men to make life difficult for music lovers.

Let's start with lineage, that first stumbling block for beginners who believe that composers come packaged oneof-a-kind. When they try to find a "K" number for Mozart's Trumpet Concerto in D, they quickly discover their error. There is no such thing. Leopold, the father, wrote it.

If they like to take their trips with Viennese waltzes, they will soon be up to their ears in sorting out Strausses: Eduard, Josef, Johann Sr., Johann II, Johann III, Richard, and Oskar (with one "s"). Then, there are the Bachs, with their special periods, musical thoughts, and sets of initials: J.S., W.F., K.P.E., J.C.F., J.C., and J.C. again. The rule here is simple. When in doubt, credit the album to J.S.

The Couperins also clutter the horizon. For two hundred years, their forebears and afterbears dispensed musical tranquilizers and stimulants to reigning beaux and belles. You even have to keep a sharp lookout for Haydn's kid brother Michael, and Wagner's namesake, Joseph, not to mention Wagner-Regemy.

But it is with musical terminology that the beginner really comes to grips with the hydra-headed monsters at the bottom of his filing cabinet. How do you classify those nondescript concoctions of Haydn, Mozart, Chopin, and Locke that are neither fish, nor fowl, nor any reasonable facsimile thereof—cassations, divertimentos, nocturnes, fantasias, and voluntaries? Are they pseudo-symphonies, contrary concertos, embryonic etudes, suites without musical furniture, or chamber music with added chambers? Splitting an infinitive is easy, but did you ever try to split a sinfonia concertante? Is it a symphony or a concerto?

In what deep cell of inventive misrepresentation do you stash away your operas? In dramatic corners, vocal cupboards, or orchestral pits? If at a loss, there is always the baby's crib, and, if you understand symbolism and operas, you will know that cribbing has played a large part in most of them.

Serenades provide typical examples of the lack of rapport between composers. Schubert made serenades into love songs. Tchaikovsky tacked one onto an exercise for strings. Goldmark included another in a symphony. Dvořák made orchestral works out of them, and Mozart strung a series together for winds, strings, and brassware.

Then, there are the unclassifiable semantic thefts from the literature of the land—romances, sketches, legends, and elegies. Consider also the mistreated concertos. Bartók and Rachmaninoff sometimes called them "rhapsodies"; Stravinsky, a "capriccio"; Franck and Tchaikovsky, "variations"; and Gottschalk, a "grande tarantelle."

This mire of indeterminate terms, which employs verbal quicksand to bog down identification, spreads across the whole field of musical literature. Add Lalo's *Symphonie espagnole* to your collection and discover that you have gained a suite. Develop a taste for fugues, and you promptly find them as mere parts of symphonies, concertos, suites, ballets, overtures, sonatas, and operas. We need help—encyclopaedic, historic, genealogic. Sir Don-



Self-sticking labels for the album spines, plastic sectional separators with titled tabs, plus a legal-size loose-leaf reference book are basics of the author's cataloging system, which also includes a separate volume for pasting up pertinent record reviews.

ald Tovey, where are you when the chips are down?

Researchers have tried to chart a path out of this morass by affixing numbering systems. Alas, it is an attempt, not an attainment. At first glance, Mozart's Köchel numbers seem well organized. Consecutively, they seem to follow the order of composition. With a closer look, the indexing fabric comes apart, showing alphabetical afterthoughts —K.9a, K.6lh, K.a.136 and K.46e.

But analytical minds are generous, if not infallible. Vivaldi is well supplied with systems. You can tabulate his works by opus number (some of them), Pincherle numbers, Rinaldi numbers, or the numbers of the published editions. Schubert has two conflicting systems opus and Deutsch. Haydn has a justifiable claim for redress as the heaviest sufferer from indexing astigmatism. Ever since his departure, classicists have had a field day prodding and poking into the body of his literature. At the turn of the century, they excised about thirty claimants from his galaxy of symphonies. Printed versions of his piano sonatas have individual numbering systems. Since the folios bear little resemblance to each other, they often have no relationship to the numbers one finds on record albums.

Musicologists are not entirely without a sense of humor. While they revel in numerical crossword puzzles, they adhere to the creed of the mystery-story writer: clues must be provided. Thus, at the cost of ten expensive records, you can purchase a book of Haydn themes that may help you in your troubles. Researchers are also fairminded. Recognizing that they are playing hob with your chances of finding the proper record slot, they clearly indicate this fact by annotating Haydn's works as Hob 7 and Hob 8. And in some respects, they are like fashion designers. As soon as they find that you have a record satisfactorily catalogued, they change the opus number, the name of the composition, or the composer, and you have your work to do all over again.

Look at their skulduggery with Dvořák. For years, everyone was happy with the "New World" as his Fifth symphony. So they changed it to the Ninth, and recording companies have since had a ball listing both old and new numbers for all symphonies (though not necessarily in the same bracketed order). Are you fond of Beethoven's hard-to-get "Jena" symphony? You'd better look for it under J.F.Witt. Do you find Schubert's Quartet for Flute, Guitar, Viola, and Cello, D.96, to be typical of his style? You'd better stop believing the large type on the cover and start reading the fine print. The work is by an unknown named Matiegka. Schubert contributed only the cello part.

One horrible example in my own file involves Dinu Lipatti and Felicja Blumental. On an album of Rumanian Dances, both are given equal prominence as composers and pianists. But who composed and who played? In 3,000 words of album copy, the secret is not divulged. It goes without saying that record companies love this game of blindman's buff for record buffs. If you are not on your toes, you may buy Mendelssohn's *Fingal's Cave* Overture although you already have it on your shelves as the *Hebrides*.

BUT enough of this wall-to-wall carping. How, with these built-in short circuits, does a beleaguered collector go about setting up a simple and sensible filing system?

To copy the technique of Schwann (aside from its alphabetical listing and cross-indexing) is a mistake. While it is ideal for its particular purpose, Schwann does not meet the requirements for a quick-reference personal library. For instance, consider the "collections" section. If, like most classical buffs, your *potpourri* albums are of threatening proportions, this broad classification is of no help in separating types of music. You need a more precise way to list concertos, symphonies, and ballets.

Your second thought may be to use record stores as models. Think again. Remember that they file records by age, by price, by composers, by conductors, by record companies, by album numbers, by whatever system seems to work—for them. The following system works for the writer. With slight adjustment, it can be tailored to your delights in musical haberdashery. Its "other side of the coin" value is that a stranger can match output with input in seconds.

The classification has fourteen categories, ten for classical music and four for popular.

1. Overtures. This category reflects the writer's interest in opening orchestral gambits. Coverage is broad enough to include the praeludiums and preludes of Lully, Bach, Chopin, Rachmaninoff, and Fauré but does not expand to Les Préludes of Liszt, his popular tone poem. (For the uninitiated, who may believe that overtures are things made to pretty girls in minis, the form is worth exploring.)

2. Symphonies. Probably the most clearly defined category, reaching back to the entr'acte "Symphonies" in Purcell's Indian and Fairy Queens, but drawing the line at Berlioz's "Symphonie fantastique" (to me, it's really a suite).

3. Concertos. Herein are collected all performances wherein a single instrument exhibits a difference of opinion with a larger group. The dictum is that a rose is a rose whatever its name.

4. Ballets. At this stage, the library spreads its musical wings over some vari-feathered chickens. It discovers the unity in fixed and formal rhythms and unites ballets, marches, and all dance derivatives. This brings into line mazurkas, polonaises, minuets, rondos, and waltzes.

5. Suites—Orchestral. This is a catchall for orchestral compositions that do not fit into the preceding categories. Surprisingly although it includes tone poems, divertimentos, and serenades, the number of albums is not likely to prove very large.

6. Quartets-Chamber Music. This familiar division is broader than it appears on paper. It ranges, in orchestral size, from Mozart's Duos for Horn to his Serenade for Thirteen Instruments and covers piano and string and other instrumental combinations.

7. Sonatas—Instrumental. This combined category was suggested by the fact that most sonatas are played by solo instruments. It provides a fine home for études, bagatelles, impromptus, fantasias, and variations.

8. Operas. All that is required here is a subjective decision to include operettas or to place them under "Shows."

9. Choral. A handy device for ordering masses, oratorios, cantatas, requients, and like-minded church and secular music.

10. Voice. Since most recording organizations promote their singing stars in selections of art songs, light classics, and operatic excerpts, this final classical species may be filed under composer, artist, or both.

11. Pop—Orchestral. Another catchall which can be selectively organized to separate jazz, rock, blues, country hep, or village square, according to the thing you do.

12. Pop—Vocal. The companion piece for No. 11. As with classical voice, it seems logical to list under the artist's name.

13. Shows. A slot for Broadway shows or film-sound-track albums.

14. Folk—National. Listed under countries of origin, this has proved to be an excellent method of segregation for folk music and idiomatic collections.

Now that you have conquered the mental Everest of library-building and discovered that no combination of bad eggs will make a good omelet, you can turn your talents to the physical chores—finding a method for identifying albums on shelves, creating a source book, and discovering a flexible technique for updating your files when necessary.



A record library can make as friendly a contribution to the social warmth of the living area as one composed of books. At left is shown approximately one third of the author's extensively catalogued collection, accommodated by substituting two record shelves for three of books. Shelf identification is the starting point. And it serves no purpose to bewail the past, with its fond memories of old, scratchy, bulky, short-run 78-rpm platters and their lovely, sturdy album backs. The spines of 78-rpm albums were large enough to accommodate the Gettysburg address. Beethoven's Ninth, with Von Karajan, required nine double sides and weighed seven pounds, three ounces. If you could lift it, you could also engrave Schiller's *Ode to Joy* on the 1½-inch binding. In comparison, the Twiggy spines of most current albums wouldn't accept the punctuation marks from the chorale.

As with many technical problems, the best answer to the identification puzzle is the simplest. After futile experiments with cardboard tip-ons and plastic index binders (which broke, bent, and obscured where they should inform) I hit the jackpot. An inexpensive box of 1,000 self-sticking labels, size 5% x 11/4 inches, provides a perfect answer. With the album number typed three times on each label (so that it can be seen from the front and both sides), the stickers add no objectionable bulk, are easily attached, clearly visible, and quickly removed. Plastic separators $(12\frac{1}{2})$ inches square with 2 x 3-inch tabs) can be inserted between the fourteen sections to localize a search. The tabs may be hand-lettered. A more attractive and professional appearance can be given by using Letraset to make the titles. The use of varying colors for the fourteen tabs is also helpful in speeding a search.

Next, the key objectives for a record-reference book should be (1) simplicity, (2) clarity, and (3) flexibility. A hand-made book along the following lines will serve admirably. Loose-leaf, parchment-type, $8\frac{1}{2} \times 14$ paper is punched to match a plastic $9 \times 14\frac{1}{2}$ base and leather cover. The resulting book, held in place by hollow screw bolts, will be light and durable with replaceable pages. If you admire the independence and information to be found in STEREO REVIEW articles and reviews, you may wish to organize two companion loose-leaf volumes—one to collect the reviews and relate them to the records that you purchased on their strength (despite the fact that reviewers firmly deny this objective), and the other to assemble special technical articles, biographies, and basic repertoires in one convenient place.

Finally, in a primary reference book, two convenient listings will warrant the slight trouble they take to prepare. The first is a discography of your favorite composer or composers. This will provide a useful checkpoint for the contents of your library and help to avoid the doublings that are such a frustrating, and expensive, part of record-buying.

The second listing is one of all the composers in your library. Aside from your main index, it will probably be the most useful few pages (on the basis of a 100- to 500album library) in your reference book. With fourteen vertical columns to match your fourteen musical classifications, a check mark can be made across from any composer to show all album additions. There is no quicker way to localize your search for a particular record.

One last thought concerning additions and updating. Your record-numbering system should allow for your estimated expansion over the next few years. If you now own thirty symphonies and expect to peak at fifty, and your symphony section starts at number 40, your next section should start at 95 or 100. With ample album numbers to meet new demands, with replaceable reference pages and a simple method of classification, library-building will be fun.

James Goodfriend, be a friend. Be good. Note the distortions in my microgroove suggestions. Be aware of the impossibility of creating a high-amplitude library with a low-wattage expenditure of time and effort. Then agree with Professor Pangloss and me. Proper cataloging is a step toward "the best of all possible worlds."

Earl Clark, in addition to being a tireless record cataloger, is a Canadian movie producer with more than ninety major films and fourteen national and international awards to his credit.

A Coda by the Music Editor

SOME step! I try to get six thousand records onto the shelves with some hope of retrieving one when I want it, and this "Beleaguered Collector" suggests triple-entry bookkeeping, with another volume for cut-out reviews (cross-indexed, I suppose) and a third one for technical and biographical information! I submit that he doesn't know what it means to be "beleaguered." It must have something to do with there being more than twenty-four hours in a day up in Canada (because they re nearer the North Pole or something).

At any rate, I will not further criticize his system. If it works for him, that's fine with me (though what happens when he buys that fifty-first record of a symphony? Number 95a? 63f-II? And he complains about Köchel!). What I will do is just name six records to him, records to be found in stores, collections, and catalogs today, and ask him, theoretically, to file them. I know where my copies are (at least I think I do). Where would Mr. Clark put them? James Goodfriend

TURNABOUT 34046. Berio: Visage (Cathy Berberian, vocal); Cage: Fontana Mix (magnetic tape alone); Mimaroglu: Agony.

RCA LM 6015. The History of Music in Sound: Vol. 1, Early Medieval Music.

MERCURY SR 4 9122. Portugal's Golden Age (four discs of vocal, choral, orchestral, and instrumental music). BLUENOTE 89902. Three Decades of Music, Vol. 1, 1939-49 (Ammons, Port of Harlem Jazzmen, Bechet, Hines, M. Lewis, G. Lewis, etc.).

WESTMINSTER 17086. Berg: Chamber Concerto for Violin, Piano, and 13 Wind Instruments. Schoenberg: Chamber Sympbony in E-flat, Op. 9.

COLUMBIA CS 9802. An Anthology of Rhythm & Blues,



Beethoven is known to have owned at least three pianos: one made by the French manufacturer Erard, another by the English firm of Broadwood, and this one, made in Vienna by Konrad Graf. Graf bought it back from the estate, but it is now on display in the Beethovenhaus in Bonn.

THE PIANO AS THE KEY TO "LATE" BEETHOVEN By Charles Rosen

E VENTS of the most profound character and the most far-reaching consequences are sometimes best understood by pondering the simplest possible statement of their fact. For example: By 1816, Beethoven was no longer able to hear himself play the piano. In a letter dated 1817, he asked to have a piano adjusted as loud as possible, but it is doubtful that anything came of this. Although he still occasionally improvised for friends as late as 1825, he must by then have been guided entirely by the sense of touch. Simple fact concerning the composer's medical history—but it is worth pondering, for its consequences were not what might have been expected. Beethoven's privation resulted in his, and perhaps music's, most revolutionary change of style, and it was accomplished first on the piano. As a young man Beethoven's renown as a pianist far outran the growing recognition of his work as a composer, and at the end of his life there were still people in Vienna who remembered his early performances of the entire *Well-Tempered Clavier* of Bach. His increasing deafness, which began in the early years of the century, had, as a consequence, a refinement of cruelty beyond the simple but terrible withdrawal of the world of sound. Beethoven is perhaps the only composer so famed as a virtuoso who had to totally abandon all public performance, and to lose the contact with music that comes from playing rather than listening, a contact vital to a pianist-composer.

Perhaps because of this isolation, Beethoven's later piano works have an abstract quality that has often been

misinterpreted as theoretical and unpianistic. But, in fact, they are all conceived directly and beautifully for the piano; to transcribe them for any other medium would be impertinent. Even the passage in the Sonata in E Minor, Op. 90, which calls for an impossible crescendo on a sustained note, requires a piano for its significance to be intelligible. And this abstract quality does not imply any lack of consideration either for the performer or for the resources of the instrument. Beethoven is no more ruthless than Chopin in twisting the hands of his pianists into difficult positions, and he never, for example, requires the almost impossible orchestral effects that Chopin demands at the end of the Polonaise-Fantaisie. A proper balance of high and low registers is sometimes very difficult to achieve in playing Beethoven's later works, and this has been set down to his deafness, but for the most part it would be more to the point to remember the change in piano sonority that took place during the nineteenth century.

In one sense, of course, every work of piano music is abstractly conceived. Particularly during the eighteenth and early nineteenth centuries, a period in which the design and construction of keyboard instruments was changing rapidly and frequently, it would be anachronistic to ascribe too specific an intended sonority to any given keyboard piece. Even today, when piano construction is much more standardized, there is a wide range of sonority that a composer will accept as the sound of a piano, despite the fact that instrumental color plays a much more significant role now than it did when Beethoven wrote the "Hammerklavier" Sonata. The opening of that work can sound magnificent on any stringed keyboard instrument that uses hammers and a damping mechanism released by a pedal, and it suits the smallest upright piano as well as any other work if we are willing to adjust the scale of our hearing. The sonority of Beethoven's piano was, after all, more like that of a small upright than of a modern concert grand.

Beethoven's late piano music, however, is abstract in a narrower and deeper sense, in its relative failure to exploit some of the most sensuous aspects of the piano's sonority except at rare moments. Beethoven's spacing of chords is not often calculated to make the harmonics of the piano vibrate in the way so characteristic of Mozart and Schubert, to say nothing of Chopin. The spacing of Mozart's harmonies is often directed toward the quality of sound as much as toward the more dramatic exigencies of voice-leading, and the equilibrium is achieved without strain. But it is just this sense of strain that is not only present in much of Beethoven's music, but inseparable from its significance, as is the deliberate sacrifice of a play of sonority to dramatic emphasis. Similarly, Beethoven never exploits the purely coloristic effect of the pedal mechanism for its own sake: in the late sonatas (as in the slow movement of the Fourth Piano



Displayed in the Beethovenhaus in Bonn are this bronze bust of the composer by Franz Klein and a somehow pathetic collection of ear trumpets constructed by Mälzel, inventor of the metronome.

Concerto) the soft pedal is always used to underline structure. The exotic effects of the damper that Haydn, for example, used in the late C Major Sonata (H. 50) are abandoned by Beethoven after the early concertos. The famous pedal effects of the last movement of the "Waldstein" Sonata and of the March from the Sonata in A Major, Opus 101, are there to sustain a necessary bass note; they are true pedal points. The musical line is the first consideration, which leaves the pianist with the problem of deciding to what extent Beethoven actually wanted the consequent delicate blending of harmonics above (nothing like the creamy blur when played on the modern piano) or merely tolerated it for the sake of the bass note. It is clear enough from the music that he kept the sound in mind as he wrote, even if the priorities of meaning remain with the line and not with the sonority.

There are, of course, moments in all the late works when the beauty of sound is so fully imagined that it is difficult to believe that line and color could ever be considered apart. The variations of Op. 111 are the greatest example of such a unity of instrumental values with a more abstract conception. It was a few years after writing this last sonata that Beethoven made his often-quoted remark that the piano is, and always will be, an inadequate instrument. When he said this, however, he had exhausted the possible relevance of the instrument to the most recent stage of his musical thought.

Like many composers, Beethoven essayed his most radical changes of style first in his piano music. The piano is traditionally the instrument of experiment, a function that it has not quite lost even today. The possibility of control by one performer over an entire polyphonic texture, the flexibility of the dynamic gradations, and the homogeneous and even somewhat neutral tone-color of the piano make it the ideal medium for experiment. Its limitations are a positive advantage in reducing the number of factors that have to be considered, and permit a concentration on the basic qualities of line and accent: only the necessity of staying within the compass of two hands is an arbitrary check. Once a new and experimental manner has been worked out, however, the piano's restrictions of tone color and range, and its discontinuity of dynamic effect, become a definite constraint to a composer no longer interested in laying the groundwork for something new, but intent on exploiting and expanding what he has already established.

In the two years 1804-1805, with the sonatas Opp. 53 and 57 (the "Waldstein" and the "Appassionata") together with the "Eroica" Symphony and the first version of Fidelio, the main lines of Beethoven's originality of style seem to have been firmly indicated, and after the solidity of the achievement there was a greater need for development than for a totally new departure. In the years that followed there was a consequent falling-off of interest in piano music and a concentration upon the symphony and quartet. The few piano works between 1806 and 1812 are all to some extent in the margin of Beethoven's main achievement of these years, with the exception of the sonata "Les Adieux," which was written in 1809, a year after the "Pastoral" Symphony. It is equally programmatic in intent. It represents a refinement and an intensification of the ideal of program music embodied in the Symphony. Not everything in the Symphony, in spite of what Beethoven said, was translated into the expression of feeling; the Sonata has a much greater purity. The succession of subjects, "the farewell," "the absence," and "the return," fits the classical three-movement sonata so well that it could almost serve as a sentimental model for the traditional scheme. The order of the three subjects is that of a diminishing emotional complexity (which by no means implies a parallel loss of intensity); this corresponds to the Classical conception of form in which the first movement is always the most tightly organized and contains the most complete material, and the finale acts as a resolution of the entire work with a much looser form and with material more simply and more squarely presented. The first movement of "Les Adieux" is the most original of the three in its psychological ambiguity: it mixes together the anxiety and the pleasure, the excitement, anticipation, and fears of a departure in a form of great conciseness. The music must be accepted as a direct expression of feeling in order to appreciate its profundity, its blending of incipient pain with joyous movement.

The last five sonatas, with opus numbers over 100, are commonly grouped together, but only because of some mystical belief in the virtue of round numbers. The Sonata in A Major, Opus 101, of 1814 belongs not with the ones that followed it but with the great lyric experiments of the song cycle An die ferne Geliebte and the Sonata in E Minor, Opus 90, the rare works of the difficult years from 1812 to 1816 when Beethoven's creativity seemed almost to have dried up. This is the Beethoven closest to the great Romantic composers Schubert and Schumann, and in these works he seems to have been searching for a lyric flow and a long expressive melodic line that had rarely been in the center of his work before.

The final onslaught of deafness came in 1816, and the year after Beethoven started to work on the "Hammerklavier," Opus 106. It was, he affirmed, to be his greatest work; it was certainly a new departure. It is the longest sonata that Beethoven (or anyone else) had written until then, and it is also the most economical. Its material has a concision and a unity never before attempted: it concentrates almost obsessively upon the simplest elements of tonality. Because of this fierce concentration, it is a work almost as difficult for the listener as for the performer, and there are still music-lovers today who cannot take the fugal finale. It also marked the end of the domination of keyboard music by the amateur pianist, for whom almost all music had been written since 1750. In the notebook that Beethoven carried with him (conversation was now possible for him only when what was said to him could be written down), Czerny wrote that a Viennese lady had been practicing the "Hammerklavier" for three months and still could not play the beginning.

WITH this work, the floodgates were opened; and if the works that followed now seem to have come slowly at first, we must remember that in 1819 Beethoven began to work simultaneously on such monumental projects as the *Missa Solemnis*, the Ninth Symphony, and the Diabelli Variations, and that while work on those was still in progress he completed the last three piano sonatas, Opp. 109, 110, and 111. Afterwards came the great set of string quartets, which carried Beethoven's new manner even farther than before: the *Grosse Fuge* was even more shocking to Beethoven's contemporaries than the finale of the *"Hammerklavier."* But the new style had been forged at the pianoforte.

Charles Rosen, a distinguished planist whose recent recording of Bach's last keyboard works met with critical acclaim, will soon be represented by a recording of Beethoven's last sonatas.

Stereo Review talks to ROD McKUEN

B ACKSTAGE at the NBC studios in New York, during the taping of a television special, is as good a place as any to interview Rod McKuen, since he says that wherever he is—even in bed—his mind is always on something else. "I'm thinking of so many things at one time that I can't even get on an airplane to go somewhere by myself. I need help."

It's no wonder. Besides being the best-selling poet of the twentieth century (his eight books of poetry have made him literally that), McKuen is also the composer-lyricist of about one thousand songs (for a time he was writing them at the rate of one a day); the composer of five major film scores, some TV shows, and a concerto for four harpsichords that also makes use of the *ondes Martenot* (a French instrument which he describes as "kind of an electronic synthesizer—it can even bark like a dog"); an "in-person" singer; and a frequent television performer. He is only thirty-six and wears sneakers and comparatively short dirtyblond hair that nonetheless manages usually to be in his eyes. He writes—more often than not—on the themes of love and loneliness.

"I've got to stop working so hard," he says. "Moncy's only to spend on things you like, and how many candy bars can you eat? How many airplane rides can you take?" Yet, believing in "only two kinds of music: good and bad," he is at it eighteen hours a day, turning out material for everyone from Frank Sinatra to Kitty Kallen and Gisele MacKenzie. McKuen's best-known songs are Kaleidoscope, If You Go Away, The Single Man, and Stanyan Street. His film scores include Joanna and the forthcoming Alyra Breckinridge, but his best to date is The Prime of Miss Jean Brodie, with its lovely title song, Jean, and a dozen others adding just the right note of slightly tacky nostalgia to the movie. Perhaps it is his best because he is essentially a sentimentalist whose spiritual home is the 1930's, the period of Jean Brodie.

Considering his early lifetime of failure, his success in the cynical late 1960's was startling—to him as well as to observers of the popular-music scene. "I'm vulnerable and I can't pretend not to be; it's nice to have so many people responding to my kind of vulnerability in a time when people say they don't like that sort of thing." Commenting on his success, McKuen says he has always believed that "you should do whatever you do best and the world will stumble over you one day, or else you'll kill yourself."

As a sort of American branch office of the French composer-singers Jacques Brel, Charles Aznavour, and Gilbert



Bécaud (they are all his friends, and McKuen himself was a star in Paris before he made it in America), Rod feels it is vital that he travel around the country singing his own songs, even though he acknowledges that Sinatra can do them better. "I'm no crooner, no Tony Bennett, but I am a communicator, and it's important that I try to communicate what I feel." His present permanently hoarse speaking and singing voice is the result of his singing his own *Oliver Twist* at a succession of bowling alleys at the height of the twist craze in 1961 and 1962 and then playing six straight weeks, four shows a night, seven nights a week, at the Copacabana lounge. Doctors told him he would be lucky even to be able to talk again, and that's when he turned to writing in a big way.

"In this country we do everything bigger and better than anybody else—except talk to each other," McKuen says. "Sex is one of the few ways left for direct communication, and they have to sell us manuals to tell us how to do that." He insists that he never tries to do anything for any particular age group: "People are just people, but I'm delighted to be leaving the future in the hands of today's kids—they are honest and they reject the lies and clichés our parents taught us."

McKUEN is a peripatetic poet ("my idea of a restaurant is room service") whose work is the cumulation of his experiences as an Oakland-born dropout (less than four years of formal education), horse trainer, soldier, shoe salesman, movie actor, lumberjack, and Nabisco cookie puncher. He is conventional enough to be commercially successful and just radical enough to reject "the Dimitri Tiomkin school of movie music where you're always competing for an Academy Award" in favor of "music as just one of the characters in a film, not an intrusion" and to call for a new definition of poetry. "Poetry touches one other human being. It can be walking down the street and having a stranger smile a smile you will never see again."

Rod has never married. "I've always had all kinds of problems with finding a girl who will take second place to my work," he says. For love he depends on "certain friendships" and his menagerie of two English sheep dogs and two Siamese cats. "I've never known an animal that didn't respond to love," he commented. "And one of my goals is to build a clinic where animals can be treated at a decent price." The next one hundred or so songs that come out of his typewriter will be dedicated to just that.

-Robert Windeler




CLASSICAL

SHOSTAKOVICH'S CONTROVERSIAL THIRTEENTH SYMPHONY

Eugene Ormandy and the Philadelphians construct a remarkable musical edifice for RCA

N June of 1937, Picasso's *Guernica* was unveiled at the Spanish Pavilion of the Paris World's Fair. Named after the Basque town destroyed in an air raid on April 26, 1937, it was an unmistakable condemnation of the mass crimes of modern warfare, and was subjected to disparagement by "certain Spanish politico-social authorities." They demanded that the painting be removed from the Pavilion on the grounds that it was an "antisocial and ridiculous picture, wholly inadequate for the wholesome mentality of the proletariat." Because of Picasso's international prestige and the possibility of negative propagandistic results, the picture's removal was prevented.

On December 18, 1962, Shostakovich's Thirteenth Symphony, Op. 113, was premiered in Moscow. A pas-

sionately humanistic work, based on five poems by the young Soviet poet Yevgeny Yevtushenko and including, importantly, his poem Babi Yar, it called forth official disapproval. But apparently it was not the music but the text that caused the trouble. Babi Yar has to do with the Nazi massacre of Jews in the Ukrainian town of that name during World War II. It also refers explicitly to anti-Semitism in the present-day U.S.S.R., a reference that must have fallen with little welcome on Khrushchev's ears.

The first performance of the work almost didn't take place. Word of Khrushchev's disapproval became known before the premiere, and it is reported that the composer had to plead with the chorus to appear. Appear they did, however, and the Symphony met with great public success. Nevertheless, the government's attitude went unchanged—the official box was empty throughout the concert, and no review appeared in *Pravda*. Officially, the premiere had not occurred. There was a second performance, but subsequent ones were cancelled. Only after Yevtushenko and Shostakovich had added a few lines to the text pointing out that others in addition to Jews had been murdered at Babi Yar did the work receive two more performances, in 1963 and 1965. Then silence, until Eugene Ormandy and the Philadelphia Orchestra premiered the work in Philadelphia and New York—and immediately afterward recorded it for RCA.

It is, I find, a magnificent recording of an almost



DMITRI SHOSTAKOVICH Speaking his own tonal language

indescribably powerful work, certainly the most monumental artistic document of protest since Picasso's Guernica, and altogether worthy of comparison with that great painting. It is, as well, one of the most supremely telling musical works of our era. I do not expect that everyone will agree with me in this evaluation. I have played the record for one or two musically knowledgeable friends and received such responses as "It's so oldfashioned," or "Shostakovich hasn't written anything new since his Fifth Symphony." The New York Times said that "four-fifths of the Thirteenth Symphony amounts to little more than poster music." My own reaction is quite different. Admittedly, this is recognizable Shos-



Recording session for the Shostakovich Thirteenth: Eugene Ormandy conducts the Philadelphia Orchestra with soloist Tom Krause (foreground) and the Mendelssohn Club of Philadelphia (rear).

takovich. The composer has spoken his own tonal language for many years now, and it is true (undoubtedly because of official pressure to stay within the confines of "Socialist Realism") that he has indulged in no stylistic innovations, and that his music has not therefore "progressed" by certain standards. On the other hand, there comes a time in any artist's life when his own language becomes so instinctive and natural to him that he can say things of great personal immediacy and profundity in it without at all changing his technique. He does not have to strain, or search his mind for new ideas. Everything he puts down on paper has a direct, distilled pungency and meaning, underpinned by conviction and years of experience. Themes, rhythms, and colors mean more than themselves, surfaces become important only in that they form a kind of container for what is within.

It is my feeling that such a moment of personal stylistic consolidation arrived for Shostakovich with his Thirteenth Symphony. Undoubtedly he was moved by Yevtushenko's passionate poetry, and by the knowledge that he was collaborating with another genius-touched, freeminded Russian artist. One senses that these poems found a perfect resonance in the composer's creative psyche, that he was not so much setting another man's words to music as he was setting his own feelings. Further, I had an uncanny sense, in listening to the record, that it was not a Finnish baritone named Tom Krause singing the solo part, but that the poet Yevtushenko himself was on the stage. And all around, behind, and through the words weaves an elegantly etched panorama of music, chilling or warming the atmosphere, touching one's senses with a symbolic flurry of melody or a clear, lonely bell in the unforgotten distance.

Lest I give an erroneous impression that the Thirteenth Symphony consists only of unrelievedly tragic sentiments,

I should mention that it has in it not one moment of bathos, no instant of hatred or anger, that it most certainly is not a symphony of doom and gloom. The second movement, called Humor, is a saucy Allegretto well characterized by its text: "They wanted to kill humor, /but humor thumbed his nose!" The third, fourth, and fifth movements, played without pause, contain an affectionate paean to warm, sturdy Russian women, whom Yevtushenko calls "kind family-goddesses"; a sober section called Fears in which reference is made to "the secret fear of a knock on the door" (pace Stalin); and a final Allegretto, titled A Career, in which the poet puts himself on the side of the Galileos, Shakespeares, Pasteurs, and Tolstoys of this world and inveighs against the fearful nay-sayers. The last movement ends with a heartbreakingly beautiful passage for solo violins and celeste.

The performance of this Thirteenth Symphony by Ormandy, the Philadelphia Orchestra, soloist Tom Krause, and the Male Chorus of the Mendelssohn Club of Philadelphia is absolutely remarkable. I cannot imagine a better one, either in its details or as a whole. The pacing of the music, the sound, the attention to fine thematic relationships, the careful building of an edifice that takes an hour to reveal itself as a total entity—all of these are part of a truly masterly recording achievement. Anyone concerned with it should feel exceedingly proud. So, certainly, should the composer and the poet. If, until this Symphony, there was no monument at Babi Yar, one can say that there most surely is one now, in this music.

Lester Trimble

SHOSTAKOVICH: Symphony No. 13, Op. 113 ("Babi Yar"). Tom Krause (baritone); Male Chorus of the Mendelssohn Club, Philadelphia; Philadelphia Orchestra, Eugene Ormandy cond. RCA LSC 3162 \$5.98, (B) TR3 1008 (3¾) \$6.95, (B) R8S 1151 \$6.95, (C) RK 1151 \$6.95.

A REDISCOVERED SINGER IN A NEGLECTED OPERA

Soprano Magda Olivero scores a triumph in a London recording of Giordano's Fedora

FEDORA (1898) was Umberto Giordano's second-best opera—an observation that is not likely to impress those who are inclined to dismiss *Andrea Chénier* (1896), Giordano's best. Nonetheless, after two previous (and not too successful) complete recordings, we now have *Fedora* in stereo for the first time. London's just-released new version offers Magda Olivero and Mario del Monaco in the roles of Fedora Romazoff and Loris Ipanoff, two Russian *émigrés* in Paris who love and unwittingly destroy each other, and Tito Gobbi as the busybody French diplomat De Siriex. Somehow I could not resist calculating that the combined stage experience of these three stars approaches a hundred years, and with that much know-how involved, it is perhaps not surprising that this *Fedora* is such a success.

Fedora, like Tosca a passionate, impulsive woman full of contradictions (which might be expected, since both

MAGDA OLIVERO AND MARIO DEL MONACO Passionate principals in a well-made opera



Fedora and Tosca are based on plays by the French dramatist Victorien Sardou), is a marvelous role for Magda Olivero, an artist who is now enjoying a triumphant comeback and reaping the rewards of a long-overdue recognition (see the story by Robert M. Connolly in the November 1969 issue of STEREO REVIEW). Her singing can best be compared to that of Maria Callas in its overall intensity, thrusting delivery of lines, ability to impart unusually expressive coloration to phrases, and dedicated attention to word values. But the comparison is not entirely fair to Mme. Olivero, for she is the "senior" artist of the two; I therefore hasten to add that her voice today is in better shape than Callas', judging from that artist's latest recordings. Olivero has some vocally effortful moments, but the requirements of the role are unfailingly met: the eloquent use of the voice makes up for what it lacks as an intrinsically sensuous instrument, and the final scene in particular is an absolute tour de force.

If it can be said that Magda Olivero provides the chief attraction in this Fedora, it is the veteran tenor Mario del Monaco who delivers the surprise. The role of Loris Ipanoff, a man given to wild jealousy and raging outbursts, has some overtones of Otello in it—at least the way Del Monaco interprets it. His tone has the familiar hard edge, but the attacks are direct and the intonation always accurate, and the score's big lyrical "hit," the arioso "Amor li vieta," is delivered with great expressiveness and a nicely turned legato. The role of De Siriex is not a large one, but Tito Gobbi's interpretive mastery lends it ample distinction. He still commands a sizable voice, and his brief aria "La donna russa" is tossed off with impressive aplomb (the music here represents a borrowing of Alabiev's The Nightingale, with echoes of The Volga Boatmen thrown in for good measure).

There are some good cameo roles also, particularly the Boroff of Virgilio Carbonari and the Grech of Silvio Maionica, but the overall production lacks the imaginative "staging" atmosphere of London's best recorded-opera efforts. The sound itself is fine, and Lamberto Gardelli conducts a vital performance. But *Fedora* is a very *theatrical* opera, and it could have been made even more exciting by a fuller realization of its theatrical elements.

Musically, *Fedora* is an eclectic score, with its materials skillfully subordinated to the melodramatic qualities of the subject. The first two acts open with operetta-like themes that admirably set the mood of the Parisian salons. Act III opens with an aptly evocative Swiss melody (the action has moved to Switzerland), and again the proper atmosphere is established in a matter of seconds. Fedora flirts with Ipanoff in the second act against a background of piano music à la Chopin. Later, when the pianist is scornfully described as a "second Chopin," the reference is illustrated in the music by a passing phrase right out of Chopin. These are resourceful touches, and they all work. As William Weaver observes in his excellent notes, "No one would claim that *Fedora* is a masterpiece, but, at least in Italy, there are many who feel that it is a well-made and enjoyable opera." And how many other operas do we recall, written in the last fifty years, that are worthy of even such a modest distinction? *George Jellinek*

GIORDANO: Fedora. Magda Olivero (soprano), Fedora Romazoff; Mario del Monaco (tenor), Loris Ipanoff; Tito Gobbi (baritone), M. de Siriex; Leonardo Monreale (bass), Lorek; Lucia Capellino (soprano), Olga Sukarev; Virgilio Carbonari (baritone), Boroff; Silvio Maionica (bass), Grech; Piero de Palma (tenor), Baron Rouvel; Peter Binder (baritone), Kiril; others. Chorus and Orchestra of the Monte Carlo Opera, Lamberto Gardelli cond. LONDON OSA 1283 two discs \$11.96.

RANDY NEWMAN: COMPOSER FOR THE SEVENTIES

New growth from American musical roots in a contemporary-song album from Reprise

RANDY NEWMAN is the newest talent in an already gifted family (his uncle is conductor and film composer Alfred Newman). Reprise has just released a collection of twelve of his songs, with the composer supplying both piano accompaniments and vocals, and on this evidence (plus that provided by his previous record), he may well be the most gifted of all. I was somewhat put off by his singing on that first outing (Reprise RS 6286), even though it was obvious that the songs themselves were excellent. But he sounds much better now, singing with a less whining tone, and just the right touch of vague disenchantment. The accompaniments are fairly simple, permitting his well-articulated piano lines to ring through and giving us a clear view of the inner workings of his songs.

Yellow Man has already been recorded by several other artists (Ella Fitzgerald, Harry Nilsson), and seems to be on the way to becoming a minor—perhaps major hit. But other tunes here—*Have You Seen My Baby?*, *Suzanne*, and *Lucinda*—though less familiar, are no less impressive. Newman has a razor-sensitive feeling for the root elements in American music, and one constantly hears drifting strains of barbershop harmonies, peculiar (but appropriate) bitonalities, shifting rhythms, and disjunct interval leaps. By calling attention to these I hope I am not making his work sound like a difficult seminar composition, for none of these highly sophisticated technical elements ever intrude on the simple and charming directness of the songs.

Two tracks, however, arouse my curiosity. Why, I



RANDY NEWMAN A very big pair of ears

wonder, did Newman choose to include that ancient period piece Underneath the Harlem Moon, a song whose language and point of view must have been offensive to many blacks even in the relatively unenlightened days when it was written? And similarly, Newman's own Uncle Bob's Midnight Blues is a peculiar pastiche of Amos 'n' Andy-style dialect fragments. Granted, these sounds, and others like them (Ukulele Ike, the Two Black Crows, Cohen on the Telephone) are undeniably part of the American heritage of recent (and recorded) memory, so I'll give Newman the benefit of the doubt and assume that the songs' inclusion is perhaps intended to strike a satirical note beyond the range of my hearing.

These reservations aside, this set of super-contemporary art songs should not be missed. Write this down: Randy Newman is going to be one of the important musical voices of the Seventies. Don Heckman

RANDY NEWMAN: Twelve Songs. Randy Newman (piano and vocals); various accompaniments. Have You Seen My Baby?; Let's Burn Down the Cornfield; Mama Told Me Not to Come; Suzanne; Lover's Prayer; Lucinda; Underneath the Harlem Moon; Yellow Man; Old Kentucky Home; Rosemary; If You Need Oil; Uncle Bob's Midnight Blues. REPRISE RS 6373 \$4.98.

PIONEER OUTPERFORMERS



CS-63DX

Everyone talks about pollution. Pioneer does something about it. Noise pollution, that is.

Pioneer's formula is simple. Use only the finest quality materials. Combine them with advanced circuitry and design. Employ quality craftsmen. Maintain meticulous quality control every step along the way. Give more value for the money than any comparably priced speaker systems.

The CS-63DX and CS-99 embody all these principles for unrivaled capability and sound reproduction. Both systems incorporate six separate speakers that brilliantly cover all fre-

quency ranges. Add to this a superb crossover network to assure that each speaker handles only those frequencies for which it was specially designed. The 15-inch woofer, which refuses to break-up, even at maximum power, produces wholesome, resonant bass at a depth unrealized by other speakers. The unique roll-edge 5inch midrange unit is designed for completely smooth linear response. It supplies perfect balance for the entire system and eliminates possible distortion.



To achieve crisp, clear highs as well as widest dispersion, both systems employ a combination of a horn tweeter for moderate highs with super tweeters for the critical ultra highs.

CS-99

You can adjust the middle and high frequencies to any room environment with the dual 3-step tone control.

The finishing touch is the air-suspension enclosure lined with resonance-free, sound-absorbing material in a handsome, oiled walnut cabinet with latticework grille.

Help stamp out noise pollution. Hear these magnificent Outperformers at your Pioneer dealer today.



Specifications in common: Enclosure: Infinite baffle; Impedance: 8 ohms; Maximum Input: 80 watts (IHF)



PIONEER ELECTRONICS U.S.A. CORPORATION, 140 Smith St., Dept. S-6S, Farmingdale, N.Y. 11735 • (516) 694-7720 West Coast: 1335 West 134th St., Gardena, Calif. 90247 • (213) 323-2374 & 321-1076 • In Canada: S. H. Parker Co., Province of Ontario





If this is all you have, you're in luck.

But even if you don't have a system quite this good it won't matter. Because the aural opulence of the new recordings of the Philadelphia Orchestra, under Eugene Ormandy, is incredible. They were produced in an acousti-

cally-perfect recording auditorium—Town Hall in Philadelphia. And the result is a lush rain forest of sound. Topping any previous recordings of these works.

The full experience has been captured with 12 to 15 AKG

microphones, a 15-channel transistorized custom-built console and 4-track Ampex tape recorders.

Besides all that, the music is simply beautiful.

And that's not luck. Just genius.

On Columbia Records and Tapes. Enjoy The Fabulous Philadelphia Sound Series.





Reviewed by BERNARD JACOBSON • DAVID HALL • GEORGE JELLINEK IGOR KIPNIS • ERIC SALZMAN • LESTER TRIMBLE

BACH, J. S.; St. Jobn Passion (BWV 245). Fritz Wunderlich (tenor), Evangelist; Dietrich Fischer-Dieskau (baritone), Jesus; Karl Christian Kohn (bass), Peter, Pilate, and bass arias; Lisa Otto (soprano), Maid; Horst Schäfertöns (tenor), Servant; Elisabeth Grümmer (soprano); Christa Ludwig (alto); Josef Traxel (tenor); Choir of St. Hedwig's Cathedral, Berlin; Berlin Symphony Orchestra, Karl Forster cond. SERA-PHIM SIC 6036 three discs \$8.94.

Performance: On a high vocal level Recording: Very good Stereo Quality: Excellent

This performance led by the late Karl Forster has been available for several years on the imported Odeon label. It is a fine rendition with an exceptional cast of soloists. In many ways it is one of the best available sets of this Passion, although I prefer the Harnoncourt performance on Telefunken, a historical reconstruction which is stronger on musicological grounds, and even more dramatically conceived as well. Nevertheless, Forster imparts considerable tension and unrest to his interpretation and does it all with a welcome lack of affectation. The chorus and orchestra, though perhaps sounding a little large, perform exceptionally well, and the recording is thoroughly satisfactory. 1. K. Text and translation are provided.

RECORDING OF SPECIAL MERIT

BACH, J. S.: Suite No. 1, in C Major (BWV 1066); Suite No. 4, in D Major (BWV 1069). English Chamber Orchestra, Raymond Leppard cond. PHILIPS 839792 LY \$5.98.

Performance: Well-shaped Recording: Excellent Stereo Quality: Fine

With but one exception, the lack of doubledotting in the opening overtures, Leppard's performances of these two suites (he has also recorded the second and third) are firstclass. Needless to say, the English Chamber Orchestra plays beautifully for him, and he sees to it that phrases are extremely well delineated. Dance movements here sound far more dance-like than one usually hears, and

Explanation of symbols: (R) = reel-to-reel tape (a) = four-track cartridge (b) = eight-track cartridge (c) = cassette Monophonic recordings are indicated by

Monophonic recordings are indicated by the symbol (\mathfrak{M}) ; all others are stereo

Leppard imparts to the scores not only his customary vitality but a welcome lyricism as well, bringing out felicitous inner orchestral details along the way. On stylistic terms, he sometimes varies instrumentation for repeats and even adds a few decorative but never overdone ornaments and embellishments. Since Leppard *does* habitually double-dot French overtures from Handel to Rameau, it is rather a shame that he hesitated to apply the same principles to Bach; as it is, the only conductor to do so is Nikolaus Harnoncourt in the splendid Concentus Musicus performance with original instruments on Tele-



CARLO MARIA GIULINI Wonderfully humane music-making

funken 9509/10. Nevertheless, Leppard's are most enjoyable renditions, and they are very well recorded. I. K.

RECORDING OF SPECIAL MERIT

BEETHOVEN: Symphony No. 6, in F Major, Op. 68 ("Pastoral"); Overture to "Egmont," Op. 84. New Philharmonia Orchestra, Carlo Maria Giulini cond. ANGEL S 36684 \$5.98.

Performance: Full of musicality Recording: Excellent Stereo Quality: Natural

Carlo Maria Giulini's "Pastoral" is a conception that grows in stature as it proceeds, and also as the listener becomes more familiar with it through repeated hearings. At the outset it may appear to offer little in the way of personal involvement with the music or striking illumination of it. But perseverance, for me at least, has been richly rewarded. Giulini's way with the work is gentle, and that is as it should be, for it is the gentlest of Beethoven symphonies. Unlike some contemporary conductors, Giulini does not leap to an sfp marking as if it were a request for delivery of a ton of bricks. Instead, he nudges it lovingly into place; and after the punishment they have taken from cruder hands, Beethoven's textures-and all of Beethoven-breathe again. Yet this gentleness is an attribute of strength. There is never any lack of power where a forthright statement is called for, and the bass line throughout (aided by the good recording) is molded with propulsive firmness and resonant warmth.

Even at the beginning Giulini draws splendid playing from the New Philharmonia, especially the woodwinds, and most especially the first clarinet. And then, as the Symphony takes shape, the personal quality of his interpretation becomes clearer and more persuasive. The "Peasants' Merrymaking" is convivially accented without dipping over into caricature; the "Storm" likewise combines ample vividness with a basically musical restraint; and toward the end of a beautifully organized "Shepherd's Hymn" the *pp solto voce* passage in the strings is done with an inward exaltation that reveals the serenity at the heart of the work.

A degree of nervous intensity, surprising yet cogent, characterizes Giulini's view of the Egmont Overture. It produces an unusually lean, tiptoe account of the introduction which I find works very well, but may be thought to detract from the flow of the main Allegro, particularly through the clipping of a number of quarter-notes into something more like eighths. As in the Symphony, Giulini's ear for dynamic nuance is acute: he brings out the peculiarly Beethovenish pattern of the double opening, forte at the first statement, fortissimo at the repetition; and he pointedly observes the fall back from ff to a single f in the violin outcry just before the coda. Again the orchestra plays magnificently. The timpanist misses a note at the tenth measure of the coda, but may surely be forgiven, for he thumps away to excellent effect elsewhere.

If this were a magazine that awarded stars in various numbers to categorize records, I suppose I would have to withhold one in protest against Giulini's suppression of the symphony's first-movement repeat. But I would rather concentrate on the positive aspects of his wonderfully humane musicmaking. B. J.

(Continued on next page)

BERLIOZ: *The Damnation of Faust.* Janet Baker (mezzo-soprano), Marguerite; Nicolai Gedda (tenor), Faust; Gabriel Bacquier (baritone), Méphistophélès; Pierre Thau (bass), Brander. Paris Opera Chorus and Orchestre de Paris, Georges Prêtre cond. ANGEL SCL 3758 three discs \$17.94.

Performance: Well-sung, yet disappointing Recording: Good Stereo Quality: Good

The Damnation of Faust, an undeniable masterpiece, is a highly problematic work. A "dramatic legend" that is almost an opera, it fits into no established category and yet it

fits into no established category, and yet it serves Berlioz's own dramatic purposes so brilliantly that it demands recognition as a work *sui generis*, for it is more than justified by its own power and individuality. In performance, *The Damnation of Faust* needs, above all, a conductor with a musical intellect and a magnetism capable of transforming the elements of Berlioz's far-ranging and not always disciplined vision into a cohesive and clearly focused entity. Both Charles Munch and Igor Markevitch, who have given us recorded statements of *The Damnation of Faust* during the last sixteen years, were conductors of this caliber. Georges Prêtre, in the present instance, does not measure up to their standards.

This is a pity, for Prêtre has the benefit of what is possibly the best-balanced trio of lead singers ever to record this demanding work. Nicolai Gedda is, of course, the natural choice for Faust's difficult music, and he sings it with the intelligence and clarity one has come to expect from him, and also with steady tone; also, he is unafraid to take the high optional line in the duet in Part Three. Save for a characteristically subdued emotional communication, Janet Baker is an excellent Marguerite: her tone is rich, round, and pleasing throughout, and she is stylistically impeccable. With Gabriel Bacquier, we get stylistic mastery without the tonal enhancement: this is a dry, unsensual voice, but the demonic malice is there. Pierre Thau is excellent as Brander.

The main trouble with Prêtre's leadership is that it does not probe deeply into the score and, consequently, fails to realize the delicacy and imagination of Berlioz's textures. His performance lacks strong rhythmic shape, and the choral-orchestral balances are illdefined ("Peasant's Dance," Part I, Scene 2, to indicate but one example). Likewise, in the "Chorus of Gnomes" (Part II, Scene 7), chorus and orchestra make an unclarified mush, far from the lovely effect Munch obtained in his Boston recording of 1954 (RCA Victor LM 6114). And, despite Bacquier's effective singing of Méphistophélès' Serenade, the indifferent orchestral rendering fails to get this across as the magical piece of total inspiration that it is. I also find that the tempo for the trio (Part IV, Scene 14) is quite hard-driven. M. Prêtre also has some very odd ideas about rhythmic accentuations in the Rákóczy March, and delivers the most unrousing treatment of this almost sure-fire music I have ever heard.

The performance is frequently redeemed by the singers, and the engineering is probably the best among the various versions (the RCA set is in mono only; Markevitch's performance on DGG is in stereo, but was not on hand for comparison). The totality, however, fails to do *The Damnation* justice, and I cannot recommend it. *G. I.*

RECORDING OF SPECIAL MERIT

BERLIOZ: Requiem, Op. 5. Charles Bressler (tenor); University of Utah Civic Chorale and A Cappella Choir; Utah Symphony Orchestra, Maurice Abravanel cond. VAN-GUARD CARDINAL VCS 10070/1 two discs \$7.96, **®** VSS 2/3 two reels (7½-ips, 4channel) \$29.96, **©** CVX 10070 and 10071 \$6.95 each.

Performance: Spacious Recording: Spacious Stereo Quality: Spacious

This fifth stereo recording of Berlioz's imposing yet exquisitely lyrical Requiem has much to recommend it, not the least factor being the price tag, which is \$4.00 less than that of its most formidable competition from DGG (Charles Munch), Columbia (Eugene Ormandy), and RCA (Munch). Reading Jacques Barzun's Berlioz-centennial article in the January 1970 Musical Quarterly,



MAURICE ABRAVANEL A very satisfying Berlioz Requiem

which cited critical observations made by my colleague Eric Salzman concerning the fourtrack tape release of Munch's DGG recording (July 1969), I was led to a closer comparison of the old and the newest recordings of the Requiem, and drew the conclusion that the perfect amalgam of performance style and sonic realization has yet to be achieved in a recording of this vast and complex work. Munch, in both his recordings, communicates the drama with telling impact, though he does drive things a bit hard. I find both the 1958 Scherchen (Music Guild) and the relatively recent Ormandy readings essentially earthbound. Strangely, only the very first recording of the Requiem, recorded in Paris during the Second World War by Jean Fournet, and this Abravanel album capture the Gluck-like purity of line and texture that goes hand-in-glove with Berlioz's theatrics, and which for me is an essential component of the composer's idiom.

But there remains the problem of sonics: the sound must be not only spacious, communicating a genuine sense of a vast acoustic mural, but it must also be in proper focus, so that the fierce choral utterances at the climaxes of the *Tuba mirum* and in the declamatory episodes of the *Rex tremendae* emerge from the speakers with shattering impact. Unhappily, if one achieves the latter, then one also loses the sense of infinite space needed for the quieter episodes (Quid sum miser, Offertorium, Quaerens me). It is in this latter respect, and in the definition of the polyphonic line, that the Abravanel Utah recording particularly excels—the realization of the Offertorium, with its monotonously brooding vocal line and elaborate orchestral commentary being for me the high point of this particular performance.

Certainly the huge Mormon Tabernacle in Salt Lake City provides the ideal acoustic envelope to encompass Berlioz's spatial concepts: indeed, the localization of the four brass bands at each corner of the orchestra has never been better achieved on records. However, the choral focus at the moments of greatest dramatic impact, as noted above, seems strangely dissipated. This is also one of Vanguard's new four-channel "Surround Stereo" recordings, and I wonder whether the choral climaxes are more effective in that format.

All told, I would say that Maurice Abravanel and his ample choral-orchestral forces, aided by the highly musical singing of Charles Bressler in the *Sanctus* and by carefully thought-out and highly tasteful engineering, have achieved a very satisfying musical realization of the Berlioz Requiem, particularly in its lyrical aspects. Sonically, the recording has everything going for it save for that last bit of impact at the dramatic peaks. Certainly, in terms of clarity of line and freedom from distortion, this recording is the best so far. *D. H.*

RECORDING OF SPECIAL MERIT

BIBER: Sonata St. Polycarpi à 9 for Eight Trumpets and Continuo; Laetatus sum à 7 (Cantata for Two Basses, Violin, Viola, Two Gambas, Violone, and Organ); In Festo Trium Regium, Muttetum Natale à 6 (Epipbany Cantata for Two Sopranos, Two Flutes, Two Oboes, and Continuo); Requiem for Two Sopranos, Alto, Tenor, Bass, Five-part Choir, Strings, Three Trombones, Dulciana, Continuo, and Organ. Soloists of the Vienna Boys Choir; Kurt Equiluz (tenor); Jacques Villisech and Max van Egmond (basses); Vienna Boys Choir, Hans Gillesberger cond.; Concentus Musicus of Vienna, Nikolaus Harnoncourt cond. TELEFUNKEN SAWT 9537 A Ex \$5.95.

Performance: Splendid Recarding: Superior Stereo Quality: Excellent

We have had a good bit of Biber on discs over the last few years, but all of it has been instrumental. One has gotten the impression that the composer was primarily a violin virtuoso who occasionally went in for a few trumpet spectaculars. Well, in this all-vocal collection (almost-the opening "St. Polycarp" Sonata is instrumental), we learn that Biber is just as imaginative in his writing for voices. A few words about the pieces: the opening sonata was written for performance on the feast day of St. Polycarp, and, with the natural trumpets (both originals dating from before 1700, plus reconstructions of the clarinos) is simply sensational. Laetatus sum is a setting of the Twenty-First Psalm which owes much to Monteverdi. Biber gives In Festo Trium Regium, a cantata for the festival of Epiphany, a lovely pastoral atmosphere; but the best piece on the entire disc is the large-scale Requiem, presumably composed for some eminent person, which takes

up all of the second side. This is a most intense work, quite beautiful and remarkably advanced for its time. The performances are superb, the instrumental sounds absolutely ravishing. Boys from the Vienna Boys Choir take the top solo parts and most effectively, and the lower male voices (Kurt Equiluz, Jacques Villesech, and Max van Egmond) are impeccable. The reproduction matches the splendid level of the performances. Texts are included. This is an important disc. I. K.

RECORDING OF SPECIAL MERIT

BIZET: Carmen: bigblights (sung in German). Christa Ludwig (mezzo-soprano), Carmen; Rudolph Schock (tenor), Don José; Hermann Prey (baritone), Escamillo; Ursula Schirrmacher (soprano), Frasquita; Ursula Gust (soprano), Mercédès. Chorus and Orchestra of the Deutsche Oper, Berlin, Horst Stein cond. SERAPHIM S 60119 \$2.49.

Performance : Good Recording : Excellent Stereo Quality : Excellent

If you do not object to hearing Carmen in German-or, better yet, if you are intrigued by the prospect-this recording of highlights, taken from a complete set issued in Germany a few years ago, will appeal to you. Christa Ludwig is a Carmen of playful sensuality in the early part of the opera, and attains heights of tragic conviction in the final scene. She does not overstate dramatically, and her singing as singing is outstanding throughout. The veteran Rudolf Schock is her passionate and convincing partner in the final scene, which is presented complete. (The Flower Song is omitted.) Hermann Prey is a rather too lyrical Escamillo. He sings with great expressivity, but I am not convinced that he could really hurt a bull. Conductor Stein paces the opera knowingly, though some of his tempos seem over-deliberate. The sound is excellent, with an extremely effective stereo spread. G. J.

RECORDING OF SPECIAL MERIT

BRAHMS: Serenade No. 2, in A Major, Op. 16. DVOŘÁK: Serenade in D Minor, Op. 44. London Symphony Orchestra, István Kertész cond. LONDON CS 6594 \$5.98.

Performance: Very good	
Recording: Excellent	
Stereo Quality: Very goo	d

From slim pickings a few years ago we have now come to a near-embarrassment of riches of recorded performances of Brahms' now bucolic and now brooding A Major Serenade (the remarkable Casals Marlboro Recording Society issue of the work was reviewed in these pages in May). The thought of pairing the Brahms with Dvořák's colorful D Minor Serenade, also scored without violins, was an especially happy idea-the rather incongruous Mozart Violin Sonatas (K. 12 and 13) were the coupling on the Casals disc. Whereas Casals is earthy in his reading of the Brahms, Kertész is trim, lively, and elegant -and this approach works, for he avoids the slightest trace of rhythmic forcing or mannered phrasing. Taken together with his warmly vital reading of the Dvořák and the absolutely flawless recording, this performance makes one of the few truly perfect records that has come my way for review in some time. D.H.

RECORDING OF SPECIAL MERIT

BRAHMS: Variations and Fugue on a Theme of Handel, Op. 24; Four Piano Pieces, Op. 119; Three Intermezzos, Op. 117. Stephen Bishop (piano). PHILLPS 839722 LY \$5.98.

Performance: Superb Recording: Excellent Stereo Quality: Natural

This is the sort of piano playing that can restore your faith if, like me, you tend to regretful disbelief of the myth of great pianism as the special province of our day. Oh, yes, they say, there used to be a handful of really great pianists; but now marvelous musicians with marvelous techniques are, as the phrase commonly has it, a dime a dozen. Well, I don't, at any price, buy this. There are, indeed, scores of young so-called virtuosos to be seen and heard dashing around the keyboard with an agility and power that would have made Schnabel blanch. But the sounds that come out rarely withstand examination from a point of view that takes beauty into account, let alone one that focuses on musical sense. I could count on my fingers the number of young pianists today who put theirs at the disposal of art rather than athleticism. And Stephen Bishop (who is thirty) would be near the top of any such list. His reading of the Handel Variations is exemplary in its clarity, simplicity, warmth, and unspectacular yet always observant subtlety. He is almost as good in the two sets of late pieces, though once or twice a dynamic shading or a harmonic implication



It Can Turn a Good Recorder Into a Wonderful Recorder.

ADVENT'S new Noise Reduction Unit, Model 100, presents the famous Dolby System* of noise reduction for the first time in a separate stereo component intended for use with any good tape recorder. It uses the "B-Type" circuitry developed by Dolby Laboratories exclusively for home recording and pre-recorded tapes.

The basic virtue of the Model 100 is simple: It can reduce the otherwise irreducible tape hiss level of a recorder by *ninety percent*—with no curtailing of frequency range and no distortion.

It can yield recordings of full dynamic range and startling clarity from recorders now in just the "reasonably good" category. It can also open the way to uncompromised performance at low tape speeds, removing the hiss that especially plagues wide-range recorders at 3³/₄ and 1⁷/₈ ips.

The Model 100 takes over all of the normal electronic control functions of a recorder. It adds input-mixing capabilities to recorders that lack them, and performs all of its control functions far more precisely than most recorders.

It can make the best tape recorder audibly better.

Suggested price : **\$250.**

Advent Corporation, 377 Putnam Ave., Cambridge, Mass. 02139.

*"Dolby" and "Dolby System" are trademarks of Dolby Laboratories.

seems to elude him in these briefer works. Philips is now importing pressings from Europe rather than manufacturing them here. The technical improvement is immense, and this record is enthusiastically recommended from the sonic as well as the musical standpoint. B. J.

BRISTOW: Symphony No. 2, in D Minor, Op. 24 ("Jullien"). Royal Philharmonic Orchestra, Karl Krueger cond. Society For THE PRESERVATION OF THE AMERICAN MUSICAL HERITAGE MIA 143 \$6.00 (postpaid from P.O. Box 4244, Grand Central Station, New York, N.Y. 10017).

Performance : Good Recording : Good Stereo Quality : Good

Continuing his remarkable documentation of the nineteenth-century musical scene in the U.S., Karl Krueger offers here the second of two symphonies he has recorded by George Frederick Bristow, Bristow (1825-1898) was a New-York-born violinist, conductor, and composer who, with fellow-composer William Henry Fry, fought valiantly all his life to have the American composer given a hearing in his own land. Bristow's Second Symphony was first performed in 1856 by the New York Philharmonic Society. It is pleasing fare, cast in a post-Mendelssohnian vein with occasional overtones of Schumann. If elaborate symphonic development is not Bristow's strong point, he did have a lyrical gift, and he scored his work most transparently and effectively in a basically conservative and unpretentious style. Occasionally



there is an unexpected touch, such as the slow-movement trombone solo. The "Jullien" of the title is Louis-Antoine Jullien, the enterprising but ill-starred conductorshowman who made a point of including music by American composers in the New York concerts he gave during the early 1850's.

Krueger's recording of the "Jullien" Symphony is one of his most successful achievements, from the standpoint of both orchestral playing and overall sonics. Those who are interested in building a library comprising the full range of American art music are advised to acquire this disc. D. H.

COPLAND: Our Town; An Outdoor Overture; Quiet City; Two Pieces for String Orchestra. The London Symphony Orchestra, Aaron Copland cond. COLUMBIA MS 7375 \$5.98.

Performance: Authentic and fascinating Recording: Superb Stereo Quality: Excellent

Aaron Copland provides some fascinating new insights into his musical personality with this recording. With the exception of the Two Pieces for String Orchestra, all the works have received so many performances over the years that, unlike most American compositions, they can be thought of as familiar repertoire pieces. And yet, for all their familiarity, Copland brings a different tone to the music when he is conducting. One hears the composer delineating his thoughts directly, without the interposition of another interpretive mind. And the result is startling. Even though one may always have been aware (and how could anyone not be) of the lean severity of his style, its economy of means and deliberate plainness, these performances accentuate such qualities surprisingly. The concert piece adapted from his movie score for Our Town, and the music entitled Quiet City, are approached by other conductors with emphasis on their evanescent nostalgic moods. With Copland conducting, the stage-scrims are lifted, and the lighting becomes brighter and more factual. One becomes more strongly aware of the music's structure and finds that it is even more starkly rigorous than he knew. Indeed, it is amazing to realize that mistiness and dreamy nostalgia could ever have been created by such a truly Spartan use of musical materials.

DEBUSSY : Chansons de Bilitis (see SATIE)

DVOŘÁK: Serenade in D Minor (see BRAHMS, Serenade)

FAURÉ: Requiem, Op. 48. Martina Arroyo (soprano); Hermann Prey (baritone); Robert Arnold (organ); Musica Aeterna Orchestra and Chorus, Frederic Waldman cond. DECCA DL 710169 \$5.98.

Performance: Good Recording: Good Stereo Quality: Good

Every time I encounter Gabriel Fauré's Requiem, composed in 1886 in memory of his father, I come away feeling that this is the most exquisitely beautiful work in the French choral literature. Here are none of the melodramatic terrors of the Berlioz or Verdi Requiem settings---there is no Dies (Continued on page 84)

BLASED IN THE INTEREST OF INTER SOUND



The new premium cassette tapes make any cassette recorder sound a little better. But the new Concord F-106 stereo cassette deck makes

new tapes sound even better. It is the first cassette deck to make true high fidelity recordings.

The secret is a little switch and a unique circuit that adjusts the record bias from the normal value used for standard tapes to the higher levels that let the premium cassettes just open up and sing.

There are lots of conveniences built into the F-106: Separate record level meters and controls, so you can set proper record levels for high fidelity recording. A remote control switch makes it easy to omit commercials when recording off the air; automatic stop shuts off the motor when the tape ends (preventing motor and drive wear) and signals you with a bright ruby light when it has stopped. There's a tape counter with an instant reset button and easily-accessible microphone and stereo headphone jacks that hide behind a sliding panel when not in use.

More quality features: a noise filter, and a servo-type drive motor with electronic speed control.

But the real joy of the F-106 is its superb sound – sound you never expected to hear from a cassette. Hear it yourself at your Concord dealer (he's blased in the interest of good sound, too). The price \$149.95 includes a high quality dynamic microphone, remote control, C-60SD super dynamic cassette.



Concord Electronics Corporation, 1935 Armacost Avenue, Los Angeles, California 90025 / a subsidiary of Ehrenreich Photo-Optical Industries, Inc. III

CONCORD F-106 CASSIETTE DECK

irae, and only at the reference to this text in the *Libera me* is there a momentary grim clouding over of the harmonic texture. Solemnity without pretension, compassion without sentimentality, and an all-encompassing radiance of spirit—these are the pervading characteristics of this remarkable score by one of the finest and most self-effacing of France's turn-of-the-century late-Romantic composers.

The Fauré Requiem has never lacked good recorded performances, beginning with the Chanteurs de Lyons discs back in the 1930's. This new Decca disc offers another good one, under the sensitive and knowing direction of Frederic Waldman. Martina Arroyo is in lovely vocal form in the famous soprano solo *Pie Jecu*, and Hermann Prey sings with warmth and manliness in the Offertory and *Libera me*. The organ part is effectively balanced and contrasted against the dark-hued orchestral timbre, and the recording itself is endowed with a warm concert-hall ambiance.

For those who prefer the Requiem in ecclesiastical surroundings, I call particular attention to the budget-price King's College Choir disc on the Setaphim label, which uses a boy soloist rather than a female soprano, as was also the case with the now unavailable 1964 Grand Prix du Disque recording under Louis Frémaux (Epic BC 1285). D. H.

GIORDANO: *Fedora* (see Best of the Month, page 75)

GRIEG: Lyric Pieces, Op. 43: Butterfly; Lonely Wanderer: My Homeland; Little Bird; Erotic; To Spring. Op. 54: Shepherd Boy; Norwegian March; March of the Dwarfs; Nocturne; Scherzo; Bell Ringing. Op. 57: She Dances. Op. 62: Booklet. Op. 65: Wedding Day at Tioldbaugen. Liv Glaser (piano). RCA VICTROLA VICS 1465 \$2.98.

Performance : Idiomatic Recording : Bass-heavy Stereo Quality : Not significant

The mono discs of Walter Gieseking and Artur Rubinstein have comprised for more than a decade the LP representation in this country of Grieg's solo-piano works. The Gieseking discs contain the cream of the ten books of Lyric Pieces, and the Rubinstein disc is highlighted by the fine Ballade in G Minor. There is also a just-released recording, on the Orion label, of Grieg's remarkable and proto-Bartókian *slåtter* (Norwegian peasant dances) for piano, played by

Vladimir Pleshakov We have here a first stereo recording of fifteen of the Lyric Pieces played by Liv Glaser, the gifted daughter of the Oslo Philharmonic Orchestra's veteran concertmaster. For me, some of the pieces have worn thin with the years; others-such as the Little Bird, Brooklet, and the full-blown impressionist Bell Ringing-still breathe a fresh aura of poetic originality. Miss Glaser's performances are completely idiomatic, but she is ill-served by the recording here, which is close-miked and bass-heavy. Tone control adjustment helps a little in playing back this disc, but a roomier sound in the first place would have made for a far happier sonic result. D. H.

HAYDN: Piano Sonatas: No.33, in C Minor; No. 50, in D Major; No. 62, in E- flat Major. Alexis Weissenberg (piano). RCA LSC 3111 \$5.98.

Performance: Brilliant, but . . . Recording: Good Stereo Quality: Fair

There is some wonderful music on this record, music that ought to be played much more often in the recital hall. To clarify the matter, I should explain that the numbering of the sonatas given above follows that of the recording, which is in fact that of Christa Landon's complete Urlext edition-33, 50, and 62 correspond, in the more familiar traditional sequence, to 20, 37, and 52. No. 62 is the big E-flat Major masterpiece that has been comparatively well treated on records (more than half a dozen versions are now in the catalog): it is one of Haydn's strongest utterances in a genre most congenial to him. The C Minor and D Major works have also been recorded a number



MARTINA ARROYO Lovely solo in a sensitive Fauré Requiem

of times. They are smaller in scale, conjuring up in one case Haydn's transitional sortie into the world of *Sturm und Drang* (No. 33) and in the other, more surprisingly, the sound of Scarlatti. Their own attractive qualities provide an excellent foil to the Beethovenish breadth of No. 62, and thus help to produce an unusually well-balanced program for anyone wanting to listen to the record straight through.

Weissenberg's performances are extremely dashing. In places I feel the fast tempos are perhaps too fast, but the playing has a true rhythmic impulse and only occasionally begins to sound rushed. The part-playing is admirably clear, and subordinate voices are never submerged. The finest reading, I think, is that of No. 62, which benefits enormously from the observance of all repeats, including two in the slow movement. This rich, yet paradoxically lean, E Major Adagio is perhaps the high point of the record, for it exemplifies Weissenberg's ability to keep a slow movement fluent without losing poise -Horowitz' phrasing in his recording of this sonata lacks stability here, and Galling's, at the other extreme, tends to tighten up into frigid inaction.

Though the new numbering is used, Weissenberg appears to be using versions that differ in several respects from the Urtext. Either that, or he has made some regrettable emendations of his own. Dynamics in a few places directly contradict those indicated by Haydn, and the same is occasionally true of articulation. The final chord of No. 50 is octave-transposed down to a more resonant register. More drastically, a little eight-measure transition in the exposition of No. 62's finale, which Haydn shortens by one measure when it recurs in the recapitulation, is here clipped by two bars in the first instance and by one in the second, which spoils the joke.

Still, I don't want to exaggerate the flaws of a record that has given me considerable enjoyment. In general, Weissenberg comes very close to a genuinely Haydnesque spirit. The crisp, unromanticized sonorities he draws from the piano contribute materially to this end, even though the recording, which may have been miked a trifle too closely, sometimes crosses the line that separates clean from clangy sound. *B. J.*

RECORDING OF SPECIAL MERIT

KORTE: Matrix. New York Woodwind Quintet. SEEGER: Suite for Wind Quintet. Lark Quintet. ORBON: Partita No. 2. Members of the Group for Contemporary Music at Columbia University, Richard Dufallo cond. COMPOSERS RECORDINGS, INC. CRI SD 249 \$5.95.

Performance: Exceptionally good Recording: Exceptionally good Storeo Quality: Splendid

Composers Recordings, Inc. has been for quite a few years a mainstay of the contemporary-music recording field. By now, it has a very sizable catalog. And in view of its policy never to delete a work, its catalog grows more and more valuable. The addition of this new disc, made possible by grants from the Martha Baird Rockefeller Fund for Music, the American Academy and National Institute of Arts and Letters, and the State University of New York at Binghamton, is extremely welcome. The music is attractive, good, and fascinating; the sonics are firstrate.

Karl Korte's Matrix, which occupies the first side, is a stunning piece. I have heard earlier music by this young American and liked it. But nothing in it would have led me to suppose that he would take off in the direction in which he's apparently been flying since 1964. This work, dating from 1968, is a tribute not only to Korte's own inventiveness and sensitivity, which are everywhere in evidence, but to the nourishing influence of Elliott Carter's open-ended aesthetics and technology, which is also apparent (though in the background). Matrix is thoroughly up-to-date. But it does not have the stamp of stiff conformity which has blighted so much music in the past decade. This piece takes its own "trip," and carries the listener along, through fascinating turnings and to surprising points of arrival. It sounds exceptionally secure for a relatively young composer. The performance is just about perfect.

Ruth Crawford Seeger's Suite for Wind Quintet was her last composition (she died in 1953). It is an extremely handsome work, especially the first two of its three movements, and the Lark Quintet plays it with the elegance and richness that the piece so well deserves.

(Continued on page 86)

"How well does the Heathkit AR-29 perform? Very well indeed!"..."No other receiver in its price class can compare with it!"

Julian Hirsch, Stereo Review magazine



Here's Why...

Here's what Mr. Hirsch says about Sensitivity: "Its FM tuner had an IHF sensitivity of 1.75 microvolts, placing it among the finest in respect to sensitivity."

About FM Frequency Response: "Stereo FM frequency response was extremely flat, ±0.25 dB from 30 Hz to 15,000 Hz."

About Power Output: "We found the audio amplifiers to be considerably more powerful than their rated 35 watts (rms) per channel. With both channels driven at 1000 Hz into 8-ohm loads, we measured about 50 watts (rms) per channel just below the clipping level."

And this is what he writes about Distortion: "Harmonic distortion was under 0.1 per cent from 0.15 to 50 watts, and under 0.03 per cent over most of that range. IM distortion was about 0.1 per cent at any level up to 50 watts. At its rated output of 35 watts per channel, or at any lower power, the distortion of the AR-29 did not exceed 0.15 per cent between 20 and 20,000 Hz. The distortion was typically 0.05 per cent over most of the audio range, at any power level."

About Input Characteristics: "... the AR-29 can handle any modern cartridge without risk of overload, and provide low distortion and an excellent signal-to-noise ratio."

About Hum & Noise: "Hum and noise were extremely low: -90 dB at the high-level auxiliary input and -71 dB on phono, both referenced to a 10-watt output level.'

About Assembly: "... the AR-29 construction made a positive impression." "... assembly has been markedly simplified."

Says Mr. Hirsch about overall performance: "The test data speaks for itself.""... no other receiver in its price class can compare with it."

Additional Features That Make the AR-29 The World's Finest Medium Power Receiver

· All solid-state circuitry with 65 transistors, 42 diodes and 4 Integrated Circuits • 7-60,000 Hz frequency response • Transformerless, direct-coupled outputs • Greater than 70 dB selectivity . Factory assembled, aligned FET FM tuner • Mute Control attenuates between-station FM noise • Blend Control attenuates on-station Stereo FM noise . Linear Motion controls for Volume, Balance, Bass & Treble . Individually adjustable input level controls for source switching without volume changes . Switches for 2 separate stereo speaker systems • Center speaker capability . Exact station selection with two tuning meters . Stereo indicator • Stereo headphone jack • Swivel AM rod antenna • 300 & 75 ohm FM antenna inputs • Massive, electronically regulated power supply . Modular plug-in circuit board construction

Kit AR-29, (less cabinet), 33 lbs.....\$285.00* Assembled AE-19, oiled pecan cabinet, 10 lbs......\$19.95*

Se transformer and

HEATHKIIT	NEW	HEATH COMPANY, Dept. 40-6 a Schlumberger company Benton Harbor, Michigan 49022	
	FREE 1970 CATALOG! Now with more kits, more color. Fully describes these along with over 300 kits for stereo/hi-fi, color TV, electronic organs, gui-	Enclosed is \$, plus shipping. Please send model (s) Please send FREE Heathkit Catalog. Please send Credit Application. Name Address CityStateZip*Mail order prices; F.O.B. factory. Prices & specifications subject to change without notice.	HF-237
	CIR	CLE NO. 16 ON READER SERVICE CARD	

Partita No. 2 by Julian Orbon was commissioned for the Third Inter-American Music Festival in Washington, D.C. It is a wild and colorful opus, whirling timbres of celesta, harmonium, vibraphone, harpsichord, and string quartet into the most unpredictable clumps and etchings of sound. I can't say for sure that I know what it's all about, but the main points must certainly have to do with vigor, color, and dazzlement. These come across in force, and are much enhanced by clever exploitation on the recording of the music's inbuilt stereophony. (I wish the liner notes had named the harpsichordist, for he deserves special praise-as do the other performers and conductor Richard Dufallo.) CRI has a real winner in this recording. L. T.

MAHLER: Symphony No. 5, in C-sharp Minor; Five Rückert Songs. Janet Baker (mezzo-soprano); New Philharmonia Orchestra, Sir John Barbirolli cond. ANGEL S 3760 two discs \$11.96.

Performance: Restrained Recording: Good, but lacks presence Stereo Quality: Good

This is, in many respects, a perfectly satisfactory performance-but it didn't do anything for me and, I suspect, doesn't do much for Mahler either. Barbirolli and the Philharmonia musicians are calm, collected, dutiful, accurate, and respectful. It is all (or almost all) nicely played, and it all moves right along. It is also curiously distant and uninvolved. The score says wild (the German word means something close enough to the English equivalent), but the results are about as savage as an English garden party. Mahler without passion is like a platonic love affair with a beautiful, sensual girl; it may not be a total waste of time (you could learn a lot) but it somehow isn't quite the ideal relationship. The recording has clarity and is reasonably attractive, but contributes to the general sense of detachment and distance. Gritty surfaces too.

But wait! This is not entirely an unrequited love affair. Side four is a beautiful take of the five Rückert songs (one, *lch bin der Welt abhanden gekommen*, was previously recorded by Baker, Barbirolli, and the Hallé orchestra). Purity of heart here counts as something of the right divine simplicity. Can one recommend buying an expensive set solely for its fourth side? E. S.

RECORDINGS OF SPECIAL MERIT

MENDELSSOHN: Symphony No. 3, in A Minor, Op. 56 ("Scotch"); Overture to Ruy Blas, Op. 95. New Philharmonia Orchestra, Wolfgang Sawallisch cond. PHILIPS SAL 3739 \$5.98.

MENDELSSOHN: Symphony No. 4, in A Major, Op. 90 ("Italian"); Symphony No. 5, in D Major, Op. 107 ("Reformation"). New Philharmonia Orchestra, Wolfgang Sawallisch cond. PHILIPS SAL 3727 \$5.98.

Performances: Excellent Recordings: High-quality Stereo Quality: Very good

This is a first-rate group of performances. The "Italian" and the "Scotch" are at once brilliant and poetic. Best of all, they shape up and move right along with grace, ease, sparkle, and a kind of aristocratic *elan*. Even the last movement of the "Scotch"—moderately paced by the usual notions—comes off with a kind of measured inner tension. Similar comments could be made about the Scherzo of the "Reformation." Indeed, if the latter performance must be rated a notch below the others, it is only because there is a certain element of drama and conflict inherent in the music that is barely touched upon. The more conventionalized drama of *Ray Blas* is, however, brought off to perfection. All the recordings are good, and the discs themselves are models of plastic purity and blessed vinyl quiet. *E. S.*

MOZART: Don Giovanni. Gabriel Bacquier (baritone), Don Giovanni; Joan Sutherland (soprano), Donna Anna; Pilar Lorengar (soprano), Donna Elvira; Werner Krenn



(tenor), Don Ottavio; Donald Gramm (bass), Leporello; Marilyn Horne (mezzosoprano), Zerlina; Leonardo Monreale (baritone), Masetto; Clifford Grant (bass), the Commendatore. Ambrosian Singers; English Chamber Orchestra, Richard Bonynge cond. LONDON OSA 1434 four discs \$23.92, **(B)** V 90167 (71/2) \$25.95.

Performance: Problematic Recording: Excellent Stereo Quality: Excellent

London's new Don Giovanni is impressively cast, and engineered to virtual perfection. It is complete down to the rarely heard Zerlina-Leporello duet preceding Donna Elvira's "In quale eccessi. O Numi," which Mozart added for the first Vienna production. This is obviously a project executed with much thought and care. And it will generate a great deal of controversy, having less to do with the personalities involved, perhaps, than with the overall musical approach.

What this set offers for our edification, and frequent mystification, is a thorough rethinking of the vocal writing. Virtually all phrase endings involving two successive identical musical notes are decorated with generously enlivened with such Baroque and post-Baroque devices as cadential trills and da capo ornamentations. This may not sound like much on paper, but I assure you that the changes are numerous enough and substantial enough to disconcert any listener familiar with Mozart's writing as it appears on the printed page. To cite an example: the two three-measure phrases containing Donna Anna's words "Or sai chi l'on-ore rapire a me volse" emerge with an entirely new melodic contour in place of the one we-and such Mozartians as Bruno Walter, Erich Leinsdorf, and Fritz Busch, among othershave heretofore regarded as being Mozart's inspiration. There is no denying the Bonynge premise that embellishments are musicologically permissible, for it is a fact that singers enjoyed a great deal of latitude in such matters in Mozart's time. It is surprising, however, that the otherwise detailed annotations skirt the issue: no scholarly justifications are offered for such a sweeping revision of the musical notation. The strange notes leap at you unheralded and very often with a startling effect. One of my several objections to this procedure persists more stubbornly than others: suppose Mozart did want certain phrases to end on repeated notes? After all, appoggiature are not in themselves guaranteed to be musically desirable. Returning to "Or sai chi l'onore," for example, I find the Bonyngized treatment infinitely less effective than the printed notation, for the repeated notes convey a verbal emphasis more appropriate to the dramatic situation than the softened melodic figure heard here.

appoggiature, and the vocal line has been

Another issue may be raised on grounds that are logical rather than musicological: embellishments of this kind have their place in the old-fashioned opera seria, but Don Giovanni is anything but that. It was, in fact, the last word in musico-dramatic sophistication for its age, hardly a vehicle for the frills of an outmoded style, the personal preferences of certain contemporary prima donnas notwithstanding. What, in short, may serve Idomeneo seems to me a disservice to Don Giovanni. In fairness, I must concede that the embellishments are always in good taste, and never excessive. The problem is that they do not aid the dramatic cause. On the contrary, by calling attention to themselves, they introduce an element of artificiality that gets between the listener and the music.

A performance that keeps the listener in constant bafflement can hardly be expected to be transporting, and this one is not. Moments here are enlivened by a certain dramatic spark-the cemetery scene, for onebut overall this performance is a rather bloodless affair, careful, thoughtful, and unexciting. There are also some ill-judged tempo choices: rather slow for "Là, ci darem la mano," maddeningly slow for "Vedrai carino," and uncomfortably rushed for the minuet in the last scene of Act One. The one singer whose achievement rises above criticism is Marilyn Horne. With a ravishing tone and smooth technique, she simply steals the show. But of course not even a Zerlina of this brand can turn an otherwise problematic performance into a successful one. In the title role, Gabriel Bacquier displays a certain elegance, and his light sec voice manages the tessitura skillfully. Since he is an (Continued on page 89)

CIRCLE NO. 103 ON READER SERVICE CARD



Garrard introduces an automatic turntable especially for the discerning At Garrard, we recognize that as Before each unit is shipped, it every phase of its operation.

high fidelity components have become more refined, they've also become more costly.

As Alan Say, our Chief Engineer, puts it, "A house, a motor car and a stereo rig are the three weightiest purchases many chaps make in a lifetime. "And, today, it can be a toss up

as to which is number three.

Unfortunately, there are those with an ear for good music, and the desire to indulge it, who are not blessed with limitless means.

For them, we offer the SL72B.

At \$89.50 it is, without question, the world's greatest value in an automatic turntable.

Son of SL95B

Our SL72B is a slightly modified SL95B, at present the most highly perfected automatic turntable you can buy -regardless of price.

The turntable is a bit smaller, the tone arm is simplified, and we've eliminated the ultra-precise counterweight adjustment screw.

But the 72B has the same revolutionary two-stage synchronous motor as our 95B. With an induction portion to reach playing speed instantly, and a synchronous portion to guarantee unvarying speed.

It has the same patented sliding weight anti-skating control to

poor.

provide permanently accurate settings.

It has the same viscous damping of the tone arm descent in both manual and automatic play. And can be cued in either mode.

It has the same two-point record support, a Garrard exclusive that assures the gentlest possible record handling

All in all, a degree of refinement quite impossible to find in any other turntable near its price.

Mass produced, by hand

Despite our place as the world's largest producer of component automatic turntables, Garrard steadfastly rejects mass production methods.

At our Swindon works, final assembly of the 72B, like the 95B, is in the hands of nineteen men and women. Hands, not machines.

Each person who assembles a part, tests that finished assembly.

And four of every nineteen final "assemblers" do nothing but testing.



must pass 26 final checks that cover

Thus, remarkably few compromises have been made to achieve its remarkable price.

\$40 saved is \$40 earned

Still, the 72B is not the ultimate automatic turntable.

Our 95B bears that distinction. But at its price of \$89.50, the 72B represents a saving of \$40.

A significant difference to all but the affluent.

To quote Alan Say, "If a penny saved is a penny earned, \$40 is a bloody raise in pay

"The 72B is the automatic turntable with almost everything for the man with everything save money.'

From Swindon, with love

The care that goes into a Garrard is preserved by a heritage that often spans two and three generations at our works in Swindon, England.

That care does not vary with turntable price.

You can select with confidence from six component models starting with the 40B at \$44.50 and running to the SL95B at \$129.50.

Your dealer can help you match a Garrard to your system.





Reversing a Trend: THE RECORDING ANGEL VISITS CLEVELAND AND CHICAGO

By GEORGE JELLINEK

N case you haven't noticed, the onetime pre-eminent position of U.S. labels on the international recording scene is a thing of the past. European companies-meaning EMI/Angel, Decca/London, DGG, and Philips-have taken the lead in all the important considerations: the roster of artists under contract, the volume of recording activity, and, certainly, the enterprise and imaginativeness of their productions. I note this phenomenon in sorrow, not mixed with surprise, for it was bound to come: we in this country have a great potential for wonderful things, but the American recording industry seems to fluctuate forever between feast and famine-our present famine being caused largely by the prohibitive costs of recording in this country. But Europe, in the final analysis, has always shown more know-how, better long-range planning, more consistency, and more determination in pursuing the solid values of excellence.

These passing thoughts are incidental to the somewhat paradoxical appearance of four releases signaling Angel's new American undertakings: two discs with the Cleveland Orchestra, long associated with the Columbia label, and two with the Chicago Symphony, a former mainstay in the RCA stable. The two pairs of recordings originated in the orchestras' home cities under Angel's musical and technical supervision, and there was no intrusion upon musical leadership. The Clevelanders were led by George Szell, who has made them into one of the world's finest ensembles, and the Chicagoans operated under Seiji Ozawa, a familiar guest conductor for several seasons and formerly director of the orchestra's summer concerts at the Ravinia Festival.

All four releases are, in the main, successful, but the values of the Cleveland project are clearly more impressive. Here, Angel wisely took advantage of the fact that cellist Mstislav Rostropovich was concertizing in Cleveland last May, and brought in David Oistrakh for a tightly organized three-day session in which both Brahms string concertos were recorded. The Double Concerto, in which three of our

greatest musical minds are linked up for the first time, is clearly the outstanding achievement. It offers large-scale, penetrating, vibrant yet mellow Brahms, an interpretation over which Szell exerts steady control and within which the soloists play with surpassing tonal beauty and remarkable unanimity of phrasing. Since I was privileged to be present during some of the recording and playback sessions, I can testify to the atmosphere of relaxed music-making and striking unity of purpose that bound the participants together and made this uniquely satisfying performance possible.

The clarity, absolute rightness of tempos, and countless felicities of phrasing and nuance that characterize the Double Concerto are present in the Oistrakh-Szell collaboration in the Brahms Violin Concerto as well. Here, however, the recording must contend with a tough competitor from Angel's own catalog, the Oistrakh-Klemperer collaboration (Angel 35836), a more rugged statement of the work, but otherwise similar in many ways to the probing, sensitive, beautifully balanced later interpretation captured on the present recording. Both are superb—take your pick.

BEAUTIFUL orchestral playing is a common characteristic of the Cleveland and Chicago orchestras as they are heard here. The Chicagoans respond to Seiji Ozawa's leadership with the rich sound and virtuosity the Bartók Concerto for Orchestra demands. The conductor's sympathy with this masterpiece is obvious, and the general treatment is sound, but when it is compared to the Chicago Orchestra's previous recording under Fritz Reiner (RCA Victrola VICS 1110), I discover special Reiner insights which make his interpretation unsurpassed, in my estimation: the urgency in his treatment of the ostinato figure in the first movement, the tension of his Elegia, the contrast between the lush string melody and the mocking "interruption" in his Intermezzo interrotto, the lightness and flexibility of the Finale. In Kodály's Dances

of Galánta, which completes the disc, Ozawa offers a thoroughly enjoyable and luminously played, if somewhat unimpassioned, account.

I do not find Ozawa's *Scheherazade* a wholly convincing statement of this muchrecorded work. It has many beautiful episodes (a truly exciting depiction of the shipwreck in the fourth movement, for one) and orchestral sounds that are consistently appealing, but no special insight and a downright uninteresting reading of the second movement.

All four discs offer warm and luminous sonics, with excellent clarity and depth in general, technical production of consistent excellence. One looks forward eagerly yet with a certain apprehension to EMI's future American incursions: the beginning is encouraging, but was another *Scheherazade* really needed? It would indeed be a pity if EMI did not respond to this unique opportunity with a fittingly stimulating and enterprising utilization of artists and repertoire.

BRAHMS: Concerto, in A Minor, for Violin and Cello, Op. 102. David Oistrakh (violin); Mstislav Rostropovich (cello): Cleveland Orchestra, George Szell cond. ANGEL SFO 36032 \$5.98, © 4XS 36032 \$7.98.

BRAHMS: Violin Concerto, in D Major, Op. 77. David Oistrakh (violin); Cleveland Orchestra, George Szell cond. ANGEL SFO 36033 \$5.98, © 4XS 36033 \$7.98.

RIMSKY-KORSAKOV: Scheherazade, Op. 35. BORODIN: Polovtsian Dances from "Prince Igor." Chicago Symphony Orchestra, Sciji Ozawa cond. ANGEL SFO 36034 \$5.98, © 4XS 36034 \$7.98.

BARTÓK: Concerto for Orchestra. KODÁLY: Dances of Galánta. Chicago Symphony Orchestra, Seiji Ozawa cond. ANGEL SFO 36035 \$5.98, © 4XS 36035 \$7.98. inusually fine actor, he probably makes a very good Giovanni on stage. He communitates little magnetism on records, however, and the recitatives that are so vital to this tole lack compelling inflection. The same is true of Donald Gramm's Leporello. The wit, the spark, and the constant play at oneupmanship between master and servant simoly do not emerge in the give and take of these two interpreters. Mr. Gramm's singing is otherwise competent; if his "Madamina" is overfussy, the blame must rest largely with Mr. Bonynge's "edition."

Werner Krenn offers pleasant tone and serviceable technique as Ottavio, but his voice is undersized for a role that is somewhat self-effacing to begin with. Clifford Grant is a very satisfactory Commendatore. I know nothing about him, and he appears to be a stranger to London Records as well, for the annotations give us much detail about every performer *except* Mr. Grant—and Leonardo Monreale. Monreale is an acceptable Masetto. He is, furthermore, the only Italian in the cast, and the only singer whose diction is impecable. Pilar Lorengar's Donna Elvira is a total disappointment.

The stunning ease with which Joan Sutherland negotiates the Allegro moderato portion of her fiendish second-act aria probably cannot be matched by any soprano today. Having granted this, however, I must regretfully say that as a whole her Donna Anna is yet another droopy-toned and monochromatic portrayal, a character freely interchangeable with the Sutherland Lucia, Gilda, or Alcina. The usual mannerisms-rhythmic sluggishness, sliding attacks, indistinct enunciation-are everywhere apparent. A comparison with her previous rendering of Donna Anna under a conductor (Giulini) who was more assertive and a stronger disciplinarian speaks volumes. Admirers of this opera and of Miss Sutherland should turn to that album (Angel S 3605) wherein the diva comports herself in a manner deserving admiration in a performance that, although it offers a Giovanni no more magnetic than Bacquier, is superb overall. The outstanding Don Giovanni of Cesare Siepi, too, can be heard on London 1401, made about ten years ago-a version of Don Giovanni that should be in no danger of being pushed into limbo by the present undertaking. G. I.

MOZART: Lucio Silla, K. 135. Ferrando Ferrari (tenor), Lucio Silla; Fiorenza Cossotto (mezzo-soprano), Cecilio; Dora Gatta (soprano), Giunia; Anna Maria Rota (mezzo-soprano), Cinna; Rena Gary Falachi (soprano), Celia; Luigi Pontiggia (tenor), Aufidio. Angelicum Chamber Orchestra and Polyphonic Chorus of Milan, Carlo Felice Cillario cond. RCA VICTROLA VICS 6117 three discs \$8.94.

Performance: Satisfactory Recording: Good Stereo Quality: Good

That Mozart was two months short of his seventeenth birthday when he completed *Lucio Silla* must not obscure the fact that by then he had written six works for the stage. Be that as it may, he was still seventeen, and even the most astounding musical genius the world was ever to know did not automatically *have* to be a wise judge of opera librettos; in Giovanni da Gamerra's uninspiring and absurdly motivated book he found a real dud. In terms of *musical* achieve-

For cartridges that can track as low as 0.1 gram



- Features all new Empire 990...
 world's most perfectly balanced playback arm.
- No acoustic feedback even when you turn up gain and bass.
- World's finest turntable motor hysteresis synchronous type maintains speed accuracy with zero error.
- Lowest rumble of any turntable tested, 90dB (RRLL), wow and flutter, .01%.
- Exclusive pneumatic suspension lets you dance, jump or rock without bouncing the stylus offthe record.
- Tone arm floats down or lifts up from a record surface bathed in light. Pick out the exact selectior you want, even in a darkened room.

New Troubador 598 MId. U.S.A. record playback system \$199.95-less base and cover/walnut base and plexiglas cover-\$34.95

EMPIRE Write for free "Guide to Sound Design for 1970." Empire Scientific Corp. 1055 Stewart Ave., Garden City, N.Y. 11530

CIRCLE NO. 14 ON READER SERVICE CARD

You don't have to be big to have brains.

Tiny solid state devices in the Olympus 35EC do many things automatically that cameras twice its size can't do. Indoor or outdoor exposures, whether day or night, sunlight or flash; all are set automatically. The fastest action stopped electronically at 1/800th of a second. Yet you can take pictures with the light from one match automatically. The professional type 5 element lens delivers razor sharp pictures. If you're looking for a camera that slips into your pocket but is packed with electronic brains... see the remarkable new Olympus 35EC.

> The Olympus 35EC (Electronic Compact) World's smallest electronic full frame 35mm Camera._

OLYMPUS

Marketed in U.S.A. by Ponder&Best. Corporate Offices: 11201 West Pico Blvd., Los Angeles, Calif. 90064. CIRCLE NO. 29 ON READER SERVICE CARD ment, however, Lucio Silla is a work of the highest order. It abounds in effective and showy arias and expertly constructed ensembles, and contains at least one scene of superior dramatic inspiration: the meeting of Giunia and Cecilio in a hall of tombs for fallen Roman heroes, at the conclusion of Act I. They are husband and wife, by the way. Giunia is wooed by the dictator Lucio Silla while Cecilio is in exile. Tired of languishing, Cecilio returns to organize a conspiracy and is promptly arrested. In Act III, he is pardoned for reasons known only to the librettist, and the theretofore unpopular Silla receives the homage of the populace as the curtain falls. You see what I mean?

As Cecilio, originally a castrato role, Fiorenza Cossotto is absolutely first-rate. In this recording, made about seven years ago, the gifted mezzo displays a lighter timbre than she has today, but she is in full command of her part musically and dramatically. None of her colleagues match her expertise with this kind of bravura vocal writing. The role of Giunia, in particular, calls for a Sutherland or Stich-Randall, for it is full of anticipations of the dramatic and furious scenes Mozart later perfected in Idomeneo and Don Giovanni. All the singers are adequate or better, however, and Cillario conducts the music with brisk efficiency. Technically, the recording is good but unspectacular. In sum: a worthy but by no means essential entry in the operatic catalog. G. 1.

ORBON : Partita No. 2 (see KORTE)

RECORDING OF SPECIAL MERIT

SATIE: Socrate. Marie-Thérèse Escribano (soprano), Socrate; Michèle Bedard (mezzo-soprano), Phèdre; Emiko Iiyami (mezzosoprano), Phèdon; Ensemble "Die Reihe," Friedrich Cerha cond. DEBUSSY: Chansons de Bilitis. Marie-Thérèse Escribano (speaker); Ensemble "Die Reihe," Friedrich Cerha cond. CANDIDE CE 31024 \$3.98.

Performance: Excellent Recording: Excellent Stereo Quality: Very good

Satie, unpredictable as usual, actually set excerpts from three Platonic dialogues as a symphonic drama with voice," although the work is neither symphonic nor dramatic, and employs (or at least has always been sung by) female voices representing the male participants of the Socratic dialogues. The work was commissioned by the famous Princesse de Polignac just after World War I-an extraordinary moment for the composition of such an utterly remote work. The interpretation of Greek antiquity as something pure, abstract, simple, monochromatic, and remote is not unique to Satie but is a particularly French notion that has often recurred in French art over the centuries. There are exact equivalents in the work of contemporaries such as Cocteau and Gide. And Satie's Socrate is not quite as isolated a musical work as is often claimed. The particularly fluid, pure, and affecting style of endless recitative has antecedents in (somewhat surprisingly) Moussorgsky and Debussy-although, of course Debussy was also influenced by Satie. Even more obviously, a whole younger generation of French musicians, many of whom emerged under the "patronage" of Satie, was directly under the spell. Poulenc was strongly influenced by *Socrate* (see and hear *The Dialogues of the Carmelites*) and so, to a lesser degree, was Darius Milhaud, the author of the program notes for this album. *Socrate* also had an important impact on the work of Virgil Thomson.

Well, here is the original-simple, dreamy, linear. sweet, pure, minimal, naïf (in the sense of the painter Rousseau), possessed of a kind of divine ennui, profoundly moving in its description of the death of Socrates and its extraordinary coda. It is well paired with the rare and curious Debussy work. These are not the well-known songs but a set of readings from the same Pierre Louvs collection interspersed with the briefest musical epigrams. This curious form was only recently reconstructed and revived under the direction of Pierre Boulez (a fact that goes unmentioned here). The work contains some of the most gorgeous inventions of its composer, but these are of so brief a



span and the changes of level from music to word are so abrupt that, in spite of the attractiveness of both elements, the totality is unsatisfactory.

A Viennese ensemble originally founded to play serial music is the surprising source for these very attractive and à propos readings. "Die Reihe" has become one of the leading chamber ensembles of Europe and this record is a tribute to the breadth of their scope. Cerha, like Boulez a far-out composer who has also turned to conducting, does an amazing job of re-creating ultra-French music with all the necessary elements of style, expressive control, fluid phrase, and beauty of color.

The recording is of good quality. Milhaud's notes are, partly due to misleading translations (the French word *mélodie* means "art song" in this context), inadequate and confusing; the distinction between the earlier *Chansons de Bilitis* (three *mélodies* for voice and piano) and the version at hand is not made very clear. And, oddly enough, French texts for the Debussy (which is spoken) are provided without translation while nothing at all is given for the Satie (which is sung). *E. S.*

SATIE (arr. Camarata): Trois Gymnopédies: Heures séculaires et instantanées; Avant-dernières Pensées; Passacaille; Trois Gnossiennes; Trois Nocturnes; Embryons Desséchés; Enfantillages pittoresques; Peccadilles importunes; Pièces froides. The Camarata Contemporary Chamber Group. DERAM DES 18036 \$4.98.

Performance: Hokey Recording: Hokum Stereo Quality: Hoked-up

At radio station WBAI in New York we give Scratchy Groove Awards for the worst records of the year. Here's a prime candidate. These are slick arrangements of Satie piano works rigged up for guitar, solo winds, Moog synthesizer, and (unidentified) orchestra, in hokey echo-chamber, multi-track recordings. One of the most original and eccentric geniuses in the history of music has been turned into syrupy or cutsie-pie elevator-music glop. Don't let the Moog fool you; this is not switched-on Satie, only a Scratchy Groove grand prize winner. *E. S.*

SEEGER: Suite for Wind Quintet (see KORTE)

SHOSTAKOVICH : Symphony No. 13 (see Best of the Month, page 73)

RECORDING OF SPECIAL MERIT

STRAVINSKY: Introitus. Gregg Smith Singers; Columbia Chamber Ensemble, Igor Stravinsky cond. Orchestra Variations; Abraham and Isaac; Requient Canticles. Richard Frisch (baritone, in Abraham and Isaac); Linda Anderson (soprano); Elaine Bonazzi (contralto); Charles Bressler (tenor); Donald Gramm (bass); Ithaca College Concert Choir; Columbia Symphony Orchestra, Robert Craft cond. COLUMBIA MS 7386 \$5.98.

Performance: Good Recording: Good Stereo Quality: Good

It takes either a great deal of humility or a lot of chuizpah for an eighty-four-year-old composer to write a Requiem, and humility has not generally been regarded as one of Igor Stravinsky's outstanding traits. Not only did he write an old man's Requiem, but he has already managed to outlive it by something like four years. And it is in fact one of the most impressive pieces of what he wryly calls his "last-ditch period" music. Like all these late works, it is spare, highly condensed, more like a sketch for a last will and testament than a completed work. It seems to conjure up, in a few terse sentences, a whole history of modern musicmusical "Conversations with Stravinsky." There is no trace of sentiment, only tension and a certain ritualistic, laconic fervor.

The other pieces are also worthy of note. The Orchestra Variations, most familiar from their appearance-played three times over !--- as the score for the Balanchine ballet Jewels, are a kind of anti-pendant to Le Sacre du printemps-an early and a late instrumental magnum opus, one prolix, outwardly revolutionary, overpowering, the other concise, dense, serial, refined. The Introitus is another Requiem, a short, moving, chorus-and-percussion epitaph for T. S. Eliot (the Variations are also in memoriam-Aldous Huxley). The fourth piece, Abraham and Isaac (dedicated to Israel), is a setting of the Hebrew text from Genesis for baritone and chamber orchestra. It consists of a

long, unfolding, twelve-tone cantorial incantation accompanied by the barest of instrumental sounds.

Only the brief *Introitus* is actually conducted by Stravinsky, Robert Craft being responsible for the rest. The Columbia chamber and symphonic ensembles are, of course, New York and Hollywood free-lance groups of varying constituency, but they and the vocal forces are effective proponents of all this patriarchal, epitaphial music. The recordings are good; the disc quality is fair by going American standards. *E. S.*

RECORDINGS OF SPECIAL MERIT

STRAVINSKY: Le Sacre du printemps. Cleveland Orchestra, Pierre Boulez cond. COLUMBIA MS 7293 \$5.98, © 16 11 0154 \$6.98.

STRAVINSKY: Le Sacre du printemps; Eight Instrumental Miniatures for Fifteen Players. Los Angeles Philharmonic Orchestra and Los Angeles Chamber Ensemble, Zubin Mehta cond. LONDON CS 6664 \$5.98.

Performances: Both superb Recordings: Both superb Stereo Quality: Superb on both

Not one, but two new recordings of *Le Sacre du printemps*! Spring came in with a bang this year! To make a choice between these new additions to an already long list of *Le Sacre* performances is not easy. Both orchestras sound stunning, and both conductors are big-league musicians.

Considering that Stravinsky always let it be understood he meant every jot and tittle of the markings in his scores (see his analysis of three earlier recordings of Le Sacre, including one by Boulez, in HiFi/Stereo Review for February of 1965), 1 find it surprising that so fastidious a score-follower as Boulez should take liberties with the composer's metronome indications. Mehta is known as something of a firebrand, so one does not expect him to take an absolutely objective approach. But apparently Le Sacre is now so firmly ensconced in the literature that obeisances to Stravinsky's markings, such as were made by Monteux on his fine RCA Victor recording (unfortunately deleted from the catalog), are no longer felt to be necessary. Since I have lent a forgetful friend my copy of Stravinsky's own Columbia performance, I can't swear that even be followed his own metronome markings exactly. But I can affirm that Monteux did, to extremely good effect, and that neither Boulez nor Mehta does so with any constancy.

As a single, notable instance, I might mention the Rondes printanières section, which is marked metronomically for a quarter note to equal 80. Monteux (who premiered Le Sacre back in 1913) followed the score exactly on his recording, and the section was absolutely vivid with rhythmic thrust. Boulez reduces the speed to 60, which is to say, from something like a slow andante to an adagio-no small reduction. But Mehta goes him one better and slows the tempo to 56. Those last four metronome points are crucial, and Mehra's Rondes sound a little labored. Boulez's do not, but the section is not as attractively slinky as it would have been at the proper tempo.

I mustn't give the impression, however, that either of these performances is less than first-rate. Le Sacre is obviously able to withstand a more subjective interpretation than Stravinsky may have had in mind. Mehta brings out a great deal of color and excitement. Boulez, whose reading I somewhat prefer, does the same within a more finelined context.

On the London disc, Stravinsky's *Eight* Instrumental Miniatures for Fifteen Players are included as a curtain-raiser. They are excellently played. L. T.

RECORDING OF SPECIAL MERIT

VERDI: *Il Troratore*. Placido Domingo (tenor), Manrico; Leontyne Price (soprano), Leonora; Sherrill Milnes (baritone), Count di Luna; Fiorenza Cossotto (mezzosoprano), Azucena; Bonaldo Giaiotti (bass), Ferrando; Elizabeth Bainbridge (mezzo-soprano), Inez; Ryland Davies (tenor), Ruiz; others. Ambrosian Opera Chorus; New Philharmonia Orchestra, Zubin Mehta cond. RCA LSC 6194 three discs \$17.98.

Performance: Very good, with reservations Recording: Excellent

Sterea Quality: Very good

RCA's new *ll Trovatore*, the company's third version on microgroove (one per LP decade), has much to offer: strong and often exciting singing, vital direction, and rich recorded sound. It is, all things considered, a very fine performance, built around the artists who made the opera's current Metropolitan production a great musical success. Whatever reservations follow must be considered within this positive overall view.

Reservations, in fact, do not apply at all



Segovia is "so proud" of him. So are we.

In 1968, Andrés Segovia singled Chris Parkening out: "He belongs to that special group of my disciples of which I am so proud." The list was five names long. At 20, Parkening was the only American. After Chris attended his Berkeley classes, Segovia commented, "He progressed not by learning but by intuition."

In the new spirit of Angel, we have recorded three albums by Chris Parkening. Hear them. We believe his subtlety and his thoughtfulness and his talent will delight you. Just as they have Segovia.



CIRCLE NO. 4 ON READER SERVICE CARD



MARILYN HORNE and HENRY LEWIS: Their new London disc

is evidence of artistic maturity

LONDON RECORDS' new release of Mah-ler's Kindertotenlieder and Wagner's Wesendonck Lieder, sung by Marilyn Horne with her husband Henry Lewis leading the Royal Philharmonic Orchestra, not only contains exceptional performances of these elusive works but also places on the careers of two maturing American artists the stamp of having "arrived" artistically. Both husband and wife have been in the news for several years-Miss Horne most recently, of course, for her dazzling Metropolitan Opera debut this spring as Adalgisa in Bellini's Norma. But newsmaking and artistic achievement often have little to do with each other. In this instance, it seems to me the acclaim is quite justified, and I offer this disc as evidence.

I'll generalize-just to get started-and say that the Wesendonck Lieder are for me the more successful of the undertakings, by a narrow margin. Miss Horne has a positively matchless way with sustained legato lines, and the sinuous phrases she spins out here with such security and ease are in themselves ravishing. But she does not stop there: she delivers Mathilde Wesendonck's rather humid salon verse as if it were great love poetry. In Stehe still!, for example, the words "Wesen in Wesen sich wiederfindet, und alles Hoffens Ende sich kündet" ("Being finds itself in being, and all hopes are realized") are ecstasy embodied, and the first quiet moments of Träume breathe a lovely tender radiance. The measure of the magnitude of her achievement here is that my only cavil is with her habit of clinging to the consonant sound (or sounds) of a word before opening up into the vowel sound-a very small blemish on a near-ideal performance. Mr. Lewis' orchestral accompaniments are beautifully fashioned and are executed with great authority by the Royal Philharmonic.

The Kindertotenlieder rate only slightly lower. Mahler's five songs on the German poet Friedrich Rückert's lamentations for his dead children are perhaps the most difficult works in the entire repertoire of orchestral song, and it is an infrequent performance, "live" or recorded, that brings into perfect association the grief-laden vocal line, so full of both technical and interpretive hurdles, and the interlocking contrapuntal strands of the "loaded" orchestral backing in this score. That the Lewises are in the same league as the teams of Kathleen Ferrier and Bruno Walter, and Dietrich Fischer-Dieskau and Karl Böhm, is no small tribute. Some peccadilloes of intonation aside, Miss Horne is superb: her German is much better than Miss Ferrier's, and, as in the Wesendonck Lieder, she colors the vocal line very expressively. The interpretive means used here-slow basic tempos subject to frequent variation, anticipatory ritenutos, and the like-are not much to my taste, but they do not violate Mahler's score markings, and I never felt that the forward motion was impeded or the continuity weakened. And Lewis draws some remarkable playing from the orchestra: in the first song, "Nun will die Sonn'," just after the big vocal phrase "ins ew'ge Licht versenken," where Mahler indicates "Mit leidenschaftlichem Ausdruck" (with passionate expression), the music bursts out with really memorable force; and no one I know handles better the difficult "slowing-up" orchestral measures leading to the cradle-song ending of "In diesem Wetter." But some of what these scores hold is not fully realized. In "Wenn dein Mütterlein," for example, Miss Horne attains a shattering intensity, but here—and elsewhere, too-important orchestral lines are submerged. And some fluke of acoustics renders the harp larger than life in the first song and the B-flat clarinet too resonant throughout. There is some slackness, too-"In diesem Wetter" just runs out of steam about twothirds of the way to the cradle song. Still, I would not deny that the essence has been caught: after several hearings of these performances, I was still quite moved by them.

Taken all together, this is a recording that makes a considerable dent in one's musical sensibilities. Though its weaknesses are identifiable, its virtues are of a rare kind that is out of the reach of lesser artists. Except for the instances I have mentioned, the recorded sound is a credit to London, a company with notably high standards; both voice and orchestra possess a really extraordinary presence. The handsome album cover has good liner notes by Jack Diether, but the enclosed text-and-translation sheet is error-ridden -to the point that the title of the fourth Wesendonck song, Schmerzen, variously rendered into English as "Sorrow." "Sufferings," or "Tears," is given here—in-credibly—as "Plans"! Robert S. Clark

MAHLER: Kindertotenlieder. WAG-NER: Wesendonck Lieder. Marilyn Horne (mezzo-soprano); Royal Philharmonic Orchestra, Henry Lewis cond. LONDON OS 26147 \$5.98.

to Fiorenza Cossotto's gloriously sung Azu cena, which makes all the dramatic point effectively without excessive theatricalism and without compromise of the sustained beauty of the singing. I give strong endorse ment also to Leontyne Price, here undertak ing the role of Leonora for the second time on discs. This has always been one of he best efforts, and, again, she responds to it: demands with a well-conceived, secure char acterization. Both "Tacea la notte" and "D'amor sull'ali rosee" are delivered with expressive phrasing, well-sustained legato and a sensuous, dusky tone quality that gives way to a freely soaring high register. The fourth-act cabaletta "Tu vedrai che amore" (fully restored in this performance) strains her resources somewhat, for its tessitura lies rather low and its florid passages seen effortful.

In the more lyrical and meditative passages, the Manrico of Placido Domingo is exemplary. His "Ab sì, ben mio" is excellent, and he does some beautiful work in Act Four, particularly in the music leading into "Ai nostri monti." He sounds less at ease when he strives for volume, but in the main this is a very satisfying Manrico, and there is no denying the appealing quality of the voice itself. As yet, neither he nor the Count di Luna here, Sherrill Milnes, has stamped a distinctive mark on the characters they portray. The baritone is a natural Verdian: his vocal sound is ample and has a ringing top (not entirely free of effort), he phrases expansively, and he displays the energy and rage a good Count di Luna should have. But he needs a finer control of the externals-his intonation is fractionally off at times, for example. The performance gains added strength from a happy casting of the lesser roles-the exceptionally fine Ferrando of Bonaldo Giaiotti and the far-above-average Inez and Ruiz of Elizabeth Bainbridge and Ryland Davies.

And this brings me to the location where most of my reservations are centered: the orchestra pit. Zubin Mehta deserves credit for the overall vitality of the performance, for its rhythmic propulsion and definition, and for the good orchestral balances. Much of his work is excellent. The Azucena-Manrico duet (Act Two, Scene 1) is very well paced, the tricky ensemble that concludes the act is held together admirably, and virtually the entire fourth act is above reproach. On the other hand, he shows a recurring tendency to overstress dynamics and an inability to curb his penchant for fast tempos. The first-act trios, the opening of Act Three, the Soldiers' Chorus, the ensemble following 'Giorni poveri avea"-all these lose effectiveness through hard-driven and ill-judged tempos. As I pointed out at the beginning of this review, this is a good performance, but it could have been even better if the orchestral leadership had matched the quality of the singing.

This is a "complete" *Il Trovatore*, with repeats observed and several traditional cuts dutifully restored, including some which, in my opinion, could have been safely dispensed with. The sound is rich and clear, the vocal ensembles are clearly defined, and the technical production is laudable for its honest and ungimmicked sound. In overall merit, this is as good a performance as can be found among the modern stereo versions available to the record buyer at present. *G. J.*

COLLECTIONS

CRISTINA DEUTEKOM: Opera Arias. Verdi: I Vespri Siciliani: Mercè, dilette amiche. Ernani: Ernani! Ernani, involami. Il Trovatore: D'amor sullali rosee. Don Carlo: Tu che le vanità. Bellini: I Puritani: Qui la voce. La Sonnambula: Ab! non credea mirarti. I Capuleti e i Montecchi: Oh, quante volte. Donizetti: Linda di Chamounix: O luce di quest'anima. Cristina Deutekom (soprano); Orchestra of Radiotelevisione Italiana, Rome, Carlo Franci cond. PHILIPS 839791 \$5.98.

Performance: Generally good Recording: Very good Stereo Quality: Very good

Cristina Deutekom, whose Queen of the Night is known to Metropolitan audiences, is a disarmingly dimpled, reassuringly buxom, generously gifted, and somewhat erratic singer. She displays true affinity for the Italian repertoire, and the range and amplitude of her voice enables her to take on the heavier dramatic challenges of the Verdi roles, though the low tessitura of the Don Carlo aria is not comfortable for her. Some of Miss Deutekom's work is decidedly firstclass, particularly the vivacious Donizetti aria, but she is not always so consistent. Her top register is clean and secure; in the midrange, however, her vibrato is often excessive and her intonation not always dependable. Miss Deutekom has a good technique and an interesting way of handling fast passages: notes clearly articulated in a manner that is neither legato nor staccato, but something in between. With a little more attention to minutiae she is capable of outstanding singing; here, she achieves distinction only intermittently. The orchestral support she receives from conductor Franci, however, is consistently excellent. G. I.

RECORDING OF SPECIAL MERIT

HISPANIAE MUSICA, VOL. 2: Masters of the Baroque. Durón: Ya rompen sus velos; Adiuva nos Deus. Cererols: Hodie nobis caelorum Rex. Josep Torrescassana (boy alto, in Adiuva nos Deus); instrumental soloists and Choir of Montserrat Monastery, Ireneo Segarra dir. Aguilera: Tiento de falsas de quarto tono. Bruna: Tiento de primer tono. Xaraba: Obra accidental No. 2. Del Vado: Tiento de primer tono. Alvarado: Tiento sobre el "Pange lingua" español. Cabanilles: Paseos II. Elías: Preludio. Julio-M. García Llovera (organs in Zaragoza, Madrid, and Toledo). DEUTSCHE GRAMMOPHON ARCHIVE ARC 198453 \$5.98.

Performance: Best in vocal works Recording: Excellent Stereo Quality: First-rate

This is the second of a series of Archive volumes devoted to Spanish music, this one including choral and organ music of the seventeenth century. Of the two vocal composers, Diego Durón (c. 1658-1731), a choirmaster of the Cathedral of Las Palmas (Canary Islands), is quite obscure; his Christmas carol, Ya rompen sus velos, is utterly charming, and his other piece, a motet for Good Friday, has, in spite of its reflective mood, a typical Spanish intensity. Juan Cererols (1618-1680), a Montserrat monk, is represented by Christmas responses, im-

(Continued on page 95)



RECORDS

Now on London

Puccini: TOSCA

Leontyne Price, Giuseppe di Stefano, Giuseppe Taddei The Vienna Philharmonic Orchestra—Herbert von Karajan OSA-1284

Mozart: COMPLETE MASONIC MUSIC

Werner Krenn, Tom Krause–The Edinburgh Festival Chorus —The London Symphony Orchestra–Istvan Kertesz ^{OS-26111}

Bellini: BEATRICE DI TENDA—Highlights

Joan Sutherland, Luciano Pavarotti, Josephine Veasey —The London Symphony Orchestra—Richard Bonynge OS-26140

JAMES KING IN OPERETTA AND SONG

Lehar: Giuditta—Freunde, das Leben ist lebenswert; Du bist meine Sonne. Friederike—O Mädchen, mein Mädchen. Das Land des Lächelns—Dein ist mein ganzes Herz. J. Strauss— Enie Nacht in Venedig—Komm in die Gondel. Tauber: Du bist die Welt. Stolz: Corrida. Meisel: Schön ist jeder Tag. Geehl: Für dich allein. Nevin: Der Rosenkranz. de Curtis: Vergiss mein nicht. Lara: Granada The Berlin Symphony Orchestra—Hans Carste 05-26153

SALUTE TO PERCY GRAINGER

Peter Pears, John Shirley-Quirk—The Ambrosian Singers— The English Chamber Orchestra—Benjamin Britten CS-6632

Mendelssohn: SEXTET IN D MAJOR (Op. 110) Borodin: QUINTET IN C MINOR

Members of The Vienna Octet CS-6636

FRENCH OPERA OVERTURES

Auber: Marco Spada; Lestocq. Adam: Giralda; La Poupée de Nuremberg. Lecocq: La Fille de Madame Angot. Thomas: Mignon. Planquette: Les Cloches de Corneville. Boieldieu: La Calite de Bagdad. The New Philharmonia Orchestra—Richard Bonynge CS-6643

Beethoven: SYMPHONY NO. 1 IN C MAJOR (Op. 21) SYMPHONY NO. 2 IN D MAJOR (Op. 36)

The Vienna Philharmonic Orchestra-Hans Schmidt-Isserstedt cs-6658



Twenty-fourth in a series of short biographical sketches of our regular staff and contributing editors, the "men behind the magazine"—who they are and how they got that way. In this issue, Contributing Editor

BERNARD JACOBSON By JAMES GOODFRIEND

"I F anyone had asked me, a dozen or so years ago, what I most wanted to be, assuming all difficulties could be overcome," says Bernard Jacobson, "I would have told him that I wanted to be a music critic." In a field that has sometimes been equated with the French Foreign Legion as a home for people who all wanted to do something else, that statement alone is almost sufficient to make Mr. Jacobson unique among music critics in America today.

Besides recently joining the staff of STEREO REVIEW as Contributing Editor, Bernard Jacobson is Music Critic of the Chicago Daily News, one of the few really important positions of its kind in the United States. Why does one want to become a music critic? "The why of it is easy," he says. "I'd always fancied myself as having some ability with words, and what interests me has always been music. Joining what you can do with what interests you is only logical. If you have passionate feelings about music (and I do), you want to get them across. You want to sort of strike a blow for what you believe is right. Eventually, it's a moral involvement."

How one becomes a music critic is rather more complicated. Bernard was born in London on March 2, 1936, within sound of the Bow Bells (the Church of St. Mary-le-Bow) and is thus, according to ancient tradition, an official Cockney. He was educated first at the City of London School. "I was already interested in music, but, if you had the ability, the school expected you to gravitate toward ancient languages. I did. The only way to study music was really to be no good in anything else. 'Besides,' as a teacher advised me, 'you don't want to earn your living doing the thing you love best.' "

In 1956, Bernard entered Corpus Christi College, Oxford, where he took his degree in philosophy and ancient history. (The two years between schools he spent in the Royal Air Force, where he learned to type to Schubert's *Rosamunde* ballet music.) At Oxford he spent almost all the time he ought to have devoted to study in listening to, singing, and writing about music, and in editing a university magazine. Later, his history tutor said: "I always knew you had another line, so there seemed little point in making a fuss."

"About a month before graduation, in 1960, I saw an advertisement for someone to go to Holland as a note writer for Philips Records." Bernard applied for the job, got it, and spent two years in Baarn. 'I did the backs of the jackets, and the man in the next office did the fronts. He was an excellent photographer. One day he proposed that we do interviews together, he taking the pictures and I writing the copy, and submit them to the London Times. I thought that this was preposterously ambitious, but we gave it a try. We interviewed his former nextdoor neighbor, who happened to be Gustav Leonhardt, the harpsichordist. Nothing happened for a while. Then, three months after we had submitted the interview, the Times wrote to ask if we would mind if they now published it-and, incidentally, if I would care to be their regular Dutch music correspondent. It was completely fortuitous, but, of course, it was really what I had wanted all along.'

Bernard returned to England in April, 1962, and did classical promotion work for E.M.I. International, as well as music criticism for *Music and Musicians* and the Manchester *Guardian*, record reviews for *Records and Recording*, BBC broadcasts, concert program notes, and record liner notes.

In 1964, he moved to New York, and worked as a free lance for about three years. He wrote for Saturday Review, High Fidelity/Musical America, Opera News, Music Journal, and many other publications, as well as being correspondent for the British publications The Musical Times and Opera.

In October, 1967, Bernard was appointed Music Critic of the Chicago Daily News, and he serves also as advisory member of the Illinois State Arts Council. He has contributed articles to Melos (Mainz), The World of Music (UNESCO, Berlin), The Listener (London), and other magazines, and wrote the chapter on "The Songs" in Frédéric Chopin, a symposium edited by Alan Walker (Barrie & Rockliff, London, 1966; Taplinger, New York, 1967). He has recently been invited to contribute an article on the Sonata to the new Encyclopaedia Britannica, which will replace the articles by Donald Francis Tovey and Robert Donington.

B_{ERNARD} was married in Philadelphia on August 11, 1968, to Philadelphiaborn Bonnie Brodsky. Mrs. Jacobson, whose professional fields are English, medieval studies, and linguistics, works at the Chicago Council on Foreign Relations. The three Jacobsons live in what Bernard refers to as "a joke," a terrace apartment in one of the two huge phallic symbols that dominate the middle of Chicago. The third member of the family is Farnaby the cat, who unfortunately gets left behind when the Jacobsons visit Bernard's parents, who live in a suburb of London.

What about being a music critic? How do you work? "I don't think a great deal about how I do things. I find listening to music absolutely incompatible with doing anything else, even making notes on what I'm hearing. The first part of criticism is the unconscious part: I simply watch my gut to see how it reacts. As someone said, a critic is like a piece of litmus paper. You dip him in music and see what color he turns. The intellectual part is the task of drawing the lines that connect the observed event and the reaction, and doing it in such a way as to illuminate the event for other people. That's where evidence comes in." And Bernard Jacobson has built his reputation as a music critic on being able to supply the evidence.

pressively set forth by two antiphonal choirs. The Montserrat choir sings all of this music extremely well and with rather steadier tone than I have heard from them in the past (for instance, a set of six villancicos by Cererols on a now ten-year-old Lumen recording); the boy alto in the motet is excellent, and the accompaniments are firstclass. The second side, consisting to a considerable extent of tientos (preludes, usually contrapuntal in style) by relative unknowns Juan Cabanilles (1644-1712), organist of Valencia Cathedral, is perhaps the best known, and José Elías was his pupilis less appealing, partly because the works themselves emerge a little drily in García Llovera's hands. He does not bother to add unwritten ornaments, something any seventeenth-century Spanish organist would have done as a matter of course, and the best one can say of his playing is that he obviously knows the outstanding features of the three Spanish organs on which he performs. For instance, Elías's Preludio makes an impressive sound with the Toledo Cathedral state trumpet stop; another worthy item is the lengthy tiento by Pablo Bruno (1611-1669). The sonic reproduction is fine and texts and translations are provided. *I. K*.

RECORDING OF SPECIAL MERIT

YOSHIO UNNO: Recital. Sarasate: Zigennerweisen, Op. 20, No. 1; Saint-Saëns: Introduction and Rondo Capriccioso, Op. 28; Massenet: Méditation from "Thais"; Beethoven: Romance, in F Major, Op. 50; Romance, in G Major, Op. 40; Tchaikovsky: Melody from "Souvenir d'un lieu cher," Op. 42. Yoshio Unno (violin); CBS Symphony, Tadashi Mori cond. COLUMBIA MS 7411 \$5.98.

Performance: Superb Recording: Superb Stereo Quality: Perfect

Yoshio Unno, a thirty-four-year-old Tokyoborn violinist, has been concertizing in Western Europe, Eastern Europe, the U.S.S.R., and South America roughly since 1964, and has recorded for CBS/Sony in Japan since 1968. With this issue, he makes his United States recording debut.

His is an astonishing talent. Technically, there is absolutely nothing he can't do and do elegantly. All the digital pyrotechnics of pieces like the Sarasate Zigennerweisen take place as if they were the fundamentals of violin playing rather than the far reaches of virtuoso complexity. His intonation is utterly perfect, and this is not a general impression given by skillful "faking," but an actual note-by-note fact of every fingertip. His tone is beautiful, with a bright, silvery edge to it, and lots of vigor in the lower registers. In short, on a technical level he has everything.

Musically, he seems equally remarkable. Although this disc comprises "favorite violin works," even including the Massenet Méditation from Thais, it represents a very sage cross-section of music for a recording debut. The two Beethoven Romances, Opp. 40 and 50, are by no means pot-boilers, nor are they musically easy to interpret. On the contrary, they are two of the most inscrutably resistant works in the violin repertoire, and young Unno plays them like an old master.

Having made a recording debut of this caliber, he should, I imagine, be appearing on our recital stages soon. L.T.

In 1948, University Sound made home high fidelity possible.

In 1970, we made it perfect.

In 1948 University unveiled the world's first popularly priced, full fidelity speaker—the 6201 —and home high fidelity was born.



In 1970 University unveils the finest, fullest line of high fidelity products in the world—and home high fidelity is finally perfected.



ULTRA D

The most popular speaker system in the University line. A high efficiency threespeaker system that reproduces the entire audible spectrum with clarity and fullness. Three speakers balanced in acoustic suspension assure excellent uniformity throughout entire range, with no holes or "regeneration gaps".

Specifications: 3-speaker, acoustic suspension system ■ Frequency Response: 30 Hz to beyond audibility ■ Power handling capacity: 32 watts ■ Impedance: 8 ohms ■ Controls: Brilliance/Presence ■ Finish: Lustrous oiled walnut ■ Dimensions: 23¹% x 11⁷% (W) x 9³%" (D)







Original Broadway cast recording on Ampex Records & Ampex Stereo Tapes • Open reel • 8-track cartridge • Cassette Available wherever records and tape are sold



ENTERTAINMENT

Reviewed by NOEL COPPAGE • DON HECKMAN • PAUL KRESH • REX REED • PETER REILLY

TONY BENNETT: Tony Sings the Great Hits of Today!. Tony Bennett (vocals); orchestra, Peter Matz and Dee Barton, arrs., Peter Matz cond. MacArthur Park; Something; The Look of Love; Here, There and Everywhere; Live for Life; Little Green Apples; Eleanor Rigby; My Cherie Amour; Is Thu All There Is?; Here; Sunrise, Sunset. COLUMBIA CS 9980 \$4.98, (1) 18 10 0876 \$6.98.

Performance: Tremulous, tentative Tony Recording: Uneven Stereo Quality: Okay

Back in the late Fifties, I dated a girl production assistant for a number of TV variety shows. Of all the famous she'd worked with, Tony Bennett was the only star to have given the entire crew and cast gifts on leaving—unlike the grandstanders who only rewarded the producer, director, and writers. This set Tony up for me for all time. It helped that he also had the talent to sing like some demented and endearing ugly angel.

So now here's the new Bennett album, warmly welcomed in spite of a forced sketch of Tony on the cover in bell-bottoms, groovy shoes, wide tie, and mod threads to bear out the fact that the singer of the Fifties is still "with it" in the Seventies.

Things start out promisingly with Mac-Arthur Park, the best number on the album. Here he sounds like the old Tony, a good top to this voice, and the danceable tempo mixing perfectly with the Bennett sound in what is a truly interesting song. On band two, Something, he is still great. He handles this Beatles hit with smooth insinuating grace and originality. Tony's changed emphasis on the phrase "I don't want to leave her" makes it sound like an entirely new song. Bands one and two on side one are what "Tony Sings the Great Hits of Today" should be like all the way through. But after band two—let's just say, charitably, that the candle flickers and dims a lot.

There are exceptions. Sunrise, Sunset is perfect public-appearance stuff for the Catskill circuit or Vegas. Tony is pretty good here, absorbed but a bit hampered by the lachrymose melody and lyrics. The corny, swingy, campy, old-fashioned treatment of Here, There and Everywhere comes on, however, like somebody on a racing motorbike

Explanation of symbols: (B) = reel-to-reel tape (A) = four-track cartridge (B) = eight-track cartridge (C) = cassette Monophonic recordings are indicated by the symbol (M); all others are stereo. with the soles of his shoes skating the pavement. In *Live for Life*, the zesty, adventurous song has been turned into a blues dirge. The performance here is embarrassing, like a promising amateur singer going flat in the middle of a number. A big-band jitterbug tempo (arrangement by Dee Barton) is mildly funny for *Little Green Apples*, a much over-sung song. But how can we overlook what Tony's "boop-boop-dittum-dottom-wottom" approach makes of a good love song?

Listening to this great artist go up and down, exposing himself in slow tempos where his lack of vocal control actually hurts,



JUDY GARLAND A legend based on talent

is like watching those last painful professional years of Mickey Mantle or Y. A. Tittle. This is one album that should have been extra-carefully put together and ruthlessly edited so Tony could appear in his best light.

Prediction: the public will love it anyway. And thinking of Tony's sweet sincerity, the joy of his past performances, I'm glad. *R. R.*

BONNIE DOBSON : Good Morning, Rain.

Bonnie Dobson (vocals and guitar); orchestra, Ben McPeek arr. and cond. Light of Love; Sweet Man; Milk and Honey; White Song; Clown; Streets of London; Factory Girl; and four others. RCA LSP 4277 \$4.98.

Performance: **Promising** Recording: Very good Stereo Quality: **Excellent**

Here's another pretty girl with a pure soprano voice in the best Baez-Collins-Mitchell tradition, but with a couple of differences: Bonnie Dobson's voice has a slight but definite lilt to it, and she is backed, on this recording, by the type of small band that doesn't usually accompany pretty girl folk singers with pure soprano voices. I now know why they don't; the background sounds are distracting almost throughout. Worse, the band at times destroys the emotional impact Miss Dobson's voice might have made if left alone. Her natural inflection being what it is, she is going to have to be subtle and delicate in conveying certain emotions; her voice naturally sounds happy and carefree. The arrangements seem to put her in a sanitized plastic wrapper, like a brownie at Howard Johnson's.

Three of her own compositions, Sweet Man, You Don't Know, and Good Morning, Rain, are the main attractions on the disc. Sweet Man has trite lyrics but a driving rhythm and a bluesy melodic line; hard to believe it was written by a little old girl like this one. You Don't Know will never be successfully recorded by anyone else, now that we have this version as the standardand for once the arrangement doesn't work against Miss Dobson. Good Morning, Rain has a catchy if unoriginal melody and could become a super hit if the radio stations play it. The arrangement is good, which is to say restrained, and this cut demonstrates that Miss Dobson has the ability to produce a pleasant-sounding high note in close proximity to a pleasant-sounding low note, an ability some of her contemporaries don't have.

Bonnie Dobson has, I think, a high-caliber talent with a few fairly evident weaknesses; there should be a comfortable place for her in folk music as it is now defined. N. C.

RECORDING OF SPECIAL MERIT

JUDY GARLAND: The Golden Years at MGM. Judy Garland (vocals); various orchestras. You Made Me Love You; Over the Rainbow; I Cried for You; The Boy Next Door; The Trolley Song; Get Happy; I Don't Care; and fourteen others. MGM SDP1-2 \$11.96, **(B)** J12 $(7\frac{1}{2})$ \$11.95, **(B)** K812 \$13.90, **(C)** K512 \$13.90.

Performance: Excellent Recording: Variable Stereo Quality: Variable

From all one can gather from Miss Garland's own testimony, she did not consider her years at MGM as being particularly golden. This two-record set is, however, a stunning reminder of what a remarkable performer she was during those years: youthful, vital, earnest, and vastly talented. The odd, poignant catch in her voice, which in later years became a ginmicky whine, is heard here in several affecting songs, including her first big hit You Made Me Love You. The recordings cover the years 1938 to 1950, the

WHY PAY MORE FOR HI-FI COMPONENTS & FURNITURE?



We have the answer. The original space saver! Presenting a complete new line of versatile HI-FI modulars that can be arranged vertically, horizontally, wall hung or free standing. Modulars are available in walnut, oak, teak and rosewood.

Also available at a substantial savings are brand name components.

Write for free brochure, and indicate your component choice. All merchandise is shipped promptly from our inventory, fully insured in factory sealed cartons.

OMNICRAFT INDUSTRIES, INC. Dept. 302 Station Plaza East, Great Neck, N.Y. 11021

CIRCLE NO. 28 ON READER SERVICE CARD

Stereo Review subscriber service

Please include an address label when writing about your subscription to help us serve you promptly. Write to: P.O. Box 1099, Flushing, N.Y. 11352



state

year in which she was let go by MGM. The album contains an elaborate booklet with scenes from her films during her MGM career and a short, unsentimental, and apt tribute from Arthur Freed, who produced so many of her films. For evidence as to why Garland became and remained a star for so many years this album is basic repertoire. The only important film she made post-MGM was A Star Is Born, which had a fine score by Harold Arlen. But even then, the inner torment was becoming more and more visible. During her last years she became a rather pathetic figure with an audience that comprised, in the main, people who were sicker than she was, and who took a morbid delight in watching her disintegrate in public performances. These records present the core of the Garland legend-a legend based on talent, not on emotional turmoil. P. R.

RECORDING OF SPECIAL MERIT

JENNIFER: See Me, Feel Me, Touch Me, Heal Me! Jennifer (vocals); orchestra. Let the Sunshine In; Easy to be Hard; Time Is on the Run; Cajun Train; Old Folks; and six others. PARROT PAS 71034 \$4.98.

Performance: Good Recording: Excellent Stereo Quality: Good

My response to the plea in the title of Jennifer's new album is: love to! Along with being pretty, Jennifer is also a better than fair singer with really good taste in choosing material. She makes a very good job of Mason Williams' Saturday Night at the World, with a guitar accompaniment by Williams, and also teams with him again in a translation of an aria from Donizetti's Don Pasquale called Tell Me Again I Love Thee. in which he sings the tenor part. Jennifer comes across as a very hip, with it girl who doesn't take herself too seriously, but manages to make a lot of music make a lot of musical sense. For instance, Mick Jagger's song Back Street Girl, in her hands, is really a tour de force. Nothing else quite reaches that peak, but she almost makes it with Jacques Brel's Old Folks. All in all, this is an enjoyable album by a promising young talent who seems to know exactly where she's going. P, R

RECORDING OF SPECIAL MERIT

GERMAINE MONTERO: Canciones de España. Germaine Montero (vocals). Roman El Granaino (flamenco guitar); orchestra, Salvador Bacarisse cond. Los Cuatro Muleros; Los Contrabandistas de Ronda; Nana; Paso Rio; No bay quien pueda; Caracoles; Eres Alta y Delgada; El Baile de Avila; Ya se van los pastores; Jotas; Asturiana; Boda; Folia de San Vicente de la Barquera; Corroclocio; Fandango; Gallegada; Con las Abejas. VANGUARD VSD 6534 \$4.98.

Performance: Pulse-quickening Recording: Good electronic reprocessing Stereo Quality: Plausible

"Electronically rerecorded to simulate stereo," this is a classic recording of songs from Spain sung by Germaine Montero, whose fiery vocals are alternated now and then with some lovely respites in the form of flamenco guitar solos by Roman El Granaino. Miss Montero's talent was brought to the world's attention by the poet Federico Gar-

cia Lorca, who thus earns still another measure of gratitude for his contributions to our understanding of the Iberian character. In her enthralling program, Miss Montero ranges from songs about mule drivers and contrabandists in Andalusia to a dance from Castile, a shepherd song from Meseta, a ballad from Galicia, a tense and insolent jota from Aragon. The most haunting number she offers is also the most hushed, with an undertone of that cruelty that threads its way through the whole of Spanish art-a song about a girl who sees her lover in every river and fountain she passes, so that it's no longer safe to drink the water: his eyes have poisoned it. This is one of the great recordings of Spanish folk songs. P. K.

THE MOTHERS OF INVENTION: Burnt Weeny Sandwich. The Mothers of In-



vention (vocals and instrumentals). WPLJ; Igor's Boogie; Overture to a Holiday in Berlin; Theme from a Burnt Weeny Sandwich; Igor's Boogie, Phase Two; Holiday in Berlin, Full Blown; Aybe Sea; Little House I Used to Live In; Valerie. BIZARRE RS 6370 \$5.98, (1) SRM 6370 \$6.95, (2) CRX 6370 \$5.95.

Performance: Trippy Recording: Excellent Stereo Quality: Comfortable

Frank Zappa, a sort of unwashed, people's (read that without the comma if you insist) version of John Cage, talked Reprise into starting two record labels, Bizarre and Straight, and I guess nobody need be told that the Mothers of Invention record for Bizarre. They are reasonably bizarre here, although not as freaky as they have been on other recordings. Those who still get haircuts can get an idea what the Mothers are like if they can picture the old Sauter-Finegan Orchestra gone berserk; here we have an ultimate squeak, over there creative use of feedback, and in the back a french-fried ohm.

And yet it is all real, fairly honest music. Sugar Cane Harris performs a violin solo on *Little Honse I Used to Live In* that would, if done in formal (or at least clean) clothing in the august atmosphere of a classical concert, extract that throaty yet refined cry of "Bravo" we all like to hear. Zappa presides over it all from the organ, picking his

zip-code

way through the complicated electric maze he has set up. He wrote all the pieces except White Port and Lemon Juice and Valerie, the only two cuts that involve vocals and are the low points of the recording. (The Mothers fall into a Four-Seasons vocal style on Valerie; must be a put-on.) The high points, for me, occur several times in Little House, which runs for almost twenty-two minutes.

The Mothers don't play rock, usually, although their music is called rock. I suppose it eventually will be called jazz, for lack of a better word. They sound like a fairly straight avant-garde jazz combo at times, and at other times they kid jazz unmercifully. One cut here features a brilliant piece of satire with an alto sax. And anyone who refuses to take an alto sax seriously is all right in my book. *N. C.*

RANDY NEWMAN: Twelve Songs (see Best of the Month, page 76)

THE JOE RENÉ COMPLEX: Music to Read "The Pretenders" By... provocative and sexy music inspired by the best-selling novel. The Joe René Complex (vocals and instrumentals). Il You Pretend; Double Bubble Bath; Ménage à Trois; Mirror on a Mexican Ceiling; Weekend for Lulu; Anti-Social Register; Pictures At an Exbibition; Variations On a Ménage; and three others. PHILLES PHS 606327 \$4.98.

Performance: Soft and limpid Recording: Understated Stereo Quality: Okay

This is the sort of LP you think is a big campy gag, and that *is* probably how it started. The front cover more or less duplicates the dust jacket of Gwen Davis' best-selling sex novel which was based on more or less recognizable people from society and show business. The back of the package lists the cutely named songs and boasts a dewy-eyed photo of the author, plus a straightforward one of composer René; then an irate "letter" from the mother of Harry Bell, threatening to sue (Bell is a character in the book).

But you don't have to have read The Prelenders to enjoy this album. It has already become a kind of underground hit, with the NYC and LA disc jockeys taking a fancy to it. The reason has nothing to do with its faintly sophomoric attempts at double-entendre (read page so-and-so with such-and-such selection). The success lies in the eleven softly listenable numbers. Only Harry's Funeral is annoying, with its recitation of Harry's virtues and faults done in the high-school manner of a class giving out with The Bells. There's a group vocal on If You Pretend, which opens the album sweetly like an old number from a Disney film. It's nice, acceptable, and very commercial. Only Weekend for Lulu and Rank-Out have any rock beat and a pretty quietly done one at that. Almost all the numbers are pleasant instrumentals which sound very reminiscent of something. Therein lies the album's charm. You can dance to it, listen to it, or just let it play on in the background.

This recording is as much a surprise as the novel itself turned out to be. For Gwen Davis really *can* write, and now a "joke" album, inspired by her book, turns out to be a soft, sweet chuckle itself. *R. R.* There are maybe six or seven really good speaker systems in the world. Rectilinear makes three of them. Send for detailed literature.

Rectilinear Research Corporation 107 Bruckner Blvd. Bronx, N.Y. 10454

CIRCLE NO. 32 ON READER SERVICE CARD

Honeywell Pentax. Designed for Go-ers and Do-ers.

You like to go, and you go first-class. Whatever you do, whenever you buy, price is secondary to quality. You're the kind of man who made Spotmatic a classic — the world's best-selling 35mm SLR. Precise, durable, lightweight, go-able. And so easy to use, it makes you an even better photographer than you thought you were. With Super-Takumar f/1.4 lens, about \$300.

Honeywell Photographic P.O. Box 22083, Denver, CO 80222 Please send me Honeywell Pentax* literature. 616	ROAFTWELL PENTAX
Name	
Address	10 - 10 - 10 - 10 - 0
State/Zip	
Honeywell	*Honeysvell Pentax in the U.S. and Mexico: Asahi Pentax elsewhere.

CIRCLE NO. 17 ON READER SERVICE CARD





JOY (Oscar Brown, Jr.). Original-cast recording. Oscar Brown, Jr. and Jean Pace (vocals); Sivuca (piano, guitar, accordion); James Benjamin (bass); Norman Shobey (congo); Everaldo Ferrarra (drums), Sivuca cond. RCA LSO 1166 \$5.98, (1) OSS 1045 \$7.95, (1) OK 1045 \$7.95.

Performance: Uneven Recording: Very good Stereo Quality: Good

When I first heard this recording I was fascinated by it, and curious to know what was happening on stage during all that singing and music so Afro-Latin in origin. So I went to see the Off-Broadway production. That was a big mistake. Until I actually saw "Joy" I liked it very much. I cooled the record for a few weeks before playing it again in an attempt to recall some of my original enthusiasm. The result was that some of the numbers regained their freshness, but others could never get back up there for me.

The disappointment in the theater was the realization that "Joy" is really a concert or a night-club act and not a piece of theater. And as an act, "Joy" is overlong, self-indulgent, and somewhat passé. But hearing the recording, I am spared Oscar Brown Jr.'s condescending attitude, which he so outrageously displayed to the audience, and the endless reprises by the spooky though unbelievably talented accordionist Sivuca. Yes, I said accordionist . . . Sivuca plays the accordion like no one I have heard before. But then the accordion has never been one of my favorite things. The stage production did have one of the most spectacular-looking and -sounding females ever to call her hair-style Afro. And vocally, too, Jean Pace is superb. She's amusing, a belter, or touching by turns. Her first solo is a ditty called Funny Feelin', a sexy teaser of a song. Jean not only sings of the funny feeling stealing over her, but adds a few squeals and sounds remarkably reminiscent of Rosemary Murphy's squeaks of yesterday. Under the Sun finds Jean using full voice, a carefully controlled husky soprano that's a pleasure to listen to. In Brown Baby, later on side one, she reveals a softness and poignancy that endeared her to me forever. These three songs were all written by her husband Oscar Brown, Jr., and beautiful songs they are. Oscar Brown is much more talented as a composer than a performer, but I have the feeling he doesn't think so. Whenever he sings, which is frequently, he irritates me. He is vocally insecure and makes up for it with volume and a total disregard for nuance. Sivuca, on the other hand, has no voice whatsoever, yet is a musical genius.

In the second half of the show Jean Pace sings a lovely song by Charles Aznavour, *If I Only Had.* The change of tempo from Afro-Latin into the romantic land of the Franks is welcome. On several songs Luis Henrique wrote the music for Oscar's lyrics. Much as I Love You is one of the best, and even Oscar sounds pretty good singing alons with Norman Shobey, the group's bonge player and a great one. Funky World ends i all with a message of peace and brotherly love. On stage this song was the source of acute embarrassment. Brown encouraged the audience to join hands and clap, and ther finally to join him on the stage to dance along all in the name of brotherly love. He had love on his lips but it seemed to me there was bitter contempt in his eyes for the foolish few white liberals who nibbled at his the atrical bait. Suddenly everything that went before seemed amateurish and silly. So don's go to see "Joy," but do enjoy the recording for the simple thing that it is. RR

COLLECTIONS

BOSTON POPS: Motion Picture Classics. Boston Pops Orchestra, Arthur Fiedler cond. Selections from Oliver; Doctor Zbivago; IVest Side Story; Tom Jones; The Sandpiper; Suicide Squadron; State Fair; Never on Sunday; Mondo Cane; Gigi; Georgy Girl; Breakfast at Tiffany's; Black Orpheus; A Hard Day's Night and others. RCA VCS 7056 two discs \$6.98.

Performance: Oompah, oompah Recording: Excellent Stereo Quality: Elaborate

Talk about getting mileage out of material! A careful inspection of previous RCA releases reveals that at least two-thirds of the performances in this set have been issued before. Mr. Fiedler's run-through of the Warsaw Concerto, with pianist Leo Litwin, has, in fact, turned up at least three times in earlier Boston Pops collections. Aside from that, the album is a generous sampler of tuneful segments known as "motion picture favorites" (although whose favorites these are is never specified—at least half of them are certainly not mine, for they cling like glue to the ears and have pursued me all too ubiquitously from radios and restaurant loudspeakers and even the elevators that make captive audiences of us city folk). Here they are, Lara and Laura and Elvira, Gigi and Georgy Girl, and all their giggling friends from Movieland.

Whenever the Boston Pops starts playing one of those mammoth arrangements for a hundred instruments of some little Hollywood tune, it conjures up a picture in my head of a Disney elephant in a pink tutu trying to be dainty on her toes. The orchestra is fully capable of dealing with the Andante from Mozart's Piano Concerto No. 21 which he presciently wrote for Elvira Madigan, but when it starts to beat out the ground rhythm for It Might as Well Be Spring or Moon River, one feels not so much the ambiance of a movie theater as of a roller-skating rink. And when a rock beat is called for, as in A Hard Day's Night, some mighty heavy rocks get tossed around. Still, if you don't already own it, it's a poignant Warsaw Concerto, the main title from Tom Jones makes good listening even minus the harpsichord, and La Virgen de la Macarena from The Brave Bulls emerges virtually intact. If you like your soundtracks as processed in Symphony Hall, this generous program of two records for a bit more than the price of one should serve you well. P. K.

(Continued on page 104)

if stereo music is your bag

it's more fun with koss stereophones





KOSS ELECTRONICS INC. 2227 North 31st Street Milwaukee, Wisconsin 53208 KOSS ELECTRONICS S. r, I. Via Valtorta 21/20127 Milan, Italia

CIRCLE NO. 46 ON READER SERVICE CARD



THE COUP THAT FAILED

THAT balding, increasingly toothless national institution known as the Ed Sullivan Show made a half-hearted try at bridging the generation gap a few Sundays ago with a special show called "A Tribute to the Beatles." Its entertainment quotient was about equivalent to that of a State of the Nation speech —which, granted, is not ordinarily thought of as being in the entertainment category—but it did make one very interesting point about the Beatles: their long-haired impudence and irreverence all but forgotten, they have now become as safe an Establishment commodity as, say, the Lennon Sisters.

The show focused on the songs of the Beatles, which in the main means the Lennon-McCartney collaborations, with a brief appearance (on tape from London) by the once irksome foursome at the end. In between what seemed to me a grudging encomium by Sullivan and the Beatles singing their new foursquare gospel Let It Be was a parade of performers who sang, danced, or played Beatles songs in that already ossified "TV Tribute to . . ." format that has done so much for Richard Rodgers.

Well, it was quite a night—for Dionne Warwick, Steve and Eydie, Peggy Lee, Duke Ellington, and the Muppets puppets—but not, I think, for the Beatles or for their music. Miss Warwick, against a stairway to paradise and a foofaraw of busy chorus boys, did her version of *A Hard Day's Night*—and her version it most assuredly was. And her arrangement. And her Dietrich imitation. The song itself simply disappeared, and I doubt that even *The Battle Hymn of the Republic* would have fared any better.

Steve and Éydie, who are my favorite married couple who also sing, timestepped through a duetto medley of Beatles love songs in that imitable style that has won them audiences from the Copa to the Sands. Their refusal to be impressed by their material—any material—has long been one of their most endearing characteristics, and they didn't let us down this time. Their pattycake delivery was very low-profile, sounding as if it had just been hatched by Lynn Duddy and Jerry Bresler, whose claim to fame is that they are able to write a complete musical comedy for the Jackie Gleason Show in something under a week.

Lucy in the Sky with Diamonds was the almost unrecognizable theme for a solo pas de whatsit by Edward Villella, soloist with the New York City Ballet. It set him careening (tripping?) against a backdrop of last-gasp psychedelia made even less palatable by trick-shot camera work that is already on the verge of becoming cliché.

Peggy Lee also made an appearance. She remains one of the very best singers of this or any other era, but she has lately refined her facial and body movements to a kind of minimal art that looks strikingly like total paralysis, and her style is so elaborately her own that she sounded as if she were singing special material. In what would ordinarily be the acrobat slot appeared the Muppets in a totally unimaginative cartoonish production based on Yellow Submarine, quasi-Disney and quasi-awful. And Duke Ellington conducted a "concerto" based on Beatles themes that was, predictably, lukewarm Ellington and ice-cold Beatles.

And that was the "shew," folks, the show that asked the question, "Have the songs of the Beatles already become standards?" In terms of what appeared on the television screen, not on your tintype. What was missing was any evidence of a realization that a fresh style has entered popular music and that you cannot perform this new music in the old way and expect to get anything but dreary hash out of it. The difference became glaringly apparent when at last the Beatles themselves did appear; the gulf that opened between their performance and what had gone before was too wide to be ignored, and the epithet "plastic people" never seemed more apt.

Critics have argued from time to time that the Beatles are not the best performers of their own material, and the many fine performances by other singers of the songs Yesterday and Michelle argue that at least these two have become "standards" in the old sense. For the rest, however, the standards are the Beatles' own original performances, definitively set down and still very much available in recordings. These are "standards" in quite a different sense from the old one, leaving other performers with only two unattractive alternatives: rearrange and stylize the songs into spiritless hash (as on the Sullivan Show) or risk comparison by imitating the originals. What this says about the music itself I am not sure, but the Beatles performances, thanks to the preservative amber of the phonograph record, are classics.

BUT one cannot really blame the managers of the Sullivan Show for making the try in probably the only way they know how. It is no secret that the TV networks avidly follow the results of demographic surveys which break down the viewing audience by age groups, nor that advertisers take these same studies very seriously in their efforts to capture what they have come to regard as the big buying market-youth. Sullivan's show (institution though it may be) was one of those on somewhat shaky ground as far as next season's renewal prospects were concerned, and the Beatles tribute was patently intended as a demographic coup. It probably did the show more harm than good. An appearance by the Beatles "live," recorded, or filmed is one thing; a supervised and filtered interpretation of them is quite another. Not that the Liverpool foursome could exactly be expected to put up any objections to a show that served mainly as a free commercial for their new film. In their own way they are every bit as show-biz as Ed Sullivan

The answer for Sullivan, it seems to me, should be more of what he does best: the celebrity of the week, an ascended star or two, a glimpse of a new Broadway show, a Señor Wences, and yes, even Michael Brody. There is, perhaps sadly, nothing he can do for the Beatles, or the Beatles for him.

BY HAROLD FROMM



Carl Belz's THE STORY OF ROCK

BOOK REVIEW



MOST welcome antidote to the inarticulate grunts and groans that constitute the reviews of rock music in, say, the New York Times, is a charming new book, The Story of Rock, by Carl Belz. Only recently, happily enough in the Times itself, composer Ned Rorem pointed out some of the failings of the current critical scene in rock, most notably the subjectivity and narcissism of the reviewers, who are fiercely involved in their own grooves and let the reader be damned. But a critic who does not really care about his audience is a selfcontradiction: the whole purpose of a review should be its attempt to relate one man's aesthetic responses to another's. If one does not care about anyone else's aesthetic responses, why is one writing reviews in the first place? Perhaps the writing of rock reviews is a contemporary form of autoerotism.

Mr. Belz, who teaches art history at Brandeis University, does not write for himself, nor for teeny-boppers, inarticulate dope freaks, or for money. Ultimately, he is an aesthetician filled with enthusiasm for his subject-rock music itself-and his book derives its value from the fact that it is animated by the coherence which, in the art of criticism, at any rate, comes from critical selfawareness. Mr. Belz examines the music from the standpoint of a musician and a musicologist-he sees it vertically as technique and horizontally as part of the history of an art form. The results are enlightening.

The book begins with a chapter that sets forth the important distinction between folk art and fine art, a distinction which forms the basis for the history and description of rock music from its beginnings in the early Fifties up to the

The Story of Rock, by Carl Belz, Oxford University Press, New York (1969), \$5.95.

Beatles' next-to-latest recording. Mr. Belz's distinction between folk art's unselfconsciousness and its belief that it deals directly with reality, and fine art's consciousness of its own forms and "artifice," aware that it is representing reality but is not itself reality, greatly illuminates the esteem of intellectuals for the Beatles' sophistication while it also helps to explain why certain pieces of relatively crude rock music are popular among the young.

Even more-or-less sophisticated critics of rock, like those who write for, say, the New Yorker, tend to represent the tastes of the unreflective audiences of high school and college students in their habit of taking the songs as direct handlings of the real world instead of as acts of "artifice" or of style. There were a number of reviewers not long ago who preferred the Rolling Stones' song about revolution, Street Fighting Man, to the Beatles' Revolution, for virtually no other reason than that the Stones endorsed revolution while the Beatles finked out by saying that mental selfdiscipline was the only genuine revolution. The preference invariably made little or no allusion to the quality of the music. Such insensitivity to the very materials of an art form and such attention to the shibboleth of holding the "correct" (that is, the currently groovy) views beg explanation, for surely one does not evaluate works of art solely on the basis of the opinions they contain-if so, who could now read almost all great literature of the past?

Mr. Belz's approach to rock music sheds light on such problems of aesthetics in a convincing way. In the present case of Beatles vs. Stones, for instance, he makes clear that what counts among the young and unsophisticated is often the acceptability of the ideas of the songs as world-views. For, musically speaking, the two songs about revolution leave off being similar once you get past their common theme. Musically, they inhabit different worlds-artificial (in the favorable sense) and controlled in the case of the Beatles, primitive background for a message in the case of the Stones

Mr. Belz helps to clear up these confusions, albeit indirectly:

Without question, the Sgt. Pepper album strives for a sound experience that is conscious of itself and independent of immediate reference to the world of nonmusical realities. But those realities are present in the experience of the record, in all of the ways in which the record makes direct statements *about* the world. Because they are present, the record precariously shares the identities of both folk art and fine art; its consciousness of art is undeniable, but it is not convincingly realized. That is not to say that the record is an aesthetic failure. On the contrary, it is one of the most ambitious and one of the finest achievements in the history of rock. But to say that its achievement remains partial is to point out the complexity of the task: transforming legitimate folk art into fine art.

And of the Stones he observes:

In the late 1960's, the Rolling Stones became an important symbol for the restless and politically-minded members of rock's young international audience. Whether the Stones' musical significance can be measured by the social or political content of their songs, however, is a debatable issue. To the folk sensibility, artistic significance is frequently related to forceful content, and so the music of the Rolling Stones appeals greatly to it. But forcefulness of content is only one factor in the final judgment of a work's quality.

An examination of rock music in accordance with a general aesthetic which serves as a foundation of judgment is a particularly welcome and needed one at the moment, a time when extravagant but short-lived enthusiasms are the basis for the momentary favor given by the young and not-so-young to their temporary idols. While it is true that the idols of the young have always been modish, the situation now is more extreme than usual and is intensified by the power-economic, academic, political, and aesthetic-which the young wield, Adults, concerned about being accepted by the young, now tend more than has been customary to allow their stabler judgments and deeper deliberation to be narcotized by fear of the generation gap. That which is desirable when it attempts understanding and reconciliation is horrifying when it becomes mindless emulation of skittish enthusiasms. The young contribute to society crucial and profoundly needed skepticism and they hasten the abandonment of decayed and dead traditions. But adults still have the powers of introspection, deliberation, scholarship, sensitivity to complexity, and receptivity that are rarely found. among the young. It is surprising how many young people, for all their fervid enthusiasms, do not even fully appreciate their own art forms: they don't know that the Beatles are making a witty play on the song Georgia on My Mind as well as the Georgian section of Russia in Back in the USSR, for example. They don't know when Handel is being parodied, or when themes are being augmented or diminished or varied. Their enthusiasms often make them deaf to their own enthusiasms' content. The virtues of patience, insight, and sensitivity are still needed, even if only because they make more intense pleasure possible by heightening sensibility. And a book like The Story of Rock contributes to such a heightening.



It's Obvious!

- LOWEST PRICES
- FAST SERVICE
- FACTORY SEALED UNITS
- FULLY INSURED SHIPMENTS
- PACKAGE DEALS-SAVE MORE
- FRANCHISED DISTRIBUTORS

Write for FREE Listing today

SEND US YOUR LIST FOR OUR AIR MAIL QUOTE TODAY

Visit Our Store Warehouse CLOSED MONDAYS AUDIO unlimited, inc.

396-S Third Ave. (Nr. 28), N.Y., N.Y. 10016



YORK, N.Y.10007

-3670

DEPT. S.R.

CIRCLE NO. 9 ON READER SERVICE CARD

-1-2

JAZZ

ROY AYERS: *Daddy Bug.* Roy Ayers (vibes); Herbie Hancock (piano); Buster Williams and Ron Carter (bass); Sonny Sharrock (guitar); Mickey Rocca, Freddy Waits, and Bruno Carr (drums); William Fischer arr. *Daddy Bug; This Guy's in Love with You; I Love You Michelle*; and four others. ATLANTIC SD 1538 \$4.98, (1) TP 1538 \$6.95, (2) M \$1538 \$6.95.

Performance: A star in the family of Mann Recording: Very good Storeo Quality: Excellent

It appears that jazz, like the sea, is made up of wave upon wave. There is a theory that every ninth wave is the crusher that carries the sea a little farther up the beach. Roy Ayers is part of a jazz movement, headed by Herbie Mann and including Herbie Hancock, Buster Williams, Mickey Rocca, Ron Carter, Sonny Sharrock, Bruno Carr, and a few others, that is currently coming on very strong, like that ninth wave. Roy Avers on vibes is a cool sensitive artist with no weakness for the flashy acrobatic tricks that so often are a trademark of the vibe man. "Quietly stoned" would be a perfect way to describe Avers' music, both his own and his interpretations of others he plays on this, his first solo album. His translation of Laura Nyro's Emmie is simple and as sensual a piece as I have ever heard. When he taps out Antonio Carlos Jobim's Bonita, Look to the Sky, or It Could Only Happen with You, I could almost hear the warm Latin voice of Jobim himself singing under the lightly struck notes. Ayers lingers over the notes with a caress. The high point of the album is This Guy's in Love with You. Ayers and his family of Mann is jazz at its softest and, to me, best. The kind of jazz it's always nice to stay home to. R. R.

DONALD BYRD: Fancy Free. Donald Byrd (trumpet); with various musicians. Fancy Free; I Love the Girl; The Uptowner; Weasil. BLUE NOTE BST 84319 \$5.98, B 84319 (3³/₄) \$6.95.

Performance: Uneven Byrd Recording: Good Stereo Quality: Good

Donald Byrd has been a busy man lately, teaching, consulting, studying, and setting up programs in black culture at universities throughout the country. Somehow, in the midst of his frenzied schedule, he manages to continue to be active as a jazz player. For this date he has assembled a group of excellent players and given himself, and them, ample room to stretch out in long, developmental solos. The composed sections are rich in harmonies, and a trifle too romantic for my taste, especially in the case of Byrd's two pieces on side one. I like Mitch Farber's *The Uptowner* better. Byrd's playing is very good when things are working properly, but there are moments when one wonders if his multifarious activities haven't taken the edge off his chops, forcing him to concentrate on basic technical skills that should be second nature. Given these qualifications, however, Donald Byrd continues, after some fifteen years in the recording wars, to be one of our very best jazz trumpeters. D. H.

RECORDING OF SPECIAL MERIT

FREDDIE HUBBARD: The Black Angel. Freddie Hubbard (trumpet); Jimmy Spaulding (alto sax, flute); Kenny Barron (piano, electric piano); Reggie Workman (bass); Louis Hayes (drums); Carlos "Patato" Valdes (congas and maracas). Spacetrack; Eclipse; The Black Angel; Gittin' Down;



VICTORIA SPIVEY Classics from a major blues star

Coral Keys. ATLANTIC SD 1549 \$5.98, (8) TP 1549 \$6.95, (C) CS 1549 \$6.95.

Performance: Versatile, modern jazz trumpet Recording: Very good Stereo Quality: Very good

The shadow of Miles Davis looms, benignly but everywhere, over the proceedings here. Trumpeter Hubbard, a brilliant technician with a superb ear for harmonic invention, has never really made the mark on jazz that he might have had he arrived during jazz's salad days. Yet he always has produced consistently interesting work, often of a quality unmatched by his younger contemporaries.

This is one of Hubbard's better collections, a group of fresh performances that range from the Ornette-Coleman-like dramatic statements of Spacetrack to the gritsand-gravy, Cannonball-Adderly-styled soul music of Gittin' Down (both Hubbard originals). Although the liner notes fail to say so, Hubbard sounds as though he is playing fluegelhorn on two tracks-an instrument not really well suited to his multi-noted style, but one which he handles surprisingly well. For my taste, however, the conga drums could have been omitted. Barron, Workman, and Hayes are too good a rhythm team for their work to be covered up by the conga's mushy sound. D.H.

RECORDING OF SPECIAL MERIT VICTORIA SPIVEY: The Victoria Spivey Recorded Legacy of the Blues. Victoria

NEW

Spivey (vocals); various accompaniments. Detroit Moan; Arkansas Road Blues; How Do You Do It That Way?; Don't Trust Nobody Blues; Dreaming of You; The Alligator Pond Went Dry; TB's Got Me; and seven others. SPIVEY RECORDS (M) LP 2001 \$5.00.

Performance: Classic blues from a great lady Recording: Variable

Stereo Quolity: None

A remarkable lady, Victoria Spivey: a major blues star as a teenager in the Twenties, she managed to stay relatively active during the blues-poor years of the Thirties and Forties, retired in the Fifties, and organized her own record company in the Sixties. The tracks included here date from 1927 to 1936 and include a number of previously unissued titles and alternate "takes." Among the more interesting items are Miss Spivev's classic Telephoning the Blues, New Black Snake Blues (a sequel to her first hit recording, Black Snake Blues), a fascinating, dirge-like Murder in the First Degree, and various pieces in which she is accompanied by such luminaries as Louis Armstrong, Lee Collins, and the bands of Luis Russell and Clarence Williams. The best are generally those recorded in the late Twenties, principally because the musical backings are so good. Especially noteworthy are four tracks with guitarist Lonnie Johnson-a really superb musician who had a powerful, if generally unacknowledged, effect on virtually DH. every jazz guitarist alive.

RECORDING OF SPECIAL MERIT

JEREMY STEIG: This Jeremy Steig. Jeremy Steig (flute); Warren Bernhardt (piano); Donald MacDonald (drums); Glen Moore (bass). Flute Diddley; Hang on to a Dream; Teresa's Blues; Don't Make Promises; and four others. SOLID STATE SS 18059 \$5.98.

Performance: The ultimate flutist Recording: Very good Sterea Quality: Good

From the first deliberately hazy over-blown notes of Jeremy Steig's own composition Flute Diddley, I knew I was hearing a unique and wildly original talent. And how can I describe the thrill of surprise when Tim Hardin's great Hang on to a Dream came up as the second selection? The poignant sadness of this beautiful ballad is heightened by Steig's incredibly sensitive playing. On side two Jeremy embraces Hardin's Don't Make Promises and Lenny's Tomb. Both are masterfully interpreted and executed in Jeremy's very own jazz style that sounds like no other modern jazz flutist. An electric piano, bass, and drums quietly fill in the empty spaces but never intrude on Jeremy's fanciful solo flights. The remaining songs are Steig originals, which convinced me he's as great at writing music as well as playing it. The art on the album is also Jeremy's, which is not surprising when you consider that he is the son of cartoonist William Steig. He's his father's child with pen and ink, but he's his own man on the flute. R, R



Lowest of the LOW! Shamelessly Low Prices...

As one of America's largest wholesale distributors, we're guilty of shamelessly low prices. Our buying volume has made our prices the lowest. We seriously doubt you can find one lower... and that we're proud of. What's more, at S.C.A. you can select from hundreds of NEW, Factory Sealed, Full Warrantee, Brand name, Hi-Fi Stereo components. If its in the Hi-Fi, Audio field... we have it!

Write for a lowest of the low quote...we're not ashamed.



ABOUT YOUR SUBSCRIPTION

Your subscription to STEREO REVIEW is maintained on one of the world's most modern, efficient computer systems, and if you're like 99% of our subscribers, you'll never have any reason to complain about your subscription service.

We have found that when complaints do arise, the majority of them occur because people have written their names or addresses differently at different times. For example, if your subscription were listed under "William Jones, Cedar Lane, Middletown, Arizona," and you were to renew it as "Bill Jones, Cedar Lane, Middletown, Arizona," our computer would think that two separate subscriptions were involved, and it would start sending you two copies of STEREO REVIEW each month. Other examples of combinations of names that would confuse the computer would include: John Henry Smith and Henry Smith; and Mrs. Joseph Jones and Mary Jones. Minor differences in addresses can also lead to difficulties. For example, to the computer, 100 Second St. is not the same as 100 2nd St.

So, please, when you write us about your subscription, be sure to enclose the mailing label from the cover of the magazine—or else copy your name and address exactly as they appear on the mailing label. This will greatly reduce any chance of error, and we will be able to service your request much more quickly.

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.



MX112 FM STEREO/AM TUNER PREAMPLIFIER – ALL SOLID STATE

SEND	McIntosh Laboratory Inc. 1 Chambers St., Dept. SD7 Binghamton, N.Y. 13903 NAME	
	ADDRESS	
	CITYSTATE	ZIP
CIRCLE NO	27 ON READER SERVICE CARD	



When you're #1 in tape recorders, you don't make the #2 tape.

If you've got a few hundred bucks tied up in a firstquality tape recorder, you're not going to want to gum up the works with second-rate tape. Especially when just a few extra pennies buy the finest Sony professional-quality recording tape.

Not only will Sony tape make any recorder sound its best, but it'll keep it sounding that way. Because our tape won't shed or cover tape heads with a performance-deteriorating oxide coating. Head-wear, too, is minimized, thanks to Sony's exclusive Lubri-Cushion process, which impregnates the tape with long-lasting lubricants.

Sony tape comes in all configurations: Open reel. Eighttrack. Cassettes. Open-reel tape is available in 3¹/₄", 5", and 7" sizes. The new Sony SLH-180 low-noise, high-output tape is available on 7" reels only. And 'Easy-Threader'' tabs make every Sony open reel self-threading.

Our professional-quality tape is also available in eighttrack stereo cartridges plus new Easy-Matic cassettes for both functional and stereo units, with 60, 90, or 120 minutes' recording time.

To hear the best, play the best. Sony Professional-Quality Recording Tape. From the people who offer the number-one line of tape re-

corders-Sony/Superscope.



© 1970 Superscope, Inc., 8144 Vineland Ave., Sun Valley, Calif. 91352. Send for free catalog.



Reviewed by NOEL COPPAGE • IGOR KIPNIS • PAUL KRESH • ERIC SALZMAN

CARULLI: Guitar Concerto, in A Major. GIULIANI: Guitar Concerto, in A Major, Op. 30. VIVALDI: Concerto in C Major (P. p.7, No. 3); Concerto in D Major (P. 209). Siegfried Behrend (guitar); I Musici. DEUTSCHE GRAMMOPHON ® L 9417 $(7\frac{1}{2})$ \$6.95, © 923100 \$6.95.

Performance: Entertaining Recording: Channel imbolance in first sequence Stereo Quality: Excellent Ploying Time: 53'50"

As I wrote in my review of the disc version, the late-eighteenth-century Giuliani and Carulli are delightfully performed; equally scintillating are the arranged Vivaldi pieces, although stylistic correctness is mostly overlooked. Behrend and the rich-toned I Musici play with great polish and enthusiasm, and the reproduction is even better than on the superb-sounding disc. One very major defect on my review copy was an almost inaudible right channel throughout the entire first sequence, and I would suggest checking carefully before buying this otherwise impressive tape. I. K.

RECORDING OF SPECIAL MERIT

DVOŘÁK: Nature, Life, and Love (three overtures: In Nature's Realm, Op. 91; Carnival, Op. 92; Othello, Op. 93). Scherzo Capriccioso, Op. 66. London Symphony Orchestra, István Kertész cond. LONDON (C) X 10216 \$5.95, (R) L 80216 $(7\frac{1}{2})$ \$7.95, (8) M 67216 \$6.95.

Performance: Brisk and bracing Recording: Excellent Stereo Quality: Uncramped Playing Time: 49'38''

These are scores to blow the cobwebs out of our heads. Ideally, they ought to be heard outdoors rather than in the confines of the study or the concert hall. The *Scherzo Capriccioso* beckons us on a musical chase after a will-o'-the-wisp of laughter and the joy of living. The three overtures, really a sturdy triptych of three orchestral tone poems based

Explanation of symbols: (B) = reel-to-reel tape (A) = four-track cartridge (B) = eight-track cartridge (C) = cassette The first listing is the one reviewed; other formats (if available) follow it.

Monophonic recordings are indicated by the symbol (16); all others are stereo.

on the same musical themes, sound stronger in sequence than when heard separately. In Nature's Realm abounds in the kind of tone painting Dvořák was best at—evoking visions of mountain fastnesses and running streams, of leaves in tuneful conversation with birds, of meadows dappled with sunlight and never a mosquito or a thorn to spoil the sojourner's pleasure. The Carnival Overture lets rip with another kind of exuberance in a string of musical fireworks. Othello, the least successful but in some ways the most interesting of the three, casts shad-



HENRYK SZERYNG At the zenith of his powers

ows over the same material to create a mood of nobility brought down to a tragic doom. The composer seems less at home in that idiom, but it is fascinating to hear the manipulation of musical ideas to utterly different ends.

Kertész is just about the best interpreter around for this program; less meticulous, perhaps, than George Szell, but also warmer in the tone palette he draws from the orchestra, and equal to every tremor and turn in the path of these mercurial scores, with a gratifying attention to the kind of detail that most delights the ear in the musical language of Dvořák. The performances have been processed by Ampex to produce a more open sound than I have yet heard out of one of these tiny cassette packets. There are, however, no liner notes, or any other descriptive material, which seems rather niggardly at the price. PK

GIULIANI: Guitar Concerto in A Major (see CARULLI) LISZT: Polonaise No. 2, in E Major; Sonetto 123 del Petrarca; Fantasy and Fugue on the Name of Bacb; Concert Etude in D-flat Major, "Un Sospiro"; Tarantella; Concert Etude in F Minor, "La Leggierezza"; Legend No. 2, "Saint François de Paule marchant sur les flots." György Cziffra (piano). WORLD SERIES ® X 9005 (3¾) \$5.95.

Performance: Thud and blunder Recording: Harsh Stereo Quality: Unremarkable Playing Time: 53'38"

Romantic virtuosity, once scorned, is making a big comeback. Cziffra, however, is not one of the new virtuosi, but rather one of the last of the old ones: a fury of flying fingers, lots of dramatics, and lots of sentiment. Oddly enough, his quite Hollywoodian European reputation-ladies swoon and strong men grow laint-has never penetrated these shores. What bothered me about this tape was not so much the lack of profunditythere wasn't a lot, but I hadn't expected much-as the piano sound. Cziffra whomps the daylights out of the wretched instrument, and the recording engineers have fiendishly captured every harsh thwonk. Add the shushing of the tape-there is an 'exceptionally high hiss level-as a kind of windy background, and the sad story is sadly complete. E. S.

VIVALDI: Guitar Concertos in C Major and D Major (see CARULLI)

COLLECTIONS

RECORDING OF SPECIAL MERIT HENRYK SZERYNG: Treasures for the Violin. Debussy: La Plus que lente. Novaček: Perpetuum Mobile. Brahms (arr. Kreisler): Hungarian Dance. Marroquin: Mexican Lullaby. Rimsky-Korsakov: Flight of the Bumble Bee. Vitali (ed. Charlier): Chacome. Bartók: Rumanian Dances. Leclair: Sonata, in D Major. Gluck (arr. Kreisler): Mélodie. Locatelli: Capriccio from Violin Concerto, Op. 3, No. 12 ("The Labyrinth"). Henryk Szeryng (violin); Charles Reiner (piano). WORLD SERIES (P) X9092 (33/4) \$5.95.

Performance: A treasure of treasures Recording: Splendid Stereo Quality: Realistic Playing Time: 47'56"

Any soloist whose work is to hold up through an entire program should be able to pass the test of the three "Ts": taste, tone, and temperament. This is especially true of

the violin, that most undisguisable and vulnerable of instruments, for a failure in any of these departments can wreck a performance or even a reputation. Mr. Szervng, who seems just now to be at the zenith of his powers, comes through on all counts even in this unpretentious potpourri of short pieces. He wins us over at once with his melting but never mawkish presentation of Debussy's charming waltz, La Plus que lente. Then comes the dazzle of Novaček, the lilt of Brahms, a Rimsky bumblebee who doesn't try to drive us out of the garden by making a spectacle of himself, and a Baroque Chaconne from the pen of Vitali. Side two opens with the dazzle of several Bartók Rumanian dances, dwells with loving wizardry on a Leclair sonata, makes pure song of Fritz Kreisler's arrangement of a melody from Orphée by Gluck, and concludes virtuosically with Locatelli's impossibly difficult Labyrinth, which, of course, is not at all difficult for the likes of Szeryng. The violinist, a native of Poland and now a citizen of Mexico, pays tribute along the line to his adopted country with a serene Mexican Lullaby by Marroquin, which I had never heard before, and which, for me, was the most delightful nugget in the box. Charles Reiner lends the fiddler modest but unfailing support throughout. The sonics are splendid. P. K.

ENTERTAINMENT

LYNN ANDERSON: Songs that Made Country Girls Famous. Lynn Anderson (vocals); instrumental accompaniment. Harber Valley PTA; I Fall to Pieces; You Ain't Woman Enough; Dark Moon; Don't Touch Me; Here Comes My Baby Back Again; Once a Da); and four others. CHART © PKCH 1011 \$6.95, ® X 1022 (334) \$5.95, @ M 81022 \$6.95.

Performance: Fed up Recording: Very good Stereo Quolity: Good Playing Time: 28'55''

Considering what songs made country girls famous, I think the Women's Liberation Movement could do some easy recruiting along the back roads. Country girls in Harper Valley-where the PTA cringes while Mrs. Johnson stomps around the podiumare fed up with the double standard of morality. Country girls in other places (most of them Nashville, probably) are fed up with being treated as sex objects, with having other women try to steal their men, and with their men trying to steal other women, among other things. The girls are backed into corners all over the place, and they're bristling, and about to do something drastic, according to Your Good Girl's Gonna Go Bad, Mama Spank, You Ain't Woman Enough (To Take My Man), It Wasn't God Who Made Honky Tonk Angels, and Ride, Ride, Ride. Lynn Anderson sounds frustrated enough to sing all these songs-and she's no doubt a country girl: she has that certain twang in her voice, and that cow-eyed earnestness about everything. The arrangements sound a bit citified in places, though. When, presumably for a change of pace, Lynn sings I Fall to Pieces, she does a fine job. That was my favorite in this set, not that I have anything against women's liberation, but because Pieces is prettier than the other songs here. Honest. N. C.

RECORDING OF SPECIAL MERIT

RICHIE HAVENS: Stonehenge. Richie Havens (vocals and guitar); instrumental accompaniment. There's a Hole in the Future; I Started a Joke; Prayer; Tiny Little Blues; Open Our Eyes; Ring Around the Moon; and four others. STORMY FOREST © M 56001 \$6.95, (I) M 86001 \$6.95.

Performance: Excellent Recording: Good Stereo Quality: Very good Ploying Time: 33'

I could as easily pretend to be objective about a Richie Havens recording as I could pretend I didn't really need my left arm. I think the man is superb, and have since I first heard him. Even in that rose-colored light, this does



RICHIE HAVENS A rich voice and a strong personality

not seem to me to be the best Havens available, although it might have come close had he substituted a good obscure message song for Shouldn't All the World Be Dancing, a long, monotonous, mostly instrumental, and not very obscure message song. And It Could Be the First Day, a weak little ballad, should have been thrown out. Prayer is THE song of the collection, a powerful, beautiful piece, and I entreat those who think they are neutral about Richie Havens to hear it.

Havens is one of the few pop performers who can sing someone else's song and make it a completely new and pleasant experience for the listener. He scrupulously avoids borrowing others' arrangements, always sur-rounds himself with excellent studio musicians when recording, and has a strong personality that transcends words and melody; practically any song is subordinate to Havens' singing of it. And, of course, he has an unusual voice, a rich, ragged instrument which he uses to create a comfortable, hopsack texture. The result is that he is as easeful with Dylan's Baby Blue and the Gibbs Brothers' I Started a Joke (also sacred territory to yours truly) as if he had written them. Perhaps his appeal is not universal, but I consider Richie Havens among the best singers of and for (but not limited to) his NC time.

HENRY MANCINI: Debut! Philadelphia

Orchestra Pops, Henry Mancini cond. Beaver Valley—'37; Dream of a Lifetime; Strings on Fire!; Cameo for Violin (Norman Carol, violin); Drummers' Delight; The Ballerina's Dream; and Speedy Gonzales. RCA (B) TR3 1006 (3³/₄) \$6.95, (3) R 8S 1132 \$6.95, (6) RK 1132 \$6.95.

Performance: Creamy-rich but not very nourishing Recording: Excellent Stereo Quality: Spectacular Playing Time: 33'44"

The Philadelphia Orchestra Pops has chosen to make its recording bow with an all-Mancini festival, and although the sound is ravishing and the program easy on the ears, the contents are musically on the meager side. The proceedings open with a kind of musical autobiography in a little more ponderous an idiom than Mr. Mancini usually employs for his film scores, but drawing on the same overblown musical vocabulary. The composer calls his suite Beaver Valley-'37, and for it he has drawn on impressions of his "early teen years in Aliquippa, Pennsyl-vania." These include memories of a stroll These include memories of a stroll along the Ohio River on a summer evening, a section of souped-up Delius; Black Snow, which falls with all the subtlety of lumps of coal; and Sons of Italy, a rather predictable Italianate romp culminating in a heavyhanded tarantella. The orchestration, however, is spectacular, and the recorded sound almost stupefying. On side two, Mr. Mancini seems to be competing with LeRoy Anderson in the concoction of tiny souffles for oversized orchestras. There's Drummer's Delight, and Cameo for Violin, and The Ballerina's Dream, all slick and showy and utterly empty, ending with his well-known pseudo-Mexican number Speedy Gonzales. Everything glitters, gliding effortlessly into one auricular orifice and just as effortlessly out the other. P. K.

NILSSON: Aerial Ballet. Nilsson (vocals); orchestra. Everybody's Talkin'; Little Cowboy; Together; Good Old Desk; Mr. Tinker; Bath; One; Don't Leave Me; Mr. Richland's Favorite Song; and two others. RCA © PK 1380 \$6.95, (1) PSS 1380 \$6.95.

Performance: Soaring Recording: Good Stereo Quality: Fair Playing Time: 27'24''

Many, by now, have purchased the disc version of this collection; many others have the single Everybody's Talkin', which is included here; and Harry Nilsson has gone on to better things, among them his album "Harry." But this is a chance for cassette-only owners to grab some early Nilsson, and my advice is to go ahead and grab. Though it lacks the depth of "Harry," "Aerial Ballet" contains some poignant work and is a good showcase for Nilsson's intricate, airy vocal style. His voice seems certain to stall out on one of those soaring falsetto flights, but it never does. At other times it flits along like a butterfly or hovers like a hummingbird. The main problem here is the way the album is recorded. The sound quality is spotty and the stereo separation sometimes vague, sometimes jumpy-at least on the cassette I have. The sound is generally adequate, though, and Nilsson is at all times more than that. N. C.

(Continued on page 110)

Announcing the NEW STANDARD in Stereo Testing! Get the All-New Model SR12 STEREO TEST RECORD The most complete...most sophisticated...most versatile Test Disc available today... For Just \$198!

Who Needs the New Model SR12?

If you've read this far, you do. Whether you're an avid audiophile who'll settle for nothing but peak performance from his stereo components . . . a casual listener who'd like more insight into the challenging world of stereo reproduction ... or a professional technician who needs precise standards for lab testing... the new MODEL SR12 will be the most important disc in your entire collection.



 Like its predecessor Model 211, MODEL SR12 has been produced by Stereo Review Magazine (formerly HiFi/Stereo Review) as a labor of love — by music lovers...for music lovers who want immediate answers to questions about the performance of their stereo systems and how to get the best possible sound reproduction.

Ncw greatly expanded and updated with the most modern engineering techniques, MODEL SR12 is the most complete test record of its kind — containing the widest range of checks ever included on one test disc. An ear-opener for every serious listener!

You'll make these important stereo checks BY EAR...(no test instruments of any kind required)

Frequency response—a direct warble-tone check of nineteen sections of the frequency spectrum, from 20 to 20,840 Hz, which will pinpoint any frequency response defects in your system.

Separation-an ingenious test which indicates whether you have adequate separation for good stereo.

Cartridge tracking-the most sophisticated tests ever devised for checking the performance of your cartridge, stylus and tone arm.

Channel balance—two broad-band, random-noise signals which permit you to eliminate any imbalances originating in cartridge, amplifier, speakers or room acoustics.

Hum and rumble-foolproof tests that help you evaluate the actual audible levels of rumble and hum in your system.

Flutter-a sensitive "musical" test to check whether your turntable's flutter is low, moderate, or high.

PLUS! • Cartridge and Speaker Phasing • Anti-Skating Adjustment • "Gun Shot Test" for Stereo Spread • Multi-purpose Musician's "A" • Equal-tempered Chromatic Octave • Guitar-tuning Tones.

Don't waste another minute on less-than-perfect stereo—Order Your Model SR12 Stereo Test Record NOW!

Consider the hundreds-even thousands-you've spent on your setup and you'll agree \$4.98 is a small price to pay for the most valuable performance tool ever made. So to be sure your order is promptly filled from the supply available, mail the coupon at right with your remittance... today!

AND, for the ultimate in stereo testing, 7 critical TEST EQUIPMENT checks ...

Attention professionals: Stereo Review's new Model SR12 Stereo Test Record is also designed to be used as a highly efficient design and measurement tool. In the following tests, recorded levels, frequencies, etc. have been controlled to laboratory toierances—affording accurate numerical evaluation when used with oscilloscope, chart recorder, output meter, intermodulation-distortion meter and flutter meter.

- 1,000-Hz square waves to test transient and high-frequency response of phono pickups.
- 500 to 20,000 Hz frequency-response sweep.
- Sine-wave tone-bursts to test transient response of pickup.
- Intermodulation test using simultaneous 400-Hz and 4,000-Hz signals.
- Intermodulation test using simultaneous 400-Hz and 4,000-Hz signals.
 Intermodulation sweep to show distortion caused by excessive resonances in tone arm and cartridge.
- 1,000-Hz reference tones to determine groove velocity.
- 3,000-Hz tone for flutter and speed tests.

Sample waveforms-illustrating both accurate and faulty responses are provided in the instruction Manual for comparison with the patterns appearing on your own oscilloscope screen.

FREE Instruction Manual Includes Detailed Instructions, Charts, Tables and Diagrams.

Nothing is left to chance ... or misinterpretation. Every segment of every band is fully, clearly, graphically explained. You'll know exactly what responses to listen for in each test. Which 'sounds and patterns indicate accurate performance ... which ones spell trouble ... as well as the cause of trouble and precise corrective measures to follow and help your pinpoint, analyze and cure your stereo headaches!

Records • Ziff Davis Service Division 595 Broadway • New York, N.Y. 10012	SR-670
Please sendtest records at	\$4.98 each, postpaid.
My check (or money order) for \$ (Outside U.S.A, please send \$7.00 per record ord dents please add local sales tax.	
Print Name	
Address	
City	
State	Zip

101 STRINGS: Music by Alan Juy Lerner and Frederick Loewe. 101 Strings. Gigi; On the Street Where You Live; Almost Like Being in Love; If Ever I Would Leave You; I Could Have Danced All Night; Camelot; and four others. AUDIO SPECTRUM © E 55014 \$4.95.

Performance: Mushy Recording: Excellent Stereo Quality: Very good Playing Time: 32'10"

Suffocation by music is not a lovely way to go. The 101 Strings' sound is so lush and squishy that the listener feels he is drowning in marshmallow creme after a while-but then a safety valve trips in his head and he ceases to be a listener. This orchestra could bring on this reaction with any program, but the Lerner and Loewe songs included here are so familiar that my safety valve tripped earlier than one might expect. There are times, of course, when one wants melodic ambient noise in the house, and this cassette is fine for such occasions. My problem is that I keep imagining what it must be like to be a musician in such an organization, stuck in the middle of all that mush. NC

DELLA REESE: Black Is Beantiful. Della Reese (vocals); orchestra. Games People Play; Compared to What; Choice of Colors; Get Together; Comment; Proud Mary; Cycles; and three others. Avco EMBASSY (© M 53304 \$6.95, (I) M 83304 \$6.95.

Performance: Good Recording: Poor Stereo Quality: Good Playing Time: 39'52''

Della Reese is the blackest black that ever stalked onto a stage, and if that offends any honkies in the audience, they can pick up and go back to WASP acres. She is always saucy, often angry, and sometimes bitter, but none of that makes her sing out of tune. Della bends a song all out of shape, grasps it by the neck and wiggle-waggles it around, but she never makes it unmusical. She does get preachy at times, though, and this collection-most of the songs relate to the theme of the album title, or can be construed to-is a bit tiresome. Subtlety is not Miss Reese's strong suit, partly, I suspect, because of her years in nightclubs, shouting to be heard over the drunks' prattle and the tinkle of ice.

Nothing could overcome the distractions on this cassette, however. The sound, which is good when it is good, is tinny in several spots, and there is print-through everywhere. Some of the arrangements I find distracting, too, although a nightclub-oriented gin freak might find them just right. In any event, at those moments when everything works, the tape is a better salesman for the beauty of blackness than most of the Motown bubblegum oozing out of our radios. N. C.

THE YOUNGBLOODS: Get Together-The Youngbloods' First Album. The Youngbloods (vocals and instrumentals). Grizzly Bear; Statesboro Blues; Four in the Morning; One Note Man; Tears are Falling; and five others. RCA © PK 1221 \$6.95, **③** P8S 1221 \$6.95.

Performance: Distinctive Recording: Good Stereo Quality: Good Playing Time: 31'64'' The title song in this set may do for the Youngbloods what that miracle home run did for Bobby Thompson in 1951; nobody can remember anything else he ever did. The disc containing *Get Together* had been around for several months before that song made it big as a single last summer—so big it may have obscured all else the Youngbloods have tried, including a new disc now in circulation.

Regardless of their commercial fate, the boys have a distinctive, slightly melancholy sound, and so far have been wise enough to choose songs they can feel something for. Their instrumentals show the definite influence of the Beatles; the guitar chords remind me of contemporary George and the drumming of early Ringo, and the overall effect is light but not bubble gum. It is as vocalists that the Youngbloods are unique, and Grizz-



BARBRA STREISAND Warmth and sly humor for Funny Girl

ly Bear, One Note Man, and Tears Are Falling seems best suited to their style. Adding up these elements, one would assume the group could handle country blues fairly well, but in fact the boys seem a little lost on C. C. Rider, and good and lost on Ain't That Lovin' You, Baby, a classic only as sung by Jimmy Reed. I hope the Youngbloods aren't forever penalized because of eternal comparisons of what they do with Get Together. They deserve a more complete hearing, for popular music needs more performers like them. N. C.

THEATER MUSIC

RECORDING OF SPECIAL MERIT

FUNNY GIRL (Bob Merrill-Jule Styne). Original-soundtrack recording. Barbra Streisand, Omar Sharif, others (vocals); orchestra, Walter Scharf cond. COLUMBIA © 16 12 0034 \$6.98, ® OP 1032 (71/2) BE \$9.98, ④ 14 12 0034 \$6.98, ⑧ 18 12 0034 \$6.98.

Performance: Bravo for Barbra Recording: Faithful but fuzzy Stereo Quality: Alive Playing Time: 47'23"

In the spring of 1967, when Barbra Streisand flew to Hollywood to re-create her Broadway role as Fanny Brice in *Funny Girl*, she told reporters as she stepped off the plane that for her, "being a star is being a movie star." A movie-star she became, in the larger-thanlife, glamorous, old-fashioned sense, long before the movie was ever completed; and so she sounds on the Funny Girl soundtrack. The soundtrack is hers, just as the movie is. with just the right amount of support from one of those huge Hollywood chorus-orchestras, from the time she starts singing (appropriately) I'm the Greatest Star right through her grandstand revival of My Man. Omar Sharif, as the gangster Nick Arnstein who breaks Miss Brice's heart, is heard in an occasional warble, but it is Barbra's show. More recently, in the even more overblown screen version of Hello Dolly, Miss Streisand was all wrong and irritating, but Funny Girl is so right for her that it's no wonder the big tunes in it are pop classics by this time.

When I opened the box holding the little cassette which reproduces the whole of the Columbia original-soundtrack recording, I couldn't believe it was possible to contain so big a personality in so tiny a package. It's all there though-despite some distressing fuzziness on the first side of the copy sent to me -including the music for the comic ballet The Swan, and the title song composer Jule Styne added to his score for the film. The high-points, of course, remain her piercing interpretations of People and Don't Rain on My Parade. But throughout, the warmth and sly humor of her approach to the role are evident, whether she's putting her galvanic nervous energy into Mr. Styne's numbers or reviving songs that made Miss Brice famous, like Billy Rose's I'd Rather Be Blue Over You. Most remarkably, she manages to suggest the comic genius of Brice without ever directly imitating her. All this is old news, perhaps, but the arrival of the cassette version served to renew my admiration for a big and brash yet wonderfully fastidious performance. P. K.

HELLO, DOLLY! (Jerry Herman). Broadway-cast recording. Pearl Bailey, Cab Calloway, Emily Yancy, Jack Crowder, others (vocals); orchestra, Saul Schechtman cond. RCA © OK 1032 \$7.95, **®** T03 1006 (3³/₄) \$8.95, **③** 08S 1032 \$7.95.

Performance: Tailored Recording: Very good Stereo Quality: Good Playing Time: 45'52''

The best advice to give most singers is to tell them to relax. Pearl Bailey usually seems too relaxed, so relaxed that she is careless. I think the discipline of the Broadway show was good for her, and that it shows here. Obliged to ing songs without inserting salty phrases and without pausing to clown with the stage hands from time to time, she sings them with ease and grace. Her voice has that kind of subtle, natural rhythm that has evolved out of most of the black voices we hear now; Mahalia Jackson's has it and Bessie Smith's did, but Ella Fitzgerald's does not.

Unfortunately, *Hello*, *Dolly!* consists of more than Pearl Bailey. The music is old now, and it was pretty ordinary—even dated —when it was new. Other aspects of the production may be keeping the show alive, but all you get in a cassette is the music (and a bit of fine print on the cover, of course). When Pearl isn't singing (when, for example, Cab Calloway, who is *competent* as opposed to being something special, is singing), the thing is a bit bland. N. C.



TAPE HORIZONS

PROFESSIONAL RECORDERS

UDGING by advertisements, one of the best ways to sell a recorder is to be able to describe it as a "truly professional unit." This usually means that it has three motors, three heads, and performance specifications meeting NAB standards. Yet, although there are many audiophile recorders that have these features, one rarely sees an audiophile machine in use in a professional recording studio. Are we being "put on," then? Yes, but performance capabilities aside, do we really want to spend the \$2,000 to \$50,000 or more for the additional facilities a *real* studio recorder might provide?

Undoubtedly the most significant factor in the cost of today's genuinely professional recorders has to do with channel format. We usually think of "stereo" in terms of two channels (quarter- or half-track) on $\frac{1}{4}$ -inch tape. Particularly in the field of popular music, however, the studio engineer is likely to contemplate the use of four, eight, twelve, sixteen, or even twenty-four channels, requiring tape up to two inches wide! Many professional recorders have reversible tape guides that accept either of two different tape widths, and whole head assemblies can be replaced in a couple of minutes for different multi-track requirements. Thus the same recorder that makes a full-track $\frac{1}{4}$ -inch commercial in the morning may be used in the afternoon to make the first part (or track) of an eight-channel $\frac{1}{2}$ -inch tape of a rock group.

The first part? Here another basic difference enters in. The "sound-on-sound" feature of home recorders permits you to do a monophonic Les Paul and Mary Ford by recording track one, then re-recording it together with a second part onto track two. To produce a trio, you then re-record the combined track two with the new part back onto track one, and so on. But since every time you re-record, the signalto-noise ratio on the tape deteriorates and wow and flutter increase, this certainly can't be done a dozen or more times without unacceptable degradation of the signal. The solution used by professional recorders is a technique pioneered by Ampex called "Sel-Sync." It permits the record head from an already-recorded channel to be temporarily switched to a playback function. This signal is then fed, via headphones, to the performer, so that what he records on another *first-generation* track will be kept in perfect synchronization with previously recorded material. In this way, performers whose schedules don't permit them to work simultaneously can come to the studio at different times and create a multi-track recording that needs to be "mixed down" (re-recorded) only once to produce the final two-channel version.

Does the audiophile need such facilities? Hardly. Nor do audiophile recorders have any use for the costly input and output transformers (and extra amplifier stages) that match a professional deck to studio consoles. Reliability and durability are important, but we aren't likely to want to pay for a unit capable of running eight hours or more a day for most of the week without introducing audible wow and flutter into a second- or third-generation tape. What the audiophile needs for "professional" results is a machine whose first-generation or "mastering" performance is the audible equivalent of the final product of the studio. And this, with the best home machines, we can achieve easily.



JUNE 1970

STEREO REVIEW CLASSIFIED

COMMERCIAL RATE: For firms or individuals offering commercial products or services. \$1.10 per word (including name and address). Minimum order \$11.00. Payment must accompany copy except when ads are placed by accredited advertising agencies. Frequency discount: 5% for 6 months; 10% for 12 months paid in advance.

READER RATE: For individuals with a personal item to buy or sell. 65¢ per word (including name and address). No minimum! Payment must accompany copy.

pany copy. GENERAL INFORMATION: First word in all ads set in bold caps at no extra charge. All copy subject to publisher's approval. Closing Date: 1st of the 2nd month preceding cover date (for example, March issue closes January 1st). Send order and remittance to: Hal Cymes, STEREO REVIEW, One Park Avenue, New York, New York 10016.

EQUIPMENT

WRITE for quotation on any Hi-Fi components: Sound Reproduction Inc., 460 Central Avenue, East Orange, N.J. 07018. 201-673-0600.

HI-FI Components, Tape Recorders, at guaranteed "We Will Not Be Undersold" prices. 15-day money-back guarantee. Two year warranty. No Catalog. Quotations Free. Hi-Fidelity Center, 239 (HC) East 149th St., New York 10451.

FREE! Send for money saving stereo catalog #H6R and lowest quotations on your individual component, tape recorder, or system requirements. Electronic Values, Inc., 200 West 20th St., N.Y., N.Y. 10011.

TAPE recorders. Hi-Fi components. Sleep Learning Equipment tapes. Unusual values. Free catalog. Dressner, 1523R Jericho Turnpike, New Hyde Park, N.Y. 11040.

LOW, Low quotes: all components and recorders. Hi Fi, Roslyn, Penna. 19001.

THE Price is Right! Hi-Fi Components. J. Wright Co., 65-B Jensen St., East Brunswick, N.J. 08816.

NEW low prices on all stereo components and tape recorders. Write for our quote. Stereo Corp. of America, 2122 Utica Avenue, Brooklyn, New York 11234.

GET OUR LOW QUOTATION ON HI-FI COMPO-NENTS. 125 page catalogue 25¢. Airex Radio Corp., 132 Nassau St., New York, N.Y. 10038. ELECTRONIC TUBES, Semiconductors, Equipment and Parts. Lab matched tubes. Finest quality. Serving TV/Hi-Fi Servicemen, Engineers, and Industry for 20 Years. Advise your needs. Write for Catalog. Barry Electronics, 512 Broadway, New York, N.Y. 10012. (212) 925-7000.

LOWEST PRICES ON ALL COMPONENTS. RMG STEREO, 536 W. 114TH, NEW YORK, NEW YORK 10025. 212-865-5106.

REK-O-KUT Turntables, Tonearms, and Replacement Parts are now available. Contact our Main Plant at Rek-O-Kut, 1568 North Sierra Vista, Fresno, Calif. Phone: (209) 251-4213 or our Parent Company CCA Electronics Corp., 716 Jersey Avenue, Gloucester City, N.J. 08030, Phone: (609) 456-1716.

DIAMOND NEEDLES AND STEREO CAR-TRIDGES at low, low prices for Shure, Pickering, Stanton, Empire, Grado and ADC. Send for free catalog and price sheet. We will be happy to quote on any cartridge—Magnetic, Ceramic or Crystal. All merchandise brand new and shipped PREPAID. LYLE CARTRIDGES, Dept. S, 265 East 149 Street, Bronx, New York 10451.

STEREO COMPONENTS at low discount prices. Send for our low quotes today and our cartridge trade-in specials (Shure, ADC, Pickering, Empire, etc.), Send \$1.00 for our discount catalog. DEFA ELECTRONICS, 2207 Broadway, New York, N.Y. 10024.

BUY DIRECT FROM ENGLAND'S HI-FI MAIL ORDER SPECIALISTS! Save money on Leak, Quad, SME., Goldring. Decca, Bowers & Wilkins, Thorens, Tandberg, Revox, Tannoy, Garrard, Lowther, Wharfedale, Goodmans, K.E.F., Celestion, Transcriptors, W.B., Ortofon, Jordan-Watts, Radford, Armstrong, etc., etc. Insured shipping quotes free, or send \$1.00 bill (\$2.00 airpost) to Include illustrated catalogue. Goodwin Ltd., 7, Broadway, Wood Green, London, N.22. Visitors welcome to showrooms.

WANTED: SONY MODEL 250 AND 250-A TAPE RECORDER OWNERS. Direct factory sale of beautiful plastic-molded dust covers for Sony Models 250 and 250-A at close-out prices. Only \$2.50 each—our manufacturing cost. Supply limited. Don't delay. Send check to Superscope, Inc., 8150 Vineland Avenue, Sun Valley, California 91352, attention Department DP-25. Price includes all Parcel Post and Handling fees. AMAZING DISCOUNTS on famous brand high fidelity stereo components. No small wonder that we have set new sales records each year since 1959. Write: Arkay Electronics, 1028-01 Commonwealth, Boston, Mass. 02215.

COMPONENTS at rock-bottom discounts. Write for quotes. StereoCom, Box 38582, Dallas, Texas 75238.

THE ULTIMATE IN DISCOUNTS on Acoustic Research, Shure, Pickering, Pioneer, and Dual and many others. Write for our free catalogue to ULTIMATE ELECTRONICS, 29 EGERTON ROAD, ARLINGTON, MASS. 02174.

WORLD'S BEST TAPE, Box 18026, Seattle, Washington 98118.

HIGH FIDELITY cabinets? Ask your dealer about Toujay Designs or visit our factory showroom. 146 East 53 St., N.Y.C. 10022. Tuesday through Saturday 10.00-5:30. Full line brochure and color chart, send 25¢.

SHERWOOD crossover sale. Brand new factory sealed cartons 12 DB per octave-8-16 OHMS 600 Hz-\$8.50, 800 Hz-\$6.50, 3500 Hz-\$4.50guaranteed. Cash with order. Musicraft-48 E. Oak Street, Chicago. Illinois 60611.

REVOX TAPE RECORDERS, Box 18026, Seattle, Washington 98118.

SAVE over $33 \frac{1}{3}$ on a pair of one of the world's best speaker systems shipped direct to you from factory. Try them in your home for thirty days. Write: KGLL, Inc., Water St., Lewiston, Maine 04240.

MIDWEST'S LOWEST COMPONENT PRICES. Write for system quotation. Unbeatable prices on SHURE, EMPIRE, PICKERING, and STATION as well as **RECORDING TAPE** including blank 8track. Box 127, Oak Lawn, Illinois 60454.

HARMONIC WAVEFORM PROCESSOR—for stereo systems (patent pending). "A new music waveform processing device whose function is to correct deficiencies in Commercially Recorded program material caused by inadequate energy in the 'transient' and 'peak' portions of the waveform patterns." Results . . . Realism. Audio Engineering Laboratories, Inc., Box 36, McFalls, Me. 04256.

FOR SALE

FREE ELECTRONICS PARTS FLYER. Large catalog \$1.00 deposit. BIGELOW ELECTRONICS, BLUFFTON, OHIO 45817.

JAPAN & HONG KONG DIRECTORY. Electronics, all merchandise. World trade information. \$1.00 today. Ippano Kaisha Ltd., Box 6266, Spokane, Washington 99207.

SENCORE TEST EQUIPMENT UNBELIEVABLE PRICES. FREE CATALOG AND PRICE SHEET. FORDHAM RADIO, 265 EAST 149TH STREET, BRONX, N.Y. 10451.

BURGLAR ALARM SYSTEMS and accessories. Controls, bells, sirens, hardware, etc. OMNI-GUARD radar intruder detection system, kit form or assembled. Write for free catalog. Microtech Associates, Inc., Box 10147, St. Petersburg, Florida 33733.

CIRCUIT BOARDS: Complete Job Shop Operation. Jetca, Inc., Box 418, Monon, Indiana 47959.

CONSTRUCTION PLANS: LASER ... \$2.00. Listening Devices—two F.M. Mike Transmitters ... \$1.00. Tail Transmitter ... \$1.00. Sound Telescope ... \$2.00. Infinity Transmitter ... \$2.00. Equipment and kits available. Howard, 20174 Ward, Detroit, Michigan 48235.

ELECTRONIC Bargains – Diodes, Transistors, Tubes, Courses, Free Catalog–Immediate Shipment, Cornell, 4215-H University, San Diego, Calif, 92105. ELECTRONIC PARTS, semiconductors, kits. Free flyer. Large catalog \$1.00 deposit. Bigelow Electronics, Bluffton, Ohio 45817.

MC790P \$2.00. MC724P \$1.05. Write for catalog. Hal Devices, Box 365Z, Urbana, Illinois 61801.

TAPE AND RECORDERS

CASSETTE and 8-track blanks, language tapes, dozens of accessories and recorders. Literature 25¢. CASSETTES UNLIMITED, P.O. Box 13119-S, Pittsburgh, Pa. 15243.

BEFORE RENTING Stereo Tapes try us. Postpaid both ways — no deposit — immediate delivery. Quality — Dependability — Service — Satisfaction—prevail here. If you've been dissatisfied in the past, your initial order will prove this is no idle boast. Free catalog. Gold Coast Tape Library, Box 2262, Palm Village Station, Hialeah, Fla. 33012.

SCOTCH RECORDING TAPE, lowest prices. TAPE CENTER, Box 4305, Washington, D.C. 20012.

STEREO TAPES, save 20, 30% and more, postpaid anywhere U.S.A. We discount batteries, recorders, tape/cassettes. 80 page catalog 25¢. SAXITONE TAPES, 1776 Columbia Road, N.W., Washington, D.C. 20009.

RENT stereo tapes \$1.25 week postpaid-NEW catalog 25¢. Tape Library, Box 8126, Washington, D.C. 20024.

RADIO YESTERYEAR! Biggest and best in the industry we created. Over 7,000 of those great old-time radio shows. ANY program you remember, drama, band, serials, comedy, etc. Highest fidelity possible with Ampex duplicators. Send \$1.00 for our huge 104-page catalog (refundable) to RADIO YESTERYEAR, Box H, Dept. B, Croton-on-Hudson, N.Y. 10520. Member Better Business Bureau.

RENT 4-track open reel tapes—all major labels— 3,000 different—free brochure. Stereo-Parti, 55 St. James Drive, Santa Rosa, California 95401. OLD Radio Programs on tape. 6 hours for \$8.00. Catalog 50¢. Don Maris, 1926 Cherokee, Norman, Okla. 73069.

COMPUTERIZED 80-PAGE TAPE CATALOG and magazine with 10,000 4, 8-track, cassette, openreel listings by artist, label, title, catalog number, and price. Year's subscription, 6 issues \$3.00. You paid over \$100 for your tape equipment—shouldn't you spend \$3.00 more and know what you can play on it? Send checks to Listen Magazine, 1808 Rittenhouse Square, Philadelphia, Pa. 19103.

BLANK 8-Track Cartridges. Do your own recording on 8-track cartridges. Write Stereo Shack, Box 794, Miami, Florida 33143.

BORED WITH YOUR OLD CARTRIDGES? Tired of high prices for new cartridges? You bet you are! Then send us 95¢ (plus 30¢ handling and postage and one of your present major label 8track cartridges (MUST BE IN GOOD CONDI-TION) and we will send you a previously owned 8-track cartridge in the field of your choice. (Leave the selection to us) EXCHANGE A TAPE, 98 Montague Street, Suite 241, Brooklyn, New York 11201.

OLD Time radio programs——all your old favorites. 50¢ for catalog. Robert Mussehl, R 1, Brooklyn, Wisc. 53521.

SPECIALIZING Taped Radio Mysteries. Catalog \$1.00, Refundable first order. Detective House, 218 Orangeview Lane, Lakeland, Florida 33803.

BASF RECORDING TAPE . . . 4 TRACK PRE-RE-CORDED STEREO TAPES, Lowest Prices. Postpaid U.S.A. Free brochure. Write STEREOTONE TAPES, Box 657, Sterling, Illinois 61081.

RECORDER Owners—Swamp Country Music on tape. Details, Country Cousins, 609 Cherry Street, Macon, GA. 31201.

RECORDS

UNBELIEVABLE Classical rarities. Catalogue TEN ¢! M.I.T.M. 271 Autumn Avenue, Brooklyn, N.Y. 11208.

FREE 64 PAGE CATALOG offers hundreds of recordings of rare Renaissance, Baroque and Classical music. Some records priced as low as \$1.00 each! All late recordings. In Stereo only. MHS RECORDS, Box 932-HS, New York, New York 10023.

"HARD To Get" records——all speeds. Record Exchange, 842 Seventh Avenue, New York, N.Y. 10019.

SPECIAL interest records available, produced by the editors of the world's leading special interest magazines. Send for free catalog. Record Catalog.HF, Ziff-Davis Publishing Company, One Park Avenue, New York, N.Y. 10016.

RARE, Classical Vocal LP's. Free list. D. Jorge, Box 1012, New York City 10001.

PROTECT your records——Poly sleeves for jackets 5¢; Inner sleeves 3½¢; Poly lined paper sleeves 10¢; white jackets 20¢. Minimum order \$5.00. Record Supplies, Hillburn, N.Y. 10931.

CASH for excellent unwanted LPs and prerecorded tapes. Reder, 81 Forshay Road, Monsey, New York 10952.

LIKE new LPs and prerecorded tapes. Catalogue 50¢. Records, Hillburn, New York 10931.

POPULAR organ albums factory direct. Concert Recording, Lynwood, Calif. 90262.

OLDIES-45 RPM original hits. Over 4000 available. Catalog 25¢. C & S Record Sales, Box 197, Wampsville, N.Y. 13163.

FREE CATALOGS—rare broadcasts on cassettes. ARG, 341 Cooper Station, New York City 10003.

MUSICAL Records teach children math. De Chauron, 210 Post, San Francisco 94108.

TUBES

RECEIVING & INDUSTRIAL TUBES, TRANSIS-TORS, All Brands—Biggest Discounts. Technicians, Hobbyists, Experimenters—Request FREE Giant Catalog and SAVE! ZALYTRON, 469 Jericho Turnpike, Mineola, N.Y. 11501.

REPAIRS AND SERVICES

CUSTOM RECORDING SERVICE. Tape and disc. Stereo and mono. Live and copies. Editing. Masters and pressings. High quality at reasonable rates. Joseph Giovanelli, Audio-Tech Laboratories, 2819 Newkirk Ave., Brooklyn, N.Y. 11226. IN 9-7134.

\$6.50—12" LPs from tapes, cassettes, records. ARG, 341 Cooper Station, New York City 10003.

WANTED

QUICKSILVER, Platinum, Silver, Gold. Ores Analyzed. Free Circular. Mercury Terminal, Norwood, Mass. 02062.

\$25.00 for Capitol ST-2795 Record album. Mr. Steve Grochow, 377 E. Weldon, Phoenix, Ariz. 85012.

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.

R.E.I.'s famous (5) week course for the First Class Radio Telephone License is the shortest, most effective course in the nation. Over 98% of R.E.I. graduates pass F.C.C. exams for 1st class license. Total tuition \$360.00. Job Placement free. Write for brochure Radio Engineering Incorporated Schools, 1336 Main Street, Sarasota, Florida 33577-or 3123 Gilham Road, Kansas City, Missouri 64109-or 809 Caroline Street, Fredericksburg, Virginia 22401-or 625 E. Colorado Street, Glendale, California 91205.

DEGREE in Electronics Engineering earned mostly by correspondence. Free Brochure. Dept. G-9, Grantham School of Engineering, 1505 N. Western Ave., Hollywood, California 90027.

MAGAZINES

BACK DATE MAGAZINES! Send needs. Midtown, Box 917-HS, Maywood, N.J. 07607.

BUSINESS OPPORTUNITIES

I MADE \$40,000.00 Year by mailorder! Helped others make money! Start with \$10.00 - Free Proof, Torrey, Box 318-N, Ypsilanti, Michigan 48197.

FREE BOOK "999 Successful Little-Known Businesses." Work home! Plymouth 445-L, Brooklyn, New York 11218.

ADDRESSERS (Commission Mailers) Wanted Everything Supplied. Details 25¢. Smyre's, Box 953-D, Newark, N.J. 07101.

PRINTING

FREE LITERATURE: ADDRESS LABELS, BUSI-NESS CARDS, PRINTING, RUBBER STAMPS. JORDAN'S, 552 WEST O'CONNOR, LIMA, OHIO 45801.

EMPLOYMENT INFORMATION

FOREIGN and USA job opportunities available now. Construction, all trades. Earnings to \$3,000.00 monthly. Paid overtime, travel, bonuses. Write: Universal Employment, Woodbridge, Conn. 06525.

PERSONALS

MAKE FRIENDS WORLDWIDE through international correspondence. Illustrated brochure free. Hermes, Berlin 11, Germany.

PHOTOGRAPHY-FILM, EQUIPMENT, SERVICES

SCIENCE Bargains—Request Free Giant Catalog "CJ"—148 pages—Astronomical Telescopes, Microscopes, Lenses, Binoculars, Kits, Parts, War surplus bargains. Edmund Scientific Co., 300 Edscorp Bldg., Barrington, New Jersey 08007. COLOR Slides of paintings, travel, events. Free catalog. Fotoshop, 136 W. 32nd Street, New York 10001.

HYPNOTISM

FREE Hypnotism, Self-Hypnosis, Sleep Learning Catalog! Drawer H400, Ruidoso, New Mexico 88345.

AMAZING self-hypnosis record releases fantastic mental power. Instant results! Facts free. Write: Forum (AA5), 333 North Michigan Avenue, Chicago 60601.

MOVIE FILMS

16mm SOUND Features, Shorts, New. Used for Sale. Free Catalog. National Cinema, 333 W. 57 St., N.Y., N.Y. 10019.

8MM Super 8 cartoons, adventures, sports. Discount pricing. Send for listings. Fotoshop, 136 W. 32nd Street, New York 10001.

EDUCATIONAL OPPORTUNITIES

LEARN WHILE ASLEEP, Hypnotize! Strange catalog free. Autosuggestion, Box 24-ZD, Olympia, Washington 98501.

GOVERNMENT SURPLUS

JEEPS Typically From \$53.90 . . . Trucks From \$78.40 . . . Boats, Typewriters, Airplanes, Multimeters, Oscilloscopes, Transceivers, Electronics Equipment. Wide Variety, Condition, 100,000 Bid Bargains Direct From Government Nationwide. Complete Sales Directory and Surplus Catalog \$1.00 (Deductible First \$10.00 Order). Surplus Service, Box 820-L, Holland, Michigan 49423.

PLANS AND KITS

BUILD Color Organs, Computers, Stereos, Alarms, Slide-Synchronizers, Catalog, Workshop, 33E Cain, Plainview, New York 11803.

SPORTS ACTION FILMS

COLLECTORS! Set RECORDS with FILM. Send 25¢ for catalog Super 8/8mm, get \$1.00 credit on purchases. SPORTLITE FILMS, Dept. SR, 20 North Wacker Drive, Chicago, III. 60606.

MUSICAL INSTRUMENTS

UNCOMMON Musical Instruments: Historical, ethnic, exotic; recorders, classical guitars. We buy antique and unusual instruments. Catalog \$1 refunded first purchase. Classical Instruments, 133 Gateway Bldg., New Orleans, La. 70130.

30% DISCOUNT any name brand musical instrument. Free catalog. Freeport Music, 127-Q Sunrise Hway, Freeport, N.Y. 11520.

GUITARISTS—Too busy to practice? Five minutes weekly teaches folk strums, barres, melody. Beginner—advanced. Samples, 10¢. Steele, Box 114, San Raphael, California 94902.

TREASURE FINDERS

TREASUREPROBES patented transistorized detector signals "dig" by earphone "beeping." 5" search head, PC boards, two colpitt oscillators improve stability. Kit \$13.95, assembled \$18.88, with speaker \$24.88. 60 day guarantee. Send for Free Bibliography, "Treasure Maps and Books of U.S." Treasurehouse, SJ60, Tennent, N.J. 07763,

RUBBER STAMPS

RUBBER ADDRESS STAMP \$2.00. SIGNATURE \$3.50. FREE CATALOG. JACKSON, BOX 443-G, FRANKLIN PARK, ILL. 60131.

BINOCULARS AND TELESCOPES

BINOCULAR specialists. Repairs and sales. Free literature. Tele-Optics, 5514 Lawrence, Chicago, III. 60630.

MISCELLANEOUS

WINEMAKERS. Free illustrated catalog of yeasts, equipment. Semplex, Box 12276, Minneapolis, Minn. 55412.

JAPAN'S PUBLICATIONS GUIDE Business, pleasure, education. \$5.00. INTERCONTI-NENTAL, CPO 1717, Tokyo 100-91.

SAVE on sound equipment. Learn to unscramble secret pawn shop price code. Send \$1.00 L.P.B., P.O. Box 88240-H, Indianapolis, Indiana 46208.

STOP BURGLARS THE EASY WAY!! Affix authentic "Protected by Electronic Sentry Alarm" Decals to auto windows, doors & windows of home, retail stores; vending machines, etc. Whether you have an alarm or not-thieves stay away! Only \$1.00 for each set of two. J. Ross, 80-34 Kent St., Jamaica, N.Y. 11432. Dept. SR.

MAIL ORDER OPPORTUNITIES WAITING FOR YOU!

Classified Advertisers find more outlets for their product and service advertising in Ziff-Davis Electronics Publications than in any other media.

Monthly publications: POPULAR ELEC-TRONICS, ELECTRONICS WORLD, STEREO REVIEW are each acknowledged leaders in their respective special interest areas. They offer mail order businessmen the opportunity to reach additional markets with Classified Advertising that is responded to regularly by an affluent audience of active electronics enthusiasts.

Prove to yourself the effectiveness of Classified Advertising in Ziff-Davis Electronics Publications. Write today for information, assistance or sample copies to:

Hal Cymes, Classified Adveriising Manager Ziff-Davis Publishing Company

One Park Avenue, New York, N. Y. 10016

STEREO REVIEW ADVERTISERS' INDEX

REAL	DER SERVICE NO. ADVERTISER	PAGE
1	Acoustic Research, Inc.	
2	Advent Corporation	
	Altec Lansing, Division of LTV Ling Altec, Inc	
3	Ampex Records	
4	Angel Records	
	Audio Unlimited, Inc.	
5	Bose Corporation	
103	British Industries—Garrard	
6	Carston Studios	100
	Columbia Records	
7	Concord Electronics Corp.	
8	Deutsche Grammophon (DGG)	
9	Downtown Audio	
10	Dressner	111
44	Dual	
	Dynaco, Inc.	
12	Early Times	
19	Electro-Voice, Inc.	
13	Elpa Marketing Industries, Inc.	
14	Empire Scientific Corporation	
21	Empire Scientific Corporation	
26	Fisher Radio Company	
	Great Books of the Western World	
15	Harman-Kardon, Inc.	54
16	Heath Company	
17	Honeywell Photographic Products	
<mark>2</mark> 0	JVC America, Inc.	
18	James B. Lansing Sound, Inc.	
	Classified A	dvertising

REAL	DER SERVICE NO. ADVERTISER	PAGE
22	KLH Research and Development Corp.	
23	Kenwood Electronics, Inc.	
46	Koss Electronics, Inc.	
24	Lafayete Radio Electronics	
25	London Records	93
	Marantz, Inc.	
27	McIntosh Laboratory Inc.	
	Old Grandad	
28	Omnicraft	98
41	Pickering & Company, Inc.	
	Pioneer Electronics Corp.	
29	Ponder & Best	
30	Rabsons-57th Street, Inc.	111
31	Radio Shack Corp.	
32	Rectilinear Research Corp.	
33	Revox Corporation	
34	Roberts Div. of Rheem Mfg. Co.	
35	Sansui Electric Co., Ltd.	
100	Scott, Inc., H.H.	
36	Sherwood Electronic Laboratories, Inc.	
37	Shure Brothers, Inc.	
3 9	Sony Corporation of America	
	Sony/Superscope, Inc.	
40	Sound Reproduction, Inc.	
42	Stereo Corporation of America	
43	Teac Corporation	
44	United Audio Products, Inc.	
4 <mark>5</mark>	University Sound	

STEREO REVIEW PRODUCT INDEX

As an additional reader service, we list below, by classifications, the products advertised in this issue. If there is a specific product you are shopping for, look for its listing and turn to the pages indicated for the advertisements of manufacturers supplying that equipment.

CLASSIFICATION	PAGE NUMBERS	CLASSIFICATION PAGE NUMBERS
Amplifiers and Preamplifiers		Speakers and Speaker Systems2nd Cover-1, 5, 16, 20-21, 49, 53, 77, 81, 95, 99
Books		Tape, Recording
Cameras		Tape Recorders and Decks
Cartridges	.50, 57, 89, 3rd Cover	Tape Recorders, Cassette
Catalogs		Tone Arms
Liquors		Tuners, FM
Receivers, Stereo2, 6-7, 9, 17, 23, 28-29, 30, 33, 35, 37	, <mark>44, 4</mark> 5, 85, 4th Cover	Turntables and Changers
Records		Watches

A new concept 100% MUSIC POWER®



CARTRIDGE "C" at 25% Music Power





USEFUL MUSIC POWER

REQUE

CARTRIDGE "A"

at 75% Music Power

LOST MUSIC POWER





 \dots a serious loss of definition occurs: because cartridge "C" has completely lost 75% of the Music Power at the higher frequencies.



... in this case you lose definition of tone and instruments: because cartridge "B" loses as much as 50% at higher frequencies.



... the instruments seem a little faded in the upper frequencies: because cartridge "A" attenuates higher frequencies as much as 25%.



... the instruments, all of them, are distinct and clear throughout the entire fundamental frequency range.

With the Pickering XV-15 Cartridge You Get 100% Music Power — You Hear It All!

Only Pickering's XV-15 series of cartridges features 100% Music Power. With the Pickering, a harp sounds like a harp, a trumpet has the biting sound that you expect from a brass instrument, the flute has a rich romantic tone, the orchestra is the full-throated instrument the composer called for. So choose Pickering – and make the enjoyment of 100% Music Power a part of your life.



For those who can [HEAR] the difference

THE NEW PICKERING XV-15/750E. PREMIER MODEL OF THE XV-15 SERIES. TRACKS AT 1/2 TO 1 GRAM. DYNAMIC COUPLING FACTOR OF 750 FOR USE IN FINEST TONEARMS. \$60.00. OTHER XV-15 CARTRIDGES FROM \$29.95. PICKERING & CO., PLAINVIEW, L.I., N.Y. CIRCLE NO. 41 ON READER SERVICE CARD

PICKERING





XV-15 at 100% Music Power





E-V FOUR·A 12" 3-way \$199.95 **E-V FIVE·C** 10″ 2-way \$99.95 **E-V SEVEN·B** 8" 2-way \$66.50

E-V EIGHT·A 6″ 2-way \$49.95



Any similarity between these four Electro-Voice bookshelf speaker systems is strictly scientific!

These four speaker systems share a surface beauty. But don't be misled. Underneath — where it counts there are scores of important differences. There have to be.

Because what's right for a small system may be all wrong for a big one. And what works well in a 2-way system may be poison for a 3-way. (Even a little change, like just 1" more cabinet, can upset the design of every component inside.)

Of course not everybody can afford

to design every speaker in their line from scratch, the way Electro-Voice does. But then, not everybody has a scientific computer that pre-tests hundreds of ideas on paper to find the few good enough to build.

And not everybody has a huge anechoic chamber (like the one above) to prove the superiority of each design. Nor the staggering array of test equipment that goes with the chamber. Or — most important— the engineering talent and musical sensitivity to take full advantage of these unique laboratory facilities.

When you select an E-V speaker system — regardless of size or price — you can be certain it truly represents the state of the art...and good value to boot.

Anything less would be a cop-out.

But don't take our word for it. Listen. Compare. The difference you see and hear is what high fidelity is all about.

ELECTRO-VOICE, INC., Dept. 604F 616 Cecil Street, Buchanan, Michigan 49107

For name of nearest dealer, call TOLL-FREE: (800) 243-0355 ANY HOUR, ANY DAY. In Connecticut call collect: 853-3600

high fidelity systems • tuners, amplifiers, receivers • public address loudspeakers microphones • phono needles and cartridges • space and defense electronics



A SUBSIDIARY OF GULTON INDUSTRIES, INC.