



All turntables are pretty much the same on the outside.

But if you look carefully inside, you'll see the things that separate Pioneer's new PL-518 from others.

Things that add up to a turntable that can reproduce music perfectly, free of audible

distortion, acoustic feedback and rumble.

A REMARKABLE DRIVE SYSTEM.

Obviously, all direct-drive turntables have an extremely accurate drive system.

voltage, pitch control, and a built-in strobe unit to help you regulate the speed of the platter.

But we believe the drive system of the PL-518 is the most accurate found on any turntable selling for under \$175. Because the 16-pole, 24-slot brushless DC Servo motor is much the same as those found in turntables selling for \$250, if not more. *And metal headshells*

Equally important is the fact that can distort music, so Pioneer's is made of glass fiber, this motor is anchored to a metal bottom which eliminates all resonance plate, instead of suspended from the base, where vibration can affect your music.

SOMETHING YOU RARELY SEE IN A TONE ARM: THINKING.

To give you further insight into the virtues of our PL-518 you only have to look at the way some tone arms are mounted. On piano wire. Or cheap plastic casings.

Instead, ours is gimballed on steel pivot bearings. So it can't vibrate.

A great deal of thought also went into developing an auto-return mechanism with fewer moving parts. It imposes less load on the motor and is more reliable



Instead of suspending the motor, Pioneer has anchored it so vibration can't affect the music.

than the auto-return on most turntables.

Then there are two separate ball bearing assemblies used in the tone arm for greater stability as it passes over the record.

A plastic headshell is good enough for most Each offers an immunity to fluctuations in line tone arms. It's nowhere near good enough for the PL-518. Tests show plastic tends to

esonate at frequencies between 75 and

300 hertz. By using a glass fiber shell, resonance above 75 hertz is all but eliminated.

In fact, nothing vibrates

on the tone arm with the exception of the stylus. So nothing comes through the tone arm but music.

A SOLID ARGUMENT FOR THE 2-PLY PARTICLE BOARD BASE.

The base on many turntables is nothing more than a hollow plastic shell. Or worse, sheet metal neatly hidden beneath imitation wood veneer. Both seem harmless

enough, but they tend to vibrate and cause acoustic feedback when the volume is turned up.

Unlike the hollow plastic base, our solid 2-ply particle board base perfectly centered. The base on the PL-518, however, is made of two solid blocks of compressed wood, each 20 millimeters thick. When the two are

joined it not only gives the base greater density, the glue between the pieces acts to damp vibration. So when you're listening to a record, you won't hear the turntable.



Common staples can work themselves loose, which is why Pioneer uses aluminum screws to mount the base plate to the base.

THINKING ON OUR FEFT

Instead of skinny screw-on plastic legs, Pioneer uses large shock mounted rubber feet that not only support the weight of the turntable,



Stiff plastic legs merely support most turntables, but Pioneer's massive spring-mounted rubber feet also reduce feedback.

but absorb vibration and reduce acoustic feedback. So if you like to play your music loud enough to rattle the walls, you won't run the risk of rattling the turntable.

FEATURES YOU MIGHT OTHERWISE OVERLOOK.

Besides the big things, the PL-518 has other less obvious advantages.

Our platter mat, for example, is concave to compensate for warped records.

is far less susceptible

to vibration.

The platter itself is larger than others in this price range, which means it stays at perfect speed with

And instead of

flimsy staples, we use

sturdy aluminum

less strain on the motor. Even something like our spindle is special. It's .8

microns larger than most, so that the record is always

Our spindle is .8 microns larger than others, to keep your records perfectly centered.

WHEN YOU PUT IT ALL TOGETHER, YOU CAN'T BUY A BETTER TURNTABLE FOR UNDER \$175.

©1978 U.S. Pioneer Electronics, High Fidelity Components, 85 Oxford Drive, Moonachie, New Jersey 07074



Many tone arms are mounted on plano wire that vibrates, which is why our tone arm floats on steel pivot bearings.





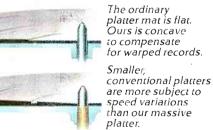
above 75 hertz.



So if you want to get the most out of every piece of music, you should have the turntable that gets the most out of every part that goes into it.

OPIONEER

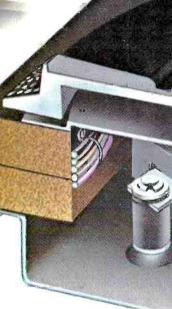
screws to seal the base plate to the base. It's details like these as well as advanced technology that gives the PL-518 an incredibly high signal-to-noise ratio of 73 decibels. And an extremely low wow and flutter measurement of 0.03%. Performance figures you'd be hard pressed to find on any other turntable for this kind of money.

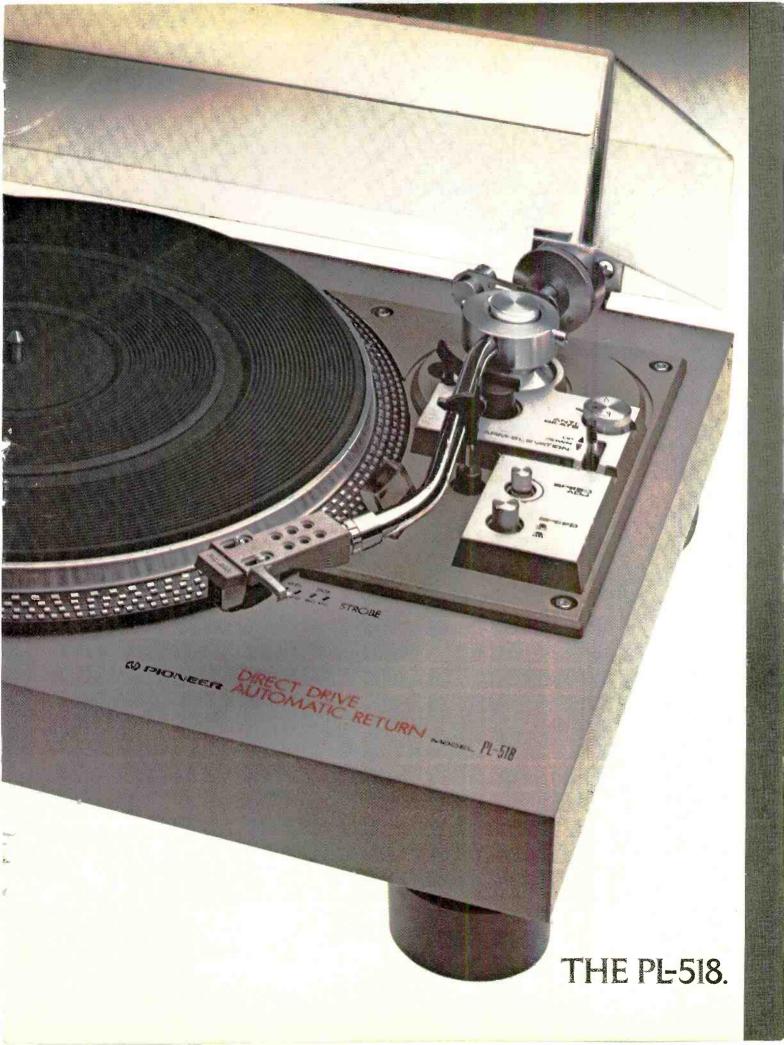


The ordinary platter mat is flat. Ours is concave to compensate for warped records. Smaller,

speed variations

than our massive





CIRCLE NO	. 21 ON	READER	SERVICE CARD

		A A		The second second		EN	P P y your syste	em sounds	better.
MODEL		4000 D/I	242Z	<u>240</u> [2000 E/I	2000	2000
FREQUENCY	10Hz-50kHz.	15Hz-45kHź	20Hz-20kHz	20Hz-20kHz	20Hz-20kHz	20Hz-20kHz	20Hz-20kHz	20Hz-20KHz	20Hz-20kHz
RESPONSE		±3.dB	± 2 dB	土 1%dB	± 2 dB	± 2 dB	± 3 dB	上3dB	土 3 dB
TRACKING FORCE RANGE	%-1% gm	1-1% gm	⁹ ⁄a−1 ¼ gm	³ 4-1 4 gm	³ 4≓1% gm	³4-1½ gm	1-2 gm	1%-2½.gm	1‰3.gm
SEPARATION: 15Hz to 1kHz 1kHz to 20kHz 20kHz to 50kHz 20Hz to 500Hz 500Hz to 15kHz 15kHz to 20 kHz	28 dB 23 dB 15 dB	24 dB 20 dB 15 dB	20 dB 30 dB 25 dB	18 dB 27 dB 22 dB	20 dB 28 dB 20 dB	20 dB 25 dB 18 dB	18 dB 23 dB 15 dB	18 dB 23 dB 15 dB	16 dB 21 dB 13 dB
M. DISTORTION	2%	2%	08%	.08%	.1%	.15%	2%	.2%	.2%
@ 3.54 cm/sec	2kHz-2 0kHz	2kHz-20kHz	2kHz-20kHz	2kHz-20kHz	2kHz-20kHz	2kHz-20kHz	2kHz-20kHz	2kHz-20kHz	2kHz-20kHz
STYLUS	2 mil	2 mil	2 x 7 mil	.2 x .7 mil	2 x .7 mil	2 x .7 mil	2 x 7 mil	.3 x .7 mil	.7 mil
	Sol-radia	bi-radial	elliptical	elliptical	elliptical	elliptical	elliptical	elliptical	spherical
EFFECTIVE TIP MASS	4 milligram.	4 milligram	2 milligram	.2 milligram	.6 milligram	6 milligram	.6 milligram	9 milligram	1 milligram
COMPLIANCE	30x10 ⁻⁶	30x10 ⁻⁶	30x10 ⁻⁶	30x10 ⁻⁶	20x10 ⁻⁶	18x10 ⁻⁶	17x10 ^{.6}	16x10 °	14x10 ⁶
	cm/dyne	cm/dyne	cm/dyne	cm/dyne	cm/dyne	. cm/dyne .	cm/dyne	cm/dyne	cm/dyne
TRACKING ABILITY	32 cm/sec @ 1kHz @ 1 gm	30 cm/sec @ 1kHz @ 1½ gm	38 cm/sec @ 1kHz @ 9 gm	38 cm/sec @1 kHz @ 1 gm	32 cm/sec @1kHz @1-gm	-28 cm/sec @1kHz @1% gm	28 cm/sec @ 1kHz @1% gm	28 cm/sec @ 1kHz @1% gm	32 cm/sec @ 1kHz @ 2 gm
CHANNEL	within 1 dB	within 1½ dB	within ½ dB	within 1 dB	within 1 dB	within 1¼ dB	within 1½ dB	within 1 ½ dBi	within 1½ dB
BALANCE	@1kHz	@1kHz	@1kHz	@1kHz	@1kHz	@1kHz	@1kHz	@1kHz	@1kHz
NPUT LOAD	100k Ohms/	100k Ohms/	47k Ohms/	47k Ohms/	47k Ohms/	47k Ohms/	47k Ohms/	47k Ohms/	47k Ohms/
	channel	channel	channel	channel	channel	channel	channel	channel	channel
	under 100	under 100	300	300	400-500	∿ 400-500	400-500	400-500	400-500
	pF/channel	pF/channel	pF/channel	pF/channel	pF/channel	pF/channel	pF/channel	pF/channel	pF/channel
OUTPUT	3	3	3	3	4.5	4.5	7	7	7
@ 3:54.cm/sec	mV/channel	mV/channel	mV/chan ne l	mV/channel	mV/channel:	mV/channel	mV/channel	mV/channel	mV/channel

No matter what system you own, a new Empire phono cartridge ertain to improve its performance In a divinit ages of Empire are threefold. In a gradient of the energy riain to improve its performance. The advantages of Empire are threefold. The advantages will last longer. Unlike other magnetic One, your records will last longer. allows our diamond s tridges Empire's moving iron design allows our diamond s is certain to improve its performance.





Ge Equipment -

Roundup of the latest audio equipment and accessories	
AUDIO QUESTIONS AND ANSWERS	
Advice on readers' technical problems Larry Klein	
AUDIO BASICS	
Power: How Much Do You Need?	
TAPETALK	
Theoreti <mark>cal and</mark> practical tape problems solved	
TECHNICAL TALK	
The Testing of Turntables	
EQUIPMENT TEST REPORTS	
Hirsch-Houck Laboratory test results on the Burwen TNE 7000 transient noise eliminator.	
Shure V15 Type IV phono cartridge, Dynaco Stereo 416 power amplifier, Wharfedale E-70	
speaker system, and Teac A-103 stereo cassette deck	
RECEIVERS	



A TALK WITH JOSÉ VAN DAM LOFT JAZZ HOW TO READ A RECORD JACKET **BEST RECORDINGS OF THE MONTH** Vocal: Art Garfunkel's "Watermark," Gordon Lightfoot's "Endless Wire".... Opera: Mozart's La Clemenza di Tito, Cilèa's Adriana Lecouvreur. . . . Instrumental: The Joys of Purcell Stoddard Lincoln 93 John Browning's "Pictures" Richard Freed 96 Poulenc and Stravinsky: An Odd Coupling Makes Sense102 POP ROTOGRAVURE Flack's Back ...

Ge Regulars

EDITORIALLY SPEAKING	WILLIAM ANDERSON 4
LETTERS TO THE EDITOR	8
GOING ON RECORD	LAMES GOODERIEND 64
THE POP BEAT	PAIL ETTE WEISS 67
ADVERTISERS' INDEX	158

COVER: Design by Borys Patchowsky; photo by Bruce Pendleton.

COPYRIGHT © 1978 BY ZIFF-DAVIS PUBLISHING COMPANY. All rights reserved. Stereo Review, May 1978. Volume 40, Number 5. Published monthly by Ziff-Davis Publishing Company; Editorial and Executive Offices at One Park Avenue, New York, N.Y. 10016; Telephone: 212 725-3500. Philip B. Korsant, President; Furman Hebb, Executive Vice President; Selwyn Taubman, Treasurer; Charles B. Seton, Secretary. Also publishers of Boating, Car and Driver. Cycle, Flying, Modern Bride, Popular Electronics, Popular Photography, and Skiing. One-year subscription rate for U.S. and possessions, 99.98; Canada, \$10.98. All other countries, one-year subscription rate \$14.98, cash orders only, payable in U.S. currency. Second-class postage paid at New York, N.Y. and at additional mailing offices. Authorized as second-class mail by the Post Office Department, Ottawa, Canada, and for payment of postage in cash. SUBSCRIPTION SERVICE: Forms 3579 and all subscription correspondence should be addressed to Stereo Review, Circulation Department, P.O. Box 2771. Boulder, Colorado 80323, Please allow at least eight weeks for change of address. Include your old address as well as new—enclosing if possible an address label from a recent issue. Material in this publication may not be reproduced in any form without permission. Requests for permission should be directed to Jerry Schneider, Rights and Permissions, Ziff-Davis Publishing Company, One Park Avenue. New York, N.Y. 10016.

Editorially Speaking

By William Anderson



ART AND ARTISTS

" wish he didn't have to be a star, I wish he could be a nobody, he's so talented." So says singer Barbara Lea of singer Mel Tormé in a recent interview with Whitney Balliett in the New Yorker. That seems to be a rather cockeyed point of view for any artist to have about her profession, but Miss Lea is a woman with a reputation for meaning what she says, and what she is saying here is that great performing artistry has no necessary connection with popular success.

That point of view is, moreover, axiomatic among show-business professionals, whose heroes and heroines-the "actors' actors' and "singers' singers"-are seldom appreciated by the general public. But it is not so well understood by audiences, who deal habitually in unexamined absolutes: "If she's not any good, how come she sells so many records?" "If he's so great, how come I've never heard of him?'

Attempts to answer such questions usually fail because questioner and answerer are simply not talking about the same thing. The former is talking about the artist, which is to say personality, sex appeal, and all those other winning ways that together make up the otherwise indescribable bundle of attributes known as "star quality." The latter is talking about the art, which is a God-given talent to which is added that collection of laboriously acquired skills known as "performing abili-ty"—to be seen, heard, described, and in some cases even measured (flat is flat).

This brings us back inevitably to an old concern in these pages-the battle between reader (questioner) and critic (answerer). As even a casual skimmer of our letters column knows, most of our readers are artist-oriented. They tend to be what the French call "inconditionnels": once they have given their hearts, those hearts stay given, whatever the artistic accomplishments involved. This is no particular strain, for their devotion is based not so much on performing ability as it is on "personality," and that rarely changes. Though such emotional fidelity does have its attractive side, it is often accompanied by a most unattractive style of argument: the hero is defended not by recourse to artistic values (there may not be any, of course), but by the quoting of sales figures, personal attacks on the critic, on other artists, and even on other artists' audiences. When a hero falls from grace, he often does so not for artistic but for 'public-relations'' reasons. (Andy Williams was not asked to master the ceremonies for the Grammy Awards this year. Is that because he is singing less well these days or because the mother of his children is apparently careless with firearms?)

All such concerns are as nothing to the artoriented critic. His heart goes out only on loan, and he is apt to call it in at the first sign of artistic decline. And that heart is also (in the best of critics, to be sure) as invulnerable to blandishments unconnected with artistic performance as his head is to sales figures great or small. An honest critic is therefore destined to almost certain unpopularity with the greater part of the public; he will be found incomprehensibly ungenerous when he fails to salute a newly discovered superstar and fickle when he deserts a fading minor one.

To return to Barbara Lea and the rather shocking idea that to be a great popular entertainer is not necessarily to be a great artist: this is of course a generalization from any number of particular cases, and there are always exceptions. How, for instance, to explain Frank Sinatra and Bing Crosby, both sublimely accomplished artists, both popular superstars? I would guess that they have probably had two mutually exclusive audiences, a large one attracted by Sinatra's twofisted raffishness and Crosby's parish priestliness, and a smaller one by their vocal wizardry. How nice-but how unusual-to have it both wavs.

Stereo Review

PUBLISHER EDGAR W. HOPPER EDITOR WILLIAM ANDERSON MANAGING EDITOR WILLIAM LIVINGSTONE EDITORIAL COORDINATOR LOUISE GOOCH BOUNDAS ART DIRECTOR BORYS PATCHOWSKY TECHNICAL DIRECTOR LARRY KLEIN TECHNICAL EDITOR RALPH HODGES ASSISTANT TECHNICAL EDITOR GEORGE TLAMSA MUSIC EDITOR JAMES GOODFRIEND POPULAR MUSIC EDITOR PAULETTE WEISS ASSISTANT MUSIC EDITOR VIVIENNE WINTERRY GOODMAN **PRODUCTION EDITOR** JOHN HARRISON ASSISTANT EDITOR, RESEARCH RICHARD SARBIN COPY EDITOR DAVID STEIN EDITORIAL ASSISTANTS BARBARA AIKEN, DIANE NAKAMURA

CONTRIBUTING EDITORS

CHRIS ALBERTSON NOEL COPPAGE RICHARD FREED PHYL GARLAND DAVID HALL ROY HEMMING JULIAN D. HIRSCH GEORGE JELLINEK IGOR KIPNIS IRVING KOLODIN PAUL KRESH

STODDARD LINCOLN J MARKS-HIGHWATER RICK MITZ HICK MITZ LINCOLN PERRY PETER REILLY CHARLES RODRIGUES ERIC SALZMAN STEVE SIMELS CRAIG STARK OFL VANCE JOEL VANCE

LONDON EDITOR HENRY PLEASANTS ADVERTISING DIRECTOR JAMES J. SULLIVAN ADVERTISING SERVICE MANAGER LINDA BLUM EXECUTIVE ASSISTANT **PEGI MCENEANEY**

Editorial and Executive Offices Ziff-Davis Publishing Company One Park Avenue, New York, New York 10016 Eastern Advertising Manager: Richard J. Halpern Eastern Advertising Representative: Charles L. P. Watson Midwestern Office: The Pattis Group 4761 West Touty Ave., Lincolnwood, Illinois 60646 312 679-1100 Arnold S. Hoffman

Western Office 9025 Wilshire Boulevard Beverly Hills, California 90211 213 273-8050, 272-1161 Western Advertising Manager: Linda Bartlett

Japan: James Yagi Oji Palace Aoyama, 6-25, Minami Aoyama 6-Chome, Minato-ku, Tokyo, Japan Telephone: 407-1930/6821, 582-2851 Circulation Office P.O. Box 2771, Boulder, Colorado 80323

EDITORIAL CONTRIBUTIONS must be accompanied by return postage and will be handled with reasonable care however, publisher assumes no responsibility for the re-turn or safety of art work, photography, or manuscripts Member Audit Bureau of Circulations



ZIFF-DAVIS PUBLISHING COMPANY

ZIFF-DAVIS PUBLISHING COMPANY Philip B. Korsant, President Furman Hebb, Executive Vice President John R. Emery, Sr. Vice President Philip Sine, Sr. Vice President Edward D. Muhfeld, Sr. Vice President Philip Sine, Sr. Vice President, Circulation and Marketing Frank Pomerantz, Vice President, Creative Services Arthur W. Butzow, Vice President, Production George Morrissey, Vice President, Production George Morrissey, Vice President Sidney Holtz, Vice President Albert S. Traina, Vice President Albert S. Traina, Vice President Edgar W. Hopper, Vice President Robert N. Bavier, Jr., Vice President Charles B. Seton, Secretary Selwyn Taubman, Treasurer W. Bradford Briogs, Vice Chairman Philip B. Korsant, President W. Bradford Briggs, Vice Chairman

ZIFF CORPORATION William Ziff, Chairman I. Martin Pompadur, President Hershel B. Sarbin, Executive Vice President

There are probably beaut ful musical passages on many of your records that you've never heard. And you never will, unless your cartridge is sensitive enough to clearly reveal all the subtle harmonics within the audio spectrum.

Today's sophist cated direct to disc technology has raised the quality of cisc recording to a new state of the art. You need a cantridge that does justice to these fine recordings: an ADC cartridge. With an ADC certridge, you will find the state of the art has been brought almost to the stale of perfection.

Long Lnow a by audiophiles for increditly put c sound reproduction. ADC cartildges have also proven their amazingly low ecoid wear. This year, they have even surpassed themselves.

First, theres the remark-ble new ZLM with the unique ALIPTIC Stylus, It combines the better stereo reproduction of the

elliptical stylus shape with the longer, lower wearing, vert cal bearing radius of the Shibata shape. As a result, sound reproduction is completely transparent and clean. Individual instrument placement is more easily identifiable. And frequency response is ruler flat ±1dB to 20kHz and ±1/2dB to 20kHz. It tracks at 12 to 114 grams.

Then there's the new XLM MK III with the same reduced mass, tapered cantilever but with a true elliptical shaped nude diamond tip. It has 50% lower mass than our previously bwest mass XLM NIK II. it tracks at $3.4 - 1\frac{1}{2}$ grams.

The QLM 36 MK III with the innovative Diasa el iptical nude tip also has excellent figuency response, wide separation, and an incredibly clean sound. It also tracks at 3/4 = 11 2 grams.

The OLM 34 MK III offers elliptical shape and tracks as low as CIRCLE NO. 4 ON READER SERVICE CARE 1 gram with flat response out to 20kHz±2.dB

Music

The CLM 32 MK III is a 2-4 gram elliptical with great sound. It's one of the best budget ellipticals around.

And ideal for automatic changers. the QLM 30 MK III is a 3–5 gram conical stylus that's compatible with a wide range

Think about it. You probably don't even know what you're missing



Audio Dynamics Corporation Picket Disur t Road New stilfore. Cenn 26776



hew was there.



The super fidelity receiver The Sansui G-9000

A lot of money? You bet it is. But that's what it cost Sansui to develop the world's most advanced receiver. The Sansui G-9000 super fidelity DC receiver. Never before has music reproduction been so clean, brilliant, and true. When you listen to a G-9000 you'll actually hear a difference. When you look at 'the specifications, you will understand why.

The amplifier section is DC and direct coupled to achieve the widest frequency response of zero Hz to 200kHz (from main-in, -3dB). A slew rate of $80V/\mu$ sec., achieved through unique Sansui amplifier circuitry (patent pending), ensures fastest response to all musical signals. And we have virtually eliminated distortion. THD is all the way down to 0.02% at full rated power of 160 watts per channel, min. RMS, both channels driven into 8 ohms from 20-20,000Hz.

The FM section offers selectable IF bandwidth, for greatest selectivity in crowded signal areas and lowest distortion (0.08% stereo) under normal listening conditions. Sensitivity is 1.5μ V (8.7dBf), and capture ratio is a very low 0.9dB.

Sansul engineers have used independent power supplies with a dual-wound toroidal transformer to ensure minimal hum and channel crosstalk. Large oval capacitors provide a more-than-ample power reservoir. And the phono equalizer is de-



someone paid a million for. pure power DC receiver.

signed for extraordinary accuracy (± 0.2 dB, 20Hz-20kHz) and high overload margin (330mV RMS).

The Sansui G-9000 is, all in all, more advanced than nearly every separate amplifier and tuner available today at any price. And certainly more convenient. Especially when you look at and handle the full complement of "human engineered" controls. They are beautifully positioned, superbly smooth and outstandingly accurate. We have even placed all the input, output and speaker termincls at the sides, with rails for hiding the cables.

Interested? Then visit your nearest Sansui dealer today. You'll be surprised to learn that our suggested retail price is only \$1,050 and that we also offer the G-8000 pure power DC receiver, with nearly all the advantages of the G-9000, but with slightly less power, at the suggested retail price of only \$900; Which isn't a lot when you consider that these super fidelity components are easily worth a million.

SANSUI ELECTRONICS CORP.

Woodside, New York 11377 • Gardena, California 90247 SANSUI ELECTRIC CO., LTD., Tokyo Japan SANSUI AUDIC EUROPE S.A., Antwerp, Belgium In Canada: Electronic Distributors

Simulated walnut grain cobinet

CIRCLE NO. 45 ON READER SERVICE CARD





LETTERS TO THE EDITOR

Digital

Overviews of the progress of magnetictape recording such as that in the March "Editorially Speaking" are interesting and bring valuable perspective to the history of high fidelity. However, William Anderson's comment that digital recording "could contribute even more" to the increase in information density on magnetic tape may be slightly optimistic or misleading.

Digital tape recording is often characterized by the "data rate"-or, more physically, the number of bits per inch carried on the tape. Densities of 800 bits per inch are fairly easily obtained on audio tape, with 1,600 or slightly more on tape "certified" against dropouts. Let's take 9,600 bits per inch as a rather optimistic density for very-high-quality tape-storage systems. Direct conversion of analog signals to digital form may require sampling at rates of 20,000 to slightly more than 40,000 times per second, with a minimum of sixteen levels of digitization, to obtain adequate dynamic range plus distortion of roughly 0.002 per cent of saturation levels. The actual distortion increases rapidly for low-level signals with this sixteen-bit conversion, and the total bits per second is at least on the order of 300,000. Thus, one second of single-channel analog information requires perhaps 30 inches of digitally recorded tape-to which can be compared the 17% inches needed in a standard (analog) cassette recorder. Although the model I have used may involve an overestimation (I haven't considered, for instance, the bitsaving techniques used in various time-delay units), a factor of 10 to 15 remains missing even on the most excellent tape system.

Of course, the number of tracks per lateral inch of the tape could be increased by a factor of 10, but the main point still holds: digital techniques are not a direct way of increasing information density on tape. Rather, they are a way of reducing effective noise levels as far as is desired, of reducing distortion below that of analog recording at high levels, and of eliminating the effect of speed variations in the tape record/play system. Extremely flexible signal processing would also be possible. However, an increase in bits per inch or second is *not* a first-order expectation. The major reason why digital techniques are tape hogs is that the recording levels used are generally full-plus or full-minus saturation, with no use of the dynamic range inherent in the magnetic coating. This conservative approach is necessary because of the possibly disastrous effect a single false bit can have; if it is in the most-significant location, the effective distortion it will cause can be 50 to 100 per cent for the length of the dropout section on the tape. Although error-detection and correction techniques can reduce the chance that this will occur, they add an overhead of necessary bits to the digital signal stream.

HARRY R. ZWICKER Elkton, Md.

The Editor replies: Space considerations in "Editorially Speaking" dictate a high information density and sometimes even an intentional dropout (omission). I did not intend to suggest that the first benefit of digital techniques would be tape savings; I think it is generally agreed that their ability to solve the noise problem is quite enough to make them worthwhile. Regarding information density, however, in the same issue there was the following statement by Robert Donadio, BASF's manager of technical development: "Today we're up to 6,250 bits per inch, and this figure is determined by the digital electronics rather than the tape, which is capable of much more." In other words, we should expect greater densities in the future not only from improved software, but from improved hardware as well.

Music Biz

• I'm a young songwriter who's been working away at it for about two years, itching to break into the industry but unsure how to go about it. "How to Get into the Music Business" (March) was fantastic. It sure shed some light on the subject, and I know that many others out there must want to thank STEREO REVIEW (and Scott Mitchell!) for it. I take pride in my songwriting. It's something that's mine alone and conveys what I have to say to the world. I want the world to hear me, so when I make the move I'll follow the advice in the article. Who knows, I may even run into Scott at a recording studio some day. STUART HICKS, JR. San Luis Obispo, Calif.

● Was it really my letter that prompted the March feature "How to Get into the Music Business"? Well, it's enough to make one believe in . . . almost anything. Unfortunately, during the interim my cynicism has got the better of me, and my advice to aspiring rock stars is to forget the whole business and take up something respectable, like smuggling or chinchilla ranching. As for me, I'm planning on a long and humble career as a reviewer, at the end of which I'm going to be cremated and have my remains scattered over Barry Manilow. You can't take it with you.

SCOTT MITCHELL Austin, Texas

● In March's "How to Get into the Music Business," the "Outside Reading" list on page 61 incorrectly included New on the Charts under "Songwriter Magazines." instead of "Record Business Magazines." The publisher of New on the Charts reports that he is being swamped with questions, tapes, songs, etc. from aspiring songwriters that he cannot afford to acknowledge or respond to individually. Also, the address given in the list was incorrect. It should read: New on the Charts, c/o Music Business Reference, Inc., 1700 Broadway, New York, N.Y. 10019. We regret these errors.

Twentieth Anniversary

About twenty years ago (March 1958, to be exact), I had the pleasure of reading the first issue of *HiFi & Music Review*. Since then, I have not missed a single issue of the magazine known today as STEREO REVIEW. The bound collection has the best place in the room where I listen to my records. I cannot thank you enough for the pleasure and information about music and the art of music reproduction that the magazine has given me. I wish the writers and editors many, many more years of good work helping readers to a better understanding of music and sound.

AUGUSTO M. DAMONTE Rome, Italy

Ah, how sweeter than a baby's kiss, to have a thankful reader!

Cassette Packaging

As the audiovisual librarian of the Iowa City Public Library, I have been distressed at the diversity of cassette packaging, which seems to be increasing instead of diminishing (as noted in William Anderson's March editorial, "Minimax"). There is apparently no concern for the way cassettes will be stored or located in library (or home) collections. The expense of repackaging cassettes to fit library shelves has been a serious deterrent to many libraries that would otherwise eagerly invest in the format, which is more durable and compact than discs as well as easier to use. I propose the following dual solution: (1) Package music cassettes so they are the same size (two-dimensionally if not in thickness) as discs, thus enabling them to be interfiled in (Continued on page 13)

UNLOCK YOUR EARS.

Suppose you're in an art museum and find half of every picture covered with masking tape.

Outrageous?

Sure. But you listen to music the same way. Crescendos and pianissimos are sandwiched and crowded towards the middle.

The villains are the recording and broadcast processes – tapes, records, AM/FM. They have limitations that sacrifice almost half the dynamic range – the range between quiet and loud – of all the music you hear.

> But now there is a way to unlock these processes ... so your system can let you hear what you would actually hear at a live performance.



A few words about an amazing instrument

The human ear. It outperforms the best studio tape recorder by about 50%. The least sound it can hear is about 0dB of sound pressure level (or decibels, which is a scale for measuring the loudness, or quietness, of sound). The loudest sound it wants to hear is around 130dB. This gives it a dynamic range – the sound space if you will, between quiet and loud – of about 130 dB. The professional studio tape recorder has a dynamic range of only about 58 dB. And there lies the problem. A professional tape recorder "hears" a lot less than you do.

The problem – compressed sound

How does a recording engineer squeeze a musical performance with a range of 100 dB into a recording range of 58 dB? He can restrict the loud and quiet passages. Or he can squeeze. Push the quiet parts up, making them louder. Then push the louds down, making them more quiet. Until everything is compressed into a 58 dB range.

Who cares?

Your ears. They know what a live performance is like. So they can tell when compression blurs the sharp edge of percussive attacks, muddles the contrasts between quiet and loud instruments, and sacrifices definition. And the more compression, the more the music sounds flat and pinched, almost two-dimensional.

The solution – decompressed sound

Reverse the process. Simply by making quiet sounds more quiet and loud sounds louder, the way they are in a live performance, your system can pack your music with vitality and excitement. Realism, if you prefer. This is called expansion. The contrast between quiet and loud becomes startling, and musical performances approach the electrifying intensity of a live concert hall. The device that achieves this is called a dynamic range expander.

A few words about another amazing instrument

The dbx 3BX dynamic range expander. It's more than a state-of-the-art expander. It is the state of the art. Other companies' expanders operate only on a portion of the dynamic range and damage true musical perspective. The 3BX, however, is a true linear expander. It uniformly expands the dynamic range of all levels and all frequencies. Key elements are a patented rms detector which accurately senses the dynamic content of your music, and a voltage controlled



amplifier which it instructs to increase or decrease level. Moreover, the 3BX separates the frequency spectrum into three bands and expands each individually. By knowing at any given instant which bands require expansion, the 3BX achieves stunning clarity and musical depth.

It's almost like having a Hi-Fi system for each instrument

Listen to music through a 3BX. What you're hearing is actually better than the broadcast source – better than the tape, better than the record, better than the FM signal. Definition is breathtaking. You'll hear the sharp attack of a brass section. The soft brushwork of a drummer. Every nuance and texture of a symphony string section will have incredible presence. And crescendos will build with conviction and amazing depth.

You not only hear what you're getting, you see what you're getting

The more you listen to the 3BX, the more you'll appreciate it. You can set the linear expansion for anything up to 50% more dynamic range. There is a pre/post switch for taping and/or listening. But the most visually intriguing part of the 3BX is the LED indicator bank for each of three frequency bands which shows you just where and how much expansion you're enjoying. You'll see the board light up when a double forte note jumps out of the speaker. Or with the sudden shout of a rock singer. Or when you hear a string section and it feels almost thick with depth and you not only become more aware of the harmonics, but are able to pick out individual instruments. And the transition level control lets you center the program on the display, so you can see exactly what is going on.





The only component you won't have to upgrade

It will make no difference how modest, or expensive, your system is. The 3BX produces dramatic results with any system because it attacks the bane of all systems – the program source. So while you upgrade your system, the 3BX upgrades what goes into your system.

Be prepared for a rather pleasing side effect

The loss of about 20 dB of noise inherent in most records, tapes and FM broadcasts. As a matter of fact, noise approaches inaudibility.

There's more to hear

After you've heard the 3BX, listen to the dbx 118 linear dynamic range enhancer. It not only expands the dynamic range of sound, like the 3BX, for better listening, it can also compress the dynamic range of sound for background music for the home and special recordings. And if you're into copying your tapes and records onto cassette or open reel, you'll want the dbx 128. It makes tape copies that sound better than the records. It has two separate signal processing units in one. The first is a dynamic range enhancer for expansion or compression of sound sources. The second is a dbx II tape noise reduction system which allows wide dynamic range material to be recorded on tape with no audible noise added by the tape recording process.

A challenge

What we say here is nothing compared to what your ears will tell you. As a matter of fact, we'd like to offer you a friendly challenge. If you think your system is so good it can't be improved upon, drop in on your dbx dealer and listen to a simi ar system with a dbx expander. The difference will startle you. And that's a promise.

To receive additional information, plus your nearest dbx dealer's location, write to us at the address below, or circle reader service number 10.

db 71 Ne 61

dbx, Incorporated 71 Chapel Street, Dept. I Newton, MA 02195 617/964-3210



the same browsing bins using the same catalog system (Angel—and now RCA—is trying this). (2) Package spoken-word cassettes in book-size/shape containers so they can be interfiled and cataloged with their print counterparts (as is now being approximated by London and Philips). In both cases, the same type of covers, annotations, and enclosures (texts, librettos, etc.) that are such an invaluable part of the best disc packaging should be provided.

CONNIE TIFFANY Iowa City, Iowa

Discophilia

• I can't resist responding to K. Blain's March letter on disco, which he knows he "will never get to like." I, too, was a hardrock fan, until the Stones started putting out garbage ("Goat's Head Soup"), Led Zep ditto ("Houses of the Holy"), the original Deep Purple died, and Jefferson Airplane lost the Kaukonen-Casady team forever. Rock lost its sense of humor, ceased to be fun, and began taking itself far too seriously. Only Aerosmith and disco are around to fill the gap.

As I think back over disco songs I've become familiar with over the past year, many come to mind that are distinguished by their catchiness, inventiveness, brilliant arrangements, vocal excellence, and, most of all, the feeling they give that the performers are having a very good time. Among these recent topquality pop songs are C.J. and Co.'s Devil's Gun, Andrea True's New York, You Got Me Dancin'. Andy Gibbs' I Just Want to Be Your Everything, the Commodores' Brick House, Teddy Pendergrass' I Don't Love You Anymore, Rose Royce's Do Your Dance, LTD's Back in Love Again, Heatwave's Boogie Nights and Too Hot to Handle, the Bee Gees' Stayin' Alive, Donna Summer's I Feel Love, and the Emotions' classic Don't Want to Lose Your Love and Best of My Love. None of these songs owe apologies to anyone for their musical quality. They've got it-and if K. Blain won't listen, it's his/her loss.

DAVID GREEN Houston, Texas

• I am an avid reader of STEREO REVIEW, and I appreciate great performers of all kinds, whether in jazz, rock, soul, or classical music. So I was glad to see Ed Buxbaum's March review of Donna Summer's "Once Upon a Time." She's been one of my most treasured artists—and the engineering for her albums should make the U.S. studios envious. For years I have said nothing to the rampant disco haters, but when it comes to Donna Summer they're going too far.

CHESCA SCALPI Beacon, N.Y.

Inconsistent Complaints

• I really get a kick out of the idiots who write in to complain when one of STEREO RE-VIEW'S critics knocks an album by one of their favorite artists, only to turn around and knock an album or artist *they* happen to dislike. When a reviewer is unimpressed with an album and says so, he's just doing his job. The best way for readers to express their own criticism is to not buy the records they don't like, rather than rushing to the "Letters" columns to heap abuse on *other* people's favorite

JAMES P. MITCHELL Ypsilanti, Mich.

More Bests

• I much appreciated Steve Simels' choice of the best rock albums from the past two decades (February issue), but he forgot a couple: "Raw Power" by Iggy and the Stooges and Dylan's great Albert Hall bootleg. And another thing, does Steve really believe that the Beatles' white album is better than "Sgt. Pepper" or the Stones' "Exile on Main Street" than "Beggar's Banquet"?

JIM MCDONALD Flint, Michigan

Steve Simels replies: I thought it would be unfair to include the Dylan bootleg, brilliant as it is, simply because it is a bootleg and thus unavailable to most readers. As for the Beatles and Stones albums, I frankly had to flip coins to make those decisions. It was also a heart-



breaker to omit "Raw Power"—and, incidentally, "Who's Next." Had I been able to pick ten albums instead of only eight, they would have been right up there with the rest.

Richmond Bill

In February's "Editorially Speaking," William Anderson discusses two methods of supporting America's cultural institutions, artists, and scholars. One is the traditional rationing of monies in response to individual fund-raising appeals from various groups. Mr. Anderson likens this to the society matron's "frog-and-egg system" described by Ruth Draper in The Italian Lesson. In utilizing this faithful old system, patrons dole out favors "where they will do [their] personal concerns the most good." Perhaps when more people can afford a silver frog and a jade egg as mere desk ornaments, they will be likely candidates to respond to solicitations from worthy causes.

What Mr. Anderson fails to realize is that the second method, Rep. Fred Richmond's Arts and Education Bill (H.R. 1042), is not designed to remove frogs and eggs from anyone's desk. It merely provides a simple and convenient method of contributing taxdeductible dollars for those who desire to make a financial and moral commitment to the general good of the cultural environment.

If passed, the bill would establish two check-off boxes on the federal income-tax form whereby a taxpayer could make taxdeductible contributions to the National Endowment for the Arts or for the Humanities or both. Certainly this method will be more universal and realistic than the other, since it will reach many more small donors who have never before been solicited because the cost of individual solicitation is so high. The legislation is not aimed at eliminating contributions to groups meriting "personal concern," since its purpose is to broaden public support and not to deflect from private giving.

The Ford Foundation's report on the finances of the performing arts unequivocally stated that the sole hope for future funding of the arts is increased support by private individuals. Two Harris polls clearly indicated that a majority of the American public wants to contribute in some manner to arts subsidy. H.R. 1042 ties these two elements together in an efficient method for providing urgently needed funds for the labor-intensive, capitalstarved arts community. The bill requires no new agency to be formed, and it would cause no added drain on an overburdened national budget and a minimal increase in federal paperwork. It is a simple, pressure-free method to facilitate cultural support by individual citizens that will result in a massive influx of new funds from a significantly broader sector of the public, and this engendering of citizen cultural awareness will have further impact upon interest and attendance in our nation's cultural facilities.

FRANCES RICHARD, Executive Director National Council for Arts and Education New York, N.Y.

The Editor replies: I confess that I had never thought of "traditional" fund raising as depending on the "doling out" or "rationing" of funds, though I suppose there may be some reluctant donors who have to be browbeaten into an appearance of generosity. But the class issue is pure red herring—introduced, I would hope, facetiously. As my editorial noted, I do not myself rely on the "frog-and-egg" system to do my charitable duty, and I cannot imagine that anyone has ever been kept from contributing money to anything for want of desk ornaments, jade or otherwise!

To sum up my objections to H.R. 1042:

(1) Do we really need even one more line or box, let alone two, on that already unforgivably complicated piece of bureaucratic outrageousness called Form 1040?

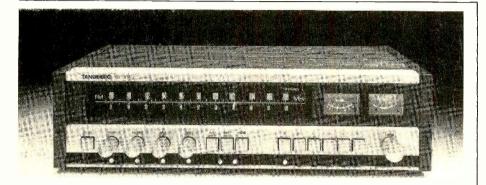
(2) If the answer is yes, will we not then be committing ourselves to accommodating ten or a dozen more boxes for other claimants to check-off charity—hospitals, diseases, and what not else?

(3) The federal bureaucracy has not grown to the size it has through a "minimal increase in paperwork." The National Endowments for the Arts and the Humanities started out in 1966 with a \$5 million appropriation, an administrative budget of \$727,000, and seventyfour employees (twenty of them on part time). They had a \$155 million appropriation in 1977. an \$11 million administrative budget, and 218 employees (as of September 1976). Proponents of the Richmond bill suggest that as much as \$1.8 billion might not unreasonably be expected from taxpayer check-offs, and this would be administered by the National Endowments. My own experience (and native cynicism) lead me to think it not unreasonable to expect that multiplying the funds to be disbursed by fourteen might very likely mean multiplying the disbursers by a significant factor

as well. And what of the invisible cost of processing the names, addresses, and amounts for all those tax-form check-off boxes? Is the IRS's computer time free?

(4) The Endowments do their job very well, perhaps because they do not have too much money to play with, but more likely because they are in the matching-fund (or "put-up-orshut-up") business. The government's role is that of a catalyst or a preceptor setting an example, saying to the public, "Get out there and support what you want supported."

(5) The Great American Middleman, even if he arrives in the shape of the federal government, has nothing to contribute in this case but his middleness. What we need to go to work on is the gulf—wide and growing—that already separates American audiences from American artists. The plight of serious musical composition in this country, to take but one example, is directly owing to the increasing isolation of musical creators from their proper audiences. Foundation grants, institutional sinecures, careless commissions, and a general artistic incestuousness do produce a kind of music-but who is listening? Without precisely suggesting that artists go back to starving in garrets, I think the time has come not to increase further the distance between the producers and consumers of art, but to find ways of decreasing it. Writing your own checks to encourage the art you want encouraged seems to me one way of doing this. But I may be wrong. Perhaps Americans do



CLEAN & FAST

Engineers around the world frequently use the term "Clean & Fast" to describe the performance of Tandberg's Series 2000 stereo receivers. We are very pleased, because this is a rather unusual term to apply to integrated receivers.

Today there are new standards of measuring amplifier performance under actual music listening conditions being applied to the more advanced separates: Rise Time, Slew Rate, DIM (Dynamic Intermodulation) and Phase Linearity. The four models in Tandberg's Series 2000 are the only receivers to excel in these new measurements normally associated with exotic separates, earning the reputation "Clean & Fast."

An adequate description of these new measurements is not really possible in this limited space, so we invite you to request our very thorough brochure "An Introduction to Tandberg Series 2000 Receivers" from your authorized dealer. We think you will be impressed, particularly when you compare our specs with the most sophisticated separates.

The Series 2000 receivers stand out in many other traditional, but still important areas of specifications as well. Again, they are too numerous to adequately mention here, but we're tempted to list just a couple: An FM tuner on its own chassis that exceeds the performance characteristics of most separate tuners; a preamplifier with low noise, dynamic range and distortion characteristics of the very best separates.

For your nearest dealer, write: Tandberg of America, Inc., Labriola Court, Armonk, N.Y. 10514; or call toll-free 800-431-1506.



want Uncle Sam signing the checks—and deciding who is to get them as well. What do readers think?

Disc Pioneer

• It was good to learn, through Larry Klein's February column, that Emory Cook is alive and well and that there still is a "Cook Laboratories." Starting in 1953 I began collecting his "Sounds of Our Time" discs: railroads, the Mosque organ, rain and surf, steel band, and so on. They are still exciting to hear. But I recall that ten or fifteen years ago a flood in Stamford destroyed all the milestone Cook recordings, and I lost track of Mr. Cook despite efforts to find him. I was never brave enough to spring for the binaural hardware, but he did open me up to some great audio adventures. Thanks for word of him.

> DAVID V. PITTENGER Dallas, Texas

• Larry Klein's "Audio Q. and A." in February brought back my memories of Emory Cook. I have seven or eight of his mono 10inch 33¹/₃-rpm records. The earliest was recorded in 1950 on rainy nights along the New York Central tracks near Peekskill and called "Rail Dynamics." The fidelity was amazing, the transients explosive. At the time I had what was then a "super-power" amplifier, all of 20 watts.

W. G. MILLER Wichita, Kan.

Loudspeaker Weather

• Concerning recent reader letters on the matter of the weather's affecting loudspeaker response, I can't see what all the fuss is about. Both loudspeakers and our ears are subject to pressure variations in the atmosphere. When your speakers sound lousy, check the barometer; you'll find that "the glass is down," as sailors used to say.

RALEIGH G. SMITH Norfolk, Va.

Is Porgy an Opera?

 It seems that old misconceptions die hard. The revelation of Gershwin's complete Porgy and Bess, on stage and records, in the last two years has confirmed in the minds of most music lovers and professional critics the work's status as a landmark twentieth-century opera. Yet STEREO REVIEW's editors persist in hedging their bets and placing it in the "musical theater" category (for instance, in the 1977 Record of the Year Awards and "Best Recordings of the Past Twenty Years" in February). Unfortunately, the RCA recording that has been garnering all the accolades uphoids this non-opera categorization well. It is a version the grand-opera enthusiasts can feel safer in liking, because of its Broadway-like orchestral sound and its theater-wise attitude.

There's nothing wrong with "musical theater" but it's a shame that the status and respect brought by so-called "serious music" designations such as "opera" and "symphony" can be awarded to any minor nineteenthcentury Italian melodrama or a Meyerbeerian spectacle or one of Shostakovich's lowest-(Continued on page 16)

The Ortofon M20 Supers. The first magnetic cortridges that can be precisely matched to the compliance variations

of fine tone arms. M20FL Super — medium compliance and fine line stylus. M20E Super — high compliance

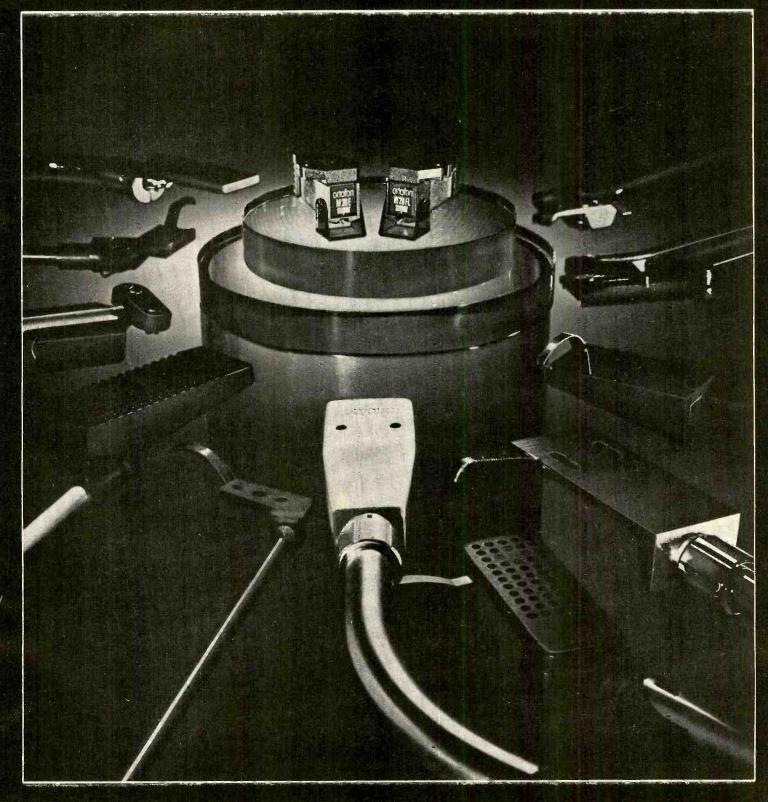
and elliptical stylus. Both feature a stepped arma- . ture, nude diamond, new lightweight damping suspension,

Your tone arm has finally met its match. and our patented VMS (Variable Magnetic Shunt) design. The VMS approach creates a super-sensitive flux field that responds to the unsuperturb to stylus movement with incomparable acauracy. For minimal distortion and a sound in which you can actually hear the location of the ind vidual instruments in relation to each other and you. A sound which truly can be called three-dimensional.

The M20 Supers are designed for both separate and factory-mounted rone arms. To find out the M20 Super that's best for you, simply asle your Ottofon dealer for our new compatibility graph. Then let your tone arm meet it most and the second second second second second the second second second second second second second the second second second second second second second second the second second second second second second second second the second sec its match.

Ortofor, 122 Dupont Street, Plairview NY 11803.

ortofon THE M2OFL SUPER THE M2OE SUPER CIRCLE NO. 42 ON READER SERVICE CARD



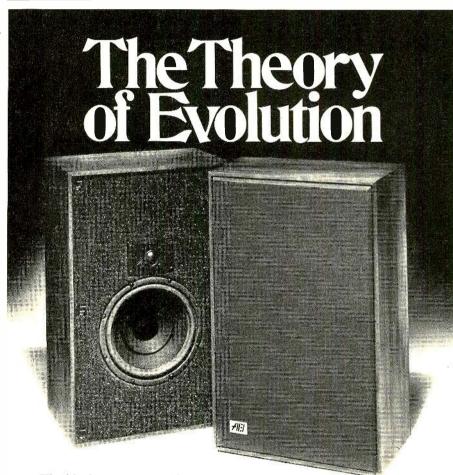
common-denominator exercises and yet be denied to *Porgy and Bess*. It is formally operatic, melodically rich, strong in personal style and originality, intelligently unified both dramatically and musically, and much more honestly "verismo" than any number of nineteenth-century attempts. That it is a masterpiece, recent musical criticism has fully confirmed. So what reason can there be for not calling this great opera what it is?

GREGORY R. SURIANO Newark, N.J.

The Editor replies: All true, but, from our point of view, calling it a "masterpiece of the American musical theater" is as high an accolade as designating it a great opera. Further, the high value Mr. Suriano places on the latter is not shared by most Americans. I recall that some years ago a perfectly splendid American musical by Kurt Weill (Street Scene) was driven off the boards in New York by perfectly well-intentioned partisans who kept insisting that it wasn't a musical at all, but an opera—and it promptly closed for lack of business. Mr. Suriano is rightly ambitious for Porgy and Bess, but calling it an opera is more likely to hinder than to help his cause.

Was Disney First?

• Five stars to James Goodfriend for his excellent February cover story on Richard



The ideal was to create the ultimate two-way bookshelf loudspeaker. A definitive system that would reproduce music in the home as naturally as units costing two to three times the price.

The result is the Evolution 1 — a product of refinement and innovation. AEI builds its own low resonance 10" woofer with a new cone process called "Concentric Mass Damping" for solid bass

response. A sophisticated new cross-over circuit eliminates nonlinearities in the midrange and the 1" soft dome tweeter provides smooth extended highs.

Evolution 1 is the first in a new line of loudspeakers designed to set new standards for accurate sound and exceptional value.

Share the Evolution 1 experience at your local audio specialist.

de not

Evolution 1 by AEI



16 ,

AUDIO ENGINEERING INTERNATIONAL 266 BORDER STREET E. BOSTON, MASSACHUSETTS 02128 Rodgers! Well, perhaps four and a half. He says that Oklahoma changed "the very nature of the American nusical theater," but didn't Walt Disney's Snow White and the Seven Dwarfs accomplish the same feat of totally integrating songs and story six years before? And you can hardly call it a "pretentious intellectual exercise" that didn't work, as Mr. Goodfriend describes the previous "book shows" on stage. Snow White can't boast as many songs as Oklahoma, but it had hits too: I'm Wishing, With a Smile and a Song, Whistle While You Work, Heigh Ho, and Some Day My Prince Will Come.

DANIEL IVANICK Ithaca, N.Y.

Heard any of them lately?

Rodrigo Première

• In Paul Kresh's February review of Angel Romero's new recording of the Rodrigo Concierto de Aranjuez, he says that Romero gave the work its U.S. première in a concert at the Hollywood Bowl in 1964. However, it was I who gave the work its first U.S. performance, in a 1959 concert with the Cleveland Orchestra conducted by Robert Shaw. As it happens, that was also the first time I appeared with any orchestra and the first time the Cleveland Orchestra performed with a guitar soloist.

REY DE LA TORRE Fremont, Calif.

Mr. De la Torre is correct, and we regret the error.

John Stewart

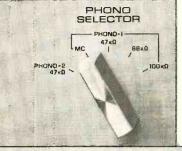
• I want to thank Noel Coppage for his continued interest in (and praise for) the work of John Stewart. I too feel that Stewart has long been overlooked by the American public, and I frankly cannot understand why his records have never sold well. His music is among the most sensitive and vital I have heard, and his understanding of Americans' love of the road and of freedom *should* place him in the same echelon as such highly publicized (justifiably so, I should add) artists as Waylon Jennings, Willie Nelson, Merle Haggard, and even John Denver.

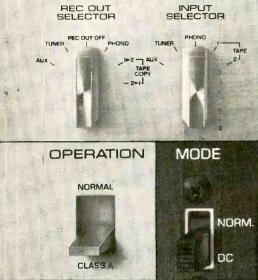
However, Mr. Coppage's sardonic comment (in his February "Best of the Month" review of "Fire in the Wind") about the relative musical knowledge and abilities of the other Kingston Trio members confuses me. I have always been a diehard Kingston Trio fan, and I cannot believe that Mr. Coppage heard something I missed in their recordings. Admittedly, Dave Guard (at the beginning) and then John Stewart were the musical leaders and highlights of the group, but to imply that Bob Shane and Nick Reynolds knew so little about their guitars as to be able to play in only three or four keys is childish. Mr. Coppage should do himself a favor and listen again to such Kingston Trio albums as "Goin' Places," "Make Way," and "Time to Think." Shane and Reynolds may not have "Make Way," and "Time to been virtuosos, but neither were they slouches.

JOHN BIRCHLER Altamont, N.Y.

How about virtuoso slouches?

The one alternative to separates: The Yamaha CA-2010 Integrated Amplifier.





58%

-96 dB S/N

The Head Amplifier. Discerning music lovers all over the world are discovering the transparent highs and extended frequency response of the moving coil phono cartridge. While other manufacturers require the addition of an expensive preamp or step-up transformer to boost the low output signal, Yamaha included a special head amplifier in the CA-2010. It's available with the flip of a switch on the front panel. And to help you get the most out of moving magnet cartridges, there's a 3-position phono impedance selector.

The Preamplifier. To assure exact, repeatable bass and treble settings, the controls are precision calibrated in ½dB steps. Dual turnover frequencies for both ranges double the versatility of these accurate tone controls. Completely independent Input and Output Selectors let you record one source while listening to another. And the power meters are easily switched to REC OUT readings in millivolts, so you can monitor the actual output level to your tape deck for cleaner,

distortion-free recordings.

The Power Amplifier. 120 watts RMS, with no more than 0.03% THD 20Hz to 20.000Hz into eight ohms.

For tighter, cleaner bass response, the amplifier can be switched to DC operation. Class A operation is switchable on the front panel, delivering 30 watts RMS, with no more than 0.005% THD 20Hz to 20,000Hz into eight ohms.

The twin power meters are fast-rise, peak delay—they can track even the briefest of transient bursts. Plus they can respond to levels from 1mW to 316W (into eight ohms). **Real Life Rated.**[™] The specifications of the individual components of the CA-2010 are superior to many separates. Individual specifications alone, however, can't possibly reflect actual in-system performance. That's why Yamaha measures overall performance from phono in to speaker out, rather than at designated points along the signal path. Furthermore, we measure noise and distortion together over a broad output range, rather than individually at the optimum output.

Our Real Life Rated measurement is called Noise-Distortion Clearance Range (NDCR). On the CA-2010, NDCR assures no more than 0.1% combined noise and distortion from 20Hz to 20kHz at any power output from 1/10th watt to full-rated power. **Superb tonality from a musical tradition of technical excellence.** The tonal accuracy of our audio components is referenced to the same standards used to evaluate the tonal accuracy of our world-renowned musical instruments. The result is a rich, clear tonality that is unknown elsewhere. You really must hear it.

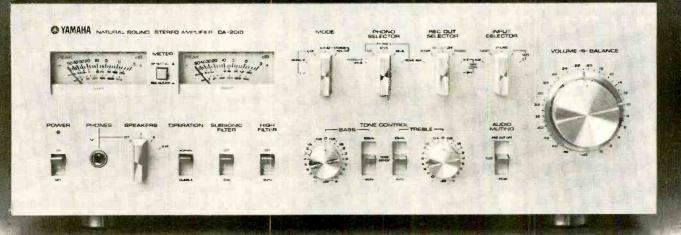
You really must hear the same resolutely accurate music reproduction available from all four Yamaha Integrated Amplifiers and four superb tunore. All are made to a single standard of

tuners. All are made to a single standard of excellence—a standard rooted in a 90-year tradition of musical perfection.

For a personal audition of the new Yamaha CA=2010, as well as the rest of our complete line of components, just visit your nearest Yamaha Audio Specialty Dealer. If he's not listed in your Yellow Pages, drop us a line.



Audio Division, P.O. Box 6600, Buena Park, CA 90622



New Products latest audio equipment and accessories

Concert-music Broadcast Directory

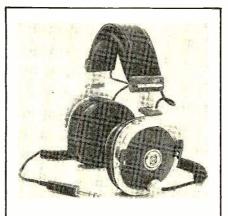
□ Radio station WCLV-FM of Cleveland, Ohio (95.5 MHz) has announced the availability of its 1977-1978 national directory of concert-music broadcasts. The directory lists radio stations in the U.S. and Canada, both commercial and non-commercial, that broadcast concert music. Information listed for each station includes its frequency, transmitter power, antenna height, and personnel, as well as the weekly hours of concert-music broadcast and the program syndications received by the station. Price of the directory is \$5 for one copy, \$4 for each additional copy. Order from WCLV, Penthouse East, Terminal Tower, Cleveland, Ohio 44113.



□ Meteor Light and Sound's Clubman One-One-m is a two-in/one-out disco mixer that will accept two stereo inputs (either phono or line) and mix them into a single stereo output. There are sliding level controls for the two stereo inputs as well as cueing switches for each. The cueing switches permit the user to monitor one input through a headphone while the other input is playing through the system's loudspeakers. There is a "crossfade" slider for fading from one stereo input to the other. The mixer has a switchable low-frequency (50 Hz) filter. A microphone-mixer circuit with a defeat switch and level control permits the user to talk over the music program. The microphone input is a phone jack for highimpedance, unbalanced-line microphones.

The Clubman One-One-m has a mono headphone amplifier and a front-panel headphone volume control (this is meant for a single-ear disc-jockey headphone). There are also average-reading output-level meters for each stereo channel. Approximate dimensions are $10\frac{1}{2}$ inches wide and $11\frac{1}{2}$ inches deep; height tapers from 7 to 2 inches. Price: \$249.

Circle 115 on reader service card

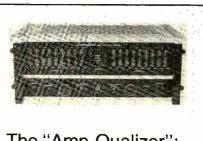


Koss Adds Pro/4 AAA Phone

 \Box The Pro/4 AAA headphone is the latest addition to the Koss stereophone line. It is an isolating-type headphone with Pneumalite ear-cushions designed to fit the ear comfortably. It also has a Pneumalite head cushion mounted under the free-floating, adjustable headband, and the band has newly designed bearings to facilitate sliding adjustments. Each driver has a 1-inch voice coil and 2½ square inches of radiating area.

The frequency range of the Pro/4 AAA is given as 10 to 22,000 Hz, and the nominal impedance is 220 ohms. An input of 0.24 volt wide-band pink noise results in a 100-dB SPL output. Total harmonic distortion at 1,000 Hz and 100-dB SPL is rated at less than 0.5 per cent. The headphone has a microphone boom mount on the left cup for professional applications. The Pro/4 AAA is provided with a coiled 3-meter (about 10 feet) cord, and it weighs about 15.5 ounces. Price: \$75.

Circle 116 on reader service card



The "Amp-Qualizer": Soundcraftsmen's Amp-equalizer Combo

□ Soundcraftsmen's EA5003 Amp-Qualizer is a combination power-amplifier/equalizer that incorporates the innards of their MA5002 "Class H" power amplifier and 20-12 equalizer. The EA5003's equalizer section has ten band-pass filters centered at one-octave intervals from 30 to 15,360 Hz. In the center of the front panel there are slide controls for adjusting the overall level of the equalized signal; in their lowest position these controls defeat the equalizer completely. The power-amplifier section has level controls for each channel as well as switching for two pairs of speakers. There are separate LED's for each channel that indicate clipping and the activation of Soundcraftsmen's "Vari-portional" powersupply-control system, a feature of the Class H circuitry.

The Amp-Qualizer is rated at 250 watts per channel continuous power into 8 ohms. The amplifier's total harmonic distortion is rated at under 0.1 per cent, and intermodulation distortion is under 0.05 per cent. The input required for full power output is 1.28 volts. The EA5003's noise level is better than -105 dB, and the slew rate is 50 volts per microsecond. The EA5003, with dimensions of 7 x 19 x 15 inches, has walnut-grain side panels and grab handles. The side panels can be removed, making the unit suitable for 19-inch rack mounting. Weight is 55 pounds. Price: \$849.

Circle 117 on reader service card



□ Superscope, Inc. recently formed a new Imperial Division to market stereo consoles and compact systems as well as other electronic items. Their new product line includes six stereo consoles, each of which includes an AM/FM stereo receiver and eight-track cartridge facilities as well as a three-speed record changer and two speaker systems. Four of the consoles have full cartridge recorders while two have just playback decks; in other respects the consoles are electronically identical: they differ physically in cabinet styles, sizes, and speaker systems. The receiver sections are rated at 5 watts per channel continuous power and have bass, treble, and balance controls as well as switchable AFC. The lighted tuning dial has a LED indicator for stereo broadcasts. There are jacks for headphones and auxiliary inputs. The consoles utilize a standard BSR record changer with a ceramic phono cartridge. The eight-track recorders (when supplied) have automatic recordinglevel adjustments, fast-forward and pause (Continued on page 20)

To get a superb performance, you need a precision machine.

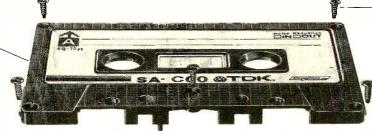
To command a great performance, a cassette shell and cassette tape must be engineered to the most rigorous standards. Which explains why we get so finicky about details. Consider:

Precision Molded Cassette Shells — are made by continuously monitored injection molding that virtually assures anirror-image parallel match. That's insurance against signal overlap or channel loss in record or playback from A to B sides. Further insurance: high impact styrene that resists temperature extremes and sudden stress.

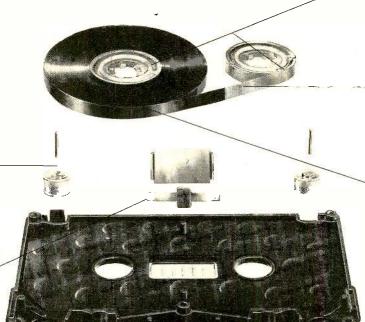
An Ingenious Bubble -Surface Liner Sheet commands the tape to follow a consistent running angle with gentle, fingertip-embossed cushions. Costly lubricants forestall drag, shedding, friction, edgewear, and annoying squeal. Checks channel loss and dropouts.

Tapered, Flanged Rollers—direct the tape from the hubs and program it against any up and down movement on its path towards the heads. Stainlesssteel pins minimize friction and avert wow and flutter, channel loss.

Resilient Pressure Pad and Holding System spring-mounted felt helps maintain tape contact at dead center on the head gap. Elegant interlocking pins moor the spring to the shell, and resist lateral slipping.







Five-Screw Assembly for practically guaranteed warp-free mating of the cassette halves. Then nothing—no dust of tape snags—can come between the tape and a perfect performance.

Pertectly Circular Hubs and Double Clamp System—insures there is no deviation from circularity that could result in tape tension variation producing wow and flutter and dropouts. The clamp weds the tape to the hub with a curvature impeccably matched to the hub's perimeter.

Head Cleaning Leader Tape — knocks off foreign matter that might interfere with superior tape performance, and prepares the heads for...

Our famous SA and AD Tape Performance-two of the finest tapes money can procure are securely housed inside our cassette shells. SA (Super Avilyn) is the tape most deck manufacturers use as their reference for the High (CrO₂) bias position. And the new Normal bias AD, the tape with a hot high end, is perfect for any type of music, in any deck. And that extra lift is perfect for noise reduction tracking.

TDK Cassettes—despite all we put into them, we don't ask you to put out a lot for them. Visit your TDK dealer and discover how inexpensive it is to fight

dropouts, level variation, channel loss, jamming, and other problems that interfere with musical enjoyment. Our full lifetime warranty* is your assurance that our machine is the

The machine for your machine.

machine for your machine. TDK Electronics Corp.,

Garden City, N.Y. 11530. Canada: Superior

Electronics Ind., Ltd.

3

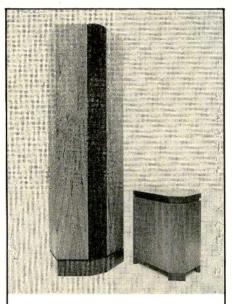
In the unlikely event that any TDK cassette ever fails to perform due to a defect in materials or workmanship, simply return it to your local dealer or to TDK for a free replacement.

New Product/ latest audio equipment and accessories

functions, and two microphone input jacks, as well as record and tape-stop LED's.

The Imperial consoles come in two basic sizes, the 44-inch and 55-inch models. The 44inch consoles have two-way speaker systems with mechanical crossovers, utilizing 8-inch drivers in sealed enclosures. The 55-inch units have two-way sealed-enclosure systems with 8-inch woofers and 21/2-inch cone tweeters crossed over with a standard passive network. The console cabinetry comes in three basic styles with two models in each style: Mediterranean, Colonial, and Contemporary. Cabinets are constructed of particle board with wood-veneer finishes. The typical dimensions of a 44-inch console are about 26 x $43\frac{1}{2}$ x 17 inches; of a 55-inch console, 28 x 541/2 x 18 inches. Weights are about 110 and 125 pounds for the 44- and 55-inch units, respectively. Prices range from about \$270 for the model D-700 to about \$370 for the D-804.

Circle 118 on reader service card



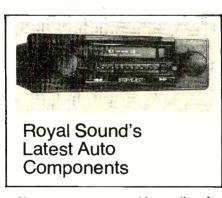
Hybrid Sound System From Beveridge Is Self-powered

□ The Model 2SW, a self-powered hybrid loudspeaker system from Harold Beveridge, Inc., includes two electrostatic and two subwoofer speaker modules. Each electrostatic speaker, designed to cover the frequency range of 70 to 15,000 Hz, has a single driver mounted in a columnar enclosure that absorbs its back radiation. A long, narrow, vertical slit in front of the electrostatic element serves as an acoustic lens to enhance lateral dispersion to 180 degrees. The bass modules, which handle the frequencies between 30 and 70 Hz, contain 12-inch woofers in acoustic-suspen sion enclosures. Vacuum-tube mono power amplifiers mounted in the base of each elec-

trostatic unit drive both the electrostatics and the subwoofers. Each amplifier unit also contains a conventional passive 70-Hz crossover and can be driven by the output of a regular stereo preamplifier. The 2SW system includes a control module, to be installed between the preamplifier and the speakers, which has controls for frequency balance, bass level, and channel separation. The frequency-balance control, called a "spectrum slope control,' adjusts the slope of the output-level-vs.-frequency curve of the system ± 0.8 dB per Hz. The "bass environmental control" for adjusting bass level has a range of +2, -4 dB at 40 Hz. The "lateral control" mixes the two channels together to varying degrees in order to adjust the spread of the stereo image.

Maximum sound-pressure level is 110 dB in a 20 x 30-foot room, measured at a distance of 15 feet from the speakers. Rated frequency response of the 2SW is 30 to 15,000 Hz. The electrostatic units have dimensions of $6\frac{1}{2} \times 2 \times$ $1\frac{1}{2}$ feet, and the subwoofers measure $26 \times 16\frac{1}{2} \times$ x 22 inches. Dimensions of the control module are $1\frac{1}{2} \times 11 \times 6$ inches. Price of the entire 2SW system: \$5,200. Beveridge plans to market both the subwoofer and the control module separately. Prices will be about \$600 for the subwoofer and \$300 for the module.

Circle 119 on reader service card

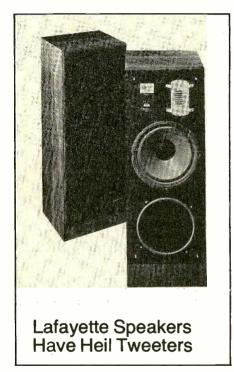


□ You can now get a graphic equalizer for your car-stereo system: Royal Sound's new EA-400 is a combination graphic equalizer/ power amplifier which provides up to 12 dB of boost or attenuation of five separate bands centered at 60, 250, 1,000, 3,500, and 15,000 Hz. The power-amplifier section of the EA-400 is rated at 20 watts per channel into 8 ohms. Total harmonic distortion at rated power is 2.6 per cent and is lower at reduced powers. Dimensions are 2 x $6\frac{1}{2}$ x $6\frac{1}{2}$ inches. Price: \$180.

The Model RS-3110 (shown) is an in-dash AM/FM stereo radio and cassette player. It features an automatic electronic tuning system that scans for and tunes in stations strong enough to be received. In addition, five preset stations (two AM and three FM) can be selected with the optional PSA-5 remote-control preset adapter. Other radio features include LED's to indicate stereo broadcasts and to illuminate the dial and indicator lights for mode (AM or FM). The cassette player features automatic reverse and locking fast-forward/ rewind switches. The tuner's usable FM sensitivity is 2 microvolts (17.3 dBf with a 75ohm antenna input). Stereo separation is 25 dB. The cassette player has under 0.45 per cent wow and flutter (wrms) and a frequency response of 40 to 12,500 Hz. The RS-3110 is rated at 7 watts per channel into 8 ohms and can be used with either 4- or 8-ohm speakers. Approximate dimensions of the unit are 2 x 7 x 6¹/₂ inches; the PSA-5 selector measures about 1³/₄ x 4 x 2¹/₂ inches. Prices: \$550 for the RS-3110, \$60 for the PSA-5.

The RS-3110 radio/cassette player is intended for in-dash mounting (it has the standard sliding front-panel shafts for universal installation); the EA-400 and PSA-5 are meant for under-dash installation. All the units are designed for use with 12-volt negative-ground systems.

Circle 120 on reader service card



□ Lafayette's Criterion 3000 line of loudspeaker systems, including the Models 3001, 3002, and 3003 (shown), all utilize the Heil "Air-Motion Transformer" for the high-frequency driver. All are two-way vented-box systems; the 3002 and 3003 have passive radiators. The 3001 has a 10-inch woofer, the 3002 a 10-inch woofer and 10-inch passive radiator, and the 3003 a 12-inch woofer and 12inch passive radiator. The 3002 and 3003 are equipped with level controls for the tweeter.

The top-of-the-line 3003 (shown) has a rated frequency response of 30 to 25,000 Hz ± 3 dB and a nominal impedance of 6 ohms. A 1watt input produces a sound-pressure level of 91 dB at 1 meter. The crossover frequency is (Continued on page 22) General Need: Tests by the Discwasher Labs show that fingerprints are absolutely not totally removed by "dry cleaning" in any form, either brush or

rds

re Va

by discwashe

THE SUPERIOR RECORD CLEANER

KEEP OUT OF REACH OF CHILDREN

Net Contents 6 fl. ozs. (170.1 cc)

MADE IN U.S.A.

CAUTION

adhesive rollers. Long term record care requires the complex integration of micro-dust pick-up (not spreading around), with removal of chemical contamination such as fingerprints; plus an in-process reduction of static charge so that dust particles are not immediately sucked back onto the surface. And all of this must be done without leaving a residue.

ecc

D3 fluid, used with the Discwasher System for capillary removal of fluid/contamination achieves the results required for record survival. But the hidden requirements of a record cleaner are much more complex than integrated function alone.

Chemical Integrity: The trick is not to simply clean—but to clean with vinyl safety and extremely low "solute load" or fluid content. D3 is a solution that typically has half the dry weight residue of tap water and about

one-fifth the median for other "record cleaners". D3 typically has the dry weight residue of distilled water sold in drug stores—and yet D3 has an activity in surface tension reduction/fingerprint removal that is greater than any fluid with twice the solute load of D3.

D3 fluid contains a complex blend of buffered surfactants conjugated in the labs of Discwasher, Inc. These provide cleaning "activity" against real-world record contamination, like fingerprints and airborne oils. But not against artificial "test conditions" of mineral oils and sheep wax (lanol n). Because if D3 removed waxes and oils of this nature, then D3 would also begin to soften critical vinyl stabilizers which are essential for record survival under the incredible heat and pressure of a tracking audio stylus. Alcohols and many cleaners pull stabilizers and age vinyl.

Some cleaning fluids contain large molecules of fatty acids to "float" dirt—but these "molecules" positively stick to vinyl and are literally a dust trap.

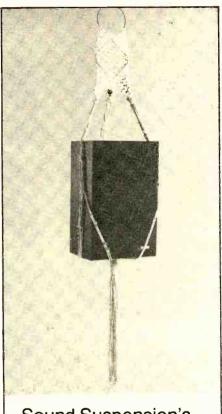
D3 fluid does not dramatically reduce static charge forever. The only liquid that can is one which leaves a coating. But D3 does reduce static charge during cleaning (using 3 drops on the Discwasher brush), and actual static voltage is reduced during playback to about one-half the normal levels. The Discwasher "Systems Approach": Any cleaning fluid, when left on the record, only spreads out contamination. With three drops of D3 on the special directional micro-fibers of the Discwasher brush, dust is lifted out of the grooves, without "follow up" or adhesive oxide removal of the vinyl.

In addition, the Discwasher System wicks up D3 fluid plus suspended contamination. The fluid is drawn deep into the absorbent backing of the Discwasher brush. No liquid, dust or contamination "dries back" when the system is properly used. The "systems approach" of Discwasher includes a hand-rubbed, milled walnut handle. Something to outlast plastic wonders and out-perform everything else. Your records can't do better than the Red Bottle inside the "system".

New Product/ latest audio equipment and accessories

2,000 Hz. Minimum input is 20 watts per channel continuous power; maximum continuous input is 70 watts per channel. The 3003, which weighs about 60 pounds, has approximate dimensions of $39 \times 1414 \times 1312$ inches. Price: about \$300. The 3002 and 3001 are priced at about \$240 and \$200.

Circle 121 on reader service card



Sound Suspension's Speaker Hanger

□ Sound Suspension Ltd. is offering a new type of speaker support: the speaker hanger. The macramé hangers have a "seat" that holds speakers up to 18 inches wide or deep and 30 inches high, with a weight capacity of up to 400 pounds. The speaker can be tilted forward through a considerable angle before the configuration becomes unstable. The hangers have a large brass ring for attachment to hooks or other fixtures in the ceiling. Besides their decorative quality, the hanging speaker mounts minimize mechanical coupling of the loudspeaker enclosure and room surfaces, thus reducing the potential for acoustic feedback.

The Sound Suspension hangers come either in white cotton or natural jute (brown). Price: \$45 per pair. Custom macramé designs are also available, starting at \$5 extra per pair. Order from: Sound Suspension Ltd., P.O. Box 386, Hermosa Beach, Calif. 90254. Include \$1.50 for postage and handling.



□ The Whistleswitch, from Universal Controls, is a remote-control switch for homeelectronic appliances, including hi-fi systems. The switch system consists of a soft-plastic, hand-held sonic transmitter and a receiver module that plugs into the a.c. outlet. The appliance to be switched is plugged into this module. The transmitter emits an ultrasonic tone when squeezed; this is received by the module, which then switches on the a.c. power. The range of the ultrasonic transmitter is said to be 50 feet; there is a sensitivity control on the receiver that permits the user to adjust for the minimum required range (this is necessary to prevent accidental triggering of the switch).

The Whistleswitch is capable of switching appliances that draw up to 400 watts of power. It accepts a two-prong, non-grounded plug from the appliance. Dimensions of the receiver are $4!4 \times 2!/2 \times 2$ inches; the handheld transmitter measures $3!/3 \times 2 \times 3!$ inches. Price: about \$25.

Circle 122 on reader service card



□ The JVC T-3030 is a low-profile FM tuner that utilizes a digital frequency synthesizer. The tuner has a digital LED readout and pushbutton controls for scanning the FM frequency range—one can scan both "up" and "down," and there is a "quick" button for speeding up the scan rate. Up to seven stations can be pre-tuned and inserted into the tuner's "memory" (there are seven pushbuttons on the front panel for this). The relative signal-strength indicator consists of five LED numbers, 1 through 5 (5 being "strong" and 1 "weak"). There are two FM-muting settings. A hi-blend feature increases the signal-tonoise ratio of weak signals. A record-level calibration switch introduces a tone corresponding to a 50-per-cent-modulated FM signal.

The usable sensitivity of the T-3030 is claimed to be 1 µV (11.2 dBf); 50-dB quieting sensitivity is 1.9 µV (16.8 dBf) in mono and 19 μV (36.8 dBf) in stereo. Capture ratio is 1 dB and AM suppression is 65 dB. Alternate-channel selectivity is 80 dB. Stereo FM separation is 45 dB at 100 and 10,000 Hz and 50 dB at 1,000 Hz. Distortion is under 0.1 per cent, and the overall signal-to-noise ratio is 75 dB in mono and 72 dB in stereo. The T-3030 has both fixed and variable-level outputs; the fixed output is 750 millivolts into 2,500 ohms and the variable output is adjustable from 0 to 1.5 volts into 2,500 ohms. There is a 75-ohm coaxial antenna input. Dimensions are about 21/2 x 161/2 x 133/4 inches. Price: \$600.

Circle 123 on reader service card



□ Pioneer's SX-1980 bears a 270-watt-perchannel rating. The large front panel has two peak-reading power meters calibrated from 0.01 to 540 watts. There is a "multipath" switch that allows the user to monitor the multipath distortion in the FM signal by ear. There are two bass and two treble tone controls, each with a different turnover frequency: 50 and 100 Hz for the bass, 10,000 and 20,000 Hz for the treble. There is also a tonedefeat switch, which cuts out the tone controls altogether. The SX-1980 provides for a variety of cartridge loads in its two phono inputs, including impedances of 10,000, 50,000, and 100,000 ohms and capacitances of 100, 200, 300, and 400 picofarads. There is a tuning-lock circuit that is defeated when the user touches the tuning knob; the circuit employs a phase-locked loop with a quartz-crystal reference oscillator. A LED labeled "fine tune" lights when the circuitry locks onto a station. (Continued on page 24)



Record Ecology in DiscKit Form -you'll save more than money

discwast

Cution

ep out of

DiscKit is a milled walnut tray and dust cover that saves you 15% with the Discwasher products in the kit. (\$46 versus \$54 separately)

DiscKit includes:1) The Discwasher System Record Cleaner with D3 Fluid, 2) the Zerostat anti-static

pistol and test light, and 3) the SC-1 Stylus Cleaner.

But you'll save more than money. You'll save your records from imbedded microdust, your cartridge stylus from abrasion and your ears from a lot of static.

Record Ecology from Disc-

washer—a substantial bargain.

OSTAT.

(Walnut tray and dust cover are available separately as

the Discorganizer, \$12.50.) All from Discwasher, Inc., 1407 N. Providence Rd., Columbia, Missouri 65201.

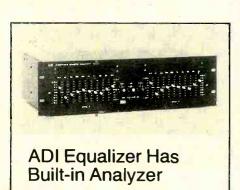


Kit

New Product/ latest audio equipment and accessories

Maximum total harmonic distortion in the SX-1980's amplifier circuits is 0.03 per cent at the rated power output of 270 watts per channel into 8 ohms. Intermodulation distortion is 0.03 per cent. The phono signal-to-noise ratio (S/N) is 87 dB, and the phono inputs have a switchable radio-frequency-interference filter. Phono overload level is 300 millivolts. The usable sensitivity of the SX-1980's FM tuner section is 1.5 microvolts (μ V), or 8.7 dBf, and the 50-dB quieting sensitivity is 2.2 μV (11.5 dBf). Capture ratio is 1 dB and alternate-channel selectivity is 80 dB. The AM rejection is 60 dB, and image and spuriousresponse rejection are both 120 dB. Mono FM distortion is 0.1 per cent, and the ultimate tuner S/N is 83 dB (65-dBf input). The SX-1980 measures approximately 81/4 x 22 x 191/2 inches and weighs 78 pounds. Price: \$1,250.

Circle 124 on reader service card



□ ADI's Model 1500 Graphic Equalizer features circuitry and indicators that tell you when you've achieved a flat acoustic frequency response with your system. The 1500 has a built-in pink-noise source and input jacks for a measuring microphone. It has a row of LED indicators, one red and one green for each band of each channel (there are ten bands per channel). To use the calibration feature, the user sets the 1,000-Hz level control to its center position; the LED's for the other bands will light up when the audio energy in any band differs from the 1,000-Hz level by more than ±0.75 dB. (The red LED lights up when the level of a particular band is above, and the green LED when it is below the 1,000-Hz level.) Both LED's light simultaneously when the level in the particular band is identical (within ± 0.75 dB) to the 1,000-Hz level. The 1500 has pushbutton switches for each channel to put the equalizer into the "calibration" mode; there is a front-panel control for the level of the pink-noise source. In the equalizer mode, the 1500 is used much like other graphic equalizers.

The 1500 covers the ten ANSI-standard octaves with a range of ± 12 dB. Frequency response, with all controls set at zero (unity gain) is 20 to 26,000 Hz ± 1.5 dB. Noise level is -104 dB relative to a 22-dBm maximum output at clipping (1 dBm is 1 milliwatt into 600 ohms) and -82 dB relative to 0 dBm. The input impedance is 10,000 ohms and output impedance is 250 ohms. Total harmonic distortion is under 0.05 per cent from 20 to 20,000 Hz at 0 dBm.

Regarding the calibration section of the 1500, the microphone amplifier sensitivity is adjustable from -70 to -20 dBm; line sensitivity is adjustable from -30 to +20 dBm. The pink-noise generator puts out 20- to 20,000-Hz pink noise with equal energy per octave within +0, -1 dB. Approximate dimensions of the 1500 are 5¹/₄ x 19 x 10¹/₄ inches; the front panel is designed for rack-mounting. Price: \$795. ADI's optional calibration microphone (Model C-90) is \$75.

Circle 125 on reader service card



 \Box KLH has entered the automotive-sound market with several new car speaker systems. One of these is the 693DMSC, a three-way driver with a 6 x 9-inch oval woofer, a 1-inch dome mid-range, and a samarium-cobalt tweeter mounted to one side of the mid-range. The speaker has a rated frequency response of 40 to 30,000 Hz and a nominal 8-ohm impedance. It is 41/4 inches deep and is designed for rear-deck or in-door mounting.

KLH also has two new two-way systems, each with 6 x 9-inch oval woofers. The 692DT has a 1-inch dome tweeter and the 392CT a 15%-inch cone tweeter. Both 8-ohm systems have frequency ranges of 40 to 20,000 Hz. The 692DT and 692CT are each 4¼ inches deep and are meant for rear-deck or in-door mounting.

The KLH "Headliner" series of car speaker systems are true "component" systemsfor example, the Headliner V system includes two 6 x 9-inch oval woofers and two piezoelectric high-frequency drivers. The high-frequency units are designed to be mounted in the front of the car at ear level; the woofers can be mounted in the usual fashion. Level controls are provided for the high-frequency drivers. The Headliner III consists of only the high-frequency drivers and is intended to be an add-on system for use with existing woofers. Prices of the KLH car speakers (all per pair) are about \$215 for the 693DMSC, \$145 for the 692DT, \$120 for the 692CT, \$170 for the Headliner V, and \$120 for the Headliner III.

Circle 126 on reader service card



□ RAM Audio Systems' Model 200 stereo preamplifier indicates the output level for each channel by a row of eight LED's labeled from -36 to +10 dBm. There are two phono inputs, each of which has alterable input impedance and capacitance. For the phono-1 input the impedance is adjustable from 6 to 47,000 ohms in 13-ohm steps and the capacitance from 5 to 1,855 picofarads (pF) in 50-pF steps; phono-2 impedance is adjustable from 1,000 to 78,000 ohms in 2,000-ohm steps and capacitance from 5 to 385 pF in 10-pF steps. The preamplifier can accept the outputs of moving-coil cartridges directly.

In addition to phono, tape, tuner, and auxiliary inputs, the RAM 200 has a front-panel high-level input. Regular input jacks are located on a subpanel beneath the cover plate, and cables feed out through a rear-panel opening. The volume control is a thirty-six-position step-type attenuator with gold-plated switch contacts and precision metal-film resistors. There is a -20-dB muting switch that changes the gain of the output stage to unity. Another muting circuit automatically applies 73 dB of attenuation when the unit is turned on or off; it can also be switched in optionally as a stand-by circuit protector during operation. The headphone jack of the Model 200 has its own 1-watt-per-channel power amplifier. There are both high and low filters, the former cutting off at 10,000 Hz and the latter at 30 Hz; the slopes are 18 dB per octave.

Phono-input sensitivity of the RAM 200 is 2.5 millivolts (mV) for the rated output of 2.5 volts into 10,000 ohms; overload occurs at 150 mV. Phono signal-to-noise ratio (S/N) is over 80 dB from 20 to 20,000 Hz; the high-level amplifier has a S/N of over 90 dB throughout the same range, with an input impedance of 100,000 ohms. Harmonic and intermodulation distortion are both under 0.02 per cent. Dimensions of the Model 200 are $3\frac{1}{2} \ge 17 \ge 14$ inches. Price: \$1,050.

Circle 127 on reader service card

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

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

LIGH IS:12 mg "rar 0.9 mg nicotine av per eigatette, FTC Report AUG 77; LIGHT 1.0's 13 mg, "tar", 1.0 mg, nicotine av, per ligatette by FTC method.

For me it's low tar, not low taste.

Most low tar cigarettes are a tasteless version of something else. Not Winston Lights. Winston Lights have low tar. But they also have taste. If you're sacrificing taste for low numbers, you're smoking the wrong cigarette.

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

Winston Lights.Winston Light 100's.

Vinston

Winston

Light 100's

LOW TAR

BOB LIFTIN THINKS PEOPLE ARE READY FOR GRAND MASTER TAPE. ROY CICALA HAS HIS DOUBTS.

"Who wouldn't be knocked out by a tape with specs like Grand Master?" Bob Liftin, Recording Engineer, Regent Sound Studios, New York City "Sure, they'll know Grand Master sounds better. But they won t know how much better unless they actually test it."

Roy Cicala, Recording Engineer, The Record Plant, New York City

15

14

We asked Bob Liftin and Roy Cicala if audio buffs are ready for a tape as sophisticated as Grand Master for use at home.

They should know. Both are nationally famous recording engineers who've been using Grand Master Studio Mastering tape since it first came out in 1973.

Bob said, "Sure they're ready. Grand Master's dramatic 4 to 8 dB improvement in signal-to-noise ratio allows a guy to hit the tape 3 to 6 dBs harder and still get better distortion figures."

Roy wasn't so sure. "Of course, Grand Master's lower distortion and higher output mean a lot to pros. But I wonder how many home systems are sensitive enough to pinpoint the improvement. Unless you run side-by-side tests with identical equipment, you can't tell how much better it is."

Noting the difference of opinion, we asked other top engineers.

Most agreed with Bob. (Sorry, Roy.)

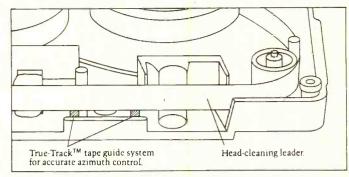
They felt the uniform response of Grand Master would allow a more realistic playback. And yield a cleaner sound as a result.

Which confirmed what we thought all along: You're ready for a very sensitive, high-output, lowdistortion tape to use at home.

So now there are 3 new versions of Grand Master. An exciting cas-

GRAND MASTER BY AMPEX. WE THINK YOU'RE READY FOR IT.

sette with lots of exclusive precision features. A completely redesigned 8-track cartridge. And a



professionally constructed quarterinch open reel as well.

So now it's up to you.

For the first time, you can actually buy the kind of recording tape only the pros could get their hands on.

We think you're ready for it. Even if Roy Cicala isn't sure.





details... A DIFFERENT KIND OF RECORD CLUB

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

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

Look at these benefits:

TREMENDOUS SAVINGS

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

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

ALL LABELS AVAILABLE including most imports through special

custom ordering service. If we don't stock it we'll get it for you.

SCHWANN CATALOG

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

DISCOUNT DIVIDEND CERTIFICATES

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

NEWSLETTERS

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

DISCOUNT ACCESSORY GUIDE

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

QUICK SERVICE

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

100% IRON-CLAD GUARANTEES

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

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

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

DISCOUNT MUSIC CLUB, INC. 650 Main Street, New Rochelle, N.Y. 10801 DEPT. 9-0578			
NAME			
ADDRESS			
сіту			
STATE		ZIP	
CIRCLE	NO. 18 ON	READER SERVI	ICE CARD

Audio Q. and A

By Larry Klein

Technical Director Klein using his calibrated finger to check the stylus compliance of an oversize plastic mock-up of the Shure V15 Type IV.



DC Amplifiers

Q. I'm a little puzzled over the use of the initials DC in connection with amplifiers. I have two questions: (1) Does it mean "direct coupled" or "direct current"? (2) What is its significance?

H. Landsman Forest Hills, N.Y.

A. In answer to question (1), both; and to (2), I'm not sure. Many years ago, when I worked as a test-instrument repairman, one of my specialties was DC oscilloscopes. The various amplifying stages of a DC scope are directly coupled to each other without the use of interstage d.c. (direct current) blocking capacitors. This type of oscilloscope has the advantage that very low frequencies (down to 0 Hz) can be handled, and there is no capacitor-caused phase shift to distort the waveform.

The direct-coupled amplifier in the scope was also a direct-current amplifier; for example, connecting a flashlight cell to the scope's input terminals would produce a trace deflection on the oscilloscope screen that was directly proportional to the d.c. voltage applied. With one of today's DC power amplifiers you could also connect a flashlight battery to its input jack and get a large d.c. voltage at the speaker terminals—if there were no d.c.blocking capacitor at the amplifier input and/ or no designed-in low-frequency rolloff, and if you didn't blow a fuse or trigger the amplifier's protective circuits (which are designed to keep d.c. from reaching the loudspeaker).

In the early days of transistor design most power-amplifier circuits included a very large capacitor between the output transistors and the speaker. Its purpose was to prevent the normal d.c. operating voltages present at the power-output stage from reaching the speaker. But although capacitors will block d.c. and pass a.c., they do not do the job perfectly. As the frequency of the a.c. audio signal becomes lower (approaches d.c.), the capacitor begins to impede its passage (capacitors also cause phase shift, but we need not go into that here). Therefore, in order to get very low audio frequencies through to the speaker without loss, the output capacitor had to be very large electrically and physically, meaning expensive and space-consuming. These are both important practical considerations in amplifier

28

design. So it is evident that there are good technical and economic reasons for eliminating the coupling capacitors at the *output* of the amplifier. As far as the practical—as contrasted to the theoretical—advantages of d.c. (or DC) design in the rest of the amplifier, I'm not sure what my position is. I do know that we don't want frequencies below 10 Hz or so (from record warp or amplifier noise) to reach a loudspeaker since (1) they could cause the speaker voice coil to be driven beyond its linear limits, (2) they use up power that would best be applied to the audio range, (3) they could produce severe IM distortion, and (4) they wouldn't be audible as "sound" anyway.

The promotional literature for many of the recent new amplifiers stresses the use of DC design as though it were a recent development. But, in point of fact, I know of at least one DC power amplifier that has been on the market for at least six years. There is no question that DC circuits have a theoretical advantage in respect to infrasonic response and absence of phase shift. But whether these theoretical advantages translate in any specific product into audible advantages must ultimately be left up to the ears of the listener.

If astute readers come away with the impression that I'm fence-straddling on the issue of DC design, they are absolutely correct!

Slow Woofer

Q. I am hoping that you will be able to settle a long and drawn-out argument. I was told (and believe) that when you can actually see the excursion of a woofer it is due to some flaw in the record or the reproduction system. Woofer excursion that obvious must have some cause. My friend states, "It's supposed to do that!" Who is correct?

> TIMOTHY POULIN Orono, Me.

A. I think you are right on several points. Although you can see a woofer cone move when it is delivering a loud, verylow-frequency signal, it should not be fluctuating wildly on normal program material. In general, a woofer cone's response has to do with the speaker system's internal damping; but we certainly can't ignore the electrical contributions of the amplifier and the record (Continued on page 32)

Free for 10 days: von Karajan conducts Beethoven

To introduce the ultimate Beethoven Collection: all9 symphonies plus 7 overtures including Leonore and Coriolan... 50 violin, piano and cello sonatas... 8 concertos...66 folk songs...23 string quartets ... 41 dances ...52 lieder...7 marches...8 arias...6 bagatelles... Missa Solemnis... Fidelio...and much more!

Time-Life Records invites you to a perfect marriage of the arts of composing and performing great music: Beethoven's symphonies conducted by Herbert von Karajan.

Beethoven, the arch-romantic—his music (like his tortured soul) surging with fiery emotion. von Karajan, called "the space-age maestro"—cool, precise, methodical, whether on the podium or at the controls of his private jet.

Two more different geniuses are hard to imagine. Yet the product of their "collaboration" is sheer magic—as you can now discover in a free audition of Volume I of the Beethoven Bicentennial Collection.

Hear von Karajan and the Berlin Philharmonic play the first 6 symphonies—free for 10 days.

In this elegant boxed set of five 12" LP stereo discs, recorded in Europe by the famous Deutsche Grammophon, you will hear the stirring Leonore Overture No. 3, as well as six complete symphonies, among them:

SYMPHONY NO. 3 ("Eroica"). A heroic struggle waged in sound—described by one critic as "the greatest single step by an individual composer in the history of music."

SYMPHONY NO. 5. The wild jubilant conclusion is all the more electrifying because of the brooding drum taps and weeping violins preceding.

SYMPHONY NO. 6 ("Pastoral"). An image-filled trip to the country—complete with nightingale (flute), cuckoo (clarinet) and quail (oboe).

And this is only the beginning. If you decide to subscribe, you will enjoy free auditions of further volumes in this definitive Beethoven collection. They include the remaining symphonies, Nos. 6-9, again by von Karajan... the celebrated "Moonlight" and turbulent "Apassionata" piano sonatas... the fascinating "Triple Concerto" for piano, violin and cello...

In all: 17 elegant boxed sets, 85 LP 12" records, over 325 different works—virtually every major composition the master ever wrote!

No risk or obligation

If you are as delighted with the first six symphonies as we think you'll be, you may own them for only \$19.95 plus shipping and handling. Mail the attached card today (no postage required). Or, if card is gone, send coupon at right to TIME-LIFE RECORDS, Time & Life Building, Chicago, Ill. 60611 Every major work Beethoven ever wrote, performed by leading virtuosos: Menuhin, Nilsson, Kempff, Fournier, Fischer-Dieskau, The Amadeus Quartet

RECORDS

TIME-LIFE RECORDS, TIME & LIFE BUILDING, Chicago, Ill. 60611

Name____

Address_

City____

Yes, I would like to examine the first album of the *Beelbouen Bicentennial Collection*. Please send it to me—for 10 days' free examination and enter my subscription to the *Beelbouen Bicentennial Collection*. If I decide to keep the first album, I will pay \$19.95 plus shipping and handling. I then will receive future albums in the *Beelbouen Bicentennial Collection*, shipped an album at a time approximately every other month. Each is \$19.95 plus shipping and handling and comes on a 10-day free-examination basis. There is no minimum number of albums that I must buy, and I may cancel my subscription at any time simply by notifying you.

If I do not choose to keep the first album, I will return the album within 10 days, my subscription for future albums will be canceled and I will not be under any further obligation.

	RBB
 	Apt. No
State (or Prov.)	Zip (or Code)

FOR EVERY SYSTEM WORTH MORE THAN \$500



If you've invested \$500 or even \$5000 in your high fidelity system, read on. Because what we have to say can have a lot to do with the quality of sound you're hearing.

Unfortunately, one of the most overlooked components in a fine sound system is the cartridge. And all too often, it can be the one place where you skimped on quality. (Out of sight, out of mind, as they say).

We sincerely believe that an investment in a Sonus cartridge will truly surprise you with the way it improves the quality of your record reproduction. The analytical quality of the Sonus brings out the inner voices of complex musical passages clearly and cleanly. Listening fatigue disappears. And a Sonus introduces no extraneous coloration of its own.

But what we're talking about is said even better by Sonus owners. "Excellent clarity," "more fulfilling sound," "open, airy 3-D sound," "superb depth and definition," "clean, accurate and transparent sound," are typical of thousands of enthusiastic comments we have received from owners of Sonus cartridges.

Make sure your cartridge matches up to the rest of your system. Write us for further information and the name of the Sonus dealer nearest you.

Manufactured in the U.S.A. by: SONIC RESEARCH, INC., 27 Sugar Hollow Rd., Danbury,Conn.06810



Audio Q. and A.

player. A turntable with severe infrasonic rumble—say, below 20 Hz or so—can produce visible—if not necessarily audible speaker-cone excursions. And warped records can cause even more severe effects at even lower frequencies.

To a great degree, what reaches the speaker cone at infrasonic frequencies depends on the frequency response of the preamp and power amp at those frequencies. If either unit rolls off the very low frequencies, then obviously the woofer cone won't be faced with the difficult task of coping with their presence. It is for this reason that many engineers feel that amplifier response down to d.c. (0 Hz) buys nothing but trouble. But in any specific case that's something to be resolved by (1) the audiophile's decision as to the way he wants his amplifier to perform at low frequencies, (2) his ears, and (3) his woofer cone.

Amplifier/Speaker Output

Q. I often see ratings of power amplifiers that read: "x watts into 8-ohm loads." Why is it that the power rating increases when 4-ohm loads are used?

> ALAN DUVERNAY Marion, Ohio

Q. The rear panel of the 80-watt-per-channel amplifier I'm about to buy has terminals (and front-panel switching) for two pairs of speakers. Can you tell me whether the 80 watts will be divided between the two speakers in each channel, or what?

EDWARD C. WINGATE Cornelia, Ga.

It may come as shocking news to most of A. my readers (I know it did to me long ago) that amplifiers don't really put out watts, they put out volts. Once that is understood, then Ohm's Law can be applied to answer both of the above questions. A transistor amplifier is essentially a constant-voltage device, meaning that a certain signal voltage applied to its input will provide a certain signal voltage at its output, to be applied across a "load" such as a precision test resistor or loudspeaker. The relevant part of Ohm's Law is $W = E^2/R$, where W is watts, E is outputsignal voltage, and R is the impedance of the load resistor or speaker. Let's take as an example an amplifier that, with a given input voltage, puts out 20 volts. Across an 8-ohm load, this is the equivalent of 50 watts. However, if we substituted a 4-ohm load, the amplifier would then be putting out 100 watts-that is, if it had the ability to do so. (Power-supply and output-transistor limitations usually reduce the 4-ohm output to something like 150 percent of the full rated 8ohm output.)

That takes care of Mr. DuVernay's question. However, Mr. Wingate's query brings in the matter of speaker impedance. If the two sets of speakers to be connected have *identical* impedance characteristics, then whatever voltage (and hence power) the amplifier is putting out would be divided between them. However, no two 8-ohm speakers of different make or model are likely to have impedance curves that match at *all* frequencies. There-

fore the signal-voltage division on music between the speakers (if they are connected in series) is likely to vary from moment to moment depending on what frequencies are involved. If the two speakers in each channel are connected in parallel (the usual switching arrangement), then the voltage across the pair will remain constant but the *current* through each will vary with frequency. And, as a result, so will the wattage.

C Cells by the Sea Shore

Q. I am quite befuddled over the do's and don't's of leaving the C-cell batteries in my cassette recorder at my summer house. The instructions say remove them if the recorder is not to be used for a while. I wonder if you could shed some light on this subject.

NANCY HENDERSON New York, N.Y.

Most batteries (cells, that is) used in A. flashlights, recorders, and radios are rated as to their "shelf-life." This means that they can be stored under normal conditions for a specified amount of time without losing a significant amount of strength. The shelf life is determined basically by the amount of internal chemical change taking place within the cell under no-load (non-operating) conditions. After a while, depending on the type of C cell involved (alkaline, carbon-zinc, etc.) the battery will discharge itself and possibly corrode its external shell. It is this corrosion, which can eat away at the parts within a recorder, that the instructions are obliquely warning against. There also appears to be an electrochemical process that takes place slowly at the points where the cell makes electrical contact with its holder. If any corrosion is observed these should be cleaned with fine sandpaper. In sum, it's good practice to remove the batteries and store them in the refrigerator; this slows down their internal chemical processes and thereby substantially extends their shelf life.

Infra vs. Sub

Q. I notice that lately your magazine is using the term "infrasonic" instead of "subsonic" to refer to the very low frequencies. Are you being fancy—or what?

FRANCIS LEFFERTS San Francisco, Calif.

A. Not fancy, just correct and in accord with modern usage. You might also have noticed that we use "ultrasonic" instead of "supersonic" to describe events at the other end of the audible spectrum. One takes a *supersonic* flight but gets teeth or jewelry cleaned by an *ultrasonic* device, and we have long had both *infrared* and *ultraviolet* light sources. And, yes, we know that there are many exceptions and inconsistencies in these usages, but it is unlikely that the philological chaos will ever be completely resolved.

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

It's hard to find a *1,000 tape deck that doesn't use Maxell. Or a *100 tape deck that shouldn't.

If you spent \$1000 on a tape deck, you'd be concerned with hearing every bit of sound it could produce.

That's why owners of the world's best tape decks use Maxell more than any other brand.

mayellith CSC

But if you're like most people, you don't own the best tape deck in the world and you're probably not using Maxell. And chances are, you're not hearing every bit of sound your tape deck is capable of producing.

out of it. So spend a little more and buy Maxell.

UD. C90

maxellub, C9U

Maxell. You can think of us as expensive tape. Or the cheapest way in the world to get a better sounding system.

Maxell Corporation of America, 6C Oxford Drive, Moonachie, N.J. 07074

Sonyquality that speaks for itself.



The TC-K7 II front-loading cassette deck is its own best spokesman.

Switch it on, and that disciplined Sony engineering will come through loud and clear.

And no wonder. Sony's been making tape recorders for 30 years. And today, we're still pushing back the frontiers. The K7 II shows how.

Its transport mechanism is a DC servo-controlled motor, with a frequency generator. It emits a signal which is relayed to electronic circuitry that locks in the tape movement exactly. Our heads are ferrite-andferrite. And they're Sony's own formula—we don't buy them, we use our heads and make them.

You'll also find a directcoupled head-playback amplifier. This means we've eliminated the middleman—the coupling capacitor—from the signal path. You get your sound direct, with minimum distortion.

Another reason the K7 II is the logical choice: our logic controlled feathertouch push-buttons actually go from fast-forward, to rewind, to play, without going through the stop position. The K7 II also speaks for itself with Dolby Noise Reduction System™ Large, professionally calibrated VU meters. Three LED's for peak level indication.

There's also bias and equalization switches for standard, Ferri-Chrome and Chromium Dioxide tapes. In fact, with nine possible combinations, any tape possibility of the future can be accommodated.

So if you're intrigued by quality that speaks for itself, get down to your Sony dealer and check this new cassette deck. Before they're all spoken for.

Songquality that doesn't speak at all.



But it won't be silent for long. Because the moment you record on one of our blank tapes, that quality will make itself heard.

Witness our Ferri-Chrome cassette.

Everybody knows that ferric-oxide tapes are ideal for reproducing the low frequencies. And that chromium dioxide is ideal for the high frequencies.

As usual, Sony wouldn't settle for anything but the best of both.

And as usual, Sony's engineers solved the problem. With a process that allows a coating of chromium dioxide to be applied over a coating of ferric-oxide. Our two coats are leaving other brands of tape out in the cold. Eecause Ferri-Chrome boasts shockingly low distortion and startling dynamic range.

Sony is this advanced because we make more than tape. We make tape heads and tape recorders, too. (No other consumer company is that involved.) Because we know where tape winds up, we're better able to design and produce it.

CIRCLE NO 52 ON READER SERVICE CARD

Of course, in addition to Ferri-Chrome, Sony makes a compete line: Chrome, Hi-Fidelity, Low Noise Elcaset and Microcassette

Sony's been making tape for 3C years.

So when it comes to answering the tough questions about the manufacture of tape, no one fills in the blanks like Sony.





POWER: HOW MUCH DO YOU NEED?

As George Tlamsa points out in his survey of receivers in this issue, amplifier power accounts for the lion's share of the cost of a typical unit. Therefore, before buying, you ought to assess your power requirements as realistically as possible. The receiver article offers some rough general guidelines to start you on your way, but they cannot be followed blindly and without reservation because, unfortunately, they require some adjustment to fit each individual case.

One of the important aspects of intelligent sound-system design is planning ahead for certain eventualities. Crowding forty people into your living room for some dancing means that you're going to need appreciably more amplifier power than the guidelines might lead you to expect (great sound absorbers, people). On the other hand, if you don't boogie and you avoid entertaining guests who do, you're okay---that is, until you decide to take your speakers out onto the patio to regale your garden party with a little Stan Kenton. Assuming typical speaker efficiencies and typical receiver powers, a very little Stan Kenton is exactly what you'll get. In the great outdoors, even the New York Philharmonic cannot generate a sound level high enough at listeners' ears to make an unamplified outdoor concert worth giving. These are all things to be aware of as you plan a sound system around intended applications. And there are plenty more.

Over the years, STEREO REVIEW's test reports have featured any number of speaker systems that will produce a sound-pressure level of 90 decibels (dB) at a distance of 1 meter when driven with 1 watt of amplifier power. Some simple calculations tell us that such a speaker should theoretically be capable of producing 106 dB (again, at 1 meter) when driven with 40 watts of power. Seems very respectable, doesn't it? Well, let's look (listen) a bit more closely.

First of all, just how loud is 90 dB anyway? As it turns out, this really depends on those you ask and what they're listening to. For most people, 90 dB sounds considerably less loud at 60 Hz than at 6,000 Hz; this is because of the ear's relative insensitivity to low frequencies. But skipping over that point, let's ask the easy-listening-music enthusiast how loud 90 dB is. Given his (typically) rather highly compressed recordings (which means that dynamic levels are never allowed to fall much below 90 dB) and his general idea of what a satisfactory music experience is, it's likely he'll reply that 90 dB is certainly loud enough and frequently a bit louder than he'd really like. But then ask the symphonic listener gleefully reveling in, say, Stravinsky's Le Sacre du Printemps and you'll probably find that 90 dB, although a passable level for unaccompanied strings, just doesn't make it for the closing minutes of the Sacrificial Dance. Would he be able to tolerate 106 dB on the loudest peaks at his ear? He would have to be made of pretty stern stuff, but such levels in the home are not unheard of.



However, before we can begin talking about 106 dB, we have to bring in another as yet unexamined factor: the 1-meter distance at which the sound-pressure-level measurement was made. We don't usually listen to loudspeakers at a distance of 3.3 feet—10 to 12 feet is more the rule in smaller rooms, with greater distances common (and usually preferred) in larger spaces. Using a variety of test tones and program material, I recently measured losses in sound-pressure level of between 6 and 14 dB when the test microphone was moved from a 1-meter position to a point about 12 feet from the speaker. (This was in a small listening room of typical proportions; I would attribute the 8-dB variation to room modes-its resonances, that is-and the dispersion characteristics of the speaker used.) In this case, if we're looking for 106-dB peaks at the 12-foot distance, we'd need at least 160 watts to drive that same loudspeaker, assuming the average loss is only 6 dB. Of course, peaks of 100 dB are still theoretically possible with 40 watts of power. This is roughly what you'd measure in the back of a large concert hall with a full symphony orchestra going just as hard as it could; fairly loud, in other words, but nowhere near enough to provoke the use of ear plugs. With the close-up microphone perspectives used in many symphonic recordings, 100 db maximum would probably not allow enough reserve for fully realistic levels on orchestral peaks without audible distortion.

The moral is that your power requirements for a home audio system are going to depend enormously on your individual listening preferences and practices. In 1964 Harry F. Olson reported that, on the average, home listeners preferred a maximum level of 70 to 90 dB. It is probably safe to say that 70 dB would seem very soft to most listeners today, and thus it's probable that the preference level is creeping up. Without question, the popularity of highfidelity sound equipment has played its part in this rise. I would estimate that the proud new owner of a high-fidelity system immediately takes a 10-dB jump in level over what he had adopted for his previous low-fi equipment, and that's a tenfold increase in amplifier power requirements even before speaker efficiency is considered.

So, with the (fairly typical) speaker we've been using as an example, a small and rather live listening room, and 1 watt of amplifier power, you should be able to achieve levels of at least 84 dB-right in the average-level ballpark, at least for 1964. Four watts of power will get you up to 90 dB, which might be considered the barest minimum for anyone interested enough in sound reproduction to be reading this. To get to 100 dB--within striking distance of realistic concert-hall peak levels, but with no reserve to spare-you'll need 40 watts. And beyond that there is a break point at which even phenomenal power increases bring less and less peak-level reserve: 80 watts for 103 dB, 160 watts for 106 dB, 320 watts for 109 dB, and so on. Incidentally, these requirements are somewhat above what you'd calculate from the graphs accompanying this month's cover story, "Receivers Today" (see page 68). This is because they are based on real measurements rather than "average-case" estimates.

Most serious home listeners of my acquaintance aim for a peak-level capability between 103 and 110 dB. You'll note that the power requirements for these two levels are vastly different. You'll also note that for each 3-dB increment of increase—a barely significant increase of level to the ear—a doubling of amplifier power is involved. This poses a dilemma to the audiophile, because each tiny twitch of the volume control requires many, many more watts. And this is why, at audiophile listening levels, the question of how much power is enough provokes such serious concern. In any event, it's clearly a question each listener must answer for himself.

Upgrade Your Hi Fi. Fuji-Fi.

Posea (1), FILT FIX-II



SUPERIOR CASSETTE HIGH BIAS, 70, S EQ

The specifications of your cassette deck may look outstanding. But its actual performance — the quality of your music reproduction — can only be as good as the tape you use. To ensure optimum performance, all of the time, you need Fuji cassettes.

Consistency. Cassette tape performance can vary with each cassette tape. Consistent performance, however, can only be guaranteed by a company which produces all the elements that go into their tape. A company like Fuji. We make our own base film and our own binder material. We produce our own oxide and do our own coating. Stringent quality control, including factory testing of each cassette, further assures you of total reliability and highest fidelity, always.

Versatility. The new Fuji FX-I 120μ s normal-bias formulation is ideal for use with home, portable and car decks; because Fuji FX-I is completely compatible with every normal-bias machine.

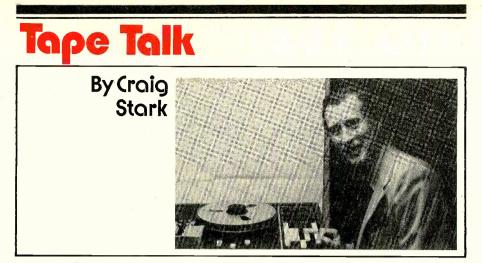
Bias Acceptability. To ensure perfect compatibility between your machine's factory-set bias and your tape, you need a tape with a wide range of bias acceptability. Like the new Fuji FX-II 70 μ s Beridox cassette. Its bias latitude is much greater than most other high-bias formulations.

PERSENTLI II

Wow and Flutter. The friction created by conventional cassette housings may adversely affect the wow and flutter performance of your cassette machine. So Fuji designed a new housing for the FX-I and FX-II tapes. With unique teflon coated waffled slip sheets, convex guide rollers (for more accurate tracking) and improved pressure pad, the new Fuji housing substantially reduces friction.

So to get the best possible performance from your cassette machine, to make your music sound clean, clear and crisp, visit your Fuji dealer today. Tell him you want to upgrade your hi-fi. Tell him you're ready to Fuji-Fi.

MAGNETIC TAPE DIVISION/FUJI PHOTO FILM U.S.A., INC. Empire State Building/New York, N.Y. 10001 CIRCLE NO. 23 ON READER SERVICE CARD



Optimizing a Deck

Q. In your article comparing cassette decks in STEREO REVIEW'S 1978 Tape Recording and Buying Guide, you said that a tape's performance could vary widely depending on the internal adjustments of a given deck. I own a very good cassette recorder and want to have it "optimized" for a specific tape. What sort of work is involved in this? I've asked two servicemen about it, and one quoted a price I thought was ridiculously high while the other was willing to do it for a figure that seemed suspiciously low.

ROBERT HOBART Los Angeles, Calif.

A. While I normally settle for margarine, this is one time I might recommend the "high-priced spread." Doing a complete "setup" job on a tape recorder—especially a twohead cassette machine, where you cannot continuously monitor the results of each adjustment as you go but must instead record tape with a "spread" of adjustment settings, rewind it and play it through again to find which was "optimal," and then set the deck to that—is a time-consuming task. There are several different adjustments involved, and some of them interact with one another.

Assuming the primary playback adjustments are correct, there are four principal record adjustment areas. The first is bias current, which should vary with the tape type and with the recorder's tape head; it affects high-frequency response, mid-frequency tape sensitivity, distortion, and signal-to-noise ratio. Your low-bidding technician probably intended to make only this adjustment.

The second adjustment is record equalization, which is essentially the amount of treble boost needed to produce acceptably flat frequency response once the bias current has been set. Unhappily, bias and equalization are interrelated in their effects on high-frequency response, and this must be taken into account in the adjustment. On some casette decks the record equalization is not adjustable; on others, there may be two different controls for it for each channel.

Third, the recording-level meters must be calibrated to reflect the "headroom" (the difference between an indicated "0 VU" and the onset of serious distortion) dictated by both the tape and the amount of mechanical lag in the meters' response to the various signals.

Fourth and finally, the Dolby system must be calibrated to reflect the sensitivity of the tape you have chosen. For a specific input level, different cassettes produce different playback-output levels, and for the Dolby system to function accurately it too should be matched to the selected tape.

Your particular deck may contain even more record adjustments than these—and, frankly, I wouldn't touch a record section until after I had thoroughly checked out the playback adjustments. So you can see that "optimizing" for a given tape can be a fairly extensive (and expensive) operation. It would probably make more sense to experiment a bit and determine by trial and error which tapes perform best with your deck using the internal adjustments it already has.

Dolby-calibration Tapes

Q. I got a "Dolby-level" test cassette from a manufacturer to calibrate my several Dolby decoders, but it shows the same wide (5to 6-dB) variations between channels on three different recorders, so I think the tape is defective rather than the machines. Getting an accurate Dolby-calibration cassette seems almost impossible. Can you help?

> A. REISMAN Yorktown Heights, N.Y.

A. While any test tape might be defective and every one will eventually lose its calibration accuracy through use—both my mail and that received at Dolby Labs indicates that there are a fair number of badlymade Dolby-level calibration cassettes floating around. The Dolby people have therefore begun to compile a list of suppliers of accurate Dolby-level cassettes; prices range from about \$7 to \$20. To date, the list includes:

RMS Inc., 7 Maynard Drive, Oakridge, N.J. 07438.

RCA Special Products, 6550 East 30th Street, Indianapolis, Ind. 46219 (part No. 127).

Standard Tape Laboratories, 26120 Eden Landing Road, No. 5, Hayward, Calif. 94545.

Marantz, 20525 Nordhoff Street, Chatsworth, Calif. 91311 (part No. 897-5001-000).

TDK Electronics, 755 Eastgate Boulevard,

Garden City, N.Y. 11530 (part No. AC-317). Teac Corp. of America, 7733 Telegraph Road, Montebello, Calif. 90640 (part No. MTT-150).

Some of these manufacturers may be interested in handling only industrial quantities (you'll have to write to find out), but at least one (TDK) advertises that its Dolby calibration tape is available through the audio dealers who handle its products.

Critical Difference

Q. I chose my open-reel recorder because I sounding decks around. Yet when I am A-B monitoring with it (or with any other recorder, for that matter), the incoming signal always sounds somehow easier to listen to than the playback signal. Is this because of intermodulation distortion—specifications for which are never given (or at least I've never seen any) for tape recorders?

DONALD R. LOOSE Fairborn, Ohio

A. Intermodulation distortion (IM) is generally considered more audibly unpleasant than harmonic distortion, because the distortion frequencies generated by intermodulation are normally not related in any "harmonious" way to the original signal frequencies. Harmonic distortion creates simple frequences, whereas IM creates new tones whose frequencies are the sum of or the difference between the originals.

I don't think that the absence of IM specifications for tape equipment signifies any deliberate "cover-up" on the part of recorder manufacturers. Mainly, this is because IM distortion is a problem inherent more in the tape itself than in the recorder(s) it is used with, so a single "IM spec" for a given machine won't have much meaning. Moreover, there are three or four widely used methods of testing for IM, making comparisons between such specs given by different manufacturers difficult. (An IEC standard test method has been proposed, but it has not yet been universally adopted; if it is, you'll get full particulars in this column.)

My own experience is that the test method I use always results in higher percentages for IM than for harmonic distortion, but I have not found much significance in the difference for open-reel recording, only for cassettes. One reason for this, I think, is that the kind of harmonic distortion typically generated by the tape-recording process-that is, the addition of spurious odd harmonics (the third, fifth, seventh, etc.)-sounds much like IM distortion. Even harmonics, which do not tend to be generated in tape recording, are like ordinary musical overtones, and thus sound "consonant" to most ears. The difference is similar to that between the sounds of square and sine waves; the former has an unpleasant raspy or buzzy quality like the distortion typically found on recorded tapes.

In your case, Mr. Loose, I think that the distortion you hear when you compare source and playback using a top-quality open-reel deck includes not only IM and odd-harmonic distortion, but *modulation noise* as well. This is a factor considered more often in professional than in home recording circles. Unlike

the noise that gets measured in order to determine a tape recorder's signal-to-noise ratio, modulation noise exists only in the presence of a recorded signal. One hears it as a noise "behind" the signal, and since its intensity varies directly with the intensity of the signal itself, it can't be masked by recording at a higher level.

There are two principal kinds of modulation noise; in a particular case, both may be present to varying degrees. One is a type of frequency modulation (FM) arising from physical vibration of the tape as it passes over the heads; this effectively varies the rate of tape travel and causes frequency variations too rapid to register on wow-and-flutter meters. Such FM tape noise is usually called "scrape flutter," and it can often be reduced by special rotating "scrape-flutter filters" installed next to the tape heads (provided that these are properly designed and suit the type of tape being used).

The other kind of modulation noise is an amplitude modulation (AM) of the signal that is caused by magnetic irregularities in the tape itself-particularly the irregularities near the surface. AM tape noise thus varies widely from one reel (or brand) of tape to another. Since it is best measured by recording a d.c. signal (0 Hz), it is often called "d.c. modulation noise," but it affects regular audio frequencies as well. With some tapes a small variation in the bias level can markedly reduce such noise, but it is very difficult to pinpoint the optimum variation without appropriate test instruments, making this solution impractical for most non-professional recordists or audiophiles.

In short, Mr. Loose, there are plenty of potential sources for the noise you hear, but putting one's finger on the precise cause is not at all easy. However, since the tape itself is the likeliest culprit, you might, as a start, try switching to another type.

Tape Timers

Why is it that no manufacturer of tape re-Q. corders includes an electronic minute timer? The tape is offered in 30-, 60-, and 90minute versions, but the "index counters" on tape decks have nothing to do with playing time and those on different machines don't even agree with each other. Would a real timer cost that much extra?

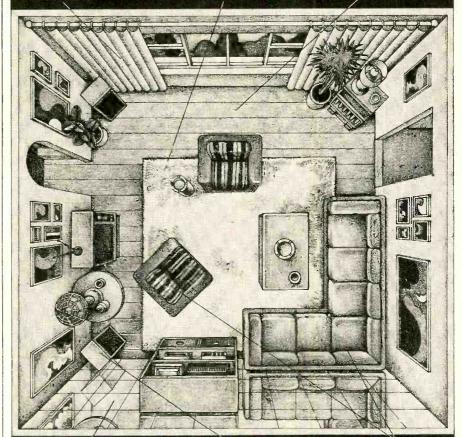
> HARRY S. FALKOFF Branford, Conn.

There are, in fact, a small number of tape decks, both cassette and openreel, whose timers read out in "real time". actual seconds and minutes-but it is still much cheaper to provide a "counter" that responds to the number of revolutions of either the take-up or supply reel. Since the number of these revolutions in a given time varies according to the amount of tape, on the spool, there is no accurate way to correlate indexcounter readings with actual playing time, whether elapsed or remaining. Further, despite attempts by groups interested in standardization, even the typical index counters don't agree from machine to machine, as you note. But with the cost of electronics technology dropping, more true timers should be coming along. Sharp and Optonica both offer cassette decks with liquid-crystal digital tape timers that also serve as 24-hour clocks.



Drapes muffle lows

Rugs soak up lows. Wood floors bounce highs.



Mirrors reflect highs.

Poorly placed speakers, poor sound.

Upholistery soaks up lows.

Your stereo probably doesn't have the sound you thought you bought. Because you first heard it in a sound room. Unfortunately, most stereos are set up in rooms designed for living. Not listening. That's why you need a Sound Shaper One or Two. The frequency equalizers that re-shape music to fit your ears. And your living room

your living room.

Sound Shaper One has ten frequency controls, five for each stereo channel. But if your system is more sophisticated, you'll want Sound Shaper Two with twenty-four frequency controls (twelve for each stereo channel). So highlight the vocal. Suppress the bass. Wipe out the

flute entirely. And if you want the real professional touch, get the SLM-100 Sound Level Meter which can help you to achieve perfectly flat

frequency response. Without redesigning your living room, turn it into a listening room.

ADC PRÖFESSIONAL PRODUCTS A Division of BSR Consumer Produ Route 303, Blauvelt, N.>, 10913 A BSR COMPANY





IntroducingTheDMFactor. Dual Monaural construction. Exclusively Mitsubishi.

It means inside our stereo preamplifier are two perfectly matched mono preamplifiers.

Just like our dual monaural power amplifiers.

Just like your ears.

It means Mitsubishi has achieved more than stereo. But inter-channel separation at more than 80dB at 20kHz. For separation 30dB more than conventional designs.

For THD at less than 0.002% from 20Hz to 20kHz. For effective elimination of leaks, crosstalk, any influence able to distort the stereo image. In both the depth and breadth of the image.

Our new preamplifier was also developed to effectively

handle the moving coil cartridge. For a signal-to-noise ratio of —77dB. Unheard of in any other preamplifier.

Introducing our new frequency synthesizing tuner. With new capabilities, new features, new design.

With THD in stereo at barely 0.08% at 1kHz. Conservative, at that. With switched selectivity for uncompromising reception. With digital read-out. With LED's to determine signal strength and precise tuning. With an uncanny ability to zero in on the quietest signal.

And along with unique electronic engineering, Mitsubishi offers unique mechanical engineering.

Like The Docking System. It means preamplifier can be linked with amplifier neatly and compactly. Without a myriad of crossed wires.

But no matter what we tell you, the truth is, nothing will tell you more about dour audio equipment than your own audio equipment.

So, use your ears, and by all means compare.

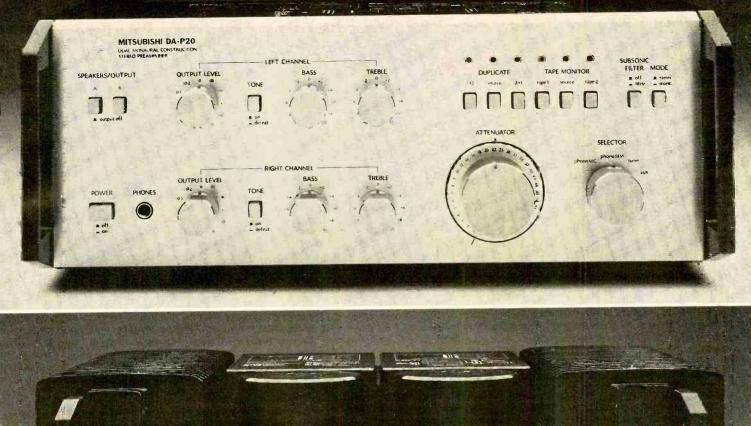
Compare the difference The DM Factor makes. Compare the convenience The Docking System makes. Compare the capabilities of our new tuner.

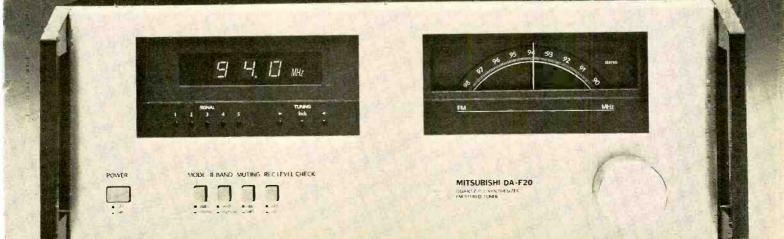
And you'll know why Mitsubishi made them part of The System.

The only high performance audio system with one name, one look, one warranty, one standard: what comes out must be as real as what went in.

Because reality is what it's all about.









The Testing of Turntables

A THOUGH turntables are sometimes sold as separate components, they cannot be used or tested except in combination with an arm and a cartridge. It is not possible to evaluate any of these components without the other two, and often it is impossible to completely separate the contributions of each to a given measured result.

Last month I discussed this problem as it applies to the testing of tone arms. The same considerations apply to turntable testing. In fact, the two are tested simultaneously, the only difference being that some of the tests and specific test records are peculiar to one or the other component. The basic turntable performance measurements include speed accuracy, speed constancy (including drift, wow, and flutter), freedom from mechanical vibration (rumble), isolation from structureor air-conducted vibration, and, in the case of a turntable with automatic or other special features, an assessment of how effectively they function.

If, as is the usual case, no cartridge is supplied with the turntable or specified for use with it, we generally install a suitable cartridge that happens to be on hand for testing. (If none is available, the Shure M95ED serves as our all-purpose standby cartridge.) After the cartridge has been installed and the necessary adjustments made for arm geometry and tracking and antiskating force, the record player is placed on a heavy, rigid, and accurately horizontal surface, one that is as isolated as possible from external shock and vibration. The cartridge output is amplified to the required levels for measurement by means of the amplifier function of our Ballantine Model 310 a.c. voltmeter.

For speed checks, the output of the meter amplifier goes to a Heath IB-101 frequency counter. While playing the standard-level 1,000-Hz band of a CBS STR 100 record, we measure the frequency on the counter. If the turntable has a stroboscope and a speed adjustment, this is set accurately to $33\sqrt{3}$ rpm. At this time the counter should read exactly 1,000 Hz. If it does not, the stroboscope marks may be in error or the light flashing at the wrong frequency (these are very remote possibilities, but we have encountered both of them in the past). If the speed is not adjustable, the counter reading gives us an accurate measurement of the true turntable speed. If vernier speed adjustments are provided, they are moved to their limits and the counter reading is noted at each of the turntable's rated operating speeds. From this it is easy to compute the speed accuracy and the vernier control range. We also change the a.c. line voltage, usually between the limits of 95 and 135 volts, and observe any changes in the frequency of the "playback signal"—which is, of course, the platter speed.

With the speed set at 33¹/₃ rpm, the output of the meter amplifier is connected to the input of a flutter meter. Until recently we used a meter based on the old IRE standard of 1954, which was essentially an unweighted average measurement. We have now replaced it with a Meguro MK-667C flutter meter which has all the currently used measurement weighting curves and meter characteristics. These include the JIS, NAB, CCIR, and DIN standards (the last is similar to the current ANSI/ IEC/IEEE standard). The DIN and CCIR systems use a peak measurement in which the flutter is expressed as " $\pm x$ per cent"; they differ only in the measurement frequency (the DIN uses 3,150 Hz and the CCIR uses 3,000 Hz). The NAB and JIS systems use similar weighting curves. Both operate at 3,000 Hz, but the NAB is an "average-reading" meas-urement and the JIS is a heavily damped rms measurement. In the future we can expect to encounter better correlation between our flutter measurements and those specified by turntable (and tape-recorder) manufacturers, if

Tested This Month

6

Burwen TNE 7000 Noise Eliminator Shure V15 Type IV Cartridge Dynaco Stereo 416 Power Amp Wharfedale E-70 Speaker System Teac A-103 Stereo Cassette Deck for no other reason than that we will be measuring with the same yardstick.

The flutter meter has an output at which the demodulated flutter waveform—the actual flutter frequencies and amplitudes—is available for external analysis. We connect this to our Hewlett-Packard 3580A spectrum analyzer and make a frequency analysis of the flutter spectrum from 0 to 200 Hz. This can give us clues to the origin of the flutter by showing whether it consists largely of discrete frequency components or is randomly distributed (which is usually the more audible).

To measure flutter, we must play a record that has the required frequency of 3,000 or 3,150 Hz recorded with a very low intrinsic flutter (ideally much less than the flutter in the component being tested). Some CBS test records, such as the BTR150, have 3,000-Hz flutter bands, but we usually use the DIN 45545 record, which is recorded at 3,150 Hz. The meter can function properly with this frequency even when it is set for JIS or NAB measurements.

It probably comes as a shock to anyone making a flutter measurement for the first time to see how much the meter reading varies. There is as much art as there is science in making a flutter measurement, since one must "eyeball" the meter and estimate its most probable reading. Occasional swings to a much higher reading can usually be ignored, but some sort of mental averaging is required to interpret the wildly swinging meter pointer.

Although the various weighting systems employed in the Meguro instrument tend to lump flutter and wow together in a combined measurement, internal filters can be switched in for a wow-only measurement. These limit wow measurement to the band from either 0.2 or 0.5 Hz up to 6 Hz, and flutter consists of the components from 6 to 200 Hz. Everything below 0.2 Hz down to zero frequency is classified as drift, for which the Meguro device has a second meter. However, if a turntable has appreciable low-frequency wow, or if the record is slightly eccentric, there will be a deflection of the drift meter accompanying the reading of the flutter meter.

To measure rumble, the cartridge plays a special unmodulated ("silent-groove") record. The cartridge output is passed though an accurate RIAA-equalized preamplifier and then to the Ballantine meter on which the readings are made. For an unweighted measurement, we first establish a reference level on the meter by playing a recorded signal of 100 Hz at a 1.4-centimeter-per-second (cm/ sec) velocity (equivalent to 1,000 Hz at 5 cm/ sec). Then the silent-groove record is played, and the meter reading is observed. The difference between the reference level and the silent-groove level is expressed as a rumble level of "-x dB." Care is needed to avoid hum pickup that can place an artificial "floor" under the readings, exaggerating the actual rumble level.

The output of the preamplifier also goes to the spectrum analyzer, so that we can determine the frequency distribution of the rumble waveform. Sometimes discrete rumble frequencies are found—at frequencies between 10 and 120 Hz—that are associated with the pole structure of a direct-drive motor, or the rotation rate of a conventional synchronous or induction motor. We also often find a peak in the rumble spectrum at the frequency of the low-frequency arm/cartridge resonance (typically 7 to 10 Hz).

This unweighted rumble measurement is informative because it indicates how much infrasonic energy will reach the amplifier and speakers (unless the energy is filtered out by the amplifier). This can cause amplifier overload, speaker distortion, or even speaker damage in extreme cases. However, almost all manufacturers' turntable specifications state a weighted rumble figure, which generally correlates better with the audibility of the rumble. Each measurement system (JIS, NAB, ARLL) attenuates the low rumble frequencies by a different amount, making comparisons between them impossible.

We use the ARLL weighting curve originated by the CBS Technology Center. It is convenient and, so far as we can tell, as valid as any of the others, although the numerical results of the measurement may not be as impressive as a JIS or DIN-B measurement. Essentially, it rolls off the low frequencies below 500 Hz at a 6-dB-per-octave rate. Since the ARLL network is driven from the output of an RIAA-equalized preamplifier, with its 6dB-per-octave boost below 500 Hz, the net effect is nearly that of an unequalized cartridge output measurement.

As with flutter measurements, the meter readings in rumble measurements are highly variable. Often the rumble-frequency components will be close to the frequency of the a.c. power line or one of its harmonics, and the resulting "beats" will cause the meter pointer to swing over a very wide range so that visual averaging is again needed. Even more than in a flutter measurement, the test record chosen is highly significant. Every such record has some rumble built in; there is no such thing as an absolutely "silent groove," any more than there is a "distortionless amplifier."

Most of our initial rumble measurements are made with an AR test record that also has the 100-Hz reference-level band. Its rumble is low enough for many turntables, but if we suspect that we may be measuring the record rather than the turntable, we play a DIN 45544 rumble test record, and if the turntable is one of the better models, we resort to a lacquer disc that was cut specially for us, one with an intrinsic rumble lower than -70 dB. Yet, no matter how good the record may be,

the ple, the lacquer disc has two silent-groove easevel ured rumble will be higher on one band than on the other; we use the best figure we can measure (this is not a property of the record, cm/ but varies according to the turntable). It should be apparent that many aspects of turntable measurement are, to say the least,

turntable measurement are, to say the least, arcane. It is not the sort of thing one can do in a "cookbook" fashion, or by following written instructions, and expect to get meaningful results. This should point up the futility of worrying about *minor* differences between the rumble or flutter ratings of different turntables and using them as a basis for selection. Aside from possible differences in instrumentation, a variation of several decibels can result from different visual interpretations of the same meter readings.

there are other factors to consider. For exam-

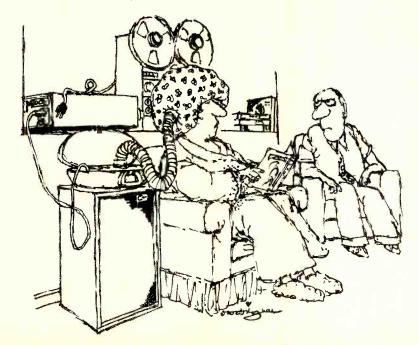
It is now recognized that one of the most important properties of a record player is how it responds to vibrations reaching it through the air or conducted through its mounting feet. Ideally, there should be *no* response to such vibrations. Practically speaking, of course, one cannot completely isolate the physical record player from the surface on which it rests or from the surrounding air that carries sounds from the speakers and other sources.

A full evaluation of the effectiveness of the turntable suspension would be very costly and difficult to perform. Furthermore, no matter how thoroughly it was done, one could never be certain that the test was complete. For example, a given record player will respond very differently to stimuli acting on it from different directions—not just from side to side or front to back, but along any line in a sphere surrounding the entire record player.

While I recognize the impossibility of doing a truly rigorous test of turntable isolation, I would still prefer to do a partial job than to ignore the matter entirely. I do this with the aid of a "poor man's shake table" whose design was proposed by Technical Director Larry Klein. It has given us excellent service over the past several years. It consists of four small loudspeaker drivers that were originally meant to be fastened to wall studs to convert one's wallboard into an acoustic radiating surface (!). Four of these drivers hold up the corners of a piece of ¼-inch-thick plexiglass large enough to support any turntable likely to be tested. They are driven in phase from a power amplifier whose input signal is derived from the sweeping signal generator of our General Radio frequency-response plotter.

The record player is set up in a normal playing position on top of the plastic. The cartridge is placed on a record (with the turntable stationary). The output of one channel, amplified by an RIAA-equalized preamplifier, goes to the input of the chart recorder, which is synchronized with the frequency sweep of the generator. With a standard drive level applied to the "speakers," the frequency is slowly swept from 20 to 1,000 Hz. The cartridge output, the result of the transmitted vibration's moving the stylus relative to the turntable (or vice versa), is plotted on the chart as a function of frequency. The vertical (amplitude) scale is corrected by a factor derived from the setting of the chart recorder's input attenuator and the output of the cartridge when it is playing a standard 1,000-Hz, 3.54-cm/sec test tone from a CBS STR 100 test record.

HESE plots, in themselves, tell us little more than the frequencies at which the record player is most susceptible to base-conducted vibration. There are no absolute quantitative data in the curves, and there are inevitable uncertainties due to the unknown loading effects of different turntable weights on the vibrators themselves. The real value of this measurement is that it permits us to make comparisons, crude though they may be, between different record players. By overlapping their charts, altering their positions to allow for the corrective scale factors mentioned earlier, and holding the charts up to the light, it is easy to see which player responds most strongly to the vibration, and at what frequencies. From this comparison, we can judge with fair accuracy whether a turntable is better or worse than the average of its competitors in this very important respect. \square





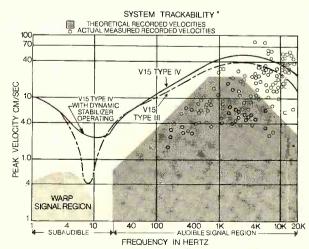
fact: the IV does more... much more!



Era IV begins! The new Shure V15 Type IV phonograph cartridge is an altogether new pickup **system** that exceeds previous cartridge performance levels by a significant degree. It systematically solves not one, but several problems prevalent in modern disc sound reproduction:

Demonstrably improved trackability across the audible and subaudible range at ultra-light tracking forces

The V15 Type IV has a new stylus assembly design for dramatically increased trackability. The effective stylus mass has been lowered significantly by utilizing a telescoped shank structure and a new lightweight high-energy magnet. The reduced effective mass of the new structure helps improve trackability in the critical mid and high frequencies. A newly designed two-function bearing system has been independently optimized for low frequencies and for high frequencies so that trackability is enhanced across the audio spectrum.

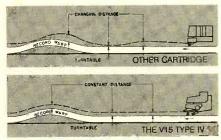


*Cartridge-tone arm system trackability as mounted in SME 3009 tone arm at 1 gram tracking force.

The shaded area at right in the Trackability chart on preceding page represents recommended theoretical limits of record cutting velocities. However, the scattered points are the "hottest" recorded velocities actually measured on today's difficult-totrack records. The new V15 Type IV tracks far more of the "hottest" points at a low stylus force than any other existing cartridge! (The curve shown is for 1 gram tracking force. By increasing this to 1¼ grams, even more of these points — which encompass virtually all records produced thus far — will be tracked.)

Dynamically stabilized tracking that overcomes record warp problems

Our war on warp...



The warp problem

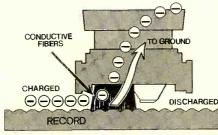
Note the shaded area (at bottom left of the Trackability chart at left) which represents actual warp signals found on records, and the revolutionary subaudible warp trackability characteristics of the SUPER TRACK IV. Reactions of the playback system to these very low frequency warps (between 0.5 and 8 Hz) existing on virtually all recordings can result in gross changes in the distance between the cartridge and the record. This distance change alters the stylus tracking force and the vertical tracking angle and can result in groove skipping, cartridge bottoming, signal wow, and even amplifier and/or speaker overload. Trackability at all frequencies is diminished by these warp-caused changes in tracking force!

Also, at some very low frequency (from 5 to 15 Hz), the tone arm-cartridge combination has a resonance frequency. When this resonance frequency is excited by the warp, all the above symptoms are intensified.

The Super Track IV total design solution:

A viscous-damped Dynamic Stabilizer on the V15 Type IV combines with a new stylus assembly to minimize or completely eliminate warp-related problems. It raises the arm-cartridge resonance frequency and attenuates the arm-cartridge system resonance effect.

An electrostaticallyneutralized record surface



FRONT VIEW

The static problem:

Static charges are omnipresent and unevenly distributed on all records. These charges can attract the cartridge unevenly and change the arm-to-record distance, the vertical tracking angle, and stylus tracking force. The result is wow and flutter. Also, static discharge through the stylus and amplifying system can be a cause of annoying pops and clicks.

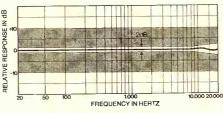
The Super Track IV total design solution:

Electrically conductive fibers in the Dynamic Stabilizer of the V15 Type IV ride on the surface of the record and continuously sweep the grooves just ahead of the stylus. This picks up the static electricity and discharges it to ground, much like a miniature lightning rod. The record surface is thus electrically neutralized. The static charge is prevented from affecting the arm-to-record distance, or fram causing static noise in the system. Discharging the static stabilizes tracking force during the entire record playing process and does away with the electrostatic attraction of dust to the record surface.

In addition, the conductive fibers effectively sweep the record surface to remove loose dust and lint.

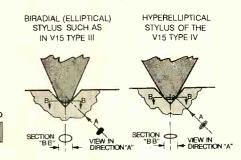
Ultra-flat response

TYPICAL FREQUENCY RESPONSE ENVELOPE

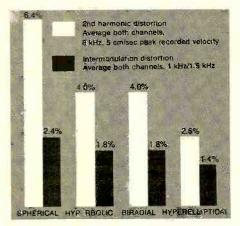


Each V15 Type IV cartridge is individually tested for frequency response that is well within the 2 dB envelope shown here.

Dramatically reduced distortion



The Hyperelliptical nude diamond tip configuration of the V15 Type IV represents a significant advance in tip design for stereo sound reproduction. As the above figures show, its "footprint" (represented by the black oval) is longer and narrower than the traditional Biradial (Elliptical) and narrower than long-contact shapes (such as the Hyperbolic). This results in an optimized tip-groove contact area and dramatically reduces both harmonic distortion (white bars in graph) and intermodulation distortion (black bars).



HARMONIC AND INTERMODULATION DISTORTION FOR VARIOUS TIP SHAPES

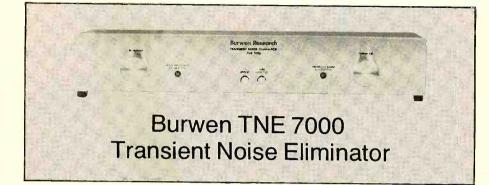
Hear this singularly musical, technically unsurpassed, and supremely uniform new pickup system at your high fidelity dealer's showroom, or write for the complete story. (Ask for AL 569):



Shure Brothers Inc., 222 Hartrey Avenue, Evanston, IL 60204 In Canada: A. C. Simmonds & Sons Limited Manufacturers of high fidelity components, microphones, sound systems and related circuitry. CIRCLE NO. 48 ON READER SERVICE CARD

Equipment Test Reports

By Hirsch-Houck Laboratories



SINCE the name Richard Burwen has been closely associated with audio-signal processing for many years, we were not too surprised a while ago to learn that there is now a Burwen Transient Noise Eliminator. The Model TNE 7000 from Burwen Research (now a part of KLH) is what is popularly known as a "tick and pop" suppressor, a device intended to remove those annoying transient disturbances from phonograph-record reproduction.

There have been a number of attempts to do this in recent years, and they have met with varying degrees of success. As with any noise-reducing device, the real problems are to distinguish the noise from the program and to remove it unobtrusively, so that the listener is never aware of the sonic surgery that has been performed.

Burwen's TNE 7000 has been designed to detect the differences between transient noises and high-frequency program transients, which is no mean feat since they share a number of similar properties and have broadly overlapping frequency spectra. But there are differences (which we will describe shortly) that make the distinction possible. Once the unwanted noise transient has been isolated, it must be removed from the program with minimum effect on the desired signal. Normally this is done by somehow blanking the sound for the duration of the noise impulse. It is then necessary to fill in the "hole" in the sound waveform with something that sounds as though it belongs there. It is possible to do this only because the turn-off interval is very short.

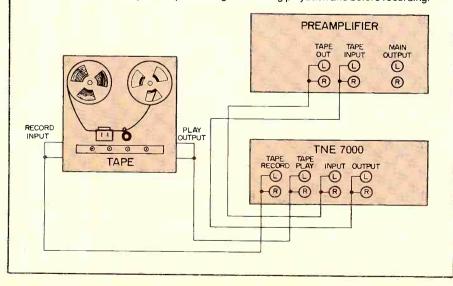
Time delay plays an important role in any transient suppressor. A sensing circuit requires some period, however small, to determine that a transient noise is present-by which time it is already past! Therefore, the program is passed through a separate channel in which it is delayed for a time equal to the decision time of the sensing system, which then has plenty of opportunity to blank out the offending portion. The preceding comments apply to every successful transient eliminator, although each of the several on the market uses a different circuit approach and makes different compromises (signal processing almost always involves some kind of compromise or trade-off).

In the case of the Burwen TNE 7000, it was decided that the noises to be removed would be those resulting from the marks and scratches that occur on a record in ordinary use, rather than gross defects. Burwen found that musical transients have a typical attack time of about 2 milliseconds, after which they gradually "decay" over a period ranging from a tenth of a second to several seconds. Noise transients, in contrast, are much faster and shorter, with an attack time of from 50 to 200 microseconds and a duration of no more than 2 milliseconds (2,000 microseconds), Because of its rapid rise, a noise transient has considerable energy content in the ultrasonic region (20,000 to 50,000 Hz), where there is little or no musical content

Working with these facts, Burwen developed an extremely fast "switch" to turn off

the program channel. It is controlled by a sensor that monitors the program energy from 30,000 Hz up (and cuts off sharply below that frequency to prevent its being triggered by high-frequency program harmonics). The sensor also monitors the difference between the two signal channels, since a physical scratch will not normally damage a groove in such a way as to produce equal-amplitude, in-phase outputs from both channels. The muting circuit turns off the sound for the duration of the transient, which is usually in the range of 80 to 600 microseconds. Because of its operating speed, the TNE 7000 is able to use a signal delay of only 40 microseconds, which Burwen claims is less than that of any other currently manufactured transient-noise suppressor.

The Burwen instruction pamphlet, in an effort to put the matter simply, states that a smoothly varying signal is substituted for the regular program during the "off" time to make the "hole" inaudible. Burwen also says that the TNE 7000 filter uses matched and trimmed components to achieve a precise, flat frequency response throughout the audio range. The TNE 7000 has two control knobs that are used to set the SENSITIVITY of the noise-sensing circuits (in accordance with the wide-band noise level of the program) and the THRESHOLD level at which suppression begins. Each control has a LED indicator to monitor its operation. The TNE 7000 is meant to be placed in the tape-monitoring loop of an amplifier or receiver; tape-recorder input and output jacks are duplicated in its rear. A front-panel pushbutton switch connects the tape recorder into the signal path (with the (Continued on page 51)



The TNE 7000 should be connected in the tape-monitor loop, with the tape machine plugged into it. This permits processing both during playback and before recording.

Presenting the JVC Ausiclovers.











JVC LX-3000 MusicTower with JVC components, as shown, from top to bottom, T-3030 Digital FM Stereo Tuner; P 3030 Control: Preamplifier, SEA-7070 10-Band S.E.A. Graphic Equalizer, KD-95 Stereo Cassette Deck, QL-10 Quartz-Locked Turntable, M-3030 DC Stereo Power Amplifier, SK-1000 3-Way Speaker Systems.



JVC MusicTowers give you total convenience and flexibility.

As you can see from the suggested JVC systems shown, your choice of components and MusicTowers depends on your own special requirements and budget. And regardless of which combination you select, one thing you can be certain of: all JVC components are designed to complement each other to produce the best possible sound reproduction.

So if you agree that a good music system should be heard—and seen—visit your JVC dealer. Select your JVC system from the most innovative collection of quality components we've ever offered. Then match it up with a JVC MusicTower. And you'll see how beautifully JVC lends a hand to component handlers. JVC LK-12 MusicTower (from top to bottom) JL-A20 Semi-Automatic Turntable; JR-S61W AM/FM Stereo Receiver: KD-25 Stereo Cassette Deck

JVC LX-2000 MusicTower (from top to bottom) JT-V77 AM/FM Stereo Tuner: JA-S77 DC Integrated Stereo Amplifier; QL-A7 Direct Drive Quartz Turntable with automatic lift; KD-85 Stereo Cassette Deck: SEA-50 Stereo Graphic Equalizer

JVC LK-1000 MusicTower (from top to bottom) QL-5 Direct Drive Quartz Turntable: JT-V22 AM/FM Stereo Tuner; JA-S55 DC Integrated Stereo Amplifier; KD-55 Stereo Cassette Deck; SEA-50 Stereo Graphic Equalizer, Protective glass door for components and record compartment.

JVC LK-44/MK-44 MusicTower (from top to bottom) QL-A2 Direct Drive Quartz Turntable with automatic return; JT-V22 AM/FM Stereo Tuner; JA-S22 DC Integrated Stereo Amplifier; KD-25 Stereo Cassette Deck; SEA-20G Stereo Graphic Equaizer; Glass panelled record compartment.

JVC LK-500 Horizontal MusicTower QL-5 Direct Drive Quartz Turntable; KD-S201 Stereo Cassette Deck; JR-S301 DC Integrated AM/FM Stereo Receiver. SK-700 3-Way Speaker Systems. Extra-wide record compartment.



JVC America Company, Division of US JVC Corp., 58/75 Queens Midtown Expressway, Maspeth, N.Y. 11378 (212) 476-8300 Canada: JVC Electronics of Canada, Ltd., Scarborough, Ont

© 1978 JVC America Company, Div. of US JVC Corp.



Because we think a good music system should be heard. And seen.

Take our LX-3000 MusicTower. This strikingly styled unit with gleaming walnut veneer sides, is designed for nineteen-inch rack-mounted components, and can house JVC's Professional Series. Each component represents the finest JVC offers. And the great thing is that it's easier than ever to make the proper interconnections after

ever to make the proper interconnections after each component slides securely into place. Then, because JVC believes distractions belong in the back, not the tront, all interconnecting wires vanish from sight within each of the two vertical supports. You can even move the whole works from

one listening area to another, the LX-3000 Music-Tower glides smoothly over any floor surface on heavy duty casters that lock into place. This JVC

> People who are into good music reproduction are proud of their high fidelity component system. They like to put it where everyone can see as well as hear it. And rightfully so, because visually, today's components are a tribute to the finest expression of contemporary design.

That's why JVU is introducing its series of

Music lowers. They're for people who like to display their

JVC component system in one place. Or any place, To meet just about any requirement for a JVC component system, our handsomely styled MusicTowers give you the opportunity to select the JVC components you want: anything from a basic system (receiver, turntable, cassette deck, speaktransient-noise suppression also acting on the signals going to the recording inputs). A second DEFEAT pushbutton bypasses the noisereduction circuits and converts the TNE 7000 to a unity-gain buffer amplifier with excellent noise and distortion properties but no transient-elimination capabilities.

The operating levels, noise, and distortion of the TNE 7000 are such that they cannot degrade the final sound quality. Although the primary purpose is to remove disc noises, it can be used with some success to process FM broadcasts and tape recordings. The user is reminded that pilot-carrier leakage in the tuner's audio outputs can disturb the operation of the sensing circuits. And, of course, CD-4 records cannot be processed by the Burwen unit, since their 30-kHz carrier frequency lies in the most sensitive part of its operating range. However, a phono cartridge with the CD-4 range of response is highly recommended, since it will provide the information required for most effective operation of the transient-noise sensor.

The Burwen TNE 7000 is a flat-format package approximately 1634 inches wide, 3 inches high, and 734 inches deep. It weighs 7 pounds. No power switch is included, since it is expected that the unit will be switched by the associated amplifier. It consumes only 8 watts from the power line and can be left on continuously if desired. Price: \$299.95.

• Comment. We made a number of measurements, but found them of little significance in respect to the audible performance of the TNE 7000. We therefore evaluated the unit entirely through use tests.

We were aware that dealer demonstrations of some other transient-noise suppressors are being made with records that have been deliberately scratched with a radial spoke pattern. The results of such a demonstration can be most impressive, and we have used the method ourselves in evaluating some earlier clicksuppressing devices. Somewhat to our surprise, the TNE 7000 did little to remove the effects of such gross record defects. We contacted Burwen and were informed that the TNE 7000 had been designed to remove common "real-world" record scratches, ticks, and pops rather than artificial "demonstration" blemishes.

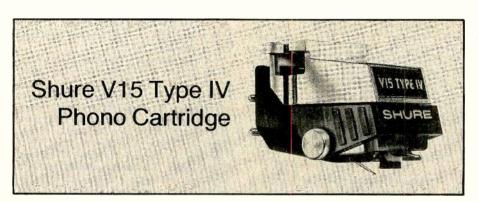
From that point onward, we began searching for the most tick-laden of our older records, and we found enough of them to give the TNE 7000 a good workout. We were pleased to find that it did its difficult job with almost total success. To use it, the SENSITIV-ITY knob is turned clockwise until the adjacent LED dims noticeably, indicating that the program noise threshold has been reached. Next, the THRESHOLD control is advanced until the clicks and pops are audibly reduced. Each time the suppressor operates, a red LED next to the THRESHOLD control flashes for 17 milliseconds (even if the actual suppression period is a small fraction of that duration). One soon learns to adjust the controls until the noises disappear (which, amazingly, they do) while the program quality is unaffected. An incorrect (excessive) setting of the suppressor circuit will produce an unmistakable harsh distortion (and the suppression light will be on full time). The simple solution is to back off a bit on the THRESHOLD knob setting. We found negligible dulling of the transients in guitar music or the sounds of flamenco dancers' shoes and castanets, even though they caused the LED to flash.

We were surprised at how well the TNE 7000 coped with occasional pops and crackles in FM programs. True, we were using a good tuner, with adequate pilot-carrier suppression, but we found that many of the transient noises in FM broadcasts originating on their records could be largely or even totally eliminated. The suppressor worked fairly well even on the occasional case of automobileignition interference we experienced.

We wondered what "weaknesses" the TNE 7000 might have other than its inability to eliminate the effects of knife or razor gouges on a record. After much listening, we found none. That does not mean that the TNE 7000 is perfect—just that we found no weaknesses in its performance in normal use. We would consider it highly effective against transient noises on any record that one might seriously wish to listen to (in other words, if a record has been deliberately gouged or trod upon, it is hardly a candidate for hi-fi reproduction). If it has any operating faults, they are more than outweighed by its "pluses."

Does this mean that the TNE 7000 belongs in everyone's hi-fi system, or even in every de luxe system? Not necessarily. What it really comes down to is whether it is worth \$300 to you to eliminate—in most cases *really* eliminate—ticks and pops from your records. If that is a problem that plagues you, the TNE 7000 is worth careful consideration.

Circle 105 on reader service card

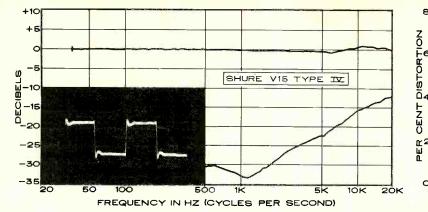


FOR about five years, the V15 Type III has headed the Shure phono-cartridge line. Since progress is inevitable, in cartridges as in all other things, the venerable Type III (which will still remain in the Shure line) has been edged out in the top spot by the company's new V15 Type IV.

Despite a distinct family resemblance between the two cartridges (and their common use of the moving-magnet principle), the V15 Type IV is an all-new unit, and its performance improvements over the Type III are by no means slight. The trackability data supplied by Shure show a moderate increase in trackability at both high and low frequencies (amounting to about 3 dB in the 5,000- to 10,000-Hz range) compared with the Type III, which was already one of the best tracking cartridges on the market. At the infrasonic frequencies, however, where warp excitation can cause tracking problems, the improvement offered by the Type IV is a dramatic 10 dB or more.

Much of the credit for this goes to a newly designed stylus assembly, lighter in effective mass than the former one, but with no sacrifice of rigidity or strength. A new stylus shape, which Shure calls "hyperelliptical," is claimed to reduce high-frequency tracing distortion by as much as 25 per cent as compared with the performance of conventional elliptical styli. It is Shure's version of the extendedline contact styli introduced by several manufacturers in the last year or so. The Type IV, however, is not intended specifically for use with CD-4 discs.

Although it often happens that a reduction in the stylus' effective mass results in a lower signal-output voltage from a cartridge, Shure has redesigned the magnetic system of the V15 Type IV for greater efficiency, so that its output voltage is, if anything, slightly higher than that of the Type III. They have also made a long-overdue change in the loading requirements for the cartridge. For years, Shure's top cartridges have given their flattest frequency response when terminated in a rather high capacitance of 400 to 500 picofarads (pF) instead of the usual 200 to 300 pF for which other cartridges are designed. As a result, because of the low-capacitance cables used in most record players since the introduction of CD-4 records, it has often been necessary to add external capacitance to the phono circuits when using a Shure cartridge to get the flattest possible frequency response. The V15 Type IV is designed to work into a capacitance of 200 to 300 pF in parallel with the usual 47,000 ohms, and even that load is not critical, so that it is compatible with virtually every record player and amplifier in current use. (Continued overleaf)



In the graph at left, the upper curve represents the smoothed, averaged frequency response of the cartridge's right and left channels; the distance (calibrated in decibels) between it and the lower curve represents the separation between the two channels. The inset oscilloscope photo shows the cartridge's response to a recorded 1,000-Hz square wave (see text), which indicates resonances and overall frequency response. At right is the cartridge's response to the intermodulation-distortion (IM) and 10.8-kHz tone-burst test bands of the TTR-102 and TTR-103 test records. These high velocities provide a severe test of a phono cartridge's performance. The intermodulation-distortion (IM) readings for any given cartridge can vary widely, depending on the particular IM test record used. The actual distortion figure measured is not as important as the maximum velocity the cartridge is able to track before a sudden and radical increase in distortion takes place. There are very few commercial phonograph discs that embody musical audio signals with recorded velocities much higher than about 15 cm/sec.

PEAK VELOCITY IN CM/SEC OF

SHURE VIS TYPE IV

Z

DISTORT

CENT

ob

Shure has been concerned for some time with the problems of tracking warped records, and the Shure cartridges have been designed to resonate in typical tone arms in the 8- to 10-Hz range, where the warp velocities are relatively low. To reduce the problem even further, they have now taken a rather novel and highly effective approach in the Type IV. The swing-away stylus guard, although it looks much like those found on other Shure replaceable stylus assemblies, is much more than it appears to be at first glance. It carries a small brush, about 1/4 inch wide, that rides on the record just ahead of the stylus. The brush is made of some 10,000 graphite fibers only 0.3 mil in diameter, so that about ten fibers span the width of a record groove. This permits the fibers to fit into the groove and remove dust from there as well as from the surface of the record. However, dust removal is not the primary purpose of the assembly.

The graphite fibe s are electrically conducting, and through the metal supporting bracket there is an electrical connection between the tip of each fiber and the ground terminal of the cartridge (and from there to the system ground). They are intended to drain off electrostatic charges from the record as it is being played, and they do this with considerable effectiveness. Several benefits accrue from reducing the electrostatic charge on the record surface. For one thing, the vertical tracking force will then be determined almost entirely by the arm adjustment instead of being significantly increased by electrostatic attraction between the cartridge and the record (which can be a genuine problem when the intended tracking force is a gram or less). Also, a lower charge makes the record less likely to attract dust, and it is therefore easier for the graphite fibers to remove any dust that may be present.

Probably the most important purpose of the brush assembly is its function as a damper (or "Dynamic Stabilizer," as Shure calls it): by introducing a mechanical resistance at the low-frequency arm/cartridge resonance, it reduces the amplitude of the resonance and improves the cartridge trackability at very low frequencies. This is accomplished by viscousdamped pivots which give the assembly some of the properties of the accessory dampers that are meant to be attached to the headshell of the tone arm. In the V15 Type IV, the integral damper can be designed for optimum performance with this specific cartridge.

The effect of the assembly on the normal arm-balancing procedure is compensated for by adding 0.5 gram to the stylus tracking force (intended to be effectively between 0.75 and 1.25 grams). Thus the arm force is set in the range of 1.25 to 1.75 grams. If one does not wish to use the damper (though it is hard to imagine why one would not want to), it locks in an upward position when fully lifted (in which case the force should be set 0.5 gram lower). And, as mentioned earlier, when the damper is swung down all the way it serves as a stylus guard.

In addition to the hyperelliptical stylus furnished with the V15 Type IV, two other styli are available. They are the VN4G, with a 0.6mil spherical stylus, and the VN478E elliptical (biradial) stylus, whose 0.5 mil x 2.5 mil dimensions make it possible to play 78-rpm records at forces between 0.75 and 1.25 grams. The price of the Shure V15 Type IV is \$150. Each purchaser of a Type IV receives a coupon redeemable for a free copy of Shure's new "Audio Obstacle Course-Era IV" (TTR-115) test record.

Laboratory Measurements. The Shure V15 Type IV was tested in the tone arm of a Dual 701 turntable. The cartridge was loaded with 240 pF in parallel with 47,000 ohms. For most tests, the total downward tracking force was set to 1.5 grams with the damper in use, equivalent to a stylus force of 1 gram, Certain tests were repeated with different tracking force and cartridge loads.

Our initial tracking tests showed that the V15 Type IV could play the highest levels on our low- and middle-frequency test records at stvlus forces between 0.5 and 0.75 gram. On the German Hi Fi Institute test record, the 70micron level of the 300-Hz test band could be played at 0.75 gram, 80 microns at 1 gram, and the maximum level of 100 microns was playable at the cartridge's rated maximum of 1.25 grams.

The outputs of the two channels matched within 0.5 dB, and the average output was 3.85 millivolts at a stylus velocity of 3.54 centimeters per second (cm/sec). The vertical stylus angle was 20 degrees, as rated.

TEST DISC

The frequency response, playing the CBS STR 100 record, was well within Shure's tight specification of ± 1 dB up to 8,000 Hz and ± 2 dB at 20,000 Hz. Our test sample, which gave the same response on both channels, measured flat within ±0.8 dB from 40 to 20,000 Hz. The stereo separation was about 30 dB or better in the mid-range, 17 dB at 10,000 Hz, and 8 to 15 dB at 20,000 Hz. A reduction in load capacitance to 150 pF made virtually no change in the frequency response, confirming the compatibility of the cartridge with any modern record player. An increase to 375 pF boosted the output about 1 dB between 6,000 and 12,000 Hz and dropped it slightly above 17,000 Hz. This change was not significant from a listening standpoint.

We were especially interested in the effect of the damper. With the damper lifted and not in use, the low-frequency resonance had a low-amplitude, "double-hump" shape characteristic of the Dual 701 tone arm, whose double-suspended counterweight is designed to distribute and reduce the effects of bass resonance. There was a peak of about 3 dB at 9 Hz and a broad rise of about 1 dB between 12 and 18 Hz. Then we repeated the measurement with the damper in use, changing the vertical force as required. This time there was absolutely no resonant rise. In fact, the output began to drop off gradually below 20 to 30 Hz, and it was down about 3 dB at 11 Hz and 5 dB at 7 Hz, a substantial improvement.

Since Shure has made high trackability and low distortion two of the major design goals in creating the Type IV, it was not too surprising to find that the distortion when playing the Shure TTR-102 IM test record was very low, measuring less than 1 per cent from 7 cm/sec to 25 cm/sec and only 2 per cent at the record's maximum of 27 cm/sec. For all we know, these may be the residual levels of distortion in the record; we have never measured lower. Similarly, the 10.8-kHz tone-burst distortion from the Shure TTR-103 record was as (Continued on page 54) The 1978 Toyota SR-5 Long Bed Sport Truck. Part sports car, part cart, because Toyota Sport Trucks are hot two-seaters with loads of luggage space. For driving fun, Toyota's way out ahead with the right combination of choice, performance, comfort, economy, and reliability.

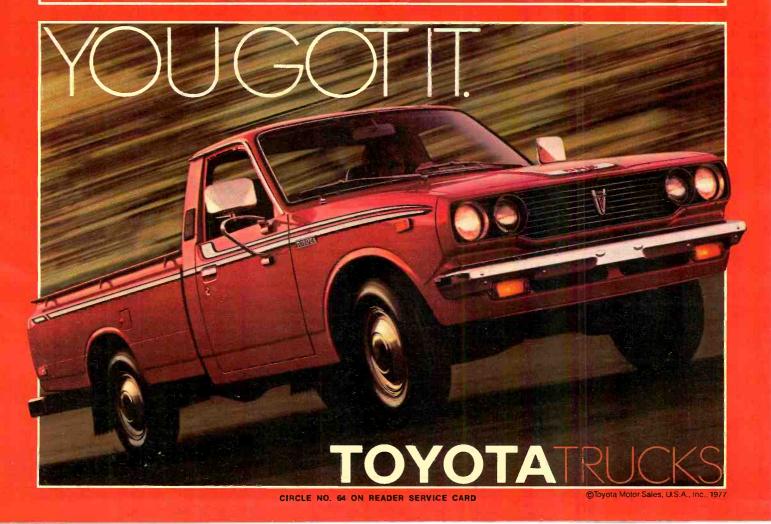
The Car Part. Accommodations for two. Hi-back bucket seats. Carpeting. AM-FM radio. Tinted glass. Floor console. Standard touches that point up some of the car quality inside an SR-5.



The Sports Part. The biggest standard engine in its class— 2.2 liters—with loads of torque. With the standard 5-speed overdrive transmission you get economy, too. In EPA tests the SR-5 was rated at 31 highway, 23 city. These EPA ratings are estimates. Your mileage will vary depending on your driving habits and your truck's condition and equipment. California EPA ratings will be lower.

The Cart Part. A bed over seven feet long that hauls up to an 1100 pound payload. That's a big trunk for whatever you want to cart around.

The Smart Part. A visit to a Toyota truck stop. The SR-5 Long Eled Sport Truck is one of six Toyota models—more than anyone else. Last, but not least, we say, "If you can find a better built truck than a Toyota...buy it."



low as we have seen—between 0.7 and 0.9 per cent from 15 to 30 cm/sec. All distortion measurements were made with a 1-gram stylus force.

Listening to the older Shure "Audio Obstacle Course-Era III" (TTR-110) record, we found that the Type IV played all levels on the record without a trace of strain at a 1-gram force. A few other cartridges we have used have done nearly as well, but always at a substantially higher tracking force. Evaluating performance with the new TTR-115 "Era IV" record was not easy, and we would prefer to wait until we have had a chance to use it with other cartridges before commenting in any detail on it. It does not appear to be as obvious as the TTR-110 in revealing mistracking, but that may simply mean that the Type IV does not mistrack on it!

We played some of our collection of warped records, with and without the damper

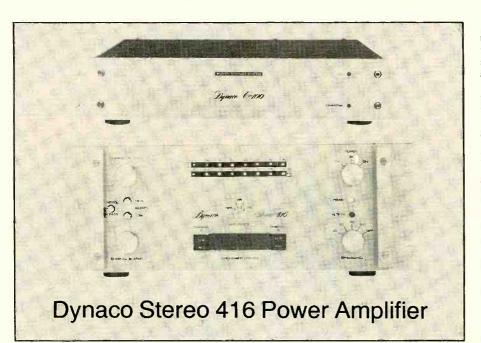
in use. The damper usually made it possible to play records that were otherwise unplayable except with very low-mass tone arms. There was no audible loss of bass with the damper in use, since its effects are confined to the frequencies below 20 Hz, but its effect on warp tracking was certainly dramatic.

• Comment. The sound of the V15 Type IV can be described in much the same way as that of a good amplifier; there is really no particular sound at all that can be attributed to the cartridge. It is, after all, essentially flat, with distortions that seem to be below those inherent in even the best test records, and with far greater tracking ability over the entire audio band than any other cartridge we know of. If such a cartridge were to have a sound of its own, it could only be as the result of a lack of the distortions present in the outputs of other cartridges. Frankly, we did not discern any essential difference in the sound of this cartridge compared with that of the V15 Type III or even the M95ED when each cartridge was properly loaded and operated within the limits of its tracking ability.

Aside from sound quality, the forte of the Type IV is its all-around tracking ability. When recorded groove modulation or one of the many kinds of warps imposes a severe task on the stylus system, this cartridge is almost certain to cope with it better than any other we have seen. The Type IV is able to play records that other cartridges cannot.

The price of \$150 is considerable for a phono cartridge, even in today's inflated economy, and the V15 Type IV is certainly not for everyone. For those who can afford it and can appreciate what it does for them and does not do to them, there is nothing else quite like it.

Circle 106 on reader service card



THE Dynaco Stereo 416 power amplifier resembles the earlier Stereo 400 in size and in many of its external features. However, it differs from the 400 in so many ways that it certainly deserves its status as a new product.

The Stereo 416 is a powerful amplifier, available either factory-wired or as a kit, rated to deliver at least 200 watts per channel to 8-ohm loads from 20 to 20,000 Hz with less than 0.25 per cent total harmonic distortion. It shares that particular specification with the Stereo 400, but beyond that point the differences become apparent. For example, the Stereo 416 carries FTC-type power ratings for operation with 4-ohm and 16-ohm loads (300 watts and 100 watts per channel, respectively) and can even be used safely with 2-ohm loads, into which its mid-range power rating (at clipping) is 450 watts per channel!

The Stereo 416 has one of the most exten-

sive protective systems we have seen on a home-entertainment power amplifier, and it has been designed to be as rugged and foolproof as possible. The amplifier's power supplies are protected by an a.c.-line circuit breaker and four d.c. fuses. Electronic voltampere limiting protects the output transistors (eight for each channel), and heat sensors mounted directly on two of the output transistors shut down the amplifier if their temperature rises to an unsafe value. The heat sink, which occupies the entire rear of the amplifier, has an area of over 1,000 square inches and is cooled by a fan that normally operates very quietly at a low speed. If the heat-sink temperature rises to 55 degrees C, the fan switches to a high-speed mode. And if, for any reason, the heat sink reaches 85 degrees C, the entire amplifier shuts down and a red front-panel HI TEMP light glows. When power is first applied, a relay delays connection of the speakers to eliminate any transient thumps. The same relay cuts off the output instantly if a significant d.c.-voltage component appears at the output.

Other protective features include individual fuses in each speaker output (located on the front panel) and the Dynaguard power-limiting circuit that was originally featured on the Stereo 400. This can be set to go into operation at nominal power outputs (into 8-ohm loads) of 20, 40, 80, or 120 watts, or it can be shut off entirely. It integrates the amplifier outputs (separately for each channel) so that brief transients are passed unmodified up to the full power capability of the amplifier. With signals of longer duration that exceed the threshold of the circuit, the output is smoothly limited to the selected value, with a response time roughly inversely proportional to the amount by which the uncontrolled signal exceeds the threshold. Lights on the panel of the amplifier glow when the Dynaguard circuit operates.

The power switch is a three-position rotary control, the "off" position is in the center, and rotation either to left or right turns the amplifier on. (The two "on" positions serve to reverse the polarity of the power-line connection to eliminate any possible hum from system ground loops.) Other front-panel controls of the Stereo 416 include individual level controls, low- and high-cut filters, and a switch that bypasses all signal controls as well as the Dynaguard. In line with current trends in amplifier design, the Stereo 416 uses LED indicators instead of meters to monitor its output-power levels. Two horizontal rows of LED's display the instantaneous output of each channel in 3-dB steps from rated power (0 dB = 200 watts into 8 ohms) down to -21 dB.The lights are also calibrated in percentages of rated power, but these turn out to be rather unwieldy values, such as 1.56 per cent for -18 dB, so that on the whole the decibel calibrations appear to be more useful. The LED's are virtually instantaneous in their action and respond to peak signal amplitudes (although (Continued on page 56)

WHY YOU SHOULD INVEST IN THE NEW FISHER LINEAR MOTOR TURNTABLE INSTEAD OF THE OLD KIND.

Direct drive used to be the "state of the art" in turntable technology. Not any more. Now there's the Fisher MT6225 linear motor turntable. 120 poles vs. 12 in the old kind.

Conventional direct drive motors use a rotor divided into a number of "poles" (like sections of a pie). The magnetic field coils rotate the platter by alternately pushing and pulling on these poles. Typically, 12 push/ pull cycles produce one revolution of the motor. Unfortunately, 12 poles produce a certain amount of flutter, vibration, and "cogging."

In the Fisher MT6225 we solved these problems by replacing the conventional armature with a ferrite band around the platter containing not the old 12. but 120 poles. So instead of 12 strong pulls per revolution, the platter receives 120 gentle tugs. The payoff in smoothness is obvious. Phasing out flutter

But we weren't through. We added a unique drive system with three separate field coils driven 120° out of phase, so their drive impulses overlap to produce constant, linear motion. With incredibly low wow & flutter (0.03%) and rumble (-70dB). Perfect, for all practical purposes. Your last turntable?

As revolutionary as the linear motor system is, it's also extremely simple and reliable. With only one moving part (the platter) and solid state electronic control, there simply isn't much to go wrong. So the MT6225 will perform as great on its 10,000th record as on the first.

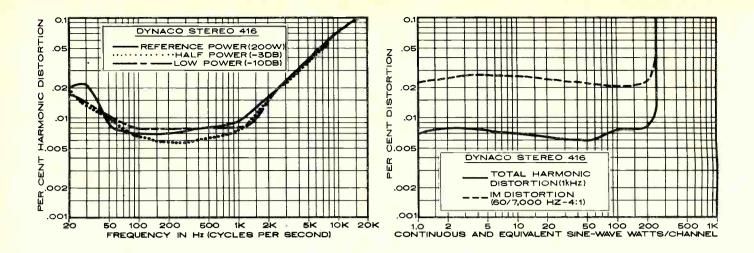
You can own this Fish∋r engineering masterpiece for only about \$200°, complete with superbly balanced tonearm base, and dust cover. Or get lin∋ar drive with a slightly different tonearm for just \$180° in pur MT6224. Either way, it's an investment you'll always be happy with even after you've played your 10,000th record.

Other Fisher turntables start at \$130*. Fisher components are available at selected audio dealers or the audio department of your favorite department store. For your nearest dealer, call tollfree 1-80C-528-6050, ext. 871 from anywhere in the U.S. (In Arizona, call toll-free 1-955-9710, ext. 871).

*Manufacturer's suggested retail value. Actual selling price is determined solely by the individual Fisher dealer.







they are calibrated in terms of continuous, or average, power output, which the manual erroneously refers to as "trms power"). A knob below the indicators increases their sensitivity by 6 or 12 dB or shuts them off entirely. In the most sensitive setting, the -21-dB light glows with an output of about 0.1 watt.

* * *

A unique accessory available for use with the Stereo 416 is the Dynaco C-100 Energy Storage System, (see heading illustration), a unit that needs a little explanation. One of the principal limitations on the low-frequency output of an amplifier is the energy available from its power supply. The full supply voltage, whatever it may be, is present in the absence of a signal and remains essentially unchanged for the duration of a short transient signal, even of high power. However, if heavy currents are drawn from the power supply, as happens during high-power continuous operation or during high-level low-frequency transients (especially when driving low-impedance loads), the voltage across the power-supply capacitors drops, usually faster than the power supply can recharge them. Thus the voltage under heavy drain can be appreciably lower than the noload voltage, which is why the continuous output of an amplifier is less than its shortterm transient output (this is the rationale for using amplifier dynamic "music-power" ratings). Economic and physical considerations usually make it impractical to design a highcurrent power supply with sufficient regulation to maintain constant voltage under varying load conditions.

One improvement that can be made is to use larger (higher capacitance) filter capacitors in the power supply. Since they can hold more energy, they maintain their voltage better under conditions of heavy current drain. The use of very high power-supply capacitance is one of the distinctions between expensive amplifiers and those selling at lower prices. Their inclusion inevitably exacts a cost in dollars, space, and weight.

Dynaco has taken a novel approach to the energy-storage problem by providing an outboard "energy storage system," the C-100. This is nothing more than a huge bank containing 100,000 μ F of capacitance, or 50,000 μ F for each power-supply polarity. (By contrast, the Stereo 416 itself has 10,000 μ F for each power-supply polarity.) The C-100 plugs into a socket on the side of the Stereo 416, which charges its capacitors slowly when the unit is turned on. After about one minute there is a click from a relay in the C-100, signifying that charging is complete, and a red CHARGE light on its panel is extinguished and replaced by an ON light.

The principal benefit to the user of the added energy-storage capacity is a higher clipping-power level for transient signals, especially at very low frequencies. There is also an increase in the continuous-power capability at lower frequencies, such as 20 Hz, especially when driving 4-ohm or 2-ohm loads.

The C-100 matches the panel width and appearance of the Stereo 416, and it can be placed on top of it in normal operation. This does not impede the cooling of the amplifier, and in fact the C-100 helps form a tunnel around the heat sinks, through which the cooling air is blown by the fan.

* * *

The Dynaco Stereo 416 and C-100 are designed to be mounted in standard 19-inch equipment racks. The front panel of the Stereo 416 is 7 inches high and 19 inches wide; the amplifier is 14 inches deep. It weighs about 53 pounds. The C-100 has a $3\frac{1}{2} \times 19$ inch front panel and is the same depth as the amplifier. Price of the Stereo 416: kit, \$649; wired, \$949. The C-100 is available only as a factory-wired unit and costs \$229.

• Laboratory Measurements. The amplifier tested for this report was constructed from a kit. However, a second unit, factory wired, was also tested and the two were found to be essentially identical in their performance.

The FTC-mandated preconditioning period which preceded all measurements gave the first clue that the Stereo 416 was no ordinary amplifier. Not only did it not overheat at any time during the one hour at one-third power and five minutes at full power, but its heat sinks never became more than moderately warm. In fact, the perforated metal grille over the power supply and low-level circuit boards was by far the warmest part of the amplifier's exterior (and it was completely comfortable to the touch). The cooling fan never switched into high-speed operation, either during the tests or in actual use.

With both channels driving 8-ohm loads at 1,000 Hz, the outputs clipped at about 260 watts per channel. The 4-ohm and 16-ohm clipping powers were 400 watts and 144 watts per channel. The harmonic distortion at 1,000

Hz was well under 0.01 per cent at all power outputs from 0.1 watt to more than 200 watts, and the intermodulation distortion was typically less than 0.03 per cent for outputs up to 200 watts or more. At the rated 200 watts output into 8 ohms, the distortion was well under 0.01 per cent from 50 to 1,000 Hz, rising smoothly at higher frequencies to about 0.1 per cent at 20,000 Hz. It also increased at low frequencies, to 0.02 per cent at 20 Hz, but this represents the residual distortion of our signal generator.

The distortion was essentially the same at half and one-tenth power as at full power. It is noteworthy that the distortion in the output of the Stereo 416 was almost pure second harmonic. There was virtually no third harmonic, and no higher-order harmonics. It is generally considered that low-order even harmonics, and especially the second harmonic, are the least offensive types of distortion.

An input of about 0.32 volt produced a reference output of 10 watts, and the wide-band hum and noise level was -81 dB referred to 10 watts (-94 dB referred to 200 watts). The amplifier rise time was 1.2 microseconds and the slew rate (rated at a rather low 8 volts per microsecond) was 18 volts per microsecond. The LOW and HIGH filters reduced the response by 3 dB at 42 and 14,700 Hz. Whereas most LED power indicators we have seen are so approximate as to have little more than cosmetic value, in the Stereo 416 the error of the LED calibrations at 1,000 Hz was usually well under 1 dB and reached a maximum of 2 dB only at the lowest level of -21 dB. The 6-dB and 12-dB attenuation switch settings were also very accurate.

On a steady-state basis, the Dynaguard circuit came into operation somewhat below the indicated power levels. At the 20-, 40-, 80-, and 120-watt settings of the Dynaguard switch, a continuous power output of about 15, 30, 70, or 105 watts caused the Dynaguard light to come on after a number of seconds of operation. But, as Dynaco points out, even the 20-watt setting will not affect the normal operation of the amplifier up to its full clipping output with most program material, which typically has high-level peaks of very brief duration. Consequently, it is recommended for maximum protection with most speaker systems.

• Comment. Our kit builder reports that construction of the Stereo 416 took 40 hours. (Continued on page 58)

THAT NEW BLACK MAGIC.



So it's got an expensive new look that separates it from every deck in its class. Nice. But is that reason enough to call it magic?

No.

But this is: generally speaking, over a auarter century of TEAC engineering is wrapped up in the A-103. Specifically speaking, the A-103 boasts an innovative design that replaces a maze of wires and circuit boards with a single circuit board. That's one reason.

When you press the Eject button, your cassette doesn't pop out at you like a deranged toaster. It's cushioned, and works slowly and smoothly for longer deck life. That's two reasons.

Built-in Dolby* circuitry, High Density Fermaflux head, frequencygenerated servocontrolled DC motor, separate level controls, wide dynamic range, and switchable bias/equalization. Reasons three through eight.

But how do we offer all these things (and more) in a deck that costs as little as the A-103?

That's the *real* magic!

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

OTEAC 1977

SFECIFICATIONS (conservatively rated)

Signal-to-Noise Ratio: 50=B (without Dolby) 55=B (with Dolby at IkHz)

Frequency Response: 30-14,000Hz (CrO2/FeCr) 30-1,000Hz (Normal)

Wow & Flutter: 0.10% (NAB Weighted)

TEAC

TAC Corporation of America • 7733 Telegraph Road • Montebella California 90640 • In Canada TEAC is distributed by White Electronic Development Corporation (1966) Ltd CIRCLE NO. 78 ON READER SERVICE CARD Construction was straightforward, with the most tedious operation being the mounting and wiring of the sixteen output transistors. The instructions were very clear. Maneuvering space was limited toward the end of assembly, but manageable nonetheless. The Stereo 416 is probably not a kit for the absolute novice, although the instructions are simple enough to be followed by someone with little experience (nothing is left to guesswork). Afterward, the instruction book/ operating manual serves as an excellent technical manual for the amplifier.

In use tests, we found the Dynaco Stereo 416 to be an absolutely first-rate amplifier. Not only was its sound at least the equal of that provided by any amplifier we have used, but it was totally free of the extraneous noises that can be annoying in a lower-power amplifier and positively hazardous to one's speakers (and the amplifier itself) in a high-power unit. The turn-on time delay keeps all transients from the speakers until the amplifier (and other system components) are fully stabilized. If any large d.c. component is present in the signal from another signal source, the relay instantly cuts off the outputs until the dangerous condition is removed. No matter how loudly one plays the system, the Dynaguard gives one peace of mind (and intact speakers!). Yet, even when the circuit operates, there is no sense of distortion or even of compressed dynamics (for a moderate overload; sustained overload is not recommended for this or any other protective device). The fan, which could be heard at close range in a quiet room, was completely inaudible in use, even with background-music levels.

In reviewing our test results with the Stereo 416, we were struck by how its "philosophy" differs from the current trends in amplifier design, and by how those differences have not in any way hampered its performance. At a time when slew rate and transient intermodulation considerations are occupying the attention of many amplifier designers, the Stereo 416 has what may be the slowest slew-rate specification of any amplifier in its power class. If this fact should disturb anyone, the amplifier has a built-in prevention for TIM (as opposed to a cure) in the form of the high-cut filter that slows down input transients to keep them well within the transient capabilities of the following power stages. Although it does not impair the amplifier's listening qualities, we never felt any need to use it (since the slew rates demanded by any program material at our disposal will not tax the Stereo 416 in the slightest). Another interesting aspect of the amplifier is that its high-frequency harmonic distortion is substantially higher than that of some amplifiers designed for very high slew rates. although 0.1 per cent at 20,000 Hz cannot be considered excessive by any rational person-and, being purely second-harmonic, it is about as innocuous as any nonlinear distortion can be.

The Dynaco Stereo 416 is far from cheap, either in kit or wired versions; nevertheless, it is one of the best "200-watt" amplifiers one can buy at any price, and almost certainly the one least likely to damage either itself or one's speakers if stressed or used carelessly.

Circle 107 on reader service card



COR many years, Wharfedale was a household word among audiophiles. In the formative years of the high-fidelity industry this British loudspeaker manufacturer was noted for neutral-sounding speakers relatively free of the deliberate frequency-response exaggerations and aberrations that characterized many of the hi-fi speakers of the time. Now, after some years' absence from this market, the Wharfedale parent organization (Rank Hi-Fi) has begun to import a new generation of Wharfedale speakers into the United States. The top-of-the-line speaker is the E-70, which was tested for this report.

The E-70 is a large, floor-standing system with an open-mesh grille that is virtually as transparent to light as it is to sound. The four

drivers and the port opening are framed in bright metal rings, giving a visual effect more reminiscent of some recent Japanese speakers than of the Wharfedale speakers of earlier years. The E-70 is a three-way unit, with a single 10-inch woofer in a ported enclosure described as a "maximally flat fourth-order Butterworth system" that is said to be responsible for high efficiency and flat bass response. The crossover to the mid-range drivers (a pair of 4-inch cone speakers) is at 800 Hz, and there is another crossover at 7,000 Hz to a horn-loaded compression tweeter. Two front-panel knobs adjust the mid-range and tweeter levels from a nominally flat response (at maximum) downward in five steps of 1 dB each.

The Wharfedale E-70 is an 8-ohm system rated for use with amplifiers delivering up to 100 watts output. The "E" apparently stands for efficiency, one of the principal design aims for the system. It is rated to deliver a sound-pressure level (SPL) of 94 dB at 1 meter when driven by 1 watt, yet its rated frequency response is 50 to 18,000 Hz ±3 dB. Obviously, this speaker would appear to require much less amplifier power than the usual acoustic-suspension design (or even most ported enclosures) for a given sound output. The veneered wooden cabinet is handsomely finished in oiled walnut, and matching grains are used on speakers bought in pairs. The enclosure is 32 inches high, 131/2 inches wide, and 14 inches deep. Weight is about 70, pounds. Price: \$475.

• Laboratory Measurements. With both level controls set to maximum, the smoothed semireverberant frequency-response curve was flat within $\pm 2 \text{ dB}$ over most of the range covered by the mid-range and high-frequency speakers. A slight rise above 10,000 Hz was the most significant departure from flatness. The bass response was measured separately at the woofer cone and the port, using close mike spacing, and the two curves were combined to generate a total bass-output curve. This proved to be exceptionally flat, with none of the bass rise in the 70- to 100-Hz range that mars the sound of so many speakers. Combining the bass and mid/high-frequency curves, we obtained a composite frequency response that was flat within ± 2.5 dB from 35 to 10,000 Hz, and nearly within ±3.5 dB from 35 to 15,000 Hz.

The mid-range control (which is actually marked LOW) affected the response between 120 and 1,500 Hz, with a maximum cut in output of about 5 dB. The high-frequency control had a range of 5 dB also, affecting frequencies above 1,500 Hz. The flattest overall response (Continued on page 60)

Technics introduces three ways to achieve the one ideal: Waveform fidelity.



To achieve waveform fidelity is an achievement in itself. But how Technics audio engineers accomplished it is an even greater achievement.

Like the unprecedented use of two automatically switchable IF bands in the ST-9030 FM tuner. A narrow band for extra-sharp selectivity. And a wide band for extra-high S/N and extra-low distortion. But just as incredible is a pilot-cancel circuit which Technics invented for optimum high-end response. Even the basic tuning function in the ST-9030 is unique. Like an 8-ganged tuning capacitor for outstanding reception.

The engineering in the SU-9070 DC pre-amp is similarly unique. There's a built-in moving coil pre-amp with -157 dBV noise voltage. A moving magnet pre-amp with an extremely high S/N of 100 dB (10 mV input). Direct-coupled circuitry to keep distortion at a minimum of 0.003% (rated THD). What's more, the SU-9070 has inputs for three tape decks.

Finally there's Technics SE-9060 amp. It's DC like our pre-amp. Has a frequency response of 0-100 kHz. (+0, -1 dB). And a "strapped" circuit for more than double the power in a multi-amp system. Compare specifications and prices. And you'll realize there's no comparison for Technics waveform fidelity.

ST-9030. THD (stereo, 1 kHz): Wide—0.08%. Narraw—0.3%. S/N (stereo): **73** dB. FREQUENCY RESPONSE: 20 Hz—18 kHz + 0.1, -0.5 dB. SELECTIVITY: Narraw—90 dB. CAPTURE RATIC: Wide—0.8 dB. IF, IMAGE and SPURIOUS RESPONSE REJECTIONS (98 MHz): 135 dB. STEREO SEPARATION (1 kHz): Wide—50 dB.

SU-9070. PHONO MAX. INFUT VOLTAGE (1 kHz RMS): MM -380 mV. MC -9 mV. S/N (IHF A): MM -100dB (10 mV input). MC -72 dB (50μ V). FREQUENCY RESPONSE: Phono 20 Hz -20 kHz (RIAA ± 0.2 dB).

SE-9060. POWER OUTPUT: =0 watts per channel (stereo), 180 watts (mono) min. RMS into 8 ohms from 20 Hz to 20 kHz with no more than 0.02% total harmonic distortion. S/N: 120 dB (IHF A).

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



was obtained when both controls were set to maximum.

Our live-room measurement gave a slightly higher efficiency reading than Wharfedale's already exceptional anechoic rating, and the 98-dB SPL we measured in front of the E-70 (it was being driven by 1 watt of random noise in the 1,000-Hz octave) represents the highest speaker efficiency we have measured to date.

The bass harmonic distortion at a 1-watt input was between 1 and 2 per cent from 100 Hz down to 36 Hz, rising to 7 per cent at 30 Hz. It must be remembered that the SPL developed by this speaker with a 1-watt input is greater than that of an acoustic-suspension speaker driven by 10 watts. We also measured the distortion with a constant-output SPL of 90 dB at 1 meter. The curve was similar in shape to that obtained at 1 watt, but higher in level. It was about 2 to 3.5 per cent down to 40 Hz and 8 per cent at 35 Hz.

The impedance of the E-70 was a minimum of 6 ohms in the 150- to 200-Hz range. Typically it was 8 to 10 ohms at most audio frequencies, rising to 25 ohms at the upper bass resonance of 70 Hz and to 35 ohms at the other bass resonance of 25 Hz. The tone-burst response of the system showed no significant signs of resonances or spurious outputs and was consistent with the flat, smooth measured frequency response.

The simulated live-vs.-recorded listening test confirmed the impression we had formed from general listening to the E-70. It produced a somewhat sharp and crisp sound, apparently a result of the strong high-frequency output above 10,000 Hz. The overall sound balance was good, and there were no obvious low-frequency or mid-range colorations. Nevertheless, the E-70 had a tendency to sound a little "hotter" than most speakers when reproducing programs having considerable energy in the highest audible octave.

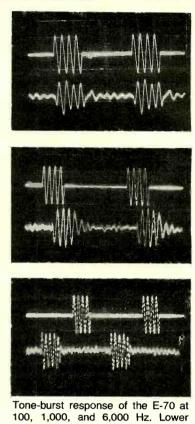
To our surprise, reducing the setting of the system's high-frequency level control did not change the essential character of the sound. In fact, we usually preferred to leave both controls at their highest settings. This can be explained (we think) by the fact that the overall frequency response of the speaker is exceptionally flat with both controls at maximum, except for the rise above 10,000 Hz. The HIGH control introduces a downward slope in the response that negates much of the benefit of its inherently flat character. Perhaps an octave equalizer or a tone control capable of modifying the response only above 10,000 Hz would make a worthwhile improvement. We didn't try to equalize the speaker, preferring its sound "as is."

● Comment. We would have to agree that, in the E-70, the Wharfedale engineers have achieved their goal of very flat, wide-range, low-distortion performance in a speaker having unusually high efficiency. Certainly the efficiency is at least as high as that of any nonhorn-loaded system for home use that we have used. Although we drove the E-70 from high-power amplifiers (200 watts per channel or more) much of the time, we also obtained excellent results with a car-radio amplifier delivering about 2 watts per channel!

The low-frequency response of this speaker, no matter what technical terms are used to describe its design principle, is as nearly flat as any we have seen. In fact, its overall measured frequency response and excellent high-frequency dispersion make this system one of the more outstanding ones we have seen in terms of meeting its design goals and specifications.

Our listening (and test) room is relatively well damped—not a "dead" room by any means, but far from "live" or bright-sounding. Speakers whose high-frequency output is at all lacking tend to sound dull and lifeless in such an environment. The Wharfedale E-70, on the other hand, is very close to ideal for our listening conditions. The sharp, almost analytical quality imparted by the high-frequency emphasis can be heard, but we did not find it unnatural or objectionable in any way.

The quality of the cabinet's walnut finish also deserves mention. It doesn't help the sound, but the manner in which the grains are



100, 1,000, and 6,000 Hz. Lower trace is the speaker output. Measurements were in a reverberant room.

matched shows the care that went into the manufacture of the E-70 and explains some of its rather high price. The sound quality explains the rest!

Circle 108 on reader service card



THE Teac A-103 is a moderately priced front-loading cassette deck with the darkgray and black appearance currently popular in audio-component styling. The tape transport, which occupies most of the left side of the unit, uses a single d.c. servo-controlled motor. The cassette itself loads into a slot in the door.

Almost the entire cassette can be viewed through a large, clear window in the door, and an orange backlight behind the cassette makes it easy to see how much tape is on each of its hubs. The control keys can be operated in any sequence without going through strop (except for the REC and EJECT functions). The cassette compartment is flanked by the pushbutton power switch on the left and the index counter on the right. Below the counter are two MIC jacks for medium-impedance (600 ohms or higher) microphones.

The right half of the panel carries a func-(Continued on page 62)

MPORTED CANADIAN WHISKY ND BOTTLED ISPY IS SX YEARS OLD E SONS, LIMITED ^{BOTTLED} IN CANADA Stagram's V.O. Eed M. Douglas It'll serve Dad right.

The personalized V.O. Server holds the 1.75 liter*of V.O. and lets him pour elegantly. To order for Father's Day or any special day, send \$11.99 (plus \$2.00 for handling) along with your name and address and the name you want engraved (up to 20 letters) to: V.O. Server, Dept. ST, P.O. Box 5062, Smithtown, N.Y. 11787.





Bottled in Canada. Preferred throughout the world.

MADIAN WHISKY. A BLEND OF GANAOA S FINES I WHISKIES, O FEARS OLD. 50.8 PROOF, SEAGRAM DISTILLER'S GU., N.T.C. 1.19 LITER'S (39.2 FL. UL.) Add local and state sales tax where applicable. Offer good except where prohibited or restricted by law. Allow 6 weeks for delivery. Offer may be withdrawn without notice. tional group of recording and playback controls and indicators. At the top are two large, well-illuminated level meters whose green-lit markings are clearly visible from a considerable distance. To their right are rectangular indicator lights (red and orange) that show when the record function or the Dolby system have been activated.

Below the meters are four bar-shaped pushbuttons. One selects either the line or the MIC/ DIN inputs (the two cannot be mixed). To its right are the separate BIAS and EQ switches, each marked for CrO_2 and "normal" tapes. The fourth button turns on the Dolby system. Below them are the two recording-level control knobs, and concentric with each is a clear plastic ring with a red index line that can be set to mark a preset recording-level adjustment. The headphone jack (for 8-ohm phones) is at the lower right of the panel. In the rear of the recorder are the line inputs and outputs and a DIN connector.

The specifications of the A-103 are not markedly different from those of many similar machines. The frequency response with a chromium-dioxide tape is stated to be 30 to 16,000 Hz, with no tolerance given. The signal-to-noise ratio (S/N) is rated at 55 dB without Dolby, and wow and flutter is rated at 0.1 per cent in a NAB-weighted measurement. The Teac A-103 is about 16 inches wide, 6¹/₄ inches high, and 11¹/₄ inches deep. It weighs 15.4 pounds. Approximate nationally advertised value: \$250.

• Laboratory Measurements. No specific recommendations are made for tapes compatible with the machine's adjustments. The instructions consist of a single folded sheet, but they are nevertheless adequate in most respects, listing many popular tapes and the corresponding settings for the bias and equalization switches. Lacking further information, we made frequency-response measurements with a number of presumably suitable tapes. With NORMAL bias and equalization, very similar results were obtained with Maxell UD-XL I, Scotch Dynarange, Memorex MRX₂, and BASF Professional I. The Maxell was used for our subsequent measurements with NORMAL tape settings, and most of the tests were also made with Dynarange, since it was very nearly like the UD-XL I. We also tried TDK AD and Scotch Master I, but the machine was evidently underbiased for them and the high-end response rose (though not so much as to make their use impractical).

With the CrO₂ control settings, the Scotch

Master II was the flattest by a small margin, although TDK SA and Maxell UD-XL II were almost identical to it. BASF Professional II, a true chrome tape, had a strongly rising highend response.

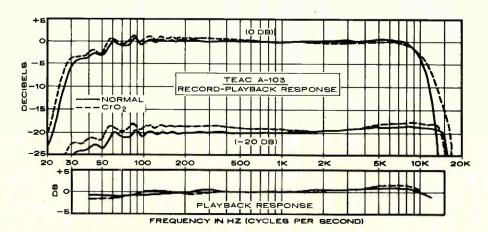
The overall record-playback response at a -20-dB level was practically the same with any of the tapes we used. In general, the variation was about ± 2 dB from about 40 to 15,000 Hz, with the usual low-frequency ripples in the response curve beginning at about 200 Hz. The frequency response at a 0-dB recording level revealed some interesting facts about the recorder as well as the tapes. With the "normal" tapes, the 0-dB curve intersected the -20 dB curve at about 13,000 to 14,000 Hz (in contrast to the 10,000 or 11,000 Hz observed on many low-price cassette decks). This indicates relatively good high-frequency tape-saturation characteristics and, by inference, a relatively efficient head design. With the chrome-type tapes, whose high-frequency performance is inherently better than that of a standard ferric tape, the two curves never intersected, the 0-dB curve remaining well above the -20-dB curve at all times. The rapidity with which the high-frequency response drops above 15,000 Hz suggests that the recorder has a built-in low-pass filter to remove any 19-kHz pilot carrier from a stereo FM program that is being taped.

The playback frequency response was measured with a TDK AC-337 test tape for NOR-MAL (120 μ sec) equalization. It was flat within ± 1 dB over the 40- to 12,500-Hz range of the tape. The CrO₂ (70 μ sec) response was measured with a Teac 116SP test tape, and it measured flat within ± 1.5 dB over the 40- to 10,000-Hz range of the tape.

The tracking of the Dolby system was checked at recording levels of -20 and -30 dB. There was less than 1 dB of change in the frequency response with the Dolby system in or out of the circuit at any frequency, indicating very close matching of the Dolby recording and playback frequency-response curves. This would not have been possible without the recorders' very flat response.

A line input of 55 millivolts (mV) or a MIC input of 0.215 mV was sufficient for a 0-dB recording level. The MIC input overloaded at 30 mV, which suggests the need for caution when making live recordings unless a microphone with very low output (or an attenuator) is used. The playback output (which is at a fixed level) from a 0-dB recording was 325 mV with "normal" tape and 290 mV with CrO₂.

The playback distortion (third harmonic)



0.8 per cent with Dynarange tape, 0.5 per cent with UD-XL I, and 1.8 per cent with Master II. The reference-distortion level of 3 per cent was reached with recording inputs of +6, +7, and +3 dB, respectively. The unweighted signal-to-noise ratio (S/N) referred to those recording levels was 50 dB with Dynarange, 52.7 dB with UD-XL I, and 48.5 dB with Master II. With CCIR/ARM weighting these readings improved to about 54, 54, and 55 dB, respectively. Finally, with the Dolby system in use, the weighted S/N was 64 dB with each of the tapes. The noise increased by 10 dB through the MIC input at maximum gain and proportionately less at lower settings.

from a 0-dB recording at 1,000 Hz was about

The combined wow and flutter, measured with a TDK AC-342 test tape, was 0.05 per cent with NAB weighting (average reading), and the same with a JIS reading (rms). A CCIR- or DIN-weighted peak-flutter measurement read ± 0.1 per cent, as did an unweighted average measurement (0.1 per cent). The tape speed was about 1 per cent fast.

The meter carried a Dolby-level calibration at its +3-dB marking, which supposedly corresponds to the standard (200 nW/m) Dolby level. However, playing a Dolby-level tape (TDK AC-337) gave meter readings of +5 dB. Since the Dolby system seemed to work with unusual effectiveness, we assume that the error was in the meter calibration and not in the actual adjustment of the Dolby circuits. The meters came very close to meeting true VU meter ballistic specifications (a rarity in home recorders), with a 5 per cent overshoot on 0.3second tone bursts of 1,000 Hz. In fast forward and rewind, a C-60 cassette was moved from end to end in about 80 seconds. The 1,000-Hz crosstalk between channels was -54 dB, as measured with a TDK AC-352 tape. Headphone volume with 200-ohm phones was on the low side.

• Comment. Reviewing the test data and comparing it with what we have measured on a number of other cassette decks, it becomes clear that the Teac A-103 performs well above expectations for a machine of its price. The ultimate test must be in the listening, and here the A-103 acquitted itself beautifully. When we recorded interstation FM tuner hiss and compared the playback to the original (at a -10-dB level) the fidelity of the recording was virtually perfect. Needless to say, recording music off the air resulted in a playback that was indistinguishable from the original. The same applies to playing high-quality recorded cassettes such as the Advent CR/70 series. They sounded every bit as good as on machines costing two or three times the price of the A-103.

• Evaluating the Teac A-103 left us once more with that feeling of satisfaction that comes from finding a product that not only lives up to its promise, but exceeds it handily. About all that is missing is "memory rewind," provision for ferrichrome tape, input source mixing, and a playback-level control. The last is the only one we really missed. It all goes to show that while you can't have *everything* for a bargain price, you certainly can come close to it in the Teac A-103.

This is without doubt a *very* good cassette recorder, one that sounds as good as it measures and handles with complete freedom from "bugs."

Circle 109 on reader service card

HITACHI The New Leader In Audio Technology

104

106

1600

1

.

MODE

LOUDNESS

108

CLASS G

 \bigcirc

HITACHI AM-FM STEREO RECEIVER BR-BOA

BASS

- TONE CONTROL -

...introduces the world's most powerful 50 watt receiver.

700

1

98

11144

111

The new Hitachi SR 804 stereo receiver has the revolutionary Class G amp that instantly doubles its rated power from 50 to 100 watts to prevent clipping distortion during those demanding musical peaks (note the clipped and unclipped waves in the symbolic graph above). The SR 804 is conservatively rated at 50 watts RMS, 20-20,000 Hz into 8 ohms with only 0.1% THD.

Class G is just one example of Hitachi's leadership in audio technology. Power MOS/FET amplifiers, RGP 3-head system cassette decks, Uni-torque turntable motors, and gathered-edge metal cone speakers are just some of the others. There's a lot more. Ask your Hitachi dealer.



it shows.

Audio Component Division, Hitachi Sales Corp. of America, 401 West Artesia Boulevard, Compton, CA 90220. (213) 537-8383

Going on RecordBy James
GoodfriendImage: State of the state of the

STAR TREK

S OME time last year, American scientists sent off to some distant, unnamed star a spaceship—a transmigrant time capsule, as it were—that contained a recorded sampling of the musics of various parts of this earth. Its stated purpose was to define us earthlings, musically as well as (through other contents of the ship) every other way, to any extraterrestrial being with the intelligence and the curiosity to flag the ship down.

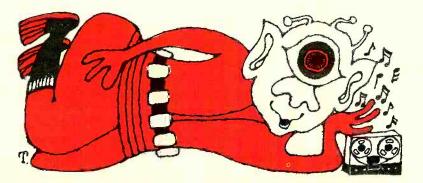
I don't want to argue here about the musical selections, or who made or authorized them, or any of those things. But it is true that this little space conceit did inspire comments (acerbic, mostly) from various sources, and one of the best, I think, came from a reader of STEREO REVIEW, who wrote to inquire how anybody could expect extraterrestrials to understand music when it was perfectly obvious from our "Letters" column that a great many of our readers had trouble doing so.

I find that an unanswerable comment, so I won't even try. But it does bring up the matter of basic musical communication, and that's a subject worth tossing around a bit. Music as an international language? Music as an intergalactic language? Well, let's pursue it.

I suppose the first thing any extraterrestrial would have to understand about the music on that tape (or any other music) is that it isn't a weapon or a language conveying factual information, but an art. That is to say, it is purposeful rather than random, but it has no function other than that of existing. Art, of course, is a sensuous thing, and we have art forms, or near-art forms, aimed at each of our five senses. Allowing that the extraterrestrial has familiarity with any art form at all, even one directed toward a sense unknown on this planet, one based on auditory experience, such as music, could not, at least as a concept, present much difficulty.

But suppose our star man knew no such thing. He would have to uncover the nature of what it was he was hearing, and he would have to do that by first convincing himself of the purposiveness of the sounds. Pure circumstantial evidence might suffice: the sounds were placed on the tape by artificial, electromagnetic means; the tape and tape player are obviously manufactured products; the whole system was patently designed to produce those sounds, almost infinitely repeatable, rather than any other sounds. That's no accidental thing.

NCE sold on that line, he would have to be convinced that the sounds were not functional, a much more difficult proposition, for it is one that many adult humans do not grasp. But what function could they have? As weapons? Hardly, for what were they meant to attack and what to protect? As language? Much harder to deny, but how does one draw a basic vocabulary from statements so different from one another as Chinese flute song, Beethoven quartets, North Indian music, and jazz? As manipulators of mood? Still harder, but the logic inherent in at least some of the music must lead to the conjecture that something besides mere mood is involved. Let the extraterrestrial continue to reason and to experiment. If he finds a common function other than that of entertainment for all the musics of this world, he will have accomplished the impossible.



But "entertainment"... what about that as a function? I for one disqualify it, principally because it is not inherent in the music but is, in the splendid phrase of jazzman Dewey Redman (or whoever titles his albums) in "the ear of the behearer." The Mozart Requiem may entertain you or it may not, but it has all its intrinsic artistic worth regardless. (Philosophers, note: I am not much of a relativist.)

Assume now that our extraterrestrial has reached what seems to me to be the inevitable conclusion. He has these things, these sounds, but they don't do anything apart from sounding, and there seems to be nothing he can do with them apart from listening to them. But in the listening (and he has heard them over and over in an attempt to figure out a purpose) certain things have happened. He is, we must assume, a being with a memory, and certain of the sounds have impressed themselves on his memory so that he can reproduce passages mentally without recourse to the tape. Intrinsic interest they may not have for him, but their very familiarity is a comfortable, perhaps even a pleasurable thing. Point one of nonverbal communication: creatures (human and extraterrestrial) who sing the same song can sing together.

Other things may happen. If our star man is in any way a creature of emotion, he must have noticed that certain musics, and certain passages of music, affect him differently. Without in any way trying to match up these exotic emotional affects with human ones, we can see that he might find a certain pleasure in one or the other of them, in the transition from one to another, or simply in the differences—and therefore the relationships between them. Point two of nonverbal communication: those who react to the same differences may have some kind of basis for mutual understanding.

Finally, if the extraterrestrial has any knowledge of logic (logic is a human invention, and it need not be descriptive of the truth at all times and places), he would have to be intrigued by the logical organization of some of the music he hears. There is intellectual meat, as well as emotional, in Beethoven, in jazz, in Indian ragas, in much other music. Point three of nonverbal communication: beings who understand the same logic can understand each other.

HE extraterrestrial has no knowledge of the historical and geographical background of the music, nor of any referential aspects a piece might have. He must accept it purely as an abstract audible art. And yet, he can draw from it many of the things we humans draw from it, even if his relationship to it is similar to our relationship with the songs of the great whales. Therefore, it doesn't really matter what music was sent out on that spaceship, so long as there was sufficient variety in it to represent the riches of music as we know it in this world. And we need not worry how "advanced" the extraterrestrial is. From our own experience with "primitive" art, we know that the relative organizational simplicity of the society that made it in no way abrogates its artistic qualities. Of course, for any of the foregoing to be true, the extraterrestrial must have ears, or all is lost. But that is the risk we take. God knows there are human beings without them, which may explain some of what sometimes goes on in the "Letters" column.



KOOL

Filter Kings KOOL

Super



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

Kings, 17 mg. "tar", 1 .3 mg. nicotine, Longs, 18 mg. "tar", 1.3 mg. nicotine av. per cigarette, FTC Report Aug. '77 There's music in the air everywhere. Imagine having it all at your fingertips.



Imagine encountering a stereo receiver light-years ahead in styling, operation and performance.

You've never seen anything quite like it before its timeless elegance immediately commands your attention.

You extend your hand. An effortless touch brings the entire system to life. There are no buttons to push, levers to flip, nor knobs to turn. The receiver, instead, responds to your every command at the briefest touch of its fingertip sensors.

Its awesome performance, finally, leads you to conclude that it is the product of an infinitely advanced intelligence.

You'd be surprised, then, to learn that the 730 Receiver is available on earth at a Nakamichi dealer. You owe it to yourself to see, hear and, most importantly, touch the Nakamichi 730... *especially* if you are totally satisfied with your present stereo system.

Write for more information: 220 Westbury Avenue, Carle Place, New York 11514.



Nakamichi Products of unusual creativity and competence...

The Pop Beat

By Paulette Weiss



WHAT'S A NICE GIRL LIKE YOU . . .

SUZY WILLIAMS is no lady. When she's on stage, her red slip, net stockings, and carelessly draped shawl tell you that even before her raunchy voice and no-holds-barred shimmy do. And when that body gets to shakin' and that voice gets to moanin', the sweet Olivia Newton-John type girl next door just won't fill the bill any more. Suzy has a dryice-in-water intensity, seething and bubbling her way through a hot tune. Yet she can also evoke real pathos with something like partner Norman Zamcheck's bluesy, bittersweet Stay Awake Awhile.

As half of the team of Stormin' Norman and Suzy, she has flaunted her shady-lady attire and big, bold voice before a growing audience of happy fans in a series of low-down joints since 1973. Like the voices of other female singers who project sexual bravado, independence, and worldliness, Suzy's has an undercurrent of vulnerability only partly concealed by the sassy delivery, and when it wells up it makes her blues all the bluer. It's a quality that puts her in the best of "bad" company, among the likes of Bessie Smith, Janis Joplin, and Bette Midler. Although Bessie reigned as empress of the blues 'way back in the Twenties and Thirties, her influence can still be traced in young performers like Suzy. whose expressive delivery often recalls her predecessor's soulful style. Janis Joplin, too, laid proud claim to that ancestry, advertising it by carrying Bessie's records everywhere she went. The Divine Miss M has no direct tie to Bessic's brand of blues, but that same attractive vulnerability cloaked in bravado is hers as well, updated for the Seventies with a tough theatricality and self-mocking humor.

Somewhere in between the old and the new, touching both blues and rock, not so raw as Bessie nor so polished as Bette, and seasoned with a little Judy Garland and Janis Joplin. Suzy Williams' own somewhat less than demure musical personality developed. One way to describe it would be to say that it steals into a stranger's heart by jumping into his lap, planting a wet one on his lips, and letting it play from there. But what wows 'em under the spotlights may not wow 'em in the grooves, and when the duo's "Oceans of Love" (Polvdor PD-1-6116) was released in February I teared that their spontaneity would suffer in studio surroundings. It has, but that's only one small ripple of disappointment in an otherwise smooth sea of satisfaction: "Oceans" is, quite simply, one hell of an album.

Although some of the unbuttoned affability of the pair's live performances has been sacrificed, Suzy keeps things airborne. At times she sounds almost spookily like the preburn-out Joplin, and their mutual debt to ghosts of the past becomes quite apparent (if you miss Janis, as I do, prepare for some misty-eyed moments). Norman Zamcheck wrote all nine selections on "Oceans" (You Keep Me Cryin' with the aid of Suzy), and he plays a fine piano-barrelhouse, boogie-woogie, and ragtime, all with gusto. He even contributes a few yeomanly vocals. Although as musical director he is the mainstay of this album, the focus is on Suzy as she belts her way through his material, making some of it seem perhaps stronger than it is-but that's what good performers do.

The ballads are the best of the lot: When the Darkness Comes, with its piano-rag introduction and Suzy's bluesy vocal over an arrangement that manages to be both sultry and bouncy; Stay Awake Awhile, a bit of sweet four-in-the-morning melancholia; and Memories of Georgia, with its lovely pedal-steel lacework. The album contains some good melodies in imaginative arrangements, plus a delightful friskiness in the uptempo songs, a friskiness mirrored in the jacket photos, which have caught Suzy cavorting, in customary slip, red feather boa, and leopard-skin and gold-lamé shoes, in an appealingly unladylike manner.

DURVIVING the transition from live performance to studio recording is a challenge performers tackle with varying degrees of success. In this case the record is fine, but the extra spark that Stormin' Norman and Suzy generate on stage is on another power level entirely, one quite high enough to make the many inconveniences of club-crawling more than worthwhile. Such is not always the case, of course, so when a live performance entails nothing extra in the way of on-stage spectacle, and the rest translates well to the recording medium, I'd rather tuck in at home in front of my stereo system.

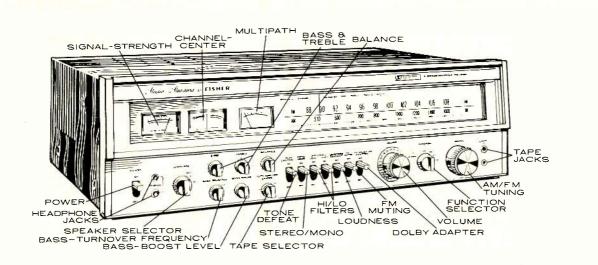
Recently. I've had a series of unpleasant experiences in clubs, discouraging enough to keep even an avid fan at home. Case in point: the rarity of Bette Midler's club appearances made her January visit to New York's Copacabana the hottest ticket in town despite its twenty-dollar price tag and additional minimum. But even as a nonpaying member of the press. I was put off by the bacon-strip seating (long tables and folding chairs in a proximitude that would make a sardine wince), rude service, and blocked sight lines. Bette was terrific, but then she's also marvelous on disc, and her latest, "Broken Blossom" (Atlantic SD 19151, reviewed last month) has yet to step on my toes and demand a tip.

Carmen McRae's appearance at Harlem's rejuvenated Cotton Club was similarly distressing. This club, unlike the Copa, is both elegant and comfortable. Also unlike the Copa, it was practically empty for this rare New York performance by McRae, one of the best popular vocalists of the past several decades. When our bill came I discovered why. Prices were sky high; the tab would have purchased more than *twenty* of Carmen's always satisfying discs.

N these past few months, I've seen other excellent artists (notably jazz singers Jackie and Roy and the elusive Carol Sloane) forced to work uphill in the intimate spots they once called home. Could it be that the cabaret renaissance is already drawing to a close, that it will soon exist *only* on records? I certainly hope not. I could, I suppose, carry on without my copy of "Oceans of Love," but if they told me I could never again see Suzy squirming in the spotlight to Stormin" Norman's boogie piano. I think I might get downright *nasty*!



Norman and (who else?) Suzy



GLOSSARY OF RECEIVER TERMINOLOGY

• AM suppression: a measure of how successful an FM tuner section is in suppressing the noise-producing amplitude variations in the incoming signal. A high figure (in decibels) is desirable.

• Amplifier section: the part of a receiver devoted to accepting the inputs of the various program sources, adjusting them in level and tonal characteristics by means of designated front-panel controls, and amplifying them for the loudspeakers.

• Capture ratio: the difference in strength between two incoming FM signals of the same frequency that is necessary if a receiver is to "capture" the stronger and reject the weaker. A low figure (in decibels) is desirable.

• **De-emphasis:** the equalization introduced by an FM tuner section for proper reproduction of an FM broadcast which has been *pre-emphasized* by the broadcaster in a complementary way. The U.S. has two FM equalization characteristics in regular use: 75 μ sec (microseconds) for standard broadcasts and 25 μ sec for Dolbyized transmissions. Many receivers provide both.

• Dolby system: a dynamic noisereduction system employed in some tape machines (particularly cassette machines) and some FM broadcasts. Proper reproduction of Dolbyized broadcasts requires a Dolby processor and a different tuner deemphasis characteristic (see above).

• **Distortion:** spurious additions made by a receiver to a signal it is processing. Two types of distortion are regularly specified: total harmonic distortion (THD) and intermodulation distortion (IM). • Equalization: deliberate frequency-response manipulation of a recorded or broadcast signal, usually intended to improve its signal-tonoise ratio. Special circuits within a receiver "undo" the equalization to restore flat frequency response while retaining the signal-to-noise benefits.

• *Filters:* switchable circuits that reduce the level of low and/or high frequencies to subdue noise such as rumble or record-surface noise. A 6-dB-per-octave filter is barely worthwhile; a 12-dB-per-octave filter is preferred.

• Frequency response: a specification indicating the frequency range over which a receiver has useful output, as well as the degree of deviation from absolute uniformity tolerated over that range.

• Interstation-noise muting: a circuit (often switchable) that automatically silences the output of an FM-tuner section when it is between stations, thereby eliminating interstation noise. An audio muting switch, found on many receivers, simply reduces the output of a receiver by a large amount to accommodate brief listening interruptions such as telephone calls.

• Loudness compensation: a circuit that works in conjunction with a receiver's (or amplifier's) volume control to boost low (and sometimes high) frequencies progressively as volume is reduced. The intent is to compensate for the ear's normal loss of sensitivity to these frequencies at low listening levels.

• *Multipath:* an undesirable condition in FM radio reception arising when the same signal reaches the receiving antenna via different "paths." The interference of these signals at the antenna imparts a fuzzy or rasping quality to the sound.

• Selectivity: a measure of how much stronger than the desired station another station broadcasting on a nearby frequency can be before significant interference takes place.

• Sensitivity: measures a tuner's ability to provide a quiet, undistorted output from a weak signal input. There are two sensitivity specifications for FM: usable sensitivity (the minimum signal strength, in dBf or microvolts, necessary for the signal to be 30 dB stronger than the noise and distortion) and 50-dB quieting sensitivity (the minimum signal necessary for a 50-dB signal-to-noise ratio).

• Signal-to-noise ratio: indicates to what degree noise (hiss and hum) is below the receiver's maximum signal level (a S/N of 80 dB means that noise is 80 dB below the signal).

• Spurious-response rejection: the ability to reject a variety of signals that are generally distant in frequency from the station to which the tuner section is set. (Image rejection and *i.f. rejection* are both facets of spurious-response rejection).

• Tape monitor: a switch-activated circuit that permits comparison of a tape an instant after it is recorded with the original signal going onto the tape. A three-head tape machine is required.

• *Tuner section:* accepts FM (and often AM) signals from the antenna, demodulates them (turns them into audio), and generally puts them into a form suitable to be processed by the receiver's amplifier section.

RECEIVERS

Before you actually get down to the buying, you must have a clear idea not only of what you want but of what you need in terms of output power

OR at least a dozen years, the receiver has been the most popular electronic high-fidelity component. Only recently has there been a revival of competition from the "separates"—tuners and amplifiers as separate units-that were once the only form in which hi-fi was readily available. The likeliest reasons for the receiver's original popularity were its relative compactness, its simplicity of installation, and (certainly not least) its economy. In addition, many people appreciated the fact that it reduced two or even three equipment choices (the separates approach) to one, thus reducing the number of life's difficult decisions.

But that was yesteryear. Times change, and the receiver has changed with them in many ways. The number and variety of receivers available today is great, and so are the perplexities facing consum-

As a rule, the power-output rating of a receiver is the greatest single determinant of the unit's price: the more watts you want, the more money you pay. A complete power-output specification, as required by the Federal Trade Commission, includes the *continuous* perchannel maximum in watts, the resistance or impedance to which this can

By George Tlamsa

ers who try to choose among them all. Furthermore, the receiver is no longer exclusively the physically and economically easy entry into high fidelity. There are units today whose size and weight prohibits their being mounted on anyone's bookshelf and whose cost may be well over \$1,000. In respect to the usual performance specifications. the biggest and best receivers can match all but the most ambitious ensembles of separates point for point. But one of the best things about receivers-their economyremains much the same. Singlechassis construction and common power supplies provide inevitable cost benefits, and the very popularity of the component results in volume-production discounts.

And, as receiver specifications (at least for the more expensive units) increasingly find themselves in the same ball park as those of separates, the real distinction—cost aside—between the two product categories becomes more and more one of convenience. The receiver makes it possible to have an all-inone electronics center as opposed to the separates' flexibility in trading up and in obtaining repairs on one unit without shutting down the whole system.

Of course, as the price of a receiver goes up, so does the level of its published specifications. To get an idea of what your dollar can buy, we will examine six common receiver specifications—three for the amplifier section and three for the FM section—and see how they correlate with price. The numbers given will be those quoted by the manufacturers rather than figures verified by independent test, but be assured that the figures quoted by today's name-brand manufacturers *are* to be trusted.

-Amplifier Section-

be delivered (the "load") in ohms, the frequency range in hertz (Hz) over which the power is available, and the total harmonic distortion (at this power level) in per cent. A typical form for such disclosures is: "x watts per channel, minimum continuous (or rms) power output into y ohms from 20 to 20,000 Hz, with no more than z per cent total

harmonic distortion." [The term "rms" in reference to power is used incorrectly, but it is meant to be synonymous with "continuous power" meaning power that can be delivered continuously for an indefinite period, as opposed to some higher power level the receiver might be able to sustain for some brief period. The "load" is the

RECEIVERS...

impedance of the speaker (or the resistance of a resistor used to simulate the speaker in testing) to which the power is to be delivered. The most common load is 8 ohms, although 4and even 16-ohm ratings occasionally appear. A 4-ohm rating will tend to be higher and a 16-ohm rating lower than the usual 8-ohm power specification.

Because power-output specifications—and the test procedures that verify them—are standardized by the FTC, you can compare the figures given for various makes and models of receiver with reasonable confidence. Of course, such comparisons won't help you much with the crucial question: How much power will you actually *need*? For some discussion of this, see the accompanying box titled "How Much Power Do You Need?" as well as this month's "Audio Basics" (page 36). In the meantime, let's see just how much power your receiver dollar can *buy* in today's market. Keep in mind throughout that the prices given in this discussion are manufacturers' guidelines and do not reflect discounts that may be available from individual dealers.

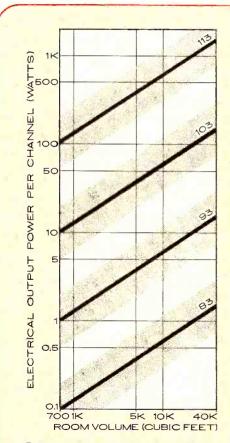
Power and Dollars

At \$200 and under you will find power output pretty low: the average is about 13 watts per channel, and in some cases the power (at the specified distortion rating) is not available over the full 20- to 20,000-Hz range. As you move into the \$201 to \$300 range (where there are a *lot* of units available—about forty) you'll find 26 watts per channel is average. In the \$301 to \$400 price class there is a significant jump to about 43 watts on the average. The \$401 to \$500 class offers an average of 54 watts per channel, and the \$501 to \$600 class 72 watts per channel. When you reach the \$601 to \$700 price range, you're getting into "superpower" territory (for receivers, at least), with 106 watts per channel being the average rating. In the decidedly luxurious \$701 to \$900 range you get an average 124 watts and for over \$900, 177 watts per channel. In the over \$900 category you will find receivers rated as high as 270 (!) watts per channel (the Pioneer SX-1980, for example, which has a "suggested value" of about \$1,250).

Harmonic Distortion and S/N

Two other important specifications for the receiver's amplifier section are the harmonic-distortion rating and the signal-to-noise ratio (S/N) of its phonopreamplifier circuits. Let's look at distortion first. For \$200 and under, the average harmonic distortion rating is about 0.87 per cent. Since receivers are commonly available with distortion well under one-tenth of this, what does such a figure mean?

First of all, remember that the "rated



Power vs. room-volume curves for an inefficient speaker (82 db/W/m). The shaded area around each line shows a range of uncertainty in the power values.

HOW MUCH POWER DO YOU NEED?

AMPLIFIER power costs money, so it's worth considering just how many watts you'll really need from your receiver. To understand the factors involved, you should understand how the human ear perceives loudness-and how amplifier power output relates to that. In describing sound levels we generally use the decibel (dB). In music, the smallest level change readily audible to anyone with normal hearing is about 3 dB, and a 3-dB change in sound level always results in about the same subjective loudness change, regardless of whether the change is from 70 to 73 dB or 90 to 93 dB. However, small as such a change is to the ear, it is substantial in respect to demands on the amplifier.

To increase a sound level by 3 dB means doubling the amplifier power output-and a 10-dB increase means multiplying the power by ten (it's logarithmic). Some peaks in recorded music are likely to ask your amplifier for a sudden 15- or even 20-dB increase in sound level for a short but significant period of time-in other words, up to a hundred-fold increase in amplifier output. Although the problem is not as severe as it may appear at first glance (since the average power used may be no more than 3 or 4 watts), it is easy to drive an amplifier into "clipping" by trying to get

more power out of it than it is capable of delivering.

How much loudness you get out of your speakers for the watts you put into them is affected by several factors, including the characteristics of your listening room. The internal surfaces of a room tend to contain the sound and reflect it to the listener. Therefore, sound levels do not fall off at a precipitous rate with every step you take away from the speaker (as they would in the open air). How well your room reflects-whether it has many sound-absorbing surfaces, in other words-will make a big difference. So will the physical size of the room. If you have a "live" room with a lot of reflective surfaces, you'll need considerably less power than if you have a "dead" room with heavy carpeting, overstuffed couches, soft armchairs, and so forth. But keeping the room "live" to reduce the power demands made on the amplifier is not the way to go, because the music will sound raucous, shrill, and echo-y.

The efficiency of your speakers is the important factor. If it takes a large power input for the speakers to produce a given sound level, you've got "inefficient" speakers, and you'll need more power than someone with "efficient" speakers that produce a

distortion" is at full power output and that at moderate listening levels it will be much lower. Second, keep in mind that there is no agreed-upon standard for the audible threshold of amplifier distortion. Psychoacousticians, who deal with such matters, agree that distortion of about 0.35 to 1 per cent becomes audible on certain program material, such as solo flute. However, actual listening tests have shown that, with much more complex music as the signal source, distortion can be as high as 6 per cent before it is noticed. The point is, don't be scared off by a "high" distortion rating of 0.87 per cent-you'll probably never hear it.

The signal-to-noise ratio (S/N) in the \$200-and-under category is 70 dB on the average. This is a thoroughly respectable figure, and with most speakers you would have to have your ears fairly close to the grille cloth to hear the hiss. As a matter of fact, 70 dB is better than the S/N available on a lot of disc recordings and FM broadcasts.

In the \$201 to \$300 class, the average

total-harmonic-distortion rating is about 0.42 per cent and the S/N improves, on the average, to 73 dB. In the \$301 to \$400 price range distortion is 0.21 per cent on average and the S/N is unchanged. In the \$401 to \$500 bracket, distortion averages 0.14 per cent and the S/N 79 dB. Distortion falls to 0.13 per cent on the average in the \$501 to \$600 class, with little or no change in average signal-to-noise ratio.

In the \$601 to \$700 price range the average distortion rating falls below 0.1 per cent-to 0.083 per cent. The average signal-to-noise ratio improves to a high 83 dB. Between \$701 and \$900 you will find harmonic distortion averaging 0.078 per cent and S/N still in the low 80's. In the over-\$900 range there is little or no significant improvement in these figures (S/N, in particular, being very close to its theoretical maximum), most of the increased cost going into power output. However, note that the figures given here are averages, and deviations for better and worse will be found in individual products.

Tuner Section

The tuner section of the receiverusually incorporating both AM and FM, though in some cases having FM only-has a large number of specifications associated with it. Three that are worth looking at closely are the 50-dB quieting sensitivity, the capture ratio, and the alternate-channel selectivity. In general, the "sensitivity" of a tuner refers to the smallest possible input from the antenna required for a specific signal-to-noise ratio in the audio-output signal. Often you will see the "IHF us-able sensitivity," which means the input in microvolts (µV) or dBf necessary to achieve a S/N of 30 dB. In reality, this is too noisy to be very "usable" at all. The 50-dB quieting sensitivity is the input necessary to achieve a 50-dB S/N (or 50 dB of "quieting"). The lower this figure is, the better; anything below 4 μ V is good, and below 3.5 μ V is excellent. Remember, though, that if you live in a city where you are close to the FM transmitters,

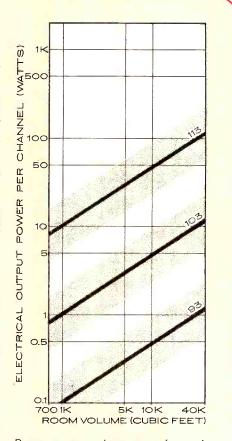
large output for the same input power. Speaker efficiency is often given in the form of "sensitivity" ratings which state the sound output of the speaker (measured at a 1-meter distance) when driven by 1 watt of power by the amplifier. Using this system, 82 dB per watt per meter (dB/W/m) is decidedly inefficient; 93 dB/W/m is comparatively efficient. Many speakers available today produce in the neighborhood of 90 dB at 1 meter for a 1-watt input.

HE accompanying graphs will help you establish (very approximately) your power needs. They show the electrical output power required per channel as a function of room volume for various sound-pressure levels: 83, 93, 103, and 113 dB ("soft" to "very loud"). There are curves for an efficient speaker (93 dB/W/m) and an inefficient speaker (82 dB/W/m). Note the large difference in power required by these two types of speaker. For example, the power required by the efficient speaker for 83 dB is too small to be shown on the graph (it is below 0.1 watt).

These curves are based on rooms with proportions of about $1:1\frac{1}{2}:2$ (height:width:length) and with an "average" reverberance (not too live and not too dead). They also assume that the listener is positioned about 10 feet from the speaker. To use the graph, first find the volume of your room in cubic feet on the horizontal

axis and then travel up (vertical axis) until you reach the bar corresponding to the sound level you hope to achieve. Then travel horizontally along that bar to the left-hand vertical axis to read the range of powers in watts likely to be required. For example, to achieve a level of 100 dB in a room of 20,000 cubic feet with the efficient speaker will probably require anywhere from 3 to 12 watts. In practice it could require even more (or Less), depending on such factors as the absorptive qualities of the room and its furnishings, the location, configuration, and directional characteristics of the speaker, and may others (see this month's "Audio Basics" for further observations on this subject).

OR speakers whose efficiencies do not correspond to the two examples given, approximate solutions can be found by transposing the bars over a 2:1 power ratio for each 3 dB of difference. For example, a speaker rated at 90 dB/W/m would theoretically require between 6 and 24 watts to achieve a 100-dB level-twice what the more efficient speaker would need. A rating of 87 dB/W/m would mean 12 to 48 watts. Considering the great variations likely to be introduced by real rooms and real speakers, it is probably not worth trying to estimate your power requirements any closer than to the nearest 3-dB increment.



Power vs. room-volume curves for an efficient speaker (93 db/W/m). The shaded area around each line represents a range of uncertainty in the power values.

RECEIVERS...

sensitivity is not all that critical, but *capture ratio* may be.

A tuner's capture ratio is the smallest difference (in decibels) between the strengths of two broadcast signals of the same frequency at which the tuner is able to suppress the weaker one by 30 dB (that is, it "captures" the stronger). The capture-ratio rating is obviously important in areas (usually between two cities) where reception from two different stations broadcasting at similar or identical frequencies is possible. It is also important in places where multipath distortion is a problem. Multipath occurs when two "competing" signals come from the same station, the direct signal as well as its delayed reflections (off buildings or other obstacles) meeting in your receiver and interfering with each other. The smaller the capture-ratio number the better. Capture ratios of 1 dB are commonly quoted now, and this is close to the theoretical limit of performance. For some top-of-the-line FM tuners you will find capture ratios of less than 1 dB specified, although these are difficult to confirm repeatably under test. Keep in mind, however, that a good FM antenna can be a major factor in achieving hi-fi FM; if you have multi-path problems, a good directional antenna will be of more help than a fractional improvement in capture ratio.

The selectivity of a receiver is also of interest; it gives you some idea of how strong the signals on neighboring channels can be before they start to interfere seriously with the signal on the channel you're interested in listening to. Selectivity is given as the ratio (in decibels again) between the strength of the potentially interfering signal and that of the desired signal at the point where interference from the undesired signal is 30 dB below the desired signal's level. Whether the neighboring channel is adjacent (one channel away) or alternate (two channels away) makes a big difference; the commonly published specification is for alternatechannel selectivity, and the larger the figure the better. A common figure is 60 dB, and you will find values surpassing 90 dB in some higher-price receivers.

• Quieting Sensitivity

In the \$200-and-under price class, the 50-dB quieting sensitivity is 4 μ V on the average. It improves quite a bit in the \$201 to \$300 range, where it averages 3.6 μ V. For the next \$200 increment the average change is marginal: 3.5 μ V in the \$301 to \$400 bracket and 3.4 μ V in the \$401 to \$500 bracket. There is another small improvement to 3.3 μ V in the \$501 to \$600 price range. The average sensitivity is about 2.9 μ V within the \$601 to \$700 range, and in the \$701 to \$900 class the average is also 2.9 μ V. In the over-\$900 class, however, the 50-dB quieting sensitivity improves to a very low 2.3 μ V on the average.

Capture Ratio

While the average 50-dB quieting sensitivity shows obvious improvement with increasing price, the capture ratio changes much less dramatically.



THIS MONTH'S COVER

A satisfied buyer poses with his new receiver acquisitions (top to bottom): Nikko NR-1415, Hitachi SR-2004, Kenwood KR-9600, Marantz 2500, Rotel RX-1603, and Pioneer SX-1980. At the frontispiece of this article is a Fisher unit.

In fact, in all but the lowest price class (\$200 and under) the most commonly found value for this specification is 1 dB (which is excellent). The improvement of the average value with price is there, but it's slight. In the \$200-andunder price class capture ratio is about 2.2 dB on the average; in the next four price ranges, spanning the interval between \$201 and \$600, the average capture ratios are about 1.5, 1.3, 1.2, and 1.1 dB, respectively. The average remains at 1.1 dB for the \$601 to \$700 class, and changes very little at higher price points. Thus the capture ratio hovers at about the same value over the entire price spectrum, and its change with price does not appear to be very

significant, at least as far as the manufacturers' quoted specifications are concerned.

Alternate-channel Selectivity

The alternate-channel selectivity does improve significantly with price. At \$200 and under it averages 55 dB, and it improves to about 61 dB in the \$201 to \$300 price class. In the \$301 to \$400 bracket there is a major improvement to an average of 67 dB, and in the \$401 to \$500 bracket there is another leap to an average of 73 dB. In the \$501 to \$600 class we're beginning to approach the upper limit (available on receivers, that is), with the average selectivity being about 78 dB. Average selectivity is 80 dB both in the \$601 to \$700 class and in the \$701 to \$900 class. In the uppermost price range the most common figure is 80 dB.

Everything considered, it appears to be possible to get a receiver with excellent overall specifications in both tuner and amplifier sections for between \$200 and \$300. As was mentioned earlier, what your money is primarily paying for (from the standpoint of specifications) is power output, which increases regularly with price. So try to keep all the other specifications in perspective as you make your buying decision. The difference between budget-price and state-of-the-art is not all that great in today's market. And remember that some manufacturers tend to rate their products more conservatively than others, so that in practice an apparent small difference in a quoted specification such as capture ratio may not reallv exist.

Operating Features

Of course, specifications are not the entire story for most purchasers. Operating features are also an important element, and as you go up in price you will find more and more features that make a receiver more flexible and easier to use. In fact, on some of today's stateof-the-art receivers it is possible to find exotic control features that were available only on high-price separates (if on those) not too long ago.

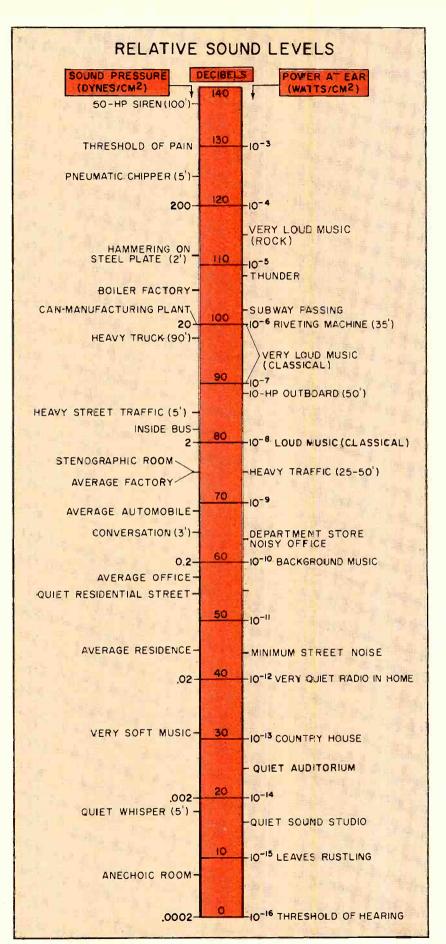
For \$200 and under, you generally get only the most basic features and controls. Receivers priced at this level have a single tuning meter (these days usually a channel-center meter, but sometimes a relative-signal-strength indicator), simple bass and treble tone controls, and provision for connecting one record player and one tape machine. One feature that is sometimes found here (and at higher price levels) is microphone mixing: this feature consists of a front-panel jack for a highimpedance microphone along with a control for mixing the microphone with the other inputs. Most \$200-and-under low-power receivers can comfortably drive only one pair of speakers at a time and therefore don't provide for speaker switching.

Between \$201 and \$300, the number of features available does not change very much overall; most of the improvement, as noted above, is in the area of specifications, and this improvement is quite great. You will find two tuning meters virtually standard here. Low- and high-frequency filters—if of dubious effectiveness become fairly common also (they are available on some receivers in the below-\$200 price class, but not many).

As you move into the \$301 to \$400 price range, features really begin to appear. Tone controls are more flexible, and a number of units offer mid-range controls in addition to bass and treble; some have only bass and treble controls but have separate controls for each channel. Marantz, in its receivers from \$310 up, has mid-range controls. as well as separate controls for each channel. Some receivers in this price range have detented potentiometers for their volume controls instead of the conventional pots (this feature becomes quite common in the higher price brackets). Audio muting controls, which attenuate the receiver's output for brief listening interruptions, also begin to appear. Yamaha's CR-620 (\$350) permits you to adjust the volume level and the loudness compensation separately. Tape facilities are more flexible, with a good many receivers accommodating two tape decks and permitting dubbing from either one of them to the other.

The most noticeable addition to tuner facilities is the appearance of an "FM de-emphasis" switch on the front panel; this permits you to change the tuner's de-emphasis from 75 to 25 microseconds so it can, in conjunction with a Dolby processor, properly decode Dolby-FM broadcasts. And, for \$350, Sony's STR-4800SD provides you with a built-in Dolby processor. There are a few other tuner niceties. For example, Akai's AA-1150 (\$400) has a control for adjusting the tuner's noise-muting level. This lets you set the level at which the tuner rejects the interstation noise but not weak stations. Many receivers have an FM muting switch, which merely defeats the

This chart gives an idea of the subjective "loudness" of different sound-pressure levels in terms of everyday sounds. Note the wide range of levels the ear responds to.



RECEIVERS...

tuner's interstation-noise muting circuits. One other interesting feature available in this price class is the totally separate power supplies for the two channels in Harman Kardon's 430 (\$280).

Between \$401 and \$500 you can find receivers with fairly exotic tone controls. Consider JVC's JR-S300II (\$430), which has a full five-band equalizer with slider controls (it also has power meters). You also begin to find receivers that have switchable turnover frequencies for their tone controls, such as Fisher's RS-1056 (\$450). Along with this comes the appearance of "tone defeat" switches that permit you to switch the tone controls completely out of the signal path.

 ${\bf A}$ NUMBER of receivers in the \$401 to \$500 bracket have two (separate) tapemonitor circuits. This is a handy feature, since you can not only control two tape decks but also use one monitor circuit to handle an equalizer or other accessory. Onkyo's TX-4500 (\$480) has switching for three tape decks. Optonica offers an interesting tape feature on its SA-4141 (\$430): a test tone for setting the levels on your recorder before taping an FM broadcast. The Rotel RX-7707 (\$480) and the Tandberg TR-2025 (\$465) permit you to preset up to five FM stations and later tune them in (electronically) at the touch of a button. One other convenient feature that becomes more common in this price bracket: inputs for two record players.

By the time you reach the \$501 to \$600 class, there aren't too many basic features available that you can't find for less money, but there are a few: receivers in this price class are more likely, for example, to have switching for as many as three pairs of speakers. You will notice more receivers with preamp-out/power-amp-in jacks on their rear panels, and this is certainly a plus; not only does it permit you to connect a signal processor into the signal path, but it makes your all-in-one receiver a bit more flexible, as you can now use its preamp/tuner and power amp separately. You will find quite a few receivers here that have provisions for plugin Dolby decoder modules as well.

"Tape-through" switching circuits become common in this price class (though this feature is also available in the \$350 Yamaha CR-620); these permit you to dub from one tape deck to

74

another while using the receiver to play a third program source. Power-output meters are quite common too, and some receivers even have switchable meter ranges. High- and low-frequency filters become more sophisticated, with Yamaha offering switchable turnover frequencies on its CR-1020 for \$560. The filters provided on the more expensive receivers usually have sharp "slopes" (expressed in decibels per octave); the slope of a filter tells you how rapidly it attenuates signal level with frequency. In the realm of FM, you can get a digital tuner readout on Heath's AR-1515 (kit price: \$580).

As you go beyond \$600, you will find all sorts of special features, many of which are downright luxurious. Some receivers, like Rotel's RX-1203 (\$750), offer controls for adjusting the phonoinput sensitivity and impedance (the former feature is useful for setting the gain of the input stage of the phono preamplifier to achieve maximum signal-to-noise ratio). Yamaha's CR-2020 (\$750) even has a high-sensitivity phono input for a moving-coil cartridge.

Interesting tuner features abound as well, with some manufacturers offering sophisticated tuning aids: Rotel has multipath meters on its RX-1203 and 1603 (\$840 and \$1,100, respectively) and Marantz goes so far as to include an oscilloscope on the front panel of its model 2500 (for \$1,850), this being the best means of monitoring multipath distortion. Some receivers have a hiblend feature, which is used to reduce the audible hiss that accompanies weak stations. Nikko even offers switchable i.f. bandwidth on its NR-1415 (\$850), giving you the option of achieving better selectivity at the cost of a bit more "conventional" distortion. If you'd like to use your receiver for short wave or other non-commercial-band broadcasts, check Tandberg's TR-2025MB multiband receiver (\$665).

Other niceties include LED power indicators (which can be set to read peak as well as average power), as on the Lux R-1120 (\$895), and front-panel warning LED's that indicate amplifier overload, as on the Setton RS-660 (\$880). Where price is no object you will find a number of receivers that are not only endowed with a full array of features but also very distinctively styled. Bang and Olufsen's Beomaster 4400 (\$695) is a good example of this, having a novel front-panel design and featuring electronic touch-contact switches-switches that require merely the touch of a finger to be activated.

Overall, it appears that useful special features really begin to show up on receivers priced at over \$300. In the \$300 to \$500 price range there is a dramatic improvement in the number and usefulness of such features. For below \$300 (and even for \$200 and under) it is pos-

	Good	Better	Best
• Amplifier Section			
Total harmonic and intermodulation distortion, per cent	0.5	0.2	0.1
Phono S/N, dB	60	65	75
• Tuner Section	lann fie	in the state of	
AM rejection, dB	50	60	70
Capture ratio, dB	3	1.5	1.4
Alternate-channel selectivity, dB	50	60	80
Usable sensitivity, µV (dBf)	3 (1 <mark>4</mark> .8)	2 (11.5)	1.7 (10)
50-dB quieting sensitivity, μV (dBf)	10 (25.8)	5 (19,8)	3 (14.8)
Image rejection, dB	50	70	90

PRICE RANGE ►	\$200 and	\$2 <mark>01</mark>	\$301 to	\$401 to	\$501 to	\$601 to	\$701 to	Over
SPECIFICATION V	under	\$300	\$400	\$500	\$600	\$700	\$900	\$900
Output power (watts per channel)	13	26	<mark>43</mark>	54	72	106	124	177
Total harmonic distortion (per cent)	0.87	0.42	0.21	0,14	0,13	0,083	0.078	0.11
Phono S/N @ 2mV (dB)	70	73	72	79	77	83	81	70
50-dB quieting sensitivity [µV(dBf)]	4.0 (17.3)	3.6 (16.3)	3.5 (16.1)	3,4 (15.8)	3.3 <mark>(15.6)</mark>	2.9 (14.4)	2.8 (14.1)	2.3 (1 <mark>2.5</mark>
Capture ratio (dB)	2.2	1.5	1.3	1.2	1.1	1.1	1.2	1.1
Alternate-channel selectivity (dB)	55	61	67	73	78	80	80	77

sible to get a very serviceable receiver; it will, however, have only the most basic operating controls (which are all many people ever use) and, as we said earlier, it will have a modest power output. For over \$500 you find lots of extra features and output power—and a strict application of the law of diminishing returns as well. As you go up in \$100 increments you are getting ever smaller increments of improvement; the "performance improvement per dollar" is not as great at the high price points as in the below-\$500 bracket.

One other aspect of the receiver market merits discussion at this point: four-channel. At this time, while the FCC is considering the question of standards for quadraphonic FM broadcasts, a lot of audiophiles are wondering whether four-channel is dead. You might be interested to know that there are still some quadraphonic receivers available, and there are many more stereo receivers with either four-channel adaptability or some form of synthesis. Sansui and Pioneer both have four-channel receiver offerings. The units, models QRX-9001 Sansui (\$1,100) and QRX-8001 (\$900) deliver 60 and 40 watts per channel (four channels driven), respectively. Pioneer's OX-949A (\$750) is rated at 40 watts per channel, four channels driven. A variety of four-channel-simulation circuits is also offered in the stereo receivers of several manufacturers (among them Lafayette, Realistic, Superscope, and Sherwood). Sherwood offers a special tape-monitor circuit for a four-channel adapter on its S-9910 (\$700), and all Marantz receivers have jacks for a four-channel adapter.

Buying

Before you actually get down to the buying of your receiver, you must have a clear idea not only of what you want but of what you need in terms of output power. Approximating your power requirements will all by itself trim the field down to a relatively small and therefore manageable price spread. After that basic step, determine what features you must have-assuming some special features are important to you. Also, if you are cramped for space or move frequently, it would be a good idea to check carefully the dimensions and weights of whatever units interest you; today's higher-power receivers can be very large and heavy.

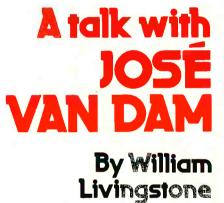
If you follow through on these athome preliminaries, you'll narrow your choice enough to cut down substantially on your shopping time. Though a listening test in the store can't tell you too much about a receiver's total performance capabilities, it will permit you to get to know the product, its appearance, flexibility, and "feel."

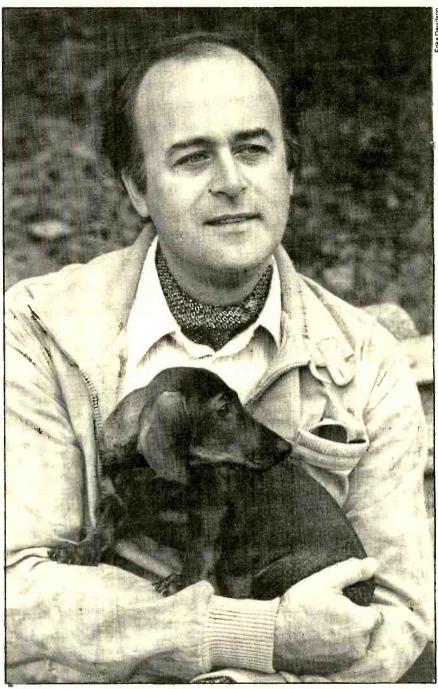
Keep in mind that the prices quoted in this article are "nationally advertised values." In many cases they will be higher than the price you actually end up paying. Obviously the discounting policy of every retailer is likely to be different. But remember that maximum discount usually goes hand-inhand with minimum after-sale service.

And finally, though this is not a howto-buy-a-speaker article, we would be doing less than our duty if we didn't warn you about the "system-package" ploy used by some dealers. These systems usually include a name-brand receiver and a no-name or house-brand pair of speakers. The "package price" usually offers an apparently enormous discount on *all* the components, but in truth the discount is large only on the receiver. The dealer makes his profit on the house-brand speakers, which are usually priced with an excessively high markup. The result is that the consumer, believing he is getting a fantastic discount, buys a top-quality receiver to be played and heard through mediocre—or worse—speakers.

AFTERWORD

WE have not discussed many of the proprietary circuit features or the special design approaches used in receivers since we are not in a position to evaluate the practical significance of such features without extensive laboratory and/or use tests. When Julian Hirsch performs such tests they usually appear as a laboratory report in STEREO RE-VIEW. An index listing the receivers (and all other products) tested since 1965 is available for 25¢ and a stamped, self-addressed long en-Write: STEREO REVIEW, velope. Dept. TRI, One Park Ave., New York, N.Y. 10016. Although we have not tested most of the receivers now on the market, those that we have tested give us confidence in the component as a category. While it is always possible to pick nits with any product, we are pleased to be able to report that it is really very difficult to make a wrong decision in receivers these days.





ANY things go into building the career of a young musician talent, training, ambition, and luck. According to the Belgian bassbaritone José van Dam, "The best thing that can happen to a young singer is to have an important conductor take an interest in his or her career."

Several conductors have been instrumental in Van Dam's career. "The first was Lorin Maazel," he says. "I was little more than twenty and was singing small roles at the Paris Opera, including some very small ones, like one of the soldiers in La Bohème. I auditioned for Maazel, and he asked me to record Ravel's L'Heure Espagnole with him. That was the first step in my international career." Other conductors who have appreciated Van Dam's voice and musicianship and have engaged him often include Herbert von Karajan, Sir Georg Solti, and James Levine.

The traits that make Van Dam one of the finest singing actors of the day are of course discernible to audiences and critics as well as to conductors. When he made his Met debut as Escamillo in *Carmen* in 1975, John Rockwell of the New York *Times* referred to him as "the leading exponent of the role in the world today." When Van Dam returned to the Met in the 1977-1978 season, he received similar raves for his Colline in La Bohème, and all stops were pulled out for descriptions of his Golaud. Andrew Porter in the New Yorker wrote that the Met's revival of Pelléas et Mélisande was "distinguished by a Golaud, José van Dam, of rare excellence—one who combined warmth and strength of tone, impeccably clear words, and force of dramatic personality."

I interviewed Van Dam at a friend's apartment in New York where he was making a twelve-hour stopover between engagements on the West Coast and in Europe. He's a good-looking, appealing man of medium height and compact build, with a long expressive face and penetrating blue-grey eyes. He wore black boots, black slacks, a tan sweater, and two watches, one set to local time and one to European time.

He was born on August 25, 1940, which means that he is a Virgo, a sun sign he shares with such other performing artists as Greta Garbo, Leonard Bernstein, Sophia Loren, and Maurice Chevalier. Amateur astrologers may be pleased to know that everything about him bespeaks the neatness, analytical turn of mind, precision, and devotion to work that are supposed to be typical of those born under this sign.

"I was born in Brussels and received my musical education there," he said. "I gave my first concert in a children's festival when I was only eleven. I was not a boy soprano, but a contralto, and, after my voice changed, I did not become a tenor as people expected, but retained the same tessitura. My voice grew deeper, of course, but as a child I went up to G, and that's my range now."

Belgium has a distinguished operatic history and has produced many opera singers, among them Fernand Ansseau, Fanny Heldy, René Maison, and Rita Gorr. Despite this Belgian tradition, Van Dam is usually thought to be French. "Even in Paris the reviews refer to me as a French singer, perhaps because I made my debut in Paris, perhaps because my voice is that of a French bass. It is not the deep, black, German bass voice required for Sarastro in The Magic Flute or Baron Ochs in Der Rosenkavalier, but a bit higher, more a basso cantante. In Germany I am called a Heldenbariton, what you call in this country a bass-baritone. In Italy I would be a baritone because the orchestra pitch is lower there than in Vienna, for example.

"I think I am lucky to have a bassbaritone voice because it opens up to me many fascinating roles—Escamillo, Figaro, Don Giovanni, Leporello, Verdi's Attila, and Jokanaan in Salome. Some of these are sung by baritones, but they are not really baritone roles."

Escamillo has been a good-luck role for Van Dam. It was his debut role in Paris, La Scala, Santa Fe (where he sang his first American performances), San Francisco, Covent Garden, and the Met. Since he has sung it so many times in so many different productions, I asked him how he managed to keep it interesting. "You may sing a role a hundred and fifty times," he said, "but whenever you go out onto the stage, it's a first. The Met seats nearly four thousand people, and at a performance one or two hundred people may be hearing you for the second or third time, but the rest are hearing you for the first time. When it's the first time for the people, it's the first time for me too. Besides, singing is such a joy for me that keeping it interesting is not a problem."

Van Dam has recorded Carmen in both the opéra-comique version (with spoken dialogue) with Tatiana Trovanos, conducted by Solti (London 13115) and in the grand opera version (with sung recitatives) with Régine Crespin, conducted by Alain Lombard (RCA/Erato 70900/2). Which does he prefer? "I think both are good on records," he said, "but in the theaterespecially a large theater-I prefer the version with the recitatives. They are nice although they were not written by Bizet [they were composed by the American-born Ernest Guiraud], and in the other version it slows the action every time the singers stop to speak. Speaking is also very bad for the singing voice.

He disagrees with the notion common among modern directors that Carmen welcomes death and is a willing

> "I think a good singer is born with a voice, but he must learn how to work with it."

collaborator in her murder by Don José. Do Carmen and Escamillo really love each other? "No. Escamillo is like Don Giovanni, a Casanova. And Carmen does not really love him. She is a woman like Frasquita or Mercedes. For her, Escamillo is neither the first nor the last. Her duet with Escamillo in the last act is revealing. She says, 'Escamillo, je t'aime et que je meure si j'ai jamais aimé quelqu'un autant que toi.' [Freely translated: 'I love you and may God strike me dead if I've ever loved anybody else so much.'] Well, ten minutes later she's stretched out dead.''

AFTER his initial engagement at the Paris Opera, where he sang his first Escamillo, Van Dam won an important singing competition in Geneva and was invited by Herbert Graf to become a member of the company there. Two years later, Maazel, with whom he had made his first recording, invited him to join the Deutsche Oper in Berlin, another step in his international career. "It is important to take these steps. It was not so difficult for me because I was very young and not married. Still, it takes courage to leave home and go to live and work in another country, but that is necessary in building a career."

Now married and the father of a son, Van Dam makes his official home in Luxembourg. He is still a member of the Deutsche Oper and spends three months of the year in Berlin. The rest of a typical year, during which he may sing as many as sixty-five performances, is divided between Vienna, La Scala, the Met, the Paris Opera, and other major theaters.

HE next great conductor to take an interest in his career was Herbert von Karajan, who invited him to record the role of the minister Don Fernando in Fidelio in 1970, and he has since sung with Karajan frequently. Solti came into his life a bit later. In 1976, American audiences heard Van Dam with both of these conductors. He sang the title role in Mozart's The Marriage of Figaro under Solti when the Paris Opera made its official Bicentennial visit to the Kennedy Center and to the Metropolitan, and later that year he was a soloist with Karajan and the Berlin Philharmonic in four straight evenings of choral works at Carnegie Hall. He has sung Figaro with both of these conductors and says the differences between them are mostly differences of temperament.

"Solti is the more temperamental, I think, more Hungarian perhaps. He is very exciting to work with. Karajan takes a line from the beginning to the end of the performance. He is a very strong man, and it is fantastic to perform with him and feel this force. He makes few gestures. He goes onto the podium and places his feet so! After he has conducted for an hour, his feet are in the same place. His concentration is almost superhuman. For me, he is one of the greatest musical personalities of our time. He is very loyal to singers who have worked well with him, such as Mirella Freni, Luciano Pavarotti, and Fiorenza Cossotto. He has great love and respect for singers, but since he himself always wants to give more and more, he demands the same thing from singers. When you succeed in giving him what he asks, there is a fantastic sense of collaboration, and it is no longer important that he is the conductor and you are a singer, but that you both make music together."

When asked whether he preferred singing concerts to performing in opera, Van Dam paused and hedged a bit. "In opera you may sing very well, but





"For me it is important that the audience see Giovanni as a very dangerous man, and yet in a way a pathetic man."

you have to do many other things too. You have to wear costumes and wigs and move and impersonate a character. The public these days demands better acting from singers, and they are right to do so. Orchestral concerts or recitals of lieder and *mélodies* offer the opportunity for greater musical concentration. You become like a violin or piano soloist and you can make pure, beautiful music. Opera does not permit this kind of concentration, and I feel that I make better music in concerts."

We spoke a great deal about singing technique. Just as the pianist Artur Rubinstein says that he learned how to phrase from listening to such singers as Emmy Destinn, Van Dam says that he has learned a lot about singing from great instrumentalists, such as the cellist Mstislav Rostropovich, and the equalization of the voice in all registers is particularly important to him. "I am pleased when people tell me they hear continuation in my voice from low to high with no breaks. You have a musical line to follow and you must do that with the characteristics of your own voice. The voice is an instrument too, and it should not sound like a violin when you sing high and a cello when you sing low. I think a good singer is born with a voice, but he must learn how to work with it. A Stradivarius is nothing until you put it into the hands of someone like Arthur Grumiaux, Itzhak Perlman, or Pinchas Zukerman who can make music with it. The same is true of the singer.'

Van Dam is concerned not just with singing technique but also with the necessary preparation of individual roles. He has sung Leporello in Don Giovanni for some time, but before adding the title role to his repertoire in 1976, he did a great deal of research. "For an important role like that you must have background. You need one hundred ideas about such a character although you may be able to convey only two or three on stage. I read everything I could find about Don Giovanni, particularly what the Danish philosopher Kierkegaard and the French author Jean Jouve wrote about the opera. For me, Giovanni is not just a man who chases women. He is not so superficial as that. My conception of the opera is mythic. Elvira, Anna, and Ottavio are mere people like you and me, but the Commendatore represents the forces of good and Giovanni those of evil. The Commendatore is killed, but he comes back. Giovanni dies in the end, but he too will come back throughout eternity. I do not want the audience to think him a sympathetic character. He does everything for himself, and when it is necessary to kill, he kills. For me it is important that the audience see Giovanni as a very dangerous man, and yet in a way a pathetic man. He is afraid of death, but in death he finds what he is looking for. I think the death of Giovanni is the greatest musical and dramatic scene in Mozart's works,'

Van Dam has enjoyed singing at the Met, where he finds the working atmosphere very congenial, and he will return next season in Jean-Pierre Ponnelle's production of Wagner's The Flying Dutchman. "Singing here is a joy for me because the audiences are so open and warm. When I came here with the Paris Opera in The Marriage of Figaro, all the French singers agreed that we had better audiences here than in France. When you are on stage, you know when the audience is reacting to the work and to the performance, and this is a great stimulus to the singer. In some European theaters there is a snobbish atmosphere, and we had a period about ten years ago when young people were not interested in opera. That is improving. But in this country there are many young people in the audience, and even the older people seem youthful. They are enthusiastic and demonstrative.

LIKE most international singers these days, Van Dam spends a lot of time in recording studios, and he free-lances with a variety of the major labels— Deutsche Grammophon, RCA, and Angel. He admits that he enjoys making records, but he has some reservations

about them. "In the early days recording techniques could not completely capture the voices of Caruso, Melba, or Tito Schipa. Now we have wonderful electronic techniques, but some producers want to make recordings too perfect. If a singer has trouble with a high note in an aria, the producer may record that note ten times, choose the best one, and splice it in. For methat's lying. I think of recordings as calling cards for Beverly Sills, Placido Domingo, and Van Dam, and we must be honest and not write on those cards anything that is not true. I never want someone who has enjoyed one of my records to come to the theater and find that I cannot do the same thing on the stage."

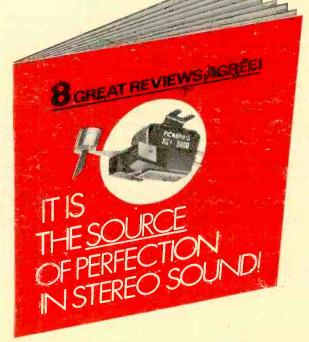
F I were to choose among Van Dam's recordings, I would recommend the RCA Carmen and the Berlioz Romeo and Juliet for starters. But, like a true Virgo, Van Dam himself is self-critical and declines to choose. "My best recordings are the ones I will make in the future. Recording Roméo et Juliette with the Boston Symphony and Ozawa was a beautiful experience, but when I heard the record, I loved me not-not even the sound of my own voice! Perhaps it is too soon for me to listen to my records and enjoy them because I am still singing the same repertoire and trying constantly to improve. Perhaps one day I can play them for my grandchildren and say, 'Listen to how well your grandfather could sing."

"You work so hard to succeed, and if you do, you have only a few years at your peak. The decline is slow but sure. You must never think 'Now I am at the top,' but continue as though your best is yet to come. And it is rare that a singer knows when to stop. There are so many who should have stopped long ago.

"Micheau tapered off, and toward the end she did only important things, ten or twelve performances a year instead of fifty, and people said, 'What a pity that she does not sing more.' That's so much better than to have them say, 'Isn't it a pity that she is still singing.' I hope I will know when to make an end or that my wife and friends will tell me. It is important to have the applause and be surrounded by people and praise, but there always comes a moment after the performance when you are alone.

"I have my private life, my family, my home. For me it is important to distinguish between the man and the singer so that when the time comes after twenty or thirty years of a beautiful career and the singer must go, the man can remain and still love life."

at last! a real international agreement!



We knew we had something special in Pickering's XSV/3000. All of our technical tests and subjective listening studies gave strong indication of its excellence... but we were simply amazed at the unanimous praise heaped on this new product by the critics and reviewers world-wide.

We have never seen such an accolade for a new product and we attribute it to the engineering innovations that made this cartridge what it is.

So, we put together a booklet which gathers all eight reviews from all over the world.

Go to your nearest store or ask us to send you one. Read the reviews for information then listen to Pickering's XSV/3000 and be convinced.

For your copy, write to Pickering & Co., Inc., 101 Sunnyside Blvd., Plainview, N.Y. 11803. Dept.SR

© Pickering & Co., Inc. 1978



"for those who can hear the difference"

CIRCLE NO. 41 ON READER SERVICE CARD



HE Uptown section of New Orleans, Chicago's South Side, New York's Harlem-these were the main breeding grounds for jazz from the turn of the century, when cornetist Buddy Bolden sent stentorian blasts of raw blues through the smoke and laughter of Gravier Street honky tonks, to the late Thirties, when Billie Holiday gave familiar lyrics new meaning and triggered romantic fantasies in the minds of silver-foxed ladies in Harlem night spots. Yes, there was jazz elsewhere. But these, few as they were, were the centers, the places where things happened-and where they happened first.

Since the Thirties, jazz has moved in virtually all directions, musically as well as geographically. Throughout the Forties, it continued to keep one foot in Harlem, but a downtown migration to West 52nd Street had begun in 1936. There, between Fifth and Sixth Avenues, a concentration of small clubs featured, at one time or another, the greatest stars of the Swing Era. And, before 1948, when tassel-twirling strippers had taken over all but one of the block's jazz spots, "The Street," as musicians called it, had embraced bop as well. For more than a decade, 52nd Street was not just the center of jazz activity in New York: it had become a focal point to which all jazz musicians were drawn, and from which budding talent blossomed and innovations sprang.

Unlike today, when a combination of complex arrangements and unfriendly attitudes discourages musicians from "sitting in" with other groups, 52nd Street clubs were geared to impromptu jam sessions. "The feeling was so wonderful," recalled clarinetist Tony Scott. "Any time you came into a joint, they asked you to join them. . . . I used to go from one joint to another, "The Seventies saw more and more lofts turn into musician-owned and operated clubs catering to people for whom neither rock nor electronic crossover music is the answer."

every half-hour, like from where Ben [Webster] was playing to where Erroll [Garner] was, to where Sid Catlett had the band. I'd make the complete rounds and I'd sit in at each club." Jazz owes much of its early growth to such informal get-togethers, but they are now a thing of the past. Today's socalled "jam sessions" are often contrived, routinely performed affairs that rarely provoke an original musical thought.

HOUGH Jimmy Ryan's held out until 1962, it had already become clear, as the strippers undulated through the late Forties and into the Fifties, that The Street would never return to jazz. But, thirty years later. New York again has an area where the music flourishes: a grimy commercial district in lower Manhattan just below Greenwich Village. They call it SoHo (because it lies South of Houston Street), and it was in the Sixties that musicians, artists, and poets began occupying lofts that had once been warehouses and factories in that bleak area. Attracted by the spaciousness and the low rent (not so low any more), they originally sought these

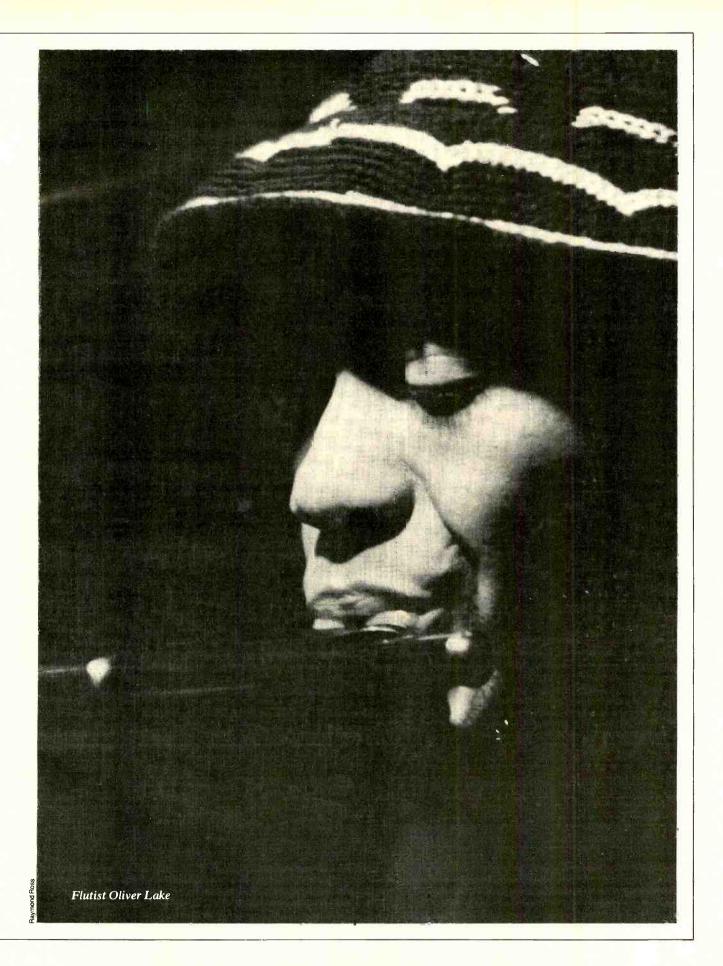
By Chris Albertson

lofts as residences, and, since they were located in a nonresidential area, musicians also found them ideally suited for rehearsals.

At first, the rehearsals and practice sessions were more or less private affairs, but when rock came of age in the late Sixties, and New York's jazz clubs dwindled to a precious few that hired only the well-established, marketable names, loft residents began inviting appreciative audiences to informal musicales. What they offered was mostly what came to be known as the "new music," a catch-all that covers a multitude of expressions having as a foundation the works of Ornette Coleman and John Coltrane, with considerable input from Chicago's outré AACM (Association for the Advancement of Creative Musicians).

Because these musical soirées quickly became popular, and because commercial outlets for this largely inaccessible music were limited, the Seventies saw more and more lofts turn into musician-owned and -operated clubs catering—with soul food and sounds not likely to be heard on the *Tonight Show*—to people for whom neither rock nor electronic crossover music nor even the polished sound of a Getz or Brubeck is the answer.

SUCH major record labels as MCA, Capitol, RCA, and Columbia have so far ignored loft music, making it necessary for many musicians to record and issue their own performances. This is an arrangement that tends to yield a more artistically satisfying product, but also one that—due to lack of promotion and almost nonexistent distribution rarely brings the artist a just financial remuneration. Now Douglas has released a five-album series entitled "Wildflowers: The New York Loft Jazz Sessions" containing twenty-two





performances recorded during seven evenings in the spring of 1976. All the recordings were made before a live audience at Studio Rivbea, a loft owned and operated since 1971 by saxophonist Sam Rivers and his wife, Bea, who also make it their home. While these recordings by no means form a complete picture of New York's slowly emerging underground jazz movement, there are enough catalytic figures involved in them to make this an important, worthwhile glimpse. Unfortunately, producers Alan Douglas and Michael Cuscuna have included in the set a few examples of this music at its worst. But perhaps even that is as it should be, for it is plain truth that all that shakes the rafters of the lofts is not profound.

Bassist Chris White-whose experiences in that big, commercial outside world include long stays with Dizzy Gillespie and Billy Taylor as well as stints with such veterans as Eubie Blake and Earl Hines-kicks off "Wildflowers 1" by laying down a solid foundation for the big-toned tenor of Kalaparusha (né Maurice McIntyre; exotic names are extremely popular with the loft crowd), whose Jays shows him to be more earthbound than most of his colleagues. There is more character to Ken McIntyre's glib alto runs and figures on New Times, which has the quartet's pianist, Richard Harper, and two percussionists stomping to a smart climax. The music of Harold Arlen isn't exactly loft material, but altoist Byard Lancaster, with Sunny Murray and the Untouchable Factor, gives Over the Rainbow an elasticized treatment of which even Dorothy herself might have approved. Rivbea proprietor Sam Rivers is a highly original and logical improviser whose artistry is well represented on several Impulse and Blue Note albums, but who is perhaps at his best on two superb duet recordings with bassist Dave Holland, recently released by the Improvising Artists label ("Dave Holland Sam Rivers," IAI 373843 and "Sam Rivers Dave Holland, Vol. 2," IAI 373848). In "Wildflowers" his soprano saxophone makes a feverish, stunning statement on *Rainbows*, which is as far removed from the Arlen tune as Soho is from Oz. Altoist Henry Threadgill's USO Dance gets phenomenal bass support from Fred Hopkins, ending the first album with shades of 1959, when Ornette Coleman (who has his own loft) shook the foundations of jazz by removing its chord structure.

■ "Wildflowers 2" gets off to a fine start with pianist Sonelius Smith's A Need to Smile, which Smith plays with a seven-piece group called Flight to Sanity. Regrettably, technical problems made it necessary to scrap the opening, but the salvaged eleven minutes show this to be a cohesive unit, and the solo work, by Smith and saxophonists Byard Lancaster and Art Bennett, is excellent. Equally fine is Ken McIntyre's Naomi, a tranquil, sensuous piece featuring his flute and more of Richard Harper's lyrical piano.

Reed player Anthony Braxton is currently perhaps the best-known player on the new-music scene and one of the few who is recorded with some regularity by a widely distributed label. He is capable of playing his instruments with conventional warmth and grace, but he often opts for the bizarre. The excerpt from his 73°-S Kelvin, included here, combines smooth alto runs with eargrating squeaks, grunts, and whines that-if the applause on the record is any indication-pleased the crowd at Studio Rivbea more than it did me. Braxton, an AACM alumnus, can be heard to far greater advantage on any of his five Arista albums.

Marion Brown's And Then They Danced takes up seven minutes of "Wildflowers 2," but the former Archie Shepp and John Coltrane sideman—whose own sidemen here, bassist Jack Gregg and conga drummer Jumma Santos, barely get a note in gives us but an alto exercise in tedium. Trumpeter Leo Smith and the New Delta Ahkri, a group that also features alto saxophone player Oliver Lake, end the second album on a more interesting note with *Locomotif No.* 6, a slightly disjointed piece of impressionism by pianist Anthony Davis.

■ Pianist Randy Weston is not someone one would identify with the new music, nor, for that matter, with the loft scene, but that is simply because of his success in the commercial world during the late Fifties and well into the Sixties (remember *Little Niles*?). Musically, Weston has always been advanced and eclectic. His *Portrait of Frank Edward Weston*, which also features his son Azzedin (the original "Little Niles") on conga, begins "Wildflowers 3" and offers striking proof that jazz does not have to forsake its roots to be au courant.

Much the same can be said of guitarist Michael Jackson's Clarity (2) and pianist Dave Burrell's Black Robert; the former contains some particularly impressive flute work by Oliver Lake, and the latter reflects the multitude of influences Burrell is fond of citing. Trumpeter Ahmed Abdullah's Blue Phrase is a boppish, Mingusy, throbbing piece that builds magnificently and contains excellent individual performances by the leader, saxophonist Charles Bracken, and guitarist Mashujaa, the whole propelled by one of the most hotly pulsating rhythm sections (drums and two basses) I've heard in a long time.

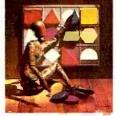
The calculated chaos of the album's final cut, an excerpt from *Short Short*, played by Andrew Cyrille and Maono, is less to my liking, but it has its points and should not really be judged out of context. Cyrille, whose diverse experience includes playing sideman to Nellie Lutcher as well as Cecil Taylor, is too often overlooked when drummers are being discussed.

■Just why and by how much Short Short was shortened by the producers is nowhere explained, but the six and a half minutes of Hamiet Bluiett's Tranquil Beauty that form the opening track of "Wildflowers 4" could have been put to better use. It's a slow, downhome blues on which Bluiett's clarinet captures the reedy New Orleans tone well, but both he and trumpeter Olu Dara fumble their way so badly through this most basic of jazz expres-









□ YES, please send me 1 year of STEREO REVIEW at the half-price rate of only \$4.99.

□ I prefer two years for only \$9.98. □ | prefer three years for only \$14.97.

Mr. Ms.		4\$45
Address		Apt.
City	State	Zip
Additional postage p	er vear: Canada — acht \$1 n	er vear. Countries out

HALF PRICE!

Auditional postage per year Contacta a table a regin year Contacta site U.S. Possessions, and Canada add \$5 – only cash orders payable in U.S. currency accepted. Prompi delivery – your first issue will be shipped 30 to 60 days from receipt of your order.

D Bill me

□ 4999 Send me 1 year of Popular Photography for \$5.99

For new subscribers only.

*Savings based on regular 1-year subscription rate of \$9.98.

First Class Permit No. 903 Boulder, Colo.

BUSINESS REPLY MAIL

No Postage Stamp Necessary if Mailed In the United States

Postage will be paid by

.

Stereo Review P.O. Box 2771 Boulder, Colorado 80321

sions that it almost has to have been deliberate. A brief baritone passage at the very end saves the track from total disaster, and if this is indeed an attempt to parody the music of stumbling, resurrected Crescent City veterans, I fail to see the purpose—*planned* mediocrity is something I think we can do without.

Pensive is an apt title for altoist Julius Hemphill's contribution to this series, and a fine contribution it is; cellist Abdul Wadud and guitarist Bern Nix give this piece a somewhat romantic aura, but there is a sardonic touch to Hemphill's melancholic statement, and the juxtaposition works. Alto saxophonist Jimmy Lyons (not to be confused with the West Coast jazz promoter) leads a quartet comprising bassoonist Karen Borca, bassist Haves Burnett, and drummer Henry Maxwell Letcher. Unfortunately, we are given only a little more than five minutes by this group, but Push Pull is five minutes well spent. Lyons is not well represented on records, but a fine example of his talent is to be found on a recent release of a 1969 Cecil Taylor concert, which also includes Sam Rivers and Andrew Cyrille ("The Great Concert of Cecil Taylor," Prestige P-34003, a threerecord set).

Oliver Lake reappears on "Wildflowers 4," this time as leader of a quartet that has Phillip Wilson on drums but otherwise is the same group heard on his excellent album "Holding Together" (Black Saint BSR 0009). Lake is an articulate player who early sought inspiration in the works of Paul Desmond and Jackie McLean, but he has since headed in his own direction along the free-form route. Zaki has him playing the alto in characteristic fashion. Ending the fourth album is Shout Song by David Murray, at twenty-three a relative youngster. Murray is a tenor saxophonist of considerable promise; in the three years since he arrived in New York from California, he has established himself firmly on the loft scene. Despite his age, he cites some of the great swing tenor men as his influences, but in two and a half minutes he barely gets off the ground.

Roscoe Mitchell and Sunny Murray share the fifth, and final, Wildflowers

album with one extended selection each. Murray's group, the same Untouchable Factor that does Over the Rainbow on "Wildflowers 1," shows more characteristic colors on Murray's own Something's Cookin', an emotioncharged seventeen-minute piece of intensity mounting to hysteria as seething saxophones seem to poke through bubbling rhythm. This sort of thing sounded fresh and exciting ten or fifteen years ago, when avant-garde was still an apt description for it. But if the "new music" doesn't start to move on soon, it will eventually find itself on the same treadmill that for years has held Dixieland music captive.

One direction that seems to lead nowhere is that taken by saxophonist Roscoe Mitchell, whose Chant ends the Wildflowers series on an excruciatingly boring series of notes. If Mitchell has mastered the technique of his instrument, I have yet to hear proof of it; this highly overrated founding member of the Art Ensemble of Chicago seems to be emulating a stuck record as he repeats his soft squeaks and loud, unimaginative figures ad nauseam. I have heard more music in gently swaying wind chimes, found greater profundity in a Rod McKuen poem. "Wildflowers 5" is the least satisfying volume of this otherwise interesting series.

To reiterate, there is more to New York's loft jazz scene than meets the ear in this five-album series. Such places as Studio Rivbea, the Ladies Fort, and drummer Rashied Ali's very successful Ali's Alley are giving jazz a new lease on life. By encouraging experimentation, they are helping to mold the young musicians who, we all hope, will be taking the music on to its next plateau.

As the Seventies draw to a close, the outlook for jazz in New York has improved. More and more small clubs, from Greenwich Village to the Upper West Side, now have a jazz policy, and many of them are hiring musicians who until recently found themselves relegated to the loft scene. So far, the lofts, too, are flourishing, but as they become viable businesses, there is always the danger that they will either spawn too *much* competition or simply lose the



NEW YORK LOFT JAZZ SESSIONS

Wildflowers 1. Jays (Kalaparusha); New Times (Ken McIntyre); Over the Rainbow (Sunny Murray and the Untouchable Factor, featuring Byard Lancaster); Rainbows (Sam Rivers); USO Dance (Air). DOUGLAS NBLP 7045 \$6.98.

Wildflowers 2. The Need to Smile (Flight to Sanity); Naomi (Ken McIntyre); 73°-S Kelvin (Anthony Braxton); And Then They Danced (Marion Brown); Locomotif No. 6 (Leo Smith and the New Delta Ahkri). DOUGLAS NBLP 7046 \$6.98.

Wildflowers 3. Portrait of Frank Edward Weston (Randy Weston); Clarity (2) (Michael Jackson); Black Robert (Dave Burrell); Blue Phase (Abdullah); Short Short (Andrew Cyrille and Maono). DOUGLAS NBLP 7047 \$6.98.

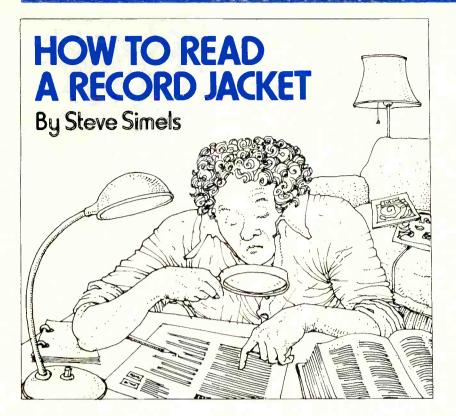
Wildflowers 4. Tranquil Beauty (Hamiet Bluiett); Pensive (Julius Hemphill); Push Pull (Jimmy Lyons); Zaki (Oliver Lake); Shout Song (David Murray). DOUGLAS NBLP 7048 \$6.98.

Wildflowers 5. Something's Cookin' (Sunny Murray and the Untouchable Factor); Chant (Roscoe Mitchell). DOUGLAS NBLP 7049 \$6.98.

character that has made them so valuable to the growth of jazz. Only time will tell, but let us hope that at least the strippers won't repeat their invasion of thirty years ago.



Some instrumentalists on the loft-jazz scene are, left to right (from facing page), Sam Rivers, Byard Lancaster, Sunny Murray, Anthony Braxton, Marion Brown, Randy Weston, and David Murray. (Photos are by Raymond Ross.)



NCE upon a time, in those faraway Days of Our Youth and Innocence when rock lyrics were looked upon as a form of literature roughly on a par with the stuff to be found in tattered old copies of Captain Billy's Whiz Bang . . . when the average rocker-assuming he knew how to spell-did not feel compelled to reproduce every bit of his deathless poesy on the inner sleeve of his latest stack o' wax . . . when the charts were dominated by Herb Alpert, The Sound of Music, and The First Fami*ly* . . . when album-cover art was 90 per cent cheesecake of the kind typified by Julie London kittenishly recumbent on a throw rug, some typing-pool Venus slathered with Instant Whip, or an anonymous Levantine dish abundantly décolletée in a Scheherezade suit, it didn't require a hell of a lot of intellectual moxie to dope out the credits on an average LP. Unless, of course, you were a functional illiterate (teenager) of the type railed against in *Life* magazine ("Why Johnny Can't Read, but Ivan Can!"), easily confounded even by something as simple as an artist's name, an album title, and (occasionally) a paragraph or two of fan-mag-style liner notes. Because that's about all you got.

This sorry state of affairs was hardly surprising, though, for several reasons, not all of which we need go into here.

One of them, however, was surely the fact that the pop LP was still being merchandised primarily as a useful adjunct to the hit single, a format whose tiny sleeve rarely permitted much more than a picture. But since pop music had not yet made the transition from High School to High Art, it didn't matter anyway. If only cretins listened to the stuff, as The Industry assumed, then it followed that only the brain-damaged would be interested in reading about who was responsible for creating it. Jazz records, of course, were the snobbish exception, usually as copiously annotated as original-cast Broadwayshow albums or full-fig classical efforts (although it is worth mentioning that some classical releases were conspicuously bereft of liner notes).

Still, like many of our most cherished institutions (the eight ways Wonder Bread builds strong bodies, the De-Soto convertible, and the House Un-American Activities Committee), the Album Cover as Vacant Lot has, since the Sixties, gone the way of the dinosaur and the complimentary cigarettes on airplanes. Today's LP's come replete with a numbingly extensive compendium of credits, blank verse, acknowledgments, biographies, dedications, in-jokes, lyrics, family snapshots, and so much general information that cover copy is frequently dense enough to recall a Modern Library edition of *Jean Christophe* or the complete works of Dickens in longhand.

That being the case, it is inevitable that the average consumer (as well as that functional illiterate referred to above) is often understandably confused as to what exactly was done, by whom, and even why on, let us say, the well-worn copy of "Frampton Comes Alive" that he or she is perusing during third-period study hall. In pop music, sadly, as in so many other contemporary pursuits, jargon (such as "custodial maintenance engineer" for "janitor") reigns supreme. To clear the air, unmuddy the waters, and uncloud the eye, then, I intend to supply forthwith a fair translation of some of the phrases frequently found lurking about the fronts, backs, sides, sleeves, and shrink wraps of these most potent of our current cultural icons. Bear in mind while reading that not once during the composition of this article did the author have occasion to avail himself of either an Aphex Aural Exciter or a state-of-the-art set of Synthidrums. I haven't figured out just what they are vet.

• PRODUCER: In that innocent era before Snooky Lanson was publicly humiliated by having to sing Rock Around the Clock on the Lucky Strike Hit Parade, records were made under the watchful, beady eyes of a Tin Pan Alley refugee known as an A-&-R (for "artist-and-repertoire") man who told the poor puppet of an artist what song to sing, how to sing it, and when he could go home after the session. With the advent of Peaceloveandflowers in the Sixties, Mr. A-&-R metamorphosed into something astounding, a groovy young dope-smoking guy who helped a group cope with the pressures of Total Creative Control and functioned as an equal partner in the creative process—say, Jimmy Miller as the sixth Rolling Stone. Today, as the Eighties hustle toward Los Angeles to be born and the concept of machine music makes its triumphant comeback, the producer has reverted to type somewhat: now he is a groovy young dope-smoking guy with beady eyes who tells the poor puppet of an artist what song to sing, etc.—say, Richard Perry as multi-platinum schlockmeister. All in all, however, be he hack, artiste, skilled technician, or visionary, his basic function is to sit in the control room and nod knowingly after the musicians have finished a take. Producers (and certain rock critics) like to think of the job as being akin to that of a film director-the Producer as Auteur, so to

speak. Be assured, though, that this is mostly nonsense. Consider: if George Martin's production was what really made the Beatles, how come his records with American Flyer are so bloody boring?

• **SYNTHESIZER**: An arcane electronic keyboard instrument that nobody—but *nobody*—ever plays during the recording of albums by Queen. Just ask them.

• CATERING: Since musicians are, on the average, just like everybody else, they suffer occasional Big Mac attacks as a result of their strenuous invocations of the muse, and more and more musicians are now plugging the eateries that relieve them. Chow's Kosherama catered Martin Mull's second album, while Southside Johnny and the Asbury Jukes "ordered out" from Stars' Deli, even though they don't stay open past eleven.

• ENGINEER: Most rock groups, owing to the sterile exigencies of contemporary recording techniques-Dolby, twenty-four-track consoles, Grammy Award nominations-spend endless hours of expensive studio time trying to re-create the raunchy sounds Link Wray achieved by accident in an illequipped garage in 1958. The engineer (or knob-twirler, as he is known in professional circles) is the man who either helps them in this ceaseless quest for sonic shoddiness (if he's creative) or, finding the whole prospect as repellant as a poke up the nose with a burnt stick (if he apprenticed on Maria Muldaur sessions), does his damnedest to make the lead guitar sound less like a Sherman tank gone berserk and more like a two-dollar plastic ukulele. Obviously, this makes him extremely important to a rock band, especially if they're at all green about record making. The best engineers-Glyn Johns, for exampleoften double as producers, which makes a great deal of sense . . . particularly for artists who don't relish the idea of screaming at two different bozos about that ukulele that has mysteriously found its way into their latest workin-progress.

• THE LONE ARRANGER: A Martin Mull-ism for the man (Keith Spring) who wrote the horn charts on his semihit *Dueling Tubas*.

• BACKGROUND VOCALS (not to be confused with *Guest Appearances*, which see): Any number of famous or not-so-famous celebrities (usually singers. although this is not a hard and fast rule) who drop by the studio to croon an occasional "ooh" or "aah" that will be intentionally buried by the surrounding din and all but inaudible when the record is completed. Liza Minnelli is credited as having appeared on Alice Cooper's "Muscle of Love," for example, but her enthusiastic Las Vegas warblings have remained undetected even by those masochists who've seen The Act more than once. This particularly odious form of cronyism was originally pioneered by Stephen Stills, who once not only recorded a chorus consisting of David Crosby, Graham Nash, Joni Mitchell, John Sebastian, and Mama Cass Elliot, but somehow managed to get them all to sound like clones of himself.

• GUEST APPEARANCES: Come in all sizes and shapes. In the case of vocalists, they are usually in the form of unlikely duets, as when Bob Dylan popped up unexpectedly on Bette Midler's version of his *Buckets of Rain*. With instrumentalists, we are often treated to pedestrian guest solos, a brilliant and famous exception being Eric Clapton's performance on the Beatles'

"The Album Cover as Vacant Lot has, since the Sixties, gone the way of the dinosaur and the complimentary cigarettes on airplanes."

While My Guitar Gently Weeps. For contractual (and other) reasons, many guest appearances are shrouded in a carefully calculated air of mystery; George Harrison has appeared as L'Arcangelo Misterioso, Al Kooper masqueraded briefly as the legendary Roosevelt Gook, and the Ramones, of late, have even passed as a rock-and-roll band.

• SPECIAL THANKS: A chance to pay back old debts, acknowledge friends from the neighborhood, send secret love notes, discreetly let your cocaine dealer know how much you appreciate the wonderful work he's doing, or get even with all those you passed on the way up. New York punk rockers Tuff Darts said it best on the back of their first album: "Thanks to nobody." • SPIRITUAL GUIDANCE: Similar to Special Thanks, only in this case it's a nod to your priest, rabbi, guru, or (in the case of John Lennon) analyst. Pioneered by the Grateful Dead, who still don't know any better, and now irredeemably passé.

• MIXING: After every one of those twenty-four tracks has been filled, whether they needed to be or not (by God, you pay your \$7.98, you better get your money's worth!), the producer, the engineer, and the group, if they've got a good lawyer, sit around for a leisurely six months (anything less is considered inappropriate to the proper superstar arrogance) and try to sort it all into some kind of finished product suitable for FM airplay, giant billboards on the Sunset Strip, and lipsynching on the Mike Douglas show. Many an album and many a friendship have been destroyed during this process, which has been aptly dubbed "mixing." Mott the Hoople organist Verden Allen, for example, upon hearing the final mix of the Hoople's third album and discovering that his solos were inexplicably missing, became so enraged that he broke producer Guy Stevens' jaw. Reactions like that have led to the latest technological breakthrough: computer mixing.

• SPECIFICATIONS: An obscure term, used only once in rock history, which describes the techniques and equipment used in the production of Lou Reed's two-record *musiqueconcrète* masterpiece, "Metal Machine Music" (better known as "Excedrin Headache CPD2-1101").

• TOM SCOTT: A virulent strain of musical flatulence, believed to have been perfected at Elektra/Asylum Records some time in the early Seventies, which has since afflicted innumerable chart-topping albums. The ailment is duly credited, and at times even its symptoms are described, but there's no known cure.

• GOPHER: Better known in record circles as Associate Producer, the gopher is that dedicated and underpaid individual who is on call to provide the artist with food, cocaine, Dom Perignon, caffeine, the latest issue of the *Hollywood Reporter*, cocaine, new strings, nicotine, phone numbers of high-price session men, cocaine, goodlooking groupies, Clive Davis' phone number, and cocaine. In the real world, his closest equivalent is the vice president of the United States.

Onkyo's exclusive Quartz-Locked The closest thing to perfect tuning

Guartz-Locked, Onkyo's unique tuning circuit, provides near perfect FM tuning and stability. You need both for best FM reception, no matter how good the rest of your aucio system may be. Ficture an electronic balance which de-

tests and corrects off-frequency condi-tions as fast as they happen. So fast, in fact, you never even know it is happening. That's Quartz-Locked.

Is done with a reference oscillator contoolled by precisely ground quartz crystal wh cr-by natural laws-vibrates at a

fied frequency. The reference frequency is Quart compared with the desired frequency. No malter what car, cause tuner drift, continual compensation pre-vents it. FM reception, clarity and separation are superb.

Quartz-Locked is controlled by the Sening Circuit nch reacts to your touch on the tuning knoh, unlocking Quartz-Locked so you can tune it; locking it wnanyoureleasette knob. Nothing is more odprocf.

Independent audio labs agree that it's practically impossible to mistune a Quartz-Locked system. We'll send you the reports to prove it. But you won't find a specification for Quartz-Locked or the Senary Circuit.



We suggess, men, you forget specifications and lis-

ten 🗇 Guartz-Locked FM at your Onkyo dealer. Onkyo has it in component tuners ard receivers. After you hear Guartz-Locked, you won't care about specifications.

Trats what Onkyo is all about. Listen-ing. The is why only On yo has Quartz-Loc ec tuning. See your Onkyo deale or write ici information and test reports on the Quartz-Locked system.

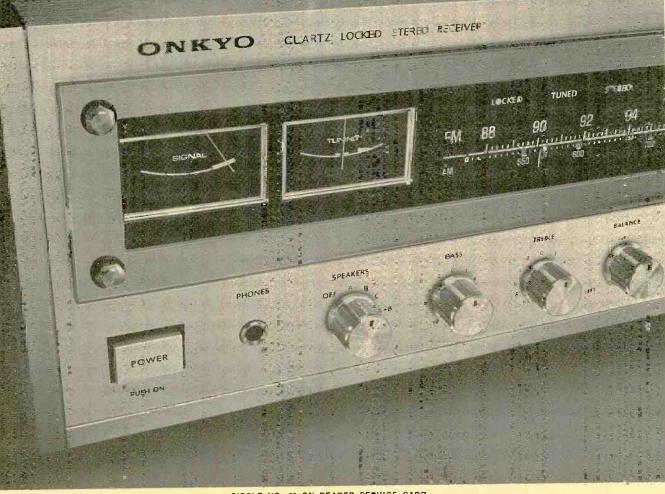
If you trust your ears you won't need anything else.

Artistry in Scurd



Eastern Office: #2-C2-201: Avenue "Long Island Oty - Y-11105-(212):723 - #33 Michael Office: 33: Svier Drive, Morid Dale=11, 60: 5: (312):598-2573 West East Distribution Orches: Damirk Indestries, 11:5,-20600 Notchod Street - 5 Dhatsworth, Calingride/1311:(2): >> 98:65Cl Canada Sole Distribution or Tel Associates Ltd, 2010 10, Canada



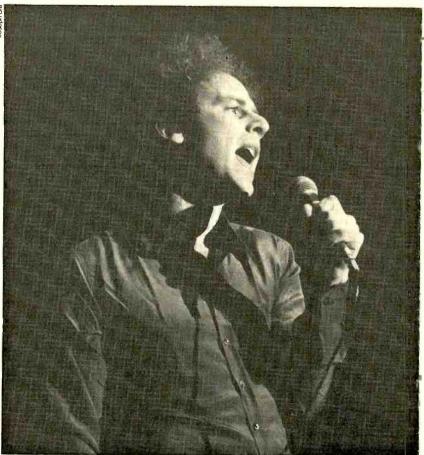




Quartz Crystal

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





Art Garfunkel in concert, February 1978

Garfunkel Sings Webb: A Fusion of Two Major Talents Produces an Album to Be Proud Of

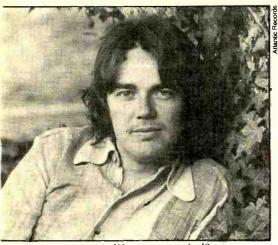
s Stanley found Livingstone, as Merman found Porter, as Warwicke found Bacharach, so Art Garfunkel has, happily, found Jimmy

Webb, for his new album, "Watermark," may well turn out to be a watershed in Webb's career. In it, with Webb himself hovering about on keyboards, Art Garfunkel sings eleven Jimmy Webb songs better than anyone else has so far. Garfunkel has exactly the right spare, intelligent vocal style for Webb's intense, deeply felt lyrics and the nonchalant but enormously secure musicianship the elusive music demands. In song after song Art Garfunkel brings to performing completion the work of one of America's best writers of popular music.

If there is a single high point in the album it is probably Garfunkel's performance of Webb's 1972 song Mr. Shuck 'n' Jive, in which the acid of the lyrics etches a portrait of an angry loser. Typical of Webb and his ability to zap you slyly when you least expect it are the lines "If you can get yourself together, kindly write a criticism of this song./ How it's exquisitely constructed, yet mechanical and somehow slightly wrong./Put it in your book about the enemy you never met." Of course this shaft is directed at Mr. Shuck 'n' Jiveor is it? Is it perhaps aimed at the alltoo-comfortable listener who was beginning to feel pretty good about his own superiority? Garfunkel manages to infuse these lyrics with a generous compassion that makes sense of, and gives heart to, the final lines, "You know, you just might make it yet, Mr. Shuck 'n' Jive.''

Another fine job is done on Crying in My Sleep, in which Garfunkel creates the fluorescent-light-burning-at-threeo'clock-in-the-morning atmosphere of emptiness and futility, all that is left of a burned-out love affair. But it is the fusion of the two major talents. Garfunkel and Webb, in everything that is done here that gives the album its glow. All My Love's Laughter and Watermark, two songs now a decade old, seem to be fresher than anything I've heard all year, and for these alone Garfunkel would deserve a large measure of our gratitude.

So, hurray for everybody-Garfunkel, Webb, and, most of all, the listen-er. "Watermark" is a truly distinguished effort [ignore if you can one puerile, non-Webb trifle from 1959 titled (What a) Wonderful World, sung for much, much more than it's worth by Garfunkel, Paul Simon, and James Taylor] and an album of which everyone involved can be enormously proud. Quality this high is hardly typical of the



JIMMY WEBB: a watershed?

pop scene, so I suggest that you grab it at once for your permanent collection. —Peter Reilly

ART GARFUNKEL: Watermark. Art Garfunkel (vocals); Jimmy Webb (keyboard); vocal and instrumental accompaniment. Crying in My Sleep; Marionette; Shine It on Me; Watermark; Saturday Suit; All My Love's Laughter; (What a) Wonderful World; Mr. Shuck 'n' Jive; Paper Chase; She Moved Through the Fair; Someone Else (1958); Wooden Planes. COLUMBIA JC 34975 \$7.98, [®] JCA 34975 \$7.95, [©] JCT 34975 \$7.98.

La Clemenza di Tito: Reincarnation For a Misunderstood Mozart Masterpiece

A CLEMENZA DI TITO is a late work of Mozart in the opera seria manner. It is often said to have been a failure, written in haste to satisfy a royal commission and already old-fashioned in its own day. Except for the fact that it was written quickly (nothing unusual for Mozart), most of this is untrue. The work became a success shortly after a mixed reception at its 1791 première (at the coronation of Leopold II as King of Bohemia). And it is perfectly clear that Mozart, working closely with his librettist Caterino Mazzola, transformed the old Metastasio libretto that came with the commission into something quite lively and contemporary. Recently the French director Jean-Pierre Ponnelle updated the work again by transferring

88

the locale from ancient Rome to the eighteenth century—apparently with considerable success.

Whatever one thinks of this operatic stepchild, it is certainly no conventional opera seria. The action, such as it is, is trimmed down to the classical verities: two acts with a highly dramatic first-act finale. The music similarly dispenses with all the old trimmings; introductions, elaborations, repeats, interludes, and postludes have been cut to the bone. Instead of the traditional, extended, and showy arias, there are ensembles of a psychological character as well as brief, intense solo numbers expressing inner states. In short, this is not in the old mold at all, but highly innovative. However, it must be admitted that not even Mozart's genius could make anything really dramatic out of the interaction of a collection of pasteboard characters. (It would be interesting to know what Ponnelle did to solve these problems.)

At any rate, in the great opera theater of the mind, the one that opens out opposite your speakers (or is it between your headphones?), these problems need not be troublesome. The tremendous brevity and incisiveness of this music—and, I must say, of this performance—themselves provide dramatic framework enough. The special qualities of the work emerge with great clarity; *Tito* is not at all the cold, neoclassic bore of its reputation, but precisely the opposite: a tense, fast-paced, passionate, pithy treatment of a cold and boring neo-classic subject!

Another hurdle for the modern listener is provided by the endless sound, however gorgeous, of female voices. Only Tito (a tenor) and the relatively unimportant Publio (a bass) are scored for males; all the other leads, male and female, are written for the universal eighteenth-century mid-range high voice. These parts, originally sung by women and castrati, all lie fairly well within the modern mezzo-soprano range. Any opera so tirelessly beset by mezzo-sopranos-even ones as richly voiced, talented, and individual as Janet Baker, Yvonne Minton, and Frederica von Stade-is bound to suffer a bit from lack of vocal color. And I have another complaint as well: there is an obvious lack of understanding on the part of these singers of even the most standard vocal ornaments of the period. Those ornaments are quite as necessary here as they would be in a lesser work-and they should be right. Mozart, of course, was a much greater composer and man of the theater than, say, Salieri, but the same singers performed the music of both according to the same conventions or traditions. Certainly I'll take a full-blooded reincarnation like this any day and never miss a few dropped apoggiaturas, but, then again, why can't we have both?

In every other respect, however, this new Philips set is superb both in performance and in recording. The great role of Sesto—originally a castrato part—is ably interpreted by the Australian mezzo Yvonne Minton. Janet Baker shows a good deal of passion—a quality not always associated with her beautiful and sometimes remote vocal sound—as Vitellia. Frederica von Stade is, in spite of a tight little vibrato, quite adorable in the role of Annio (apparently intended, like that of Cherubino, as a trouser role with the usual ambiguous sexual overtones).

Lucia Popp, a true soprano and a very different kind of singer from the other women, is stunning in the small role of Servilia. Stuart Burrows is a strong Tito and, along with Robert Lloyd as Publio, provides a welcome

Clemenza playback: mezzo-soprano Janet Baker and conductor Colin Davis



relief from all those sopranos. The playing is excellent under Colin Davis' strong direction. —*Eric Salzman*

MOZART: La Clemenza di Tito. Janet Baker (mezzo-soprano), Vitellia; Yvonne Minton (mezzo-soprano), Sesto; Stuart Burrows (tenor), Tito; Frederica von Stade (mezzosoprano), Annio; Lucia Popp (soprano), Servilia; Robert Lloyd (bass), Publio. Chorus and Orchestra of the Royal Opera House, Covent Garden, Colin Davis cond. PHILLPS 6703 079 three discs \$26.94, © 7699 038 \$26.94.

William Byrd's Musical World In a Rather Special but Rewarding Album

N the jacket cover of harpsichordist Christopher Hogwood's new recording (for L'Oiseau-Lyre) of William Byrd's collection of English virginal music known as My Ladye Nevells Booke there is reproduced a handsome portrait of a fourteen-year-old girl. The painting was done in 1589, the Booke in 1591, so the subject, Elizabeth Bruges (Brydges), daughter of Lord Giles Chandos, could have been Lady Nevell-but she wasn't. We don't know just who Lady Nevell was-a patron or a pupil of Byrd-but whoever she may have been, she brought into being one of the most exquisite collections of music ever written, copied out in one of the handsomest volumes ever made. But, sad to say, the thought of having

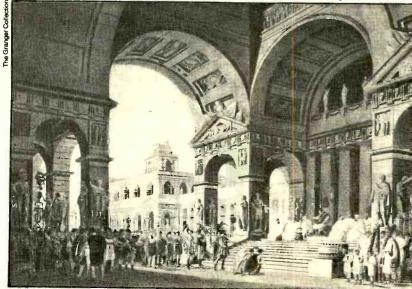


CHRISTOPHER HOGWOOD: virtuosity and a clear, uncluttered line

to listen to all of it at once (eight record sides) is more than a little grim. Having just done so, however, I would like to pass on a few words about the experience in order to encourage other listeners to brave it out as well.

The first two sides whet the appetite as one is introduced to the various musical genres (the stately pavans and galliards, subjective voluntaries, and lusty, folksy variations) and to the sounds of the instruments (virginals, Flemish and Italian harpsichords, and an English chamber organ). Once these sounds have been absorbed, there comes, I confess, a sort of dry spell. But suddenly, with side five, a miracle happens as the strains of Qui Passe begin to take shape. One then becomes totally absorbed in the world of William Byrd while everything else fades into the background. Every detail of his musical genius shines forth: shapely melodies, exquisite ornamentation and variation, opulent harmonies, bold

Model for a scene from La Clemenza di Tito as given in Frankfurt, 1795



rhythms, and ingenious counterpoint. Monotony is dispelled and each work takes on an individuality which causes one to *feel* (not merely to know factually) that "Guglielmo Bird, compositore inglese," was one of the finest keyboard composers of the Renaissance.

Christopher Hogwood's contribution to this experience is not a mean one. Technically, the music is fierce, but it holds no terrors for him. Also, he is perfectly at home on each of the instruments he plays and so can delineate its individual musical qualities. His approach is straightforward and strong: there is no fooling around with doubtful rhythmic alteration or bizarre articulation, but there is a flexibility of tempo and a sense of proper agogic accent that realize the music's expression. It should be noted that each work is played in one unchanged registration, so that the achievement of bringing it off is done not coloristically but through pure rhythmic control. Mr. Hogwood has also taken a definite stance on certain technical matters, such as the interpretation of the single and double slashes ubiquitous in scores of this school. Mr. Hogwood's reasoning makes sense and the result is a clear, uncluttered line rarely heard in performances of this music.

Obviously I recommend this album highly. True, it is *very* special, but I believe that dipping into it at first and then taking it in its entirety will prove a rewarding experience, one that might possibly get you into the world of the virginalists for the first time.

-Stoddard Lincoln

BYRD: My Ladye Nevells Booke. Christopher Hogwood (harpsichord and organ). L'OISEAU-LYRE D29D 4 four discs \$31.92.

(Continued overleaf)

Columbia's New Adriana Lecouvreur Surpasses The Previous Admirable Recorded Standard

A^N accident of history may have placed Francesco Cilèa (1866-1950) among the veristic composers chronologically, but the raw vigor of verismo was alien to his gentle, selfeffacing personality. He had neither Giordano's stirring dramatic power nor Mascagni's or Leoncavallo's flair for stark contemporary realism. If there is a stylistic influence in his Adriana Lecouvreur (a new recording of which has just been made available by Columbia), it is—in the lighter, mercurial episodes—that of Verdi's Falstaff.

Possibly swept along by Rudolf Bing's well-publicized reluctance to revive Adriana for Renata Tebaldi in 1963, several critics maligned it then, creating an aura of condescension that persists to this day. While never considering it a masterpiece, I have always regarded the work as a touching, colorful, effective, and ingeniously contrived opera, eminently worthy of periodic revival. Much of its worth relates to a faithful re-creation of a historical period (the Paris of Voltaire), though the libretto suffers from the necessary condensation of Scribe's fascinating original play into a libretto of workable length. As for Cilèa's score, we often find restatements of themes when fresh inspiration would have been more desirable, but the themes restated are invariably apt, insinuating, and lushly melodious. Given the right singers and a responsive conductor, Adriana can be exceptionally rewarding.

Happily, such is the case with the Columbia recording, which quite decidedly surpasses the London set (OSA 1311, still available), the version that has served this opera admirably for the past fifteen years. James Levine conducts the music with loving involvement, maintaining discipline over the rapid, intrigue-filled episodes while savoring the grand, expansive moments. Such dedicated leadership by a conductor of a generation supposedly out of touch with musical Romanticism certainly gives the lie to critical claims that we ought to bury operas of this sort.

The cast is just about perfect. Renata Scotto's Adriana is all loyalty, pride, defiance, jealousy, and despair, a tapestry of emotions convincingly realized in richly expressive colors and dramatic chiaroscuro. She handles the theatri-

cal declamation in the third act superbly, sings both her familiar arias with poignant simplicity, and brings an unforgettably haunting expression to the phrase "No, la mia fronte, che pensier non muta" in the final duet.

Placido Domingo's singing has more forward projection than I recall from his previous recordings. The inconsistency of Maurizio's character is an intrinsic flaw of the play, thus frustrating a unified dramatic interpretation, but vocally the part fits him perfectly and he portrays it with vibrant sound and soaring passion.

With so many mezzos on the brink of turning into sopranos, it is a joy to hear the sumptuous contralto-like timbre of an honest-to-goodness mezzo like Elena Obraztsova as the imperious and formidably evil Princess. Sherrill Milnes portrays the sympathetic Michonnet with distinction and a restraint that is appropriate to the character, and there are excellent contributions by tenor Florindo Andreolli and, especially, bass Giancarlo Luccardi.

I find the technical presentation outstanding in every respect, with a vividly effective employment of space and separation. A good English text by Glen Sauls and an informative essay by B. L. Scherer complete a triumphant presentation. —George Jellinek

CILÈA: Adriana Lecouvreur. Renata Scotto (soprano), Adriana Lecouvreur; Placido Domingo (tenor), Maurizio; Sherrill Milnes (baritone), Michonnet; Elena Obraztsova (mezzo-soprano), Princess de Bouillon; Giancarlo Luccardi (bass), Prince de Bouillon; Florindo Andreolli (tenor), Abbé de Chazeuil; Lillian Watson (soprano), Mlle. Jouvenot; Ann Murray (mezzo-soprano), Mlle. Dangeville; Paul Crook (tenor), Poisson; Paul Hudson (bass), Quinault. Ambrosian Opera Chorus; Philharmonia Orchestra, James Levine cond. COLUMBIA M3 34588 three discs \$23.98.

Jay McShann and Band: Performances to Stir The Soul and Make The Feet Stomp

"THE Last of the Blue Devils" does not have the intimacy of Jay McShann's last release, nor was it intended to, for in it McShann and Buddy Tate are joined by a full rhythm section plus trumpeter Joe Newman and saxophonist Paul Ouinichette, a member of McShann's band thirty-six years ago. The result is a strongly blues-flavored romp through some familiar territory. McShann, who is either sixty-two or sixty-nine years of age, lends his pleasant, slightly grainy voice to six of the ten selections, demonstrating that he could make it on his vocals alone. But he also happens to be an exceptionally fine pianist in the Kansas City tradition. Joe Newman, Buddy Tate, and Paul Ouinichette-all past members of the Count Basie band-are superb throughout, gently nudging such tunes as 'Fore Day Rider, Confessin' the

RENATA SCOTTO: a tapestry of emotions convincingly realized





JAY MCSHANN: among the last of a vanishing breed

Blues, and 'Tain't Nobody's Bizness If I Do, swinging fiercely on Blue Devil Jump and the old Basie flag-waver Jumpin' at the Woodside.

The album's title may have been inspired by Jay McShann's appearance in a rather dreary, ill-produced film of the same name, but it is misleading. The Blue Devils was a now-legendary orchestra from Oklahoma City that toured throughout the Midwest during the late Twenties and early Thirties; from it emerged such talent as Hot Lips Page and the nucleus of the Count Basie band-Lester Young, Jimmy Rushing, Eddie Durham, and Basie himself. McShann entered the musical arena in that area during the Blue Devils days. but he was never a member of the band. Nevertheless, Jay McShann is certainly among the last of a vanishing breed of musicians whose performances are designed to stir the soul and make the feet stomp-he and his venerable associates accomplish that full well in the generous forty-six and a half minutes of music contained in this album. -Chris Albertson

JAY McSHANN: The Last of the Blue Devils. Jay McShann (piano, vocals); Joe Newman (trumpet); Paul Quinichette, Buddy Tate (lenor saxophones); John Scofield (electric guitar); Milt Hinton (bass); Jackie Williams (drums). Confessin' the Blues; Hootie Blues; Tain't Nobody's Bizness If I Do; Blue Devil Jump; My Chile; Jumpin' at the Woodside; Just for You; Hot Biscuits; 'Fore Day Rider; Kansas City. ATLANTIC SD 8800 \$6.98.

"Endless Wire," Gordon Lightfoot's 'Different' Album, Is His Rockingest Yet

SINCE change is inevitable, it is important to some to try to get through it gracefully. Gordon Lightfoot imparts hope and sets a good example in that difficult exercise. He has changed considerably over the years, but always gradually, ever gracefully. His new Warner Brothers album "Endless Wire" is a departure of sorts, but only to about the same degree that "Old Dan's Records" was in its time. The new one, quantitatively measured-by the amplification of instruments and the nature of such songs as I Don't Mind, If There's a Reason, and the verse (but not the chorus) of Endless Wire-is his rockingest album yet. But it is really no more Rock than his Nashville one, "Summer Side of Life," was Country.

Lightfoot's other abiding interests, including his feel for the working class and working-class settings, his fondness for narratives, and his preoccupation with the loved one who got away, are all in this one too. His songwriting is everywhere crafty and in spots exceptionally bright. Daylight Katy is a wonder, actually two seemingly un-

GORDON LIGHTFOOT: inevitable change over the years

related kinds of song successfully combined, and the title song's chorus snares your mind from the straightahead rock mode of the verse and gives it a little snap. The Circle of Small, which I believe he's had around for a while, is the kind of song you hear and then say, "Now why wasn't that written ages ago?" It's a natural, as if it's been hanging there in the air for years and Lightfoot was the first one smart enough to pluck it.

Overall, the album is "different," but, as I said, it's a gradual and graceful difference. Some time back he added a steel player—a particularly stylish one—in Pee Wee Charles. A little later he added an electric guitar as a major instrumental voice, but the people who *play* the electric guitar for him are Red Shea and Terry Clements, who've been his pals for years. So the sound his records have now has its own set of roots. It makes everyone involved, especially the listener, feel a little more secure about any more changes that might be on the way. *—Noel Coppage*

GORDON LIGHTFOOT: Endless Wire. Gordon Lightfoot (vocals, guitar); Terry Clements (guitar); Tom Szczesniak, Rick Haynes (bass); Pee Wee Charles (steel guitar); other musicians. Daylight Katy: Sweet Guinevere; Hangdog Hotel Room: If There's a Reason; Endless Wire: Dreamland; Songs the Minstrel Sang: Sometimes I Don't Mind; If Children Had Wings: The Circle Is Small. WARNER BROS. BSK 3149 \$7.98, (§) M8 3149 \$7.97, (©) M5 3149 \$7.97.



Reviewed by RICHARD FREED • DAVID HALL • GEORGE JELLINEK • PAUL KRESH STODDARD LINCOLN • ERIC SALZMAN

P.D.Q. BACH (see PETER SCHICKELE)

BARBER: Piano Concerto, Op. 38. COP-LAND: Piano Concerto. Abbott Ruskin (piano); M.I.T. Symphony Orchestra, David Epstein cond. TURNABOUT \Box QTV 34683 \$3.98.

Performance: Good solo work Recording: Poor

Samuel Barber's 1962 Piano Concerto, for all the brilliance of its solo writing and the craftsmanship lavished on its musical architecture, does not, for me, jell as a totality. I hear echoes in it of the First Symphony's dramatic rhetoric, the Violin Concerto's lyricism, and the Dance of Vengeance from Medea, but no genuine synthesis, either in this well-played new version or the very formidable decadeold one with John Browning (who gave the world première) and George Szell conducting the Cleveland Orchestra.

The youthful Copland concerto, on the other hand, remains superb entertainment, vital and striking in the declamatory-lyrical first part and exhilarating in the jazzy second part. Here I had the marvelous Bernstein/New York Philharmonic collaboration with Copland at the piano, done for Columbia, to compare with the Turnabout disc. Despite the brilliance and drive of Abbott Ruskin's pianism (which is even more evident in the Barber) and the brave efforts of David Epstein's M.I.T. players, there is no serious rivalry to

Explanation of symbols:

- \mathbf{R} = reel-to-reel stereo tape
- (1) = eight-track stereo cartridge
- \mathbf{C} = stereo cassette
- \Box = quadraphonic disc
- \mathbf{R} = reel-to-reel quadraphonic tape
- \mathbf{B} = eight-track quadraphonic tape

Monophonic recordings are indicated by the symbol \boldsymbol{W}

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

the Columbia version. On the Turnabout disc, obtrusive room coloration muddies up a good deal of the close-textured piano writing in the Barber and is exacerbated in the Copland by a lack of presence for the solo instrument. Better recording production work might have achieved happier results. D.H.

BEETHOVEN: Mödlinger Tänze (WoO 17); March in B-flat Major (WoO 29). Consortium Classicum. Deutsche Tänze (WoO 42). Werner Grobholz (violin); Werner Genuit (piano). Ländlerische Tänze (WoO 15). Werner Grobholz, Dietmar Forster (violins); Hellmar Stiehler (cello). Duo in G Major (WoO 26). Robert Dohn, Renate Greiss (flutes). TELE-FUNKEN 6.42133 \$7.98, © 4.42133 \$7.95.

Performance: Ingratiating Recording: Very good

This is Volume III in Telefunken's series of Beethoven dances. Volume I (6.41935, © 4.41935) comprises twenty-four minuets, and Volume II (so far issued here only in cassette form, © 4.41996) is devoted to the contredanses, the orchestral German dances (WoO 8), the Triumphal March from the music to Kuffner's Tarpeia, and the Minuet of Congratulations-all performed by the Philharmonia Hungarica under Hans Ludwig Hirsch. This newest (and presumably final) installment forsakes the orchestra in favor of more intimately scored pieces-and more tasteful interpretations. Here the Mödling (or Viennese) dances are played by a septet made up of two violins, double bass, and various winds; the waltzes, minuets, and Ländler that make up this cycle, though, are not given in their original sequence-not that that matters much. The one-minute march is the reasonably familiar one for pairs of clarinets, horns, and bassoons. While virtuosity is not the point in this material, the performances are all quite stylish; everything is carried off with an appealing blend of sweetness, crispness, and good humor, and the recorded sound is very good indeed. R.F.

BLOCH: Sacred Service (Avodath Hakodesh). Douglas Lawrence (baritone); Rabbi Abner Bergman (speaker); Utah Chorale and Utah Symphony Orchestra, Maurice Abravanel cond. ANGEL \Box S-37305 \$7.98.

Performance: Authoritative Recording: Good

Maurice Abravanel's credentials as an authoritative interpreter of the music of Ernest Bloch were presented some time ago in the form of his fine Vanguard Cardinal disc of Schelomo (with Zara Nelsova) and the Israel Symphony (VCS-10007). This new recording of the Sacred Service for Sabbath Morning, obviously prepared with a great deal of loving care, is well conceived, deepfelt but never overindulged, and quite appealing in its own right. There is, however, the fervent Bernstein recording to be reckoned with (Columbia MS 6221). While Abravanel needn't yield to Bernstein in the matter of conviction, it must be said that the New York Philharmonic, the New York choruses (drawn from both a synagogue and a church), and, most of all, the rock-firm, commanding Robert Merrill as baritone soloist are much more impressive than their Utah counterparts. Sonically, too, the eighteen- or nineteen-year-old Columbia recording strikes me as at least the equal of the new Angel, with greater clarity and impact at almost every point. R.F.

RECORDING OF SPECIAL MERIT

BRETAN: Ten Romanian Songs; Six Hungarian Songs. Ludovic Kónya (baritone); Ferdinand Weiss (piano). ADVENT 5016 \$7.98.

BRETAN: Nine Romanian Songs; Nine Hungarian Songs. Ludovic Kónya (baritone); Martin Berkofsky and Ferdinand Weiss (pianos). MUSICAL HERITAGE SOCIETY MHS 3572 \$4.95 (plus \$1.25 handling charge from Musical Heritage Society, Inc., 14 Park Road, Tinton Falls, N.J. 07724).

Performances: Excellent Recordings: Good

Nicolae Bretan (1887-1968), a prolific Romanian composer of vocal music, is not one whose name is likely to be greeted with familiarity away from his native land. As a matter of fact, he seems to have suffered neglect even there until recently. These recordings, produced under the supervision of the composer's daughter, Dr. Judith Bretan Le Bovit, may now lead to some belated recognition of this gifted musician.

Two facts about Bretan are essential to the understanding of his art. First, he was a native and lifetime resident of Transylvania, that much-disputed border province with its mixed Hungarian-Romanian-German cultural and linguistic traditions. Second, he was a singer, a prominent baritone, and one-time manager of the opera house at Cluj, capital city of Transylvania. These two recitals combine Hungarian and Romanian poetic settings, invariably created with the skill of a composer who thoroughly understands the singing voice.

But there is more to be said in Bretan's favor. His settings are always appropriate in subject and mood. If the Romanian songs (to texts by such poets as Mihail Eminescu and Gheorghe Cosbuc) are more effective, it is because they are generally lyrical, pastoral, nature-inspired creations, with a direct appeal. Many of the Hungarian songs are based on the solemn and pessimistic texts of Endre Ady (poet of Bartók's Op. 16 cycle). They are severe, declamatory, and less likely to meet with a similar direct response. Unfortunately, the producer chose to alternate the Hungarian and Romanian songs in what appears to be a haphazard sequence instead of striving for some unification and continuity. But this is my only real criticism of these records.

Bretan's songs are emphatically vocal, with uncomplicated piano accompaniments—at times chordal, at other times with the right hand doubling the vocal line. His idiom is an amalgam of German, French, and Italian styles enriched by folkloric allusions. Harmonically he is firmly rooted in the world of Schumann, Gounod, and Verdi, hardly ever bringing to mind the vocabulary of Wolf or Fauré. And yet, in the full knowledge that these songs belie their twentieth-century origin, I do not hesitate to recommend them to song enthusiasts and to praise their melodic attractiveness and word-setting mastery.

Baritone Ludovic Kónya (no relation to tenor Sándor Kónya) sings with profound understanding of the poetic texts, sensitivity, lovely tone quality, and a beguiling mezza voce. His pronunciation is also exemplary. The piano accompaniments are excellent. The miking is close, with clear and warm sonics, but some of the song endings are cut off too abruptly. *G.J.*

BYRD: My Lady Nevells Booke (see Best of the Month, page 89)

CHAUSSON: Poème, Op. 25 (see SAINT-SAËNS)

RECORDING OF SPECIAL MERIT

CHOPIN: Scherzos: No. 1, in B Minor, Op. 20; No. 2, in B-flat Minor, Op. 31; No. 3, in Csharp Minor, Op. 39; No. 4, in E Major, Op. 54. Shura Cherkassky (piano). HNH 4022 \$7.98.

Performance: Elegant Recording: Excellent

It is good to have Shura Cherkassky recording again; his discography has never been very large, and it has been too long a time since there were any additions to it. I have been hoping for years that he might get around to redoing the two big Tchaikovsky concertos (with the Second perhaps uncut this time), but, frankly, I had not thought in terms of Chopin. On a Deutsche Grammophon record. of the polonaises, issued in Europe eight or nine years ago but apparently never in this country, Cherkassky's playing was inconsistent-sections charged with poetic insight alternating with others disappointingly stiff or superficial. In the four scherzos, however, he offers nothing but pleasure of the deepest sort. He seems to breathe the music, with an elegant spontaneity and aristocratic clarity beautifully matched to the works' own character. Indeed, this is one of those records where everything is so right that there seems little point in trying to catalog virtues. The recording itself (produced by Tudor in Switzerland, mastered for HNH by Robert Ludwig) is of demonstration quality, and Peter Eliot Stone has provided exceptionally thoughtful annotation. I would not like to have to choose between this and the similarly excellent versions of the scherzos played by Vladimir Ashkenazy on London CS 6562 and Antonio Barbosa on Connoisseur Society CSQ 2071. It may be noted, though, that both Ashkenazy and Barbosa are a little broader of gesture than Cherkassky (also somewhat less crisply recorded). R.F.

CILÈA: Adriana Lecouvreur (see Best of the Month, page 90)

(Continued overleaf)

The Joys of Purcell





ONE of the joys of the early days of earlymusic-making in New York City was the combined musicianship of countertenor Russell Oberlin and tenor Charles Bressler. When they stopped performing together, no one ever quite replaced them. That is, until now. A new Nonesuch disc of airs and duets by Henry Purcell introduces the team of Jeffrey Dooley and Howard Crook, and they come as close as perhaps anyone could to reproducing the splendors that Oberlin and Bressler created together.

Unlike Oberlin, Dooley is a falsettist, and Crook's voice is somewhat lighter than Bressler's. But the important thing is that each voice is beautifully produced, and, while their individual timbres are easily distinguished, the blend is superb. The listener is able to follow either line separately and still enjoy the exquisite ensemble. Both singers have a supple coloratura and know how to toss it off lightly without destroying a musical phrase; both have excellent diction and a sensitive approach to textual meaning and word coloration. The result is breathtaking.

The instrumental support on the record is artfully done: pitches and rhythms are secure, and everything is clearly articulated. Edward Brewer's harpsichord playing deserves a spe-



Jeffrey Dooley

cial mention; his continuo realizations are imaginative and complement the vocal lines without ever intruding on them. Do get this record—and hope that these artists will give us a little more of the same soon.

-Stoddard Lincoln

PURCELL: Airs and Duets. The Fairy Queen: Let the Fifes and the Clarions; Hark! The Ech'ing Air; One Charming Night. Love's Goddess Sure: Sweetness of Nature; Many. Many Such Days. Welcome to All Pleasures: Beauty, Thou Scene of Love. Hail, Bright Cecilia. In Vain the Am'rous Flute. Come Ye Sons of Art: Sound the Trumpet. Lord, What Is Man? Fly, Bold Rebellion: Be Welcome, Then, Great Sir. Thesaurus Musicus, Book V: Lovely Albina's Come Ashore. If Ever I More Riches Did Desire: Here Let My Life; Me, O Ye Gods. Deliciae Musicae, Book II: If Music Be the Food of Love. Arise My Muse: Hail, Gracious Glorianna, Hail. Pleasant Musical Companion, Book III: Saccharissa's Grown Old. Jeffrey Dooley (countertenor); Howard Crook (tenor); David Carp (recorder); Dennis Godburn (recorder, bassoon); Louise Shulman. Daniel Reed (violins); Mary Springfels (viola da gamba); Edward Brewer (harpsichord). NONESUCH H-71343 \$3.96.



DONIZETTI: L'Elisir d'Amore. Ileana Cotrubas (soprano), Adina; Placido Domingo (tenor), Nemorino; Ingvar Wixell (baritone), Belcore; Sir Geraint Evans (bass), Bulcamara; Lillian Watson (soprano), Giannetta. Orchestra and Chorus of the Royal Opera House, Covent Garden, John Pritchard cond. Columbia M3 34585 three discs \$20.98.

Performance: Good Recording: Excellent

Donizetti's captivating comic opera L'Elisir d'Amore has not lacked effective representation on records since the advent of the LP. There have been five "complete" recordings so far, and while only one of them came close to uniform excellence (a London version now reissued as Richmond 63524), the others all managed to surpass routine competence. Columbia's addition joins the ranks of the latter group. It is enhanced by rich and gleaming sound, and it is lively and quite enjoyable.

Chorus and orchestra are joined in a well-prepared performance under John Pritchard's neat, precise, and sympathetic leadership. The recording was made during the opera's recent Covent Garden staging, and it has almost the same cast (José Carreras sang the role of Nemorino at Convent Garden). In all likelihood, the unevenness of the cast was less evident in the stage performance: physical attractiveness, liveliness of action, and histrionic skill can go a long way toward smoothing out the edges of rough vocalism. Records, on the other hand, have a way of spotlighting such matters.

In any case, there are praiseworthy contributions from Ileana Cotrubas and Placido Domingo. The soprano offers a charming, intelligently characterized minx of an Adina, on the impressive vocal level previously attained by Hilde Gueden (Richmond) and Mirella Freni (Angel), but in no way exceeding it. The tenor is in his usually pleasing and dependable form, though at this stage of his career I find his tone a shade too heavy for Nemorino, a role that calls for more delicacy in phrasing and a lighter, more malleable stream of sound. In the bit role of Giannetta, Lillian Watson is better than most of her recorded competitors.

With the low voices comes disappointment. First-rate singing actors that they are, Ingvar Wixell and Sir Geraint Evans project vivid and stage-wise characterizations: a blustery peacock of a Sergeant Belcore and a resourcefully larcenous yet lovable Dulcamara. But, unfortunately, neither artist displays the pure and centered Italian sound Donizetti had in mind for this music.

Technical excellence and completeness are the solid virtues to weigh here against those of the Richmond set, in which the singing is earcaressing but there are minor cuts and signs of sonic aging. I should also point out that London 13101 has the superb Nemorino of Luciano Pavarotti and the far from ideal but still extraordinary Adina of Joan Sutherland. It is complete, excellently conducted and recorded—but again with a Belcore and Dulcamara who are unsatisfactory. *G.J.*

FAURÉ: Impromptu No. 5, Op. 102; Nocturne No. 13, Op. 119 (see LISZT)

GIULIANI: Guitar Concerto No. 2, in A Major, Op. 36; Guitar Concerto No. 3, in F Major, Op. 70. Pepe Romero (guitar); Academy of St. Martin-in-the-Fields, Neville Marriner cond. Phillips 9500 320 \$8.98, © 7300 598 \$8.98.

Performance: Expert Recording: Quite good

These are Giuliani's "other" guitar concertos, the one we always hear being No. 1, in A Major, Op. 30. That work, well represented on records, is a real charmer; its two successors, I would think, are to be enjoyed primarily by the most devoted aficionados of the instrument. The Second Concerto, which runs on for fully thirty-two minutes, is pleasant enough but offers nothing really memorable, and almost all of the color is supplied by the guitar itself, with the orchestra made up of strings alone. The Third, evidently modeled after the late piano concertos of Mozart, is a little shorter and a little more appealing, thanks in large part to effective use of a flute. timpani, and pairs of oboes, clarinets, bassoons, horns, and trumpets. The expert performances are all anyone could ask, and the recorded sound is quite good. RF

HINDEMITH: Sonata for Double Bass and Piano. Gary Karr (double bass); Harmon Lewis (piano). Three Pieces for Five Instruments. Julian Spear (clarinet); Malcolm McNab (trumpet); Israel Baker (violin); Buell Neidlinger (double bass); Zita Carno (piano). Suite "1922," Op. 26. Zita Carno (piano). GSC 6 \$6.98.

Performance: First-rate Recording: Good

GSC is a West Coast record company operated by three musicians who take part in the recordings (Julian Spear, the clarinetist in this performance of the Three Pieces, is the "S" of the group); its catalog so far seems to be limited to Hindemith's chamber and solo works, of which this disc constitutes Volume 6. The Three Pieces may well be appearing on records for the first time with this release. Both the other works offered here are also included in the Da Camera Hindemith series issued by the Musical Heritage Society, but the new performances outshine those versions and GSC's sound is much brighter too. All three of the performances gathered here are first-rate, as the names of the performers would suggest, and the recording is quite good. An attractive and valuable package.

R.F.

RECORDING OF SPECIAL MERIT

LISZT: Sonata in B Minor. FAURÉ: Impromptu No. 5, Op. 102; Nocturne No. 13, Op. 119. Vladimir Horowitz (piano). RCA ARL1-2548 \$7.98, (a) ARS1-2548 \$7.98, (c) ARK1-2548 \$7.98.

Performance: **Best Liszt** Recording: **Fine**

Liszt and Fauré may appear to be strange bedfellows, but Vladimir Horowitz plays the intimate and reflective music in the Liszt—and there is a great deal of such music in the B Minor Sonata—with the same delicacy and poetry that he brings to Fauré. Indeed, the avoidance of rhetoric is a hallmark of this performance; for simple, poetic fantasy and depth of feeling, it is clearly ahead of most of the competition. Not that Horowitz neglects the (Continued on page 96)

Until the Sound Guard record care work pad, one side of your record could take a beating while you were caring for the other.

A paper towel that could scratch. A piece of velvet that slips. A cloth of any kind that leaves telltale lint.

Until now, that's all you've had to lay your record on when you wiped, sprayed or buffed it.

Now you've got some-





The pad protects one side of your record while you're working on the other. The pad holds the record gently in place for buffing or wiping.

thing that takes care of one side of your record while you're working on the other side. It's non-conductive to resist picking up particles the other side of your record-or onto your furniture. Wash off your record care

from dirty records. It's not

a fabric, so it has no lint to spread around. And it's non-

abrasive to avoid

won't run over to

scratching and slipping when you're buffing.

nels give you another

advantage. They collect any excess fluid so it

Its ingenious chan-

work pad, when you have to.

Use it as you're meant to, and your records will never take another beating.

Like all Sound Guard products, the Sound Guard record care work pad is sold in audio and record outlets.



Sound Guard[®] keeps your good sounds sounding good.

Sound Guard® preservative – Sound Guard[™] cleaner – Sound Guard[™] Total Record Care System – Sound Guard record care work pad Sound Guard is Ball Corporation's registered trademark. Copyright © Ball Corporation, 1978. Muncie, IN 47302 CIRCLE NO. 13 ON BEADER SERVICE CARD



John Browning's "Pictures"

T is astounding, perhaps even alarming, that so fine a pianist as John Browning has done so little recording of late, and it was most enterprising of Delos Records to snare him for an imaginatively assembled collection of music by Modeste Moussorgsky. The major work is the Pictures at an Exhibition, in a version Browning himself produced as a result of hearing Vladimir Horowitz's unpublished arrangement and after "careful study" (as he says in a modest jacket note) of both the Ravel orchestration and Pavel Lamm's authoritative edition of Moussorgsky's original. Browning's revisions consist of "occasional doublings, changes of register, and coloristic embellishment," as well as "a contrapuntal augmentation of the Promenade motif" in The Great Gate of Kiev. It is a superb performance-quite grand in scale, utterly convincing in every section, and very well reproduced. I think I prefer it to any other piano version now available, including Sviatoslav Richter's remarkable 1958 live recording from Sofia (Odyssey W Y 32223), the allure of which is reduced by muffled sonics.

Browning's disc is filled out by an apparently unique recording of Moussorgsky's intriging two-movement Sonata for Piano Duet (with Browning taking both parts via overdubbing), plus the early *Impromptu Passione* and both the composer's own and Rachmaninoff's arrangements for solo piano of the celebrated Hopak from *The Fair at Sorochinsk*. The album is a winner on all counts, I think, and is just possibly the piano record of the year.

-Richard Freed

MOUSSORGSKY: Pictures at an Exhibition; Sonata for Piano Duet; Hopak (two versions); Impromptu Passione. John Browning (piano). DELOS DEL-25430 \$7.98.

darker forces of strength and demonism, for here they are twice as powerful for being set against a surprising gentleness and a passionate lyricism.

I much prefer Liszt's passion to Fauré's cool, but Horowitz, the quintessential lyric artist, could mine poetry out of a Czerny exercise. Actually, the Fauré Nocturne No. 13 is a late work charged with a great deal of emotion not very far beneath the surface. Horowitz has the best surface in the business, but, never content to leave it at that, he has pushed beneath to produce a very persuasive advocacy for this rare work—as well as a tremendous version of the familiar Liszt. E.S.

MOZART: La Clemenza di Tito (see Best of the Month, page 88)

RECORDING OF SPECIAL MERIT

ORFF: Trionfo di Afrodite. Isabella Nawe, Renate Krahmer, Regina Werner (sopranos); Eberhard Büchner, Horst Hiestermann (tenors); Karl-Heinz Stryczek (baritone); Reiner Süss (bass); Radio Chorus, Leipzig; Radio Chorus, Berlin; Radio Symphony Orchestra, Leipzig, Herbert Kegel cond. PHILIPS 9500 150 \$8.98.

Performance: First-rate Recording: Superb

Carl Orff's ritual theater triptych beginning with Carmina Burana and continuing with Catulli Carmina reaches its true culmination in the Trionfo di Afrodite. This work celebrates life's fulfillment as symbolized by a stylized Graeco-Roman wedding ceremony, with texts drawn from Catullus, Sappho, and Euripides (a paean to Aphrodite from the surviving fragment of his tragedy *Philoctetes*). Such being the literary sources, Philips should certainly have provided texts and translations, but that is one of the few reservations I have about this record.

In many respects Trionfo di Afrodite is the part of the triptych that wears best through repeated hearings. The song and dance elements are beautifully balanced and the use of melisma-so characteristic of the Mediterranean melodic style-is extremely artful throughout. The work runs the gamut from the fun and games enjoyed by the wedding guests to the ecstatic intimacy of the bridal pair to a concluding orgiastic outburst of the entire assembly under the spell of "all-powerful Aphrodite." Tremendous demands are made on the soloists and choruses alike, and they are backed up by a huge and varied orchestra augmented by guitars, pianos, and some two dozen percussion instruments.

Around two years ago Herbert Kegel and his East German forces gave us, also on Philips, an altogether enthralling realization of *Catulli Carmina*, and that feat is repeated here on a far grander scale. The bass soloist in the 1974 Supraphon recording does score some points over his Leipzig counterpart, Reiner Süss, in the elaborate spoken passages in Section V, but the more exuberant Philips performance is decidedly superior overall and the recorded sound is superb. D.H. PURCELL: The Indian Queen; Masque, from Timon of Athens. Honor Sheppard, Jean Knibbs (sopranos); Alfred Deller, Mark Deller (countertenors); Paul Elliott, Malcolm Knowles (tenors); Maurice Bevan (baritone); instrumental soloists; Deller Choir; The King's Music, Alfred Deller cond. HNH 4035/6 two discs \$15.96.

Performance: Gentle Recording: Lovely

The Indian Queen (not to be confused with The Fairie Queen) was a thunderous Restoration spectacle about the Incas and the Aztecs. It was written by John Dryden and Sir Robert Howard in 1664 and revived in 1695 with music by Purcell. Such epics as this one, although called operas, made extensive use of music only in certain scenes: generally formal masques, celebrations, supernatural scenes, and the like. The masque from *Timon of Athens* was a similar sort of enterprise: a selfcontained, mildly dramatic scene—a confrontation between the followers of Cupid and those of Bacchus—inserted in a Restoration version of Shakespeare's potboiler.

In spite of the unlikely and artistically confining circumstances, these "incidental" scores contain some of Purcell's most beguiling music, and a good deal of it is in the album at hand. Purcell was careful to keep his theater music in his clearest, most popular style, but his artistic and theatrical instincts constantly take the lead and lift the music up to the highest plane. This is an unbeatable combination in theater music; one only wishes that there was some way to get these scenes onto the contemporary stage.

In lieu of that, a recording can serve as our Theater of the Mind's Eye, and this one almost fills that bill. It was lovingly prepared by Alfred Deller, who appears here primarily as a conductor, leaving most of the singing to others. The voices are beautiful and elegant. My only complaint is that the whole thing is suffused by a certain delicacy, a gentle, languishing tone that I cannot believe is fully apt for the very popular and theatrical character of the music. It is only time that retroactively puts qualities of fragility and tastefulness into music whose strengths are, in great part, directness and vigor. With this reservation, I still recommend the disc as a whole, particularly the Timon of Athens music, which I had not heard before and which is an utter delight from beginning to end. Oh yes, the contest between love and wine is a standoff. ES

RACHMANINOFF: Symphony No. 3, in A Minor, Op. 44. Aleko: Intermezzo; Women's Dance. London Symphony Orchestra, André Previn cond. ANGEL □ S-37260 \$7.98, © 4XS-37260 \$7.98,

Performance: Volatile Recording: Good

RACHMANINOFF: Symphony No. 3, in A Minor, Op. 44; The Rock, Op. 7. Rotterdam Philharmonic Orchestra, Edo de Waart cond. PHILIPS 9500 302 \$8.98, © 7300 596 \$8.98.

Performance: Lyrical

Recording: Very good

Given these two latest recordings, Stokowski's high-powered 1975 reading for the Desmar label, and the two Philadelphia Orchestra versions—one with Ormandy, the other with the composer himself—there can be no com-(Continued on page 98)

We're rather well-known for our expensive amplifiers and tuners. Now we'd like to be known for our less expensive ones.

When LUX Audio products were introduced to the U.S. in late 1975, we had already played a leading role in Japan electronics for more than five decades. And our audio components had enjoyed an enthusiastic following in Asia and Europe for many years.

Thus, unlike the typical "new" brand, LUX had available a wide array of integrated and power amplifiers, preamplifiers and tuners. Eighteen models in all. Our problem was deciding which to introduce first.

We chose our top of the line power amplifier, the M-6000. Its enthusiastic reception encouraged us to follow with our other state-of-the-art products, such as the L-100 integrated amplifier and the C-1000 preamplifier.

These superb components combined performance, styling and precision in a manner new to the U.S. audiophile. They prompted one audio publication to state: "Almost overnight, the name 'LUX Audio' has earned itself a place of



Luxman T-88V AM/FM stereo tuner. Our least expensive tuner, yet includes FET front end with four-section tuning capacitor. Linear-phase ceramic filters in IF section. Features include FM interstation-noise muting, variable output level control and oscilloscope jacks for viewing multipath distortion, etc. Usable FM sensitivity; 2 microvolts (11.2 dBf) IHF and 2.8 microvolts (14.1 dBf) for 50 dB quieting. Stereo separation: 43 dB at 1,000 Hz. \$345.00

respect in the hi-fi marketplace."

That was fine. Not so fine, however, was our resulting reputation for being very expensive. Thus, many audiophiles were deprived of enjoying LUX quality and performance simply because they were unaware of our less expensive products.

We're now rectifying that. The units shown below are representative of our more moderately priced components. The differences between them and our top models are more a matter of power or flexibility than any variation in quality. You'll see that even our lowest priced units have specifications any manufacturer of fine components would be proud of.

So, if some of the engineering "indulgences" of our top units aren't really necessary to you, you can still enjoy the sonic excellence that distinguishes LUX components... because now you know about our moderate-priced components. Your LUX Audio dealer will be happy to spend as much time as you need helping you to appreciate them.

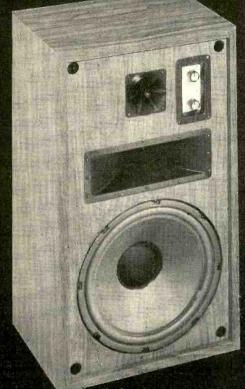


Luxman L-80V integrated stereo amplifier. 50 watts minimum continuous power per channel, with total harmonic distortion no more than 0.08 per cent, both channels driven simultaneously into 8 ohms, 20 to 20,000 Hz. Frequency response, 10-50,000 Hz, within 1 dB. Phono S/N better than 77 dB (re: 10 mV input). Bass and treble controls each have 3 turnover frequencies; high and low filters each have 2 cut-off frequencies. \$475. (Luxman L-85V, similar except 80 watts per channel, \$765.)

LUX Audio of America, Ltd.

160 Dupont Street, Plainview, New York 11803 . In Canada: White Electronics Development Corp., Ontario

Great specifications won't impress your ears... Great sound will!



Speaker Shown: Studio 3

According to the 1978 Stereo Review Stereo Directory and Buyers Guide, there are at least 111 manufacturers of high fidelity speaker systems. All of whom would have you believe that they have perfected "The Listening Experience". Most of them will try to tell you how their speakers sound by their specification claims.

Frankly, that is impossible. You have to listen to a speaker to adequately judge its quality.

At AAL we utilize the finest domestic and international raw drivers. Superb craftsmanship is performed by union workers. Computer aided design yields optimum performance. All of this adds up to great sound ... Which is what speakers are all about.

Listen to us!

American Acoustic Labs 629 West Cermak Rd. Chicago, Illinois 60616



plaint that Rachmaninoff's Third Symphony is not well represented on discs. Previn's reading is volatile in the end movements as well as in the grimly satanic middle section of the slow movement. Edo de Waart elects a more studied, lyrical approach, rich in detail and nuance, and it is abetted by truly outstanding sonics. Previn, like Stokowski, takes the first-movement repeat, while De Waarttogether with Ormandy and Rachmaninoffomits it. De Waart's very convincing performance of the impassioned, somewhat Tchaikovsky-like The Rock makes for a better filler than the sensual but rather bland Aleko excerpts chosen by Previn. The Previn recording is very spacious in its ambiance, perhaps to the detriment of some of the climaxes of the symphony. Four-channel playback makes for comparatively little enhancement here.

All told, I'm not sure that either of these versions is the one I would choose to live with. The composer's own is of unique historical value. Stokowski, despite his stress on the *non troppo* element in the slow movement, remains for me the most exciting interpreter. For sonics it's a choice between the vividness of the Stokowski Desmar disc and the gorgeous warmth of the Philips. D.H.

RECORDING OF SPECIAL MERIT

SAINT-SAËNS: Violin Concerto No. 3, in B Minor, Op. 61. CHAUSSON: Poème, Op. 25. FAURÉ: Berceuse, Op. 16. Isaac Stern (violin); Orchestre de Paris, Daniel Barenboim cond. Columbia M 34550 \$7.98.

Performance: Convincing Recording: Top-drawer

SAINT-SAÈNS: Violin Concerto No. 3, in B Minor, Op. 61; Introduction and Rondo Capriccioso, Op. 28; Havanaise, Op. 83, Pierre Amoyal (violin); New Philharmonia Orchestra, Vernon Handley cond. MUSICAL HERI-TAGE SOCIETY MHS 3738 \$4.95 (plus \$1.25 handling charge from Musical Heritage Society, Inc., 14 Park Road, Tinton Falls, N.J. 07724).

Performance: Competent Recording: Cramped

Isaac Stern in fine form, France's top orchestral aggregation, Daniel Barenboim as conductor, and recorded sound that combines a fine spaciousness with good presence for soloist and ensemble alike-what more could you ask? The brilliant virtuosity and rhetorical flourishes of the Saint-Saëns B Minor Concerto and the hothouse passion of the Chausson Poème (inspired, it is said, by Turgenev's Song of Love Triumphant) become more than usually convincing in this new Columbia recording. The only thing I can't fathom about the release is the inclusion of Fauré's rather inconsequential three-and-a-half-minute Berceuse on a side that could easily have accommodated, say, Ravel's Tzigane. Be that as it may, this Stern/Barenboim collaboration is still thoroughly enjoyable and absorbing.

The Musical Heritage Society disc, on the other hand, is a disappointment. Most of the great virtuoso fiddlers have had their innings with the *Rondo Capriccioso* and the *Havanaise*, and there are at least three currently available recordings (including the new Stern) that offer superior performances of the concerto. Pierre Amoyal is a competent violinist, but here he is too closely miked and the sound seems definitely cramped overall. D.H.

SAINT-SAËNS: Symphony No. 3, in C Minor, Op. 78 ("Organ"); Wedding Cake for Piano and Strings, Op. 76. Daniel Chorzempa (organ, piano); Rotterdam Philharmonic Orchestra, Edo de Waart cond. PHILIPS 9500 306 \$8.98, © 7300 597 \$8.98.

Performance: **Refined and lyrical** Recording: **Very good**

If you have tired of the super-charged, blockbuster approach to the Saint-Saëns Organ Symphony, then this is the disc for you. Edo de Waart's reading is an affectionate and painstaking one, notable for its sensitive nuances and attention to detail in the more delicately textured episodes of the opening movement and throughout the middle movements. I'm not about to throw away my Litaize/ Barenboim/Chicago Symphony recording of the symphony (Deutsche Grammophon 2530



ISAAC STERN A convincing collaboration with Barenboim

619), but for a contrasting treatment this new one will do very nicely.

The Wedding Cake valse-caprice—a delightful matrimonial pièce d'occasion somewhat akin to Gottschalk's salon music—gets a fine performance here with organist Daniel Chorzempa displaying fine prowess at the piano keyboard. The recording is altogether splendid throughout. D.H.

RECORDING OF SPECIAL MERIT

PETER SCHICKELE: Portrait of P. D. Q. Bach. Missa Hilarious. John Ferrante (bargain-counter tenor); Harris Poor (basso blotto); Ransom Wilson, Diva Goodfriend-Koven (tape recorders, hand flutes, corrugahorn, nose flutes); Early Anderson (trombonus interruptus); Duh Brooklyn Boys Chorus; New York Pick-up Ensemble, Peter Schickele cond. Eine Kleine Nichtmusik. New York Pick-up Ensemble, Peter Schickele cond. Echo Sonata for Two Unfriendly Groups of Instruments. John Solum (flute); Leonard Arner (oboe); Lorin Glickman (bassoon); Theodore Weis (trumpet); William G. Brown (French horn); Neal Di Biase (trombone). A Consort of Christmas Carols. Duh Brooklyn (Continued on page 102) Finally, a part-time job that builds your career as well as your wallet. And we have over 400 part-time careers to choose from.

> The problem with most part-time jobs is that you never feel fulfilled. Just tired. Like standing behind a counter to earn a few extra dollars.

The Army National Guard offers you a part-time job with a future. So we'll train you to learn the career of your choice. Not some job you have to settle for. And we'll actually pay you to learn. Over \$50 for just one weekend a month, to start. With a pay raise, to go along with every promotion.

And you'll experience the pride and satisfaction of serving your country and your community in the same tradition that patriotic men and women have been doing for centuries.

So why not join the Army National Guard? It will probably be the only parttime job you've ever had that's a golden opportunity. Instead of a drab necessity.

If you'd like more information about the Army National Guard, mail in the attached coupon or call toll-free 800-638-7600 (except in Alaska, Hawaii, Puerto Rico and the Virgin Islands). In Maryland call (301)728-3388.

The most important part-time job in America.



CIRCLE NO. 65 ON READER SERVICE CARD

Poulenc and Stravinsky: An Odd Coupling Makes Sense

> Soprano Judith Blegen: radiant solos

USIC on sacred texts with an ecumeni-M cal appeal seems to bring out the very best in Leonard Bernstein as a conductorand often as a composer as well. I had been hoping for some time that he would get around to recording Poulenc's Gloria and Stravinsky's Symphony of Psalms, though it would not have occurred to me to pair these works, as Columbia has now done. The coupling makes fine sense, actually, for there is a great deal more that they have in common than separates them, and both performances are supercharged (but not overcharged) with the sort of fervor that cannot fail to be communicated and shared, whether by the listener or by Bernstein's committed co-participants. The radiance of Judith Blegen's solos in the Poulenc, the sassy instrumental interjections in the choral sections of that work, the rhythmic acuity of the Stravinsky-all contribute to an impression of electrifying freshness.



Both works are, after all, at least in part swaggeringly joyous glorifications, and in Bernstein's realizations exultation and exaltation become one. There is a little hardness to the sound, there is some conspicuous pre-echo in the "Qui sedes" of the Poulenc, and the chorus on the Stravinsky side is occasionally overwhelmed by the instrumental mass, but in general the bright, scrubbed quality of the recording makes all the lines beautifully clear. This is the sort of aural excitement that doesn't fade, but rather is self-renewing with each exposure. —*Richard Freed*

POULENC: Gloria. Judith Blegen (soprano); Westminster Choir; New York Philharmonic, Leonard Bernstein cond. STRAVINSKY: Symphony of Psalms. English Bach Festival Chorus; London Symphony Orchestra, Leonard Bernstein cond. COLUMBIA M 34551 \$7.98.

Boys Chorus, James McCarthy dir. VAN-GUARD VSD \$7.98.

Performance: Sophisticated schlock Recording: Very good

Those who have followed the career of P. D. Q. Bach since Prof. Peter Schickele began unearthing the Baroque abominations of J. S. Bach's youngest (and least) child will know what to expect from this disc. Others can only be warned to brace themselves. The composer of the Concerto for Horn and Hardart, the Schleptet in E-flat Major, and the cantata Iphigenia in Brooklyn evidently applied his peculiar talents to more scores than even Prof. Schickele at first suspected. His Missa Hilarious, with its pig-Latin Kyrie, its "sockit-to-me" Gloria, and its Swiss yodels and Spanish ole's ingeniously juxtaposed with passages of the Donna Nobis Pasta and Angus Dei ("She's the prettiest cow I've ever seen, and I have seen a few''), is a major work that in its own frantic way is an answer to the Missa Solemnis of Beethoven-or anybody else's attempt to set a Latin text to music. The Echo Sonata for Two Unfriendly Groups of Instruments, on the other hand, is a work perhaps more representative of the composer's good-humored, somewhat besotted character. The Consort of Christmas Carols, finally, sounds as though a demented Benjamin Britten had risen from his grave to take revenge on every boys' choir that ever harangued a harmony. In the remarkable O Little Town of Hackensack, Duh Brooklyn Boys Chorus chirps excitedly over Santa's appearance with his nervous reindeer in the New Jersey skies of first Tenafly, then Secaucus, and finally Hackensack itself. Throw the Yule Log On, Uncle John is a tippling triffe, and Good King Kong Looked Out works its will on counterpoint in ways from which music may never quite recover.

Eine Kleine Nichtmusik is attributed on the jacket not to P. D. Q. Bach but to Prof. Schickele, and it is noteworthy how similar they are in their approach, considering the nearly two centuries that separate them. Schickele is perhaps the more daring of the two, interspersing the Mozartean strains of his serenade with sly references to works of Franck, Dvořák, and Stravinsky, as well as Foster's Jeannie with the Light Brown Hair and even Dixie, which the New York Pick-up Ensemble ain't just whistlin'.

Prof. Schickele's *ad libiter* remarks, some of them apparently left on the disc inadvertently as the result of inebriated editing, are

not always as witty or diverting as the music. But then something is bound to deteriorate in the brain of a man who holes up at the University of Southern North Dakota at Hoople and devotes his entire life to studying the works of Johann Sebastian's most attentuated progeny. It's amazing that the poor chap can still even find his way to a microphone. *P.K.*

RECORDING OF SPECIAL MERIT

SCHUBERT: Songs. Die Junge Nonne (D. 828); Der König in Thule (D. 367); Gretchen am Spinnrade (D. 118); Gretchens Bitte (D. 564); Scene from "Faust" (D. 126); Suleika (D. 720); Suleikas Zweiter Gesang (D. 717); Raste, Krieger! (D. 837); Jäger, Ruhe von der Jagd (D. 838); Ave Maria (D. 839). Elly Ameling (soprano); Meinard Kraak (baritone, in D. 126); Dalton Baldwin (piano). PHILIPS 9500 169 \$9.98.

Performance: Charming Recording: Good

Any collection of Schubert songs is welcome-especially if the singer is Elly Ameling. These are the songs of what might be called Schubert's heroines: Gretchen or (Marguerite) from Goethe's Faust, Suleika from the West-östlicher Divan (a Goethe collection, although the poems in question are said to have been written by Goethe's friend Marianne von Willemer), and Ellen from Walter Scott's The Lady of the Lake. Some of these songs, such as Gretchen at the Spinning Wheel and the Ave Maria, are ultrafamiliar; others, such as the dramatic scene from Faust (recorded here with Meinard Kraak and an unnamed chorus), are very little known. Familiar or unfamiliar, they are sung with equal charm and grace by Elly Ameling. This music is a simpler world than ours but it is also a place in which modern alienation is already an undertone, and it is this mixture of simple lyricism and underlying anguish that makes the Schubert songs so appealing and which is so well captured here. E.S.

RECORDING OF SPECIAL MERIT

SCHUMANN: Fantasia in C Major, Op. 17; Etudes Symphoniques, Op. 13. Misha Dichter (piano). PHILIPS 9500 318 \$8.98.

Performance: Idiomatic Recording: First-rate

Misha Dichter won second prize in the 1966 Tchaikovsky Competition in Moscow, but he was the popular favorite throughout. He then made three or four more-than-respectable records for RCA; they are no longer in the catalog, however, and he has not been heard from on disc for a decade or so. He is still only thirty-two, and this new Philips recording is a most auspicious re-entry into the lists. Dichter's Schumann has the grandeur and weight of Arrau's, the spontaneity of Perahia's, and just a touch of impetuosity, which seems thoroughly idiomatic in this material. Like Arrau and Perahia, Dichter integrates the five posthumous variations into his performance of the Etudes Symphoniques; unlike them, but like Vladimir Ashkenazy, he benefits from having his thirty-minute performance fit snugly on a single side, allowing for another major half-hour piece on the other. While Ashkenazy's similar coupling on London CS 6471 is one of the glories of the Schumann dis-(Continued on page 104)

Take on a road one-on-one. Take on the Take on the new Firenza.

Just a look tells you it's the sportiest Starfire yet. With a rear deck spoiler. Star-spoke wheels. Front air dam that integrates with sleek wheel flares. Sassy body side-striping with the bold Firenza signature.

Wait 'til you drive it. Firenza gives you a good firm feel of the road. And for a real driving experience, order the available 305 2-barrel V8 with 4-speed



manual transmission (transmission not available in California).

If you'd rather drive than be driven, get into a new Oldsmobile Starfire Firenza. Test drive one today at your Olds dealer's. Note: The Starfire Firenza is equipped with GM-built engines produced by various divisions. See your dealer for details.



Starfire Firenza Can we build one for you?

51



There's a lot of News in Olds today.

cography, I have no reluctance in putting Dichter's new disc in the same class; his interpretations are a bit more exuberant, Ashkenazy's a bit more subtle, but neither is deficient in either quality. R.F.

RECORDING OF SPECIAL MERIT

R. STRAUSS: Aus Italien, Op. 16. Dresden State Orchestra, Rudolf Kempe cond. SERA-PHIM S-60301 \$3.98.

Performance: All-out Recording: Excellent

Aus Italien, the least often heard of Strauss' large-scale works for orchestra, was the composer's first attempt—at age twenty-two—to write descriptive music. All in all, it is not a great work, perhaps not even an "important" one, but it is surely enjoyable enough to be heard from time to time. This recording was first released in Germany a few years ago as part of Rudolf Kempe's complete Strauss cycle, and, if I'm not mistaken, that was the work's first appearance on discs since the 1954 Clemens Krauss version on London. (That classic performance has been reissued on Richmond R 23210, but the mono sound really does show its age.)

As we would expect from Kempe's Strauss, the reading here is as persuasive as could be—of a sort that might well convince other conductors to consider programming the piece. The sound of the economical Seraphim pressing compares very well with that of the German EMI original; it is extremely rich, both full-bodied and finely detailed. If there is any ground for complaint about this issue, it can only be a tiny one concerning the labeling. Some titles just don't take well to translation, and calling this "From Italy" seems about as awkward as referring to *Die Fledermaus* by the other Strauss as "The Bat." *R.F.*

RECORDING OF SPECIAL MERIT

TCHAIKOVSKY: Romeo and Juliet, Overture-Fantasy; Francesca da Rimini. Philadelphia Orchestra, Eugene Ormandy cond. RCA ARL1-2490 \$7.98, ③ ARS1-2490 \$7.98, ③ ARK1-2490 \$7.98.

Performance: Noble Recording: Spectacular

TCHAIKOVSKY: Romeo and Juliet, Overture-Fantasy. London Philharmonic Orchestra, Sir Adrian Boult cond: BERLIOZ: Romeo and Juliet: Orchestral Excerpts. Romeo's Reverie and Fête of the Capulets; Love Scene; Queen Mab Scherzo. Royal Philharmonic Orchestra, Antal Dorati cond. QUINTESENCE PMC 7045 \$3.98.

Performance: Controlled passion Recording: Somewhat dated

The star-crossed lovers of Shakespeare's tragedy have inspired a whole literature of musical compositions-operas by Gounod and Zandonai, Prokofiev's ambitious ballet score, Tchaikovsky's "overture-fantasy," Berlioz's "dramatic symphony," even Leonard Bernstein's West Side Story. Measured by popularity, the Tchaikovsky, of course, wins hands down; there are more than thirty recordings listed in Schwann. Indeed, it is hard to believe that any conductor could wring an additional ounce of heartbreak out of this all too familiar work that Balakirev badgered Tchaikovsky into composing in 1869 (and later into revising), yet that is what happens with the new version by the Philadelphia Orchestra under Ormandy. With sumptuous orchestral resources at his disposal. Ormandy evidently re-examined the piece and found in it not only the color of the musical swordplay between the clashing Capulets and Montagues and all the melodrama of the sweeping denouement, but a fresh beauty in the poignancy of the love theme and a fine tendemess in the dirge that brings the music to its mournful close. This is an unhurried, spacious, superbly balanced, and exceptionally articulate performance. It is backed, most satisfactorily, by another love story in music-the tone poem set in a windy section of Dante's Inferno where the souls of Francesca and her adulterous lover Paolo are eternally tossed about in the dark.

The Quintessence rerelease offers Sir Adrian Boult's ardent yet restrained treatment of Tchaikovsky's *Romeo and Juliet*, but in both sonics and performance it is no match for the Ormandy. The music from the Berlioz symphony. though, particularly the glittering Queen Mab Scherzo, is handsomely played by the Royal Philharmonic under Dorati, and the Sixties sound holds up well. *P.K.*

RECORDING OF SPECIAL MERIT

VERDI: La Traviata. Ileana Cotrubas (soprano), Violetta Valery; Placido Domingo (tenor), Alfredo; Sherrill Milnes (baritone), (Continued on page 106)

SR



It's an album that contains no hit singles.

It doesn't have any of the things you thought a hit record was supposed to have. It does have what the best records of the future will have, an effect on the listener that goes beyond music. It's so hypnotic, so relaxing that listeners are sure to leave their bodies for the 45 minutes it's on their turntables. No kidding! Composer Michael Hoenig has been in the vanguard of Europe's electronic music scene since its earliest days in Berlin.

The music on **Departure From the Northern Wasteland** was made by this one man on one instrument, for one stated purpose:

"I want it to provoke a feeling, a mood people can react to. It's music that is finished in the mind of each listener."

****	Michael Hoenig Departure From the Northern Wastelan Produced by Michael Hoenig On Warner Bros records and tapes	
We're so sure this r the year, that we'll EP: Order Today!		
Dear Sirs: Liust got home fror	n school/work and I'm shot. I need	d Michael Hoenig's Denar-
	rthern Wasteland. Here's my qu	° .
NAME	ADDRESS	
CITY	STATE	ZIP

PS Your Michael Hoenig EP will arrive in 6 weeks Please note: You can leave your hat on, but turn the lights down low and get ready to RELAX. Offer good only in U.S.

At last: sound you can see

ÊSÊ	
Sh	erwood Electronic Laboratories Certified Performance Series
	MODEL: <u>\$75 CP</u> SERIAL NUMBER: <u>75 CP 701/89</u>
63	Total Harmonic Distoction at ated output:
	Signal necessary for SGdB quikting in stereo:34 microvolts Siereo veparation at IGHz:55dB
were mad	
S	Leonard Annoden Technicias Jungene SHERWOOD Notary Public SHERWOOD
a se	Certified Performance Series

Introducing the Certified Performance Series Receivers: You'll know what you're buying. You'll see it in writing.

Why specifications are less than specific.

An inevitable by-product of mass production is that there will exist, on a unit-tounit basis, significant variations from the "target" level of performance.

You can get a general idea of what your set can do from the manufacturer's posted specs. A general idea. But we at Sherwood feel that no specs are as important as the specs of the unit you end up buying.

With the introduction of the CP Series Receivers, Sherwood has minimized the chance of sub-standard performance—thanks to a practice we've introduced into mass-production: individual fine-tuning of each unit.

Critical areas of performance of both the tur er and the amplifier sections are evaluated. And, throughout the process, each receiver is "tweaked"—fine aligned for peak performance. Given, in short, the special treatment that typically is extended only to "showpiece" units.

So, we predict you'll find that the Sherwood receiver



you're paying for doesn't simply meet the posted specs of its competition, but exceeds them. Often by a considerable margin.

Does certification add to the cost of each receiver? Undeniably. But we at Sherwood are convinced that the impact on overall value is greater than anything else which could be done to the product at comparable cost.

Attached to the carton containing the receiver, you'll find a notarized document attesting to its actual performance levels.

It will prove that we've done everything possible to make it sound its best.

Sherwood Electronics Laboratories, Inc. 4300 N. California Avenue, Chicago, Illinois 60618 CIRCLE NC. 47 ON READER SERVICE CARD Giorgio Germont; Stefania Malagù (mezzosoprano), Flora Bervoix; Bruno Grella (baritone), Douphol; Alfredo Giacomotti (bass), D'Obigny; Giovanni Foiani (bass), Dottore Grenvil; Walter Gullino (tenor), Gastone, Giuseppe; others. Bavarian State Opera Chorus and Orchestra, Carlos Kleiber cond. DEUT-SCHE GRAMMOPHON 2707 103 two discs \$17,98, © 3370 024 \$17.98.

Performance: Very good Recording: Excellent

This excellently cast and splendidly engineered *La Traviata* is undoubtedly one of the best of all recorded versions. In overall merit I unhesitatingly rate it above all others except RCA 6154 (Moffo) and Angel S-3623 (De los Angeles), which continue to retain my longheld affection.

The enticements of the new set are many. Ileana Cotrubas is a thoroughly satisfying Vicome uncomfortable for the singers or chorus. He manages to get clear articulation nonetheless, but this kind of unrelenting energy seldom makes the right vocal effect. Two instances will illustrate my point. In the first act, after the "Libiamo," Violetta's sudden indisposition elicits a shocked reaction from Alfredo and the guests, but Kleiber's relentless pacing causes this crucial development to pass virtually unnoticed. Later, at Flora's party, Violetta's arching reiterated phrases ("Ah, perchè venni incauta") are similarly deprived of their full dramatic significance. In short, we have masterly conducting here, but the lack of flexibility suggests an insufficient emotional involvement.

The opera presented here is complete on two discs without obsessive literalness about the Urtext. There is only one verse each of Alfredo's "O mio rimorso" and Germont's "No, non udrai rimproveri," and there are no



oletta: touching, vulnerable, tragedy-haunted. While she is not a bravura dazzler, she meets the vocal demands of the first act expertly, with neatly executed turns in the "Libiamo" and cleanly articulated runs and a secure Eflat in "Sempre libera." She makes all the dramatic points without excess, though she could have made her "Addio del passato" even more heartrending at a marginally slower pace.

In recent years, Sherrill Milnes has developed a remarkable mezza-voce technique, and Germont is a role in which he can and does put it to excellent use. Although his top register lacks the ultimate tonal refinement, the overall portrayal is distinguished. So is Placido Domingo's Alfredo, which displays his characteristic tonal security and musicianship. And a good group of comprimari rounds out the cast; Dottore Grenvil is particularly well sung (by Giovanni Foiani).

Carlos Kleiber conducts briskly, incisively, and with remarkable precision. His sense of balance and dynamics is unfailing, his overall control is awesome. There is no sagging of momentum, but rather a sense of ever-present tension. On the debit side, he sometimes pushes his allegros to the point where they besecond verses to Violetta's "Ah, fors'è lui" and "Addio del passato." I applaud this procedure without reservation. I applaud the entire enterprise, in fact, though my fervor is tempered by Maestro Kleiber's own restrained enthusiasm. G.J.

RECORDING OF SPECIAL MERIT

VILLA-LOBOS: Bachianas Brasileiras No. 3; Mômoprecóce. Cristina Ortiz (piano); New Philharmonia Orchestra, Vladimir Ashkenazy cond. ANGEL S-37439 \$7.98.

Performance: Enjoyable Recording: Quite good

Villa-Lobos composed only five piano concertos labeled as such, but he produced others under different titles. The two here are probably the best, and certainly the most delicious, of the lot. Apparently there has been only one short-lived recording of each before this release, and neither has been around for at least fifteen years. I never got to hear Felicia Blumenthal's Vox record of Bachianas No. 3, but I do remember the old Angel on which Magda Tagliaferro, for whom Villa-Lobos composed Mômoprecóce (and who was

one of Cristina Ortiz's teachers), played that work with the composer conducting, and it had neither the polish nor the spirit that distinguish this new version. The title, as Frederick Fuller explains in his very helpful annotation, "is deliberately ambiguous, meaning 'precocious lad' and also 'young Momus' (the King of the Carnival)." This alternately exuberant and insinuating fantasy of 1929 is more or less an expansion of the Carnaval das Cranças Brasileiras, a suite for piano solo that Villa-Lobos wrote ten years earlier (included in Roberto Szidon's Villa-Lobos package, Deutsche Grammophon 2530 634).

Bachianas No. 3 is somewhat less extrovert, but similarly flavorsome. The fourmovement sequence is marked Preludio, Fantasia, Aria, and Toccata, the aria being one of Villa-Lobos' characteristically touching modinhas, the toccata (labeled Picapao, a reference to a bird with habits like those of the woodpecker) dancelike in its vigor. This is about as unlikely a repertoire as one might imagine for Vladimir Ashkenazy's second appearance on records in this country as a conductor, but he seems to be enjoying himself thoroughly, and he is at one with his brilliant young colleague every step of the way. The sound is quite good, ensuring the effectiveness of every one of Villa-Lobos' little touches of color, and the whole production is the sort of thing that defies one to listen with-*R*.*F*. out smiling out of pure pleasure.

COLLECTIONS

RECORDING OF SPECIAL MERIT

ACADEMY OF ST. MARTIN-IN-THE-FIELDS: A Tribute to Holland. Van Bree: Allegro for Four String Quartets. Ricciotti: Concertino No. 4, in F Minor. Vivaldi: Concerto Grosso in D Major (RV 562a, P. 444). Locatelli: Introduzione Teatrale, Op. 4, No. 5. Academy of St. Martin-in-the-Fields, Neville Martiner cond. PHILIPS 9500 171 \$8.98.

Performance: Superb Recording: Superb

Of all the ensembles playing Baroque and Classical music today, to my mind the Academy of St. Martin-in-the-Fields as directed by Neville Marriner is the most outstanding. The Academy's performances are clean, vigorous, and straightforward, displaying a consistently high degree of musicianship. Although the instruments and style are both thoroughly modern, Marriner's knowledge of early performance practices makes itself clearly felt. His readings are a perfect compromise between historical and contemporary tastes: the authentic shape of the music is there, but without the merely fussy details.

What is most delightful about the present album is the programming. All the pieces are associated in some way with Holland, and particularly with Amsterdam. While such a collection could have turned out to be a musical bore, this sparkling array of festive works by a Dutchman, two resident Italians, and a distinguished Italian visitor is quite the opposite. Bernardus van Bree's fresh and beautifully crafted Allegro for Four String Quartets is a first-rate Romantic work in the most jubilant tradition of Mendelssohn. The Carlo Ricciotti concertino, long attributed to Pergolesi, is certainly worthy of that genius. The Vivaldi Concerto Grosso in D Major, which the com-(Continued on page 110)

"All work and no Mustang sounds like a pretty dull life style."

Musiang

For RD When America needs a better idea, Ford puts if on wheels

Lose yourself in the sporty spirit of the '78 Ford Mustang II... base sticker priced less than last year. Let this wideopen T-roof convertible take you away from an ordinary day. Or maybe you'd prefer the elegant Ghia or the 3-door Hatchback. And you can opt for a Rallye



Packag₂, oversize tires, choose from 5 different kinds of wheels, 7 difrerent interiors and 14 great exterior colors. So visit your Ford Dealer and go Mustang. It could make your life a lot more fun.





ONE GOOD THING



LEADS TO ANOTHER.

When it comes to a super-powered receiver, people know a good thing when they hear it.

That's why our KR-9600 is one of the most popular receivers in its category.

For less than \$750* you get 160 watts per channel, minimum RMS at 8 ohms, from 20-20,000 Hz with no more than 0.08% total harmonic distortion. With all the features and performance you'd expect from our top of the line receiver.

But let's face it. A lot of people don't need all that power. That's why we developed the KR-4070.

It's got 40 watts per channel, mini-

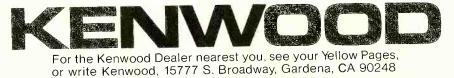
mum RMS at 8 ohms, from 20-20,000 Hz, with no more than 0.1% total harmonic distortion. (That's correct, 0.1% THD.) Plus all the features most people need.

But what's incredible, is that you can buy it for less than \$300*

Depending on how much power you need, either receiver will give you more performance for less money than you thought possible.

Because at Kenwood, we think you can't get too much of a good thing.

*Nationally advertised value. Actual prices are established by Kenwood dealers. Handles optional.



ERBERT VON KARAJAN'S second integral set of the nine Beethoven symphonies with his Berlin Philharmonic, released late last year, was recorded by Deutsche Grammophon in the orchestra's own concert hall instead of the Jesus Christus Kirche used for the earlier one. Released in 1962, that first set had in the interval remained pretty much on top of the heap among Beethoven symphony cycles on discs (I admit to unfamiliarity with the recent Solti and Haitink sets, either or both of which may have some points of decisive superiority) in terms of a combination of high-quality sound and consistently compelling interpretations. Overall, the new Karajan set is significantly better. The uniformly excellent sound is darker and richer than before. with a "burnished mahogany" quality redo-lent of New York's Carnegie Hall and particularly striking improvements in presence of the upper string tones and cleanness of the bass transients. Most of the interpretations are also superior, but a few things in them make me glad that I still have the 1962 recordingswhich, fortunately, remain available singly.

The differences between the two performances of the First Symphony are essentially marginal, except that Karajan has omitted the first-movement repeat this time and instead gives the whole movement a slightly more relaxed pace. The slow movement receives super-elegant treatment with respect to nuance and transparency of texture. Overall, though, I still prefer the somewhat brighter sound and more light-handed approach of the earlier version.

The new No. 2 wins hands down over its predecessor, with wonderfully fiery performances of the outer movements and flawless readings of the inner ones.

HE Eroica remake is quite different from the 1962 version, and my feelings about it are mixed. The first-movement tempo here is the same as Toscanini's in his 1953 recording, but the music doesn't seem to breathe the way the Italian maestro let it. Karajan's earlier reading was a shade slower and altogether grander in effect. On the other hand, the Marcia Funebre and the thematic disintegration in the final part of the second movement come off better than before. With the scherzo, I again prefer the tauter 1962 version, but the improved sonics make a telling argument for the new finale, which in pacing is somewhat more relaxed and flexible than the older one. Karajan's infinite care with interpretive nuances and the Berlin players' superb responsiveness make the valedictory pages just before the jubilant close genuinely affecting.

Symphony No. 4, that prototype of all the lyrical-heroic symphonies to come, fares beautifully in both recordings. The newer one is a little easier in pace, the earlier a stunning virtuoso affair (in the opening and closing movements especially).

So far as I'm concerned, Karajan's new Fifth is better on all counts than his 1962 version. A less hasty way with the opening movement makes for cleaner articulation and more effective tonal drama, whereas the scherzo and finale profit from an urgency and tension in phrasing that was lacking before.

The Pastoral got something of a once-overlightly from Karajan in 1962; his new approach is warmer and more relaxed. The brook music is marvelously transparent in texture, and the orchestra really does kick up a splendidly spine-tingling storm to interrupt the peasants' merrymaking. This *Pastoral* may not suit Bruno Walter fans, but within its own frame of reference it is a good one.

With minor reservations, the Seventh Symphony in the new set is interpretively one of the best of the lot, and it is superbly performed from start to finish. If it weren't for Karajan's insistence—here as in 1962—on treating the famous allegretto tune in legato rather than dotted style, I would rank this reading of the work with the classic Toscanini/New York Philharmonic version of

magisterial rendering of the bass/baritone solo part in Felix Weingartner's mid-Thirties Vienna recording.

Karajan's new first movement gains from the improved sound, but I prefer the swifter and tighter scherzo of 1962, in which he observes the initial repeat. In neither recording, to my mind, does Karajan take the measure of the Ninth's slow movement. I sense precious little heart or real tenderness in his readings of these pages. The later one is more refined, though the important violin figuration in the third variation—which gives this episode its very special character—is inexplicably suppressed to near inaudibility. On the whole, despite some relative sonic deficiencies in parts



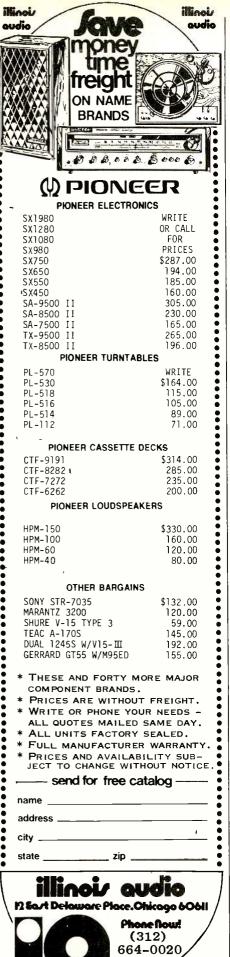
1936. And I also wonder about the rather strong horn coloration in the chord that opens the allegretto.

Until the finale, the Eighth here is a triumph of combined virtuosity and musicianship, but in the finale virtuosity for its own sake seems to get the upper hand. Karajan's blistering pace becomes virtually a *presto*—to the music's detriment. His earlier reading of the finale is superior.

The ever-problematic Ninth remains problematic. I. for one, have *never* heard a recorded performance of it with totally satisfying performance and sound throughout all four movements. Having recently compared a half-dozen versions I had at hand, I would say that Karajan's new set offers by and large the best sonic realization of the finale that I have heard, as well as a very fine *musical* realization (aided by a splendid chorus and a beautifully matched quartet of soloists). But I have yet to hear any other singer, either in concert or on records, who can match Richard Mayr's of the 1962 recording, I am inclined to stick with that Karajan Beethoven Ninth as opposed to the new one. Of course, I can also turn to those by Szell, Fürtwangler, Toscanini, or even Weingartner; but, in the end, I fear that my imagination will have to continue to supply the "perfect" performance.

-David Hall

BEETHOVEN: Symphonies: No. 1, in C Major, Op. 21; No. 2, in D Major, Op. 36; No. 3, in E-flat Major, Op. 55 ("Eroica"); No. 4, in B-flat Major, Op. 60; No. 5, in C Minor, Op. 67; No. 6, in F Major, Op. 68 ("Pastoral"); No. 7, in A Major, Op. 92; No. 8, in F Major, Op. 93; No. 9, in D Minor, Op. 125 ("Choral"). Anna Tomowa-Sintow (soprano); Agnes Baltsa (contralto); Peter Schreier (tenor); José van Dam (baritone); Wiener Singverein; Berlin Philharmonic Orchestra, Herbert von Karajaa cond. DEUTSCHE GRAMMO-PHON 2740 172 eight discs \$63.84, © 3378 070 \$58.88.



CIRCLE NO. 27 ON READER SERVICE CARD

poser used to display his virtuosity as a violin soloist during a 1738 visit to Amsterdam, is a scintillating pre-Classical affair. And the Introduzione Teatrale by Locatelli, who settied in Amsterdam in 1729 and remained there until his death in 1764, would be a worthy overture to the finest opera buffa or comedy of the period.

We need more records planned this way. After all, Bach never expected the Brandenburgs to be played in one sitting, nor did Beethoven plan his sixteen quartets as an integral cvcle. S.L.

RECORDING OF SPECIAL MERIT

ENGLISH CHAMBER ORCHESTRA: French Orchestral Works. Debussy (arr. Büsser): Petite Suite. Satie (arr. Debussy): Gymnopédies Nos. 1 and 3. Satie (arr. Poulenc): Gnossiènne No. 3. Roussel: Sinfonietta, Op. 52. Poulenc: Deux Marches et un Intermède. English Chamber Orchestra, Aviva Einhorn cond. HNH 4027 \$7.98,

Performance: Melting Recording: Excellent

This charming record of French music performed by the excellent English Chamber Orchestra and described, somewhat mysteriously, as a production of Discos Ensayo, Spain, has been issued here by HNH Records. It is altogether a very attractive production. The Debussy, a four-hand keyboard work orchestrated by Henri Büsser, is an effective piece in the composer's early style. This sort of arranging was popular at the time; the Satie works here were orchestrated by Debussy and Poulenc as an expression of their gratitude toward the man who "invented" modern French music. Poulenc's own Two Marches and an Intermezzo-written as dinner music for a banquet!-are very much in the Satie tradition. Roussel's Sinfonietta is the odd piece in this company; it is a late work (1934) in a rather straightforward, neo-Classical style. All of this music is very well played in a gentle, affectionate, and affecting manner. E.S. Good recording, too.

PHILIP JONES BRASS ENSEMBLE: In Switzerland. Howarth (arr.): Basel March; The Cuckoo; The Old Chalet; Variations on "The Carnival of Venice"; Berne Patrol. Horovitz: Music Hall Suite. Civil: Tarantango, Koetsier: Petite Suite. Philip Jones Brass Ensemble, Elgar Howarth cond. HNH 4037 \$7.98.

Performance: Neat and natty Recording: Excellent

The Philip Jones Brass Ensemble is a group of itinerant musicians who toot their melodies with considerable skill for the entertainment of audiences all over Europe. In the program they offer here, recorded on tour in Switzerland, trumpets, flugelhorns, trombones, percussion, and an occasional cuckoo join in lively, precise performances of such original material as Joseph Horovitz's Music Hall Suite, a kind of miniature musical circus all in itself, complete with cyclists and a "softshoe-shuffle," that reminded this listener of some of the more sardonic moments in William Walton's Facade. The ensemble's conductor, Elgar Howarth, has supplied some pretty arrangements of Swiss regional tunes from Lucerne and Berne, marches from Basel and Zurich (which certainly keep things moving), and a set of virtuoso variations on The

Carnival of Venice. For atmosphere there's a little suite by Jan Koetsier consisting of five tiny movements each as neatly turned out as a tourist cuckoo clock. The cuckoo itself is heard in a piece appropriately enough called The Cuckoo-which couldn't be more Swiss P.K. if it ticked.

JOHN McCORMACK: A Legendary Performer. Handel: Semele: O sleep! Why dost thou leave me? Mozart: Don Giovanni: Il mio tesoro. Bizet: The Pearl Fishers: Mi par d'udir ancora. Donizetti: Daughter of the Regiment: Per viver vicino a Maria. Bimboni: Sospiri miei andate. Parkyns: Le Portrait. Schumann: The Singer's Consolation. Rachmaninoff: When Night Descends. Tosti: Venetian Song. Bartlett: A Dream. Balfe: Come into the Garden, Maud. Lehmann: Ah! Moon of My Delight; Bonny Wee Thing. Trad. (arr. Hughes): The Next Market Day; A-Bâllynure Ballad; The Bard of Armagh. John McCormack (tenor); Edwin Schneider (piano); Fritz Kreisler (violin, in Rachmaninoff); various orchestras and conductors. RCA CRM1-2472 \$7.98.

Performance: Classic Recording: Good, with reservations

As a follow-up to the first release (Enrico Caruso), RCA has continued its new Legendary Performer series with one disc each devoted to Arturo Toscanini and John McCormack. All the old recordings involved have been restored by the new Stockham/Soundstream computer process, which is explained in the annotations. The procedure is ingenious, and it will be appeciated by those who are technologically inclined. My main concern is with the end product.

Let me begin with the most important factor: John McCormack is a legendary performer indeed. Most of the selections here (originally recorded between 1910 and 1920) are classics, cherished examples of technical virtuosity, absolute ease of tone production, mastery of dynamic shading, immaculate intonation, and clarity of enunciation.

Comparing the new release with Victrola discs 1393 and 1472, which contain several of the more important selections (Handel, Mozart, Donizetti, Bizet), one notes first that the new disc was produced at a higher volume level. More important, there is none of the veiled quality characteristic of the Victrola pressings; the singer not only appears to be closer to us, his voice is more clearly separated from the orchestral background. In contrast to the homogenized neutrality of the Victrola sound, the new disc offers a more lifelike sound with sharper contours. But the change is not all to the good. There is distinct background rumble throughout, and it can reach disturbing proportions in such delicate moments as the pianissimo close of the Donizetti aria. Veteran collectors, with ears trained to filter out unwanted noises, may not find this too detrimental. Unless you fit into this category, I urge you not to take the extravagant sales claims too seriously. In any case, McCormack will not let you down, in whatever format. G I

NOSTALGIA AND FANTASY: Latin American Art Songs. Villa-Lobos: Melodia Sentimental. Guastavino: Cuando Acaba de Llover; Prestame Tu Pañuelito; Ya Me Voy a Retirar; Las Puertas de la Mañana. Ramón y Rivera: El Araguaney. Ley: Balada del Tiempo (Continued on page 112)

110

The Dahlquist DQ-10. Time...and Time again.

Critics and audiophiles agree the listening quality of the DQ-10 is unexcelled. What accounts for its superb performance?

Time

Much credit for its smooth coherence must be given to the precisely matched transient characteristics of the five drivers. And, a good deal has been written about the DQ-10 and its extraordinary solution to the problems of time delay or phase distortion. It is not surprising that other high quality speaker designers have followed suit in offering their versions of time delay correction.

... and Time Again

The real "secret" to the unprecedented performance of the DQ-10 lies in Jon Dahlquist's patented method for reducing *aiffraction*, a more audible and destructive form of *time* distortion. The separate baffle plate on which each driver is mounted is dimensioned to minimize diffraction in the frequency band in which it operates. Thus, the effect of the sound we hear is that of a driver mounted in free space, without obstructions or surfaces to distort the original sound source.

It can be said that the DQ-10 eliminates inaccurate reproduction caused by time elements — inertial time delay, and diffraction time delay — distortions that limit the performance of conventional speaker systems.

> That's why the more critical listener will select the DQ-10. Time and time again.

DAHLOUST 27 Hanse Ave., Freeport, N.Y. 11520

Contraction of the



Souvenir Horowitz

ERTAIN records are not meant to be reviewed. This is one. To those who were at Vladimir Horowitz's Golden Jubilee Concert with Eugene Ormandy and the New York Philharmonic on January 8 of this year, the disc will be a remembrance-though not a duplication-of what they heard then. This reviewer was not in that Carnegie Hall audience, and hence approaches the record with a different point of view. But, even for many who were not at the concert, the disc is beyond reviewing. There are some who will take it, even before hearing, as the received word on the Rachmaninoff Third Concerto. There are others who will be so dazzled by the pianism that they will hear no criticism of the whole.

In truth, the piano playing is consistently dazzling, the problem being that one hears too much of it. What Horowitz plays, and what RCA has given us, is a work for virtuoso piano solo-with occasional orchestral accompaniment. So far as dynamic balance is concerned, this is evident from the start, for when the opening melody shifts to the orchestra, it is the sound of the piano figuration that still dominates the scene. But quite beyond such matters of recording (it could not have sounded that way in concert no matter how much Ormandy held the orchestra down), there is neither real interplay of piano and orchestra nor unanimity between them. Horowitz accelerates and snaps off the ends of phrases, retards the middles, transposes accents, rushes, and generally storms along his own course (hitting a few dozen extra notes in the process), while the orchestra plays its notes and tries both to keep up and stay out of the way. One might think it the result of the pianist's long absence from the orchestral concert stage, except that Horowitz has had something of a reputation for cutting up orchestras and conductors right from the beginning of his career. Complicating the matter is the fact that what we hear is *not* the concert performance, but the concert performance spliced together with passages recorded after the concert.

The results of all this are interesting. The constant presence of the piano tends to make Horowitz's dynamic range seem less than it really is. The great climaxes are not nearly so climactic as they should be, for the sound of the piano surmounting the orchestra is much less striking if it has been there all along. Horowitz is all consistently driving nervous energy, the moments (and they are only moments) of relaxation coming across like energy held in check, and the whole thing begins to sound very neurotic after a while. The piece itself becomes fragmented and the lack of coordination between keyboard and orchestra makes it sound at times rather startlingly modern: solo instrument against an only secondarily related background. Terrific excitement is purchased at the cost of just about everything else.

In short, then, this is one of the great recorded ego trips of our time. Pianists as well as non-pianists will gasp, not so much at Horowitz's technique per se, but at the way his prodigious powers are put in the service of such personal ferocity. Truly, it is a great pianistic document. It is not a great musical document. That it is worth the purchase is beyond saying, but if it's the Rachmaninoff Third you want to hear, look rather to Mogilevsky or Ashkenazy. —James Goodfriend

RACHMANINOFF: Piano Concerto No. 3, in D Minor, Op. 30. Vladimir Horowitz (piano); New York Philharmonic, Eugene Ormandy cond. RCA CRL1-2633 \$7.98.

Mozo; Copla Triste. Plaza-Alfonzo: Palma Verde, Garza Blanca. León: La Campesina; Cancioncilla; Aves y Ensueños; Serenata. Fabini: El Nido. Cluzeau-Mortet: Mar de Luna. Sas: Triolet; La Fuente. Guarnieri: Den Bau. Carmiña Gallo (soprano); Jaime León (piano). ORGANIZATION OF AMERICAN STATES OAS-001 (English notes), OEA-001 (Spanish notes) \$5.00 (from Pan American Development Foundation, Suite 622, 1625 I Street, N.W., Washington, D.C. 20006).

Performance: A rare bouquet Recording: Very good

The strangest people seem to be getting into the record business these days. The Smithsonian Institution has been issuing old musicals, and now the Organization of American States has started a "Technical Unit on Music" as part of its Department of Cultural Affairs and is issuing "non-profit" albums of material recorded in Latin America. Their first release, issued in both Spanish and English versions (the difference is in the language of the album covers, not of the songs themselves), offers Colombia's operatic soprano Carmiña Gallo and pianist Jaime León in eighteen songs by ten Latin American composers. Gallo's is a well-trained voice, and she applies it with feeling and intelligence to a program of music that is novel as well as beautiful. Though her voice cannot match the rich sweetness of, say, a De los Angeles in similar material, Gallo manages to triumph over her vocal shortcomings by the application of intense passion and insight into everything she undertakes.

The music here is almost without exception Iberian or Portuguese in influence, with almost no trace of the Indian elements one hears in the folk music of the countries represented. From Brazil comes one of those haunting melodies by Villa-Lobos, his Melodia Sentimental, which opens the program; a second Brazilian song, the lively Den Bau by Guarnieri, closes it. Argentina is represented through songs by Carlos Guastavino, who favors themes of love and rain. El Araguaney, by Ramón y Rivera of Venzuela, is a seductive dance. Also from Venezuela is Plaza-Alfonso's alluring Palma Verde, Garza Blanca. From Guatemala come rueful treatments by Salvador Ley of melancholy lyrics mourning the loss of youth; from Peru some pretty, impressionist constructions by Andrés Sas. Uruguay is represented by Eduardo Fabini and Luis Cluzeau-Mortet, in lovely songs whose romantic subjects are trees and moonlit landscapes. Most spectacular of all are the melodies supplied by the accompanist himself, Jaime León of Colombia, among them the ravishing Serenata, a haunting lullaby, and several other first-rate examples of a typically Latin American yet highly personal, never excessively flamboyant style. León is also an excellent pianist. Just why the OAS has chosen to supply an English-language album cover but no translations of the texts of the songs inside is one of those mysteries that will probably never be solved, like the Mayan alphabet. Anyhow, it's a lovely disc. P.K.

RECORDING OF SPECIAL MERIT

FRANTIŠEK POŠTA: Double Bass Recital. Borghi: Sonata for Viola d'Amore and Double Bass. Martini (arr. Nanny): Plaisir d'Amour. Fryba: Suite in Olden Style for Solo Bass: Ga-(Continued on page 114)



If you wanted to build your own Accutrac+6, you'd need lots of time. And lots of money. At least \$100,000 for computer circuitry, electro-optic mechanisms and much more. But you can buy it from us for under \$100,000.

* \$99,700 under to be exact. Because you can buy the Accutrac+6 model 3500 for less than \$300! But the most incredible thing about the Accutrac+6 isn't the price tag, it's the features. Like computerized track selection.

Which in plain English means that you can hear the tracks on each of six records in any order you like, as often as you like.

Even skip the tracks you don't like.

Literally, it's customized listening.

And you never have to touch the tonearm to do it, because the Accutrac+6 is engineered with a computerized "hands-off" tonearm.

In fact, once you close the dust cover you never have to touch the records or tonearm again to hear your programmed selections.

But the brain in the Accutrac+6 is smart enough to do even more. Like protecting your records. So, instead of dropping your records onto the platter, it lowers them v-e-r-y g-e-n-t-l-y.

That's what we said: it doesn't drop your records. Its Accuglide[™] Spindle is like an elevator.

In fact, just touch the "raise record" key, and it lifts all six records back up into the starting position. As long as we have you touching the keys, let us tell you how you can control the Accutrac+6 from across the room.

With Accutrac+6 model 3500R you can control everything from across the room with a full-system remote control transmitter and receiver. There's even remote volume control on model 3500RVC.

No other 6 record system gives you the record safety, convenience and control of the new Accutrac+6. But the truly incredible feature of the new Accutrac+6 is its low price. From under \$300* for model 3500. So forget everything you know about 6 record systems.

And remember to see the new Accutrac+6.

It's beyond your wildest dream, yet below what you'd expect to pay.



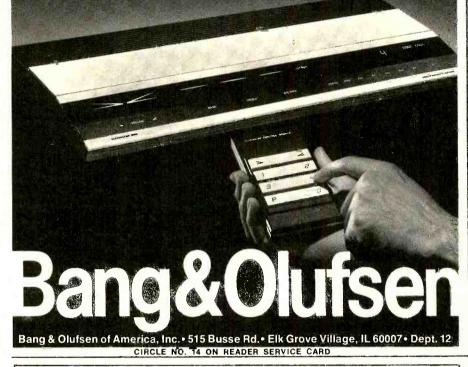
*Price shown in this ad is approximate. Selling price is determined by the individual dealer. *Accutrac is a registered trademark of Accutrac Ltd. ADC Professional Products: A Division of BSR Consumer Products Group, Rte. 303, Blauvelt, N.Y. 10913





in your listening room. Cordless remote control makes music so convenient, so accessible, that it's woven naturally into your life.

Our portfolio of literature explains this sophisticated receiver in detail. Write to us for it.





The New 1978 Basic Repertoire

STEREO REVIEW again presents the annual revision of the Basic Repertoire. In pamphlet form, it includes 1978 disc and tape recommendations for 173 standard musical works. For your copy, send $50 \notin$ in coin, plus a stamped, self-addressed No. 10 envelope ($9\frac{1}{2} \times 4\frac{1}{8}$ in.), to Esther Maldonado, STEREO REVIEW, 1 Park Avenue, New York, N.Y. 10016.

votte. Bottesini: Melody. Koussevitzky: Chanson Triste. Černý: Mazurka. Kuchynka: Canzonetta. Hipman: At the Summer Countryside. Maštaliř: Elegy. Kreisler (arr. Pošta): Liebesleid. František Pošta (double bass); Jaroslav Horák (viola d'amore in Borghi); Jan Panenka (harpsichord in Martini, piano in Bottesini and works listed thereafter). SUPRA-PHON 111 1949 \$7.98 (from Qualiton Records, 65-37 Austin Street, Rego Park, N.Y. 11374).

Performance: **Gorgeous** Recording: **Very good**

František Pošta, the longtime principal bass of the Czech Philharmonic, is known to veteran discophiles for his participation in recordings of the Dvořák Quintet in G Minor, Op. 77, and Schubert's Trout, both formerly available on Columbia's short-lived Crossroads label and now circulating as Supraphon imports. Pošta's recital proves as enchanting as it was unexpected, not merely as a showcase for his virtuosity or the gorgeous sound of his weathered-looking 1693 instrument (pictured on the jacket), but also because there are some real gems among the little-known items in this collection. The very first work on the disc, in fact-a three-movement sonata for viola d'amore and double bass by Giovanni Battista Borghi-is so downright irresistible that it is all one need hear to be hooked.

The notes do not tell us anything about Hans Fryba, František Černý, Vojta Kuchynka, Silvestr Hipman, or Jaroslav Maštaliř, but all of their contributions-from the minuteand-a-half unaccompanied gavotte of Fryba to Černý's five-and-half-minute mazurkaare the most ingratiating encores imaginable. Pošta indulges himself unabashedly in Plaisir d'Amour, but the reverie this becomes in Edouard Nanny's arrangement for bass and harpsichord is the sort of thing that must tempt the performers to linger and caress it. Kreisler's Liebesleid, on the other hand, is surprisingly idiomatic, played with a light touch one hardly associates with the double bass. The entire program is impressive, most of it unusually enjoyable; the recording itself is just fine, and the surfaces are the quietest I've yet encountered from this source. Get R.F. this one.

SPANISH BAROQUE MUSIC. De Seima y Salaverde: Canzona a Due XIII; Corrente a 2; Fantasia Sobre el Canto del Caballero; Canzona a Due XI. Hidalgo: Cuydado Pastor; Trompicávalas Amor; Crédito Es de Mi Decoro; Tonante Dios! (Recitativo y solo de "Minerva"); De las Luces Que en el Mar. Romero: Folia a 2, Romerico Florido; Romance a 3, Hermosas y Enojadas. Valenciano: Ay del Amor. De Navas: La Rosa Que Reyna. Anon.: O, Que Bien Que Baila Gill; Ya Es Tiempo de Recoger. Montserrat Figueras (soprano); Janneke van der Meer (violin); Jordi Savall (viola da gamba); Pere Ros (violone); Ton Koopman (harpsichord). TELEFUNKEN 6.42156 \$7.98.

Performance: Marvelous Recording: The best

The outstanding feature of this album is the singing of Montserrat Figueras. A native of Barcelona with some Swiss training, she has devoted much time to the vocal techniques of the Iberian peninsula. Logic has rightly led her to examine the folk tradition rather than the bel canto, and the result is stunning. Her voice is utterly devoid of vibrato and slightly (Continued on page 116)

Why you should consider the new Garrard GT35 if you're thinking Dual or B.I.C.

We'll say it straight out. The new Garrard GT35 is the best all-around turntable anywhere near its price. Let's do some direct comparing.

Start with the motor. The Dual 1245 features a fine 8 pole, synchronous



motor and theB.I.C.981, a 24 pole, synchronous unit.

The new Garrard GT35 incorporates a servo-controlled. DC mo-

tor. Servo control provides absolutely steady speed. The motor, (and thus the rotation of the platter), is immune to fluctuations in household voltage or frequency. Len Feldman, writing in *Radio Electronics*, reviewed it as a "significant breakthrough" superior to the "synchronous motor however many poles it might have." The GT35 is the only, belt-driven, single/multiple play turntable in the world with a servo-controlled, DC motor.

Chalk one up for the new Garrard GT35.

Now for the tonearm. Remember that the delicate stylus, as it traces the groove, bears the full weight of the tonearm. The heavier the tonearm, the greater the wear on the record and stylus. Light is right. The effective mass of the GT35 tonearm (measured with a Shure M95ED cartridge, tracking at 1¼ grams) is a mere 20.4 grams. That's lighter than the tonearm of the Dual 1245 at 27.5 grams or the B.I.C. 981 at 25.6 grams. In fact, the new Garrard GT35 has

the lightest tonearm of *any* sin-

Tone-

arm con-

trol is by

simple rotary



gle/multiple play turntable.

Chalk up one more for the new Garrard GT35.

The Dual, B.I.C. and Garrard all protect your records as only fully automatic turntables can. And all provide the convenience of multiple play. But only the new GT35 boasts the patented Delglide* system. Unlike the Dual and B.I.C. automatic mechanisms, Delglide is driven by its own belt and is located directly

under the

tonearm.

be done by the steadiest of hands."

We make this claim: Delglide is the smoothest and quietest automatic system ever incorporated in a turntable – of any kind.

That's still another one for the new GT35.

There's more. The Dual 1245 and the B.I.C. 981 are warranteed for 2 years. The new Garrard GT35

carries an unprecedented 3 year warranty. That's our way of underscoring its exceptional reliability. Finally. The price advertised by the manufac-



turer. Including the base and dust cover, the Dual 1245 is \$240 and the B.I.C. 981, \$237. The price of the new Garrard GT35: just \$219.95.

The GT35: a "breakthrough" motor, the lightest tonearm, the smoothest and quietest automatic system and a 3 year warranty.

Consider the GT35. If you're thinking Dual, or B.I.C. Or Technics. Or Pioneer. Or Sony. Or...



For a free brochure, write:

Garrard, Division of Plessey Consumer Products, Dept. A 100 Commercial Street, Plainview, N.Y. 11803.

action. It's no wonder that Radio

Electronics said, "...the pick-up arm

is handled more cently than could

nasal, her intonation is perfect, and her diction is exquisite. The Spanish sense of rhythm invigorates each phrase, and flamenco vocal inflections transform each ornament into a passionate yelp. (What a technique this would be for Monteverdi!) It may be a bit startling at first, but one soon appreciates the control and taste of the singing, not to mention the fine musicianship.

The instrumentalists are also excellent. Ton Koopman's realizations on the harpsichord are inventive and lively, yet do not compete with or obscure what he is accompanying. The string playing is invigorating and the ensemble excellent.

Unfortunately, even though this is a Das Alte Werke release, Telefunken treats Spanish music the same way it has been treated since heaven knows when. Ordinarily Das Alte Werke albums include texts, informative jacket notes, and details about the instruments being used, but there are no texts here nor any details about the instruments. The music of the Spanish Baroque is virtually unknown. Surely it deserves a serious discussion so that we may know who the composers were and what they were writing for. When we hear such wonderful singing of such intriguing music, should we not have a text before us? Das Alte Werke aspires to the highest musicological standards for mainstream schools. Why shouldn't the same standards of documentation be applied to the utterly unfamiliar world of early Spanish music? S.L.

JOAN SUTHERLAND AND LUCIANO PA-VAROTTI: Operatic Duets. Verdi: La Traviata: Libiamo ne' lieti calici; Un dì, felice; Parigi, o cara. Otello: Già nella notte densa. Aïda: La fatal pietra . . . O terra; addio. Bellini: La Sonnambula: Prendi, l'anel ti dono. Donizetti: Linda di Chamounix: Linda! Linda! . . . Da quel dì. Joan Sutherland (soprano); Luciano Pavarotti (tenor); London Opera Chorus; National Philharmonic Orchestra, Richard Bonynge cond. LONDON OS 26449 \$7.98.

Performance: Good to excellent Recording: Good

Joan Sutherland and Luciano Pavarotti are operatic royalty. As such, their wish to record whatever repertoire they choose amounts to a royal command. But, since the world is full of their devoted subjects and these recordings are translatable into enormous sales, who is complaining?

Certainly not I. The music chosen for the latest "command performance" of the illustrious pair consists mainly of congenial repertoire, but it also includes familiar scenes from Verdi's Aïda and Otello, two operas not normally associated with these artists. And yet, the choice need not cause consternation: both are tender, intimate duets that call for lyric expression in long-spun legato phrases, precisely the domain in which Sutherland and Pavarotti rule. Therefore, especially considering that the new disc presents freshly recorded material, I approached it with exceptional anticipation.

The opening "Libiamo" startled me. Both singers seemed to be having difficulty staying in tune, and I cannot understand how this ob-

viously unsatisfactory take could have been passed for release. The other two duets from La Traviata go much better, particularly forthe tenor, who combines clear and pointed diction with distinctive phrasing. The long scene from Bellini's La Sonnambula is excellent and makes me wish for a new complete recording of the opera with these two artists. The pretty Linda di Chamounix excerpt also captures both of them in top form.

The Otello duet is excellent. Pavarotti manages Otello's low-lying opening phrases with surprising tonal solidity for such a high-placed tenor voice; tenor and soprano trade melting mezza-voce phrases in the "E tu m'amavi" dialogue, and Sutherland's "Amen risponda" is ethereal. The dynamics employed throughout are so effectively graded that the question of the suitability of the voices for the music never arises. The final scene from Aida, however, is at best a qualified success. There are admirable moments for both singers, but Sutherland has two surprisingly weak B-flats and the music becomes rhythmically unsteady as the chorus of priestesses enters. This is, of course, the conductor's responsibility, and Richard Bonynge must also take the blame for allowing Sutherland to lag behind his beat so frequently, with most unfortunate results in the earlier "Un di, felice." Surely, better preparation and additional rehearsals would have improved matters.

But Pavarotti and Sutherland nonetheless manage to create moments of vocal magic that reduce the significance of my reservations. Their "subjects" will not be disappointed in this record. *G.J.*

PHASE LINEAR SETS THE STANDARD FOR HIGH POWER.

Current loudspeaker design theory takes for granted the availability of a high power reserve. An idea once considered frivolous by many. Today it is considered essential for the best possible reproduction of recorded material.

To reproduce a musical peak, a loudspeaker requires up to 10 times the average power being delivered. If the amplifier lacks a sufficient power reserve, it will clip, producing distortion and audibly destroying sonic quality.

The Phase Linear Dual 500-Series Two Power Amplifier is capable of delivering in excess of 505 watts per channel from 20Hz-20kHz into 8 ohms, with no more than 0.09% Total Harmonic Distortion. That's unsurpassed power for unsurpassed realism.

A massive rear mounted extruded aluminum heat sink assembly, including a thermally activated forced air cooling system, protects the 36 output devices against overheating.



Instantaneous indication of output activity is easily maintained with an exclusive 32-segment LED display, while a special 4-segment clipping indicator warns of



CONVENTIONAL **DUAL-500** OUTPUT TRANSISTOR OUTPUT TRANSISTOR.

The Dual 500 utilizes an advanced design in output de- * vices to overcome the problems associated with amplifier clipping at realistic listening levels.



hazardous overloads. High/Low Impedance Operation modes are automatically or manually activated for increased amplifier efficiency when using low impedance, speakers.

Hearing Is Believing.

See your local Phase Linear dealer for the most powerful argument for the DUAL 500: a demonstration.

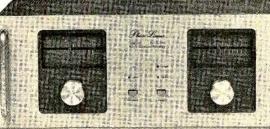
Specifications

- OUTPUT POWER: 505 WATTS, MINIMUM RMS PER CHANNEL 20HZ-20,000HZ INTO 8 OHMS, WITH NO MORE THAN
- 0.09% TOTAL HARMONIC DISTORTION. INTERMODULATION DISTORTION:
 - 0.09% Max
- (60Hz; 7kHz = 4:1)
- RESIDUAL NOISE: 120uV (IHF "A")
- SIGNAL TO NOISE RATIO: 110dB (IHF.''A'')
- WEIGHT: 65 lbs.
- DIMENSIONS: $19'' \times 7'' \times 15''$
- Optionally available in E.I.A. standard

rack mount configuration. Optional accessories: Solid Oak or Walnut side panels.

hase Linear.

THE POWERFUL DIFFERENCE Phase Linear Corporation 20121 - 48th Avenue West Lynnwood, Washington 98036



Made in U.S.A. Distributed in Canada by H. Roy Gray Ltd and in Australia by Megasound Pty Ltd.

116



Reg. Rate: 26 iss. 515

YOU PAY ONLY \$7.50

YOU PAY ONLY \$5.97 18 155. \$11.93

Reg. Rate: 10 iss. \$7.50

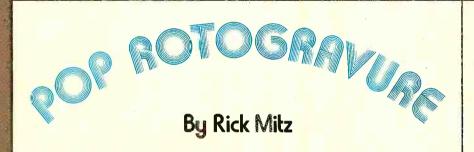
YOU PAY ONLY \$4.95

Newsst. Rate

YOU PAY ONLY \$12.00



BOBERT GORDON, whose latest album is "Fresh Fish Special" (Passport PS 7003), was getting ready to ... um ... concertize when who should show up but his pal BRUCE SPRINGSTEEN, dropping by to bring him up to date on that stubborn work-in-progress, the Fourth Springsteen Album. "This is my big night out," said Springsteen. Gordon promptly took him at his word: once on stage, he asked the audience to "give this new guy a chance to perform"...and out walked the elusive Springsteen.

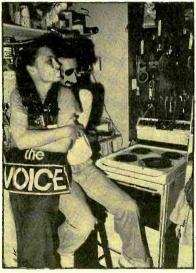


When Grammy Award winner BARBRA STREISAND re-signed recently with Columbia Records, the company threw a gala party for her and beau Jon Peters, whom Columbia hired as her producer. Twin cakes were decorated as replicas of the contracts, and Streisand is shown giving one the finger test. Columbia's Bruce Lundvall (left) and Walter Yetnikoff are perhaps trying to explain to her that you can't eat your cake and have it too. . . . Oh yeah?



D This month, perhaps at the very moment you're sitting around with friends singing / Left My Heart at the Stage Door Canteen and about ninety other songs, IRVING BERLIN, the man who wrote them, will be turning ninety. "I'm in good health," Berlin says, "and spend my time painting, fishing, and songwriting." But not, apparently, having his picture taken-this one must be thirty years old. Never mind. It's songs we want, not pictures. Happy birthday, Irving, and write on.





□ A little heart-tugging soap opera heremaybe Patient Griselda, Backstage Drudge. Anyway, once upon a time there was a lady named B.J. whose job it was to cook meals for bands that play New York City's Palladium Theater. When FRANK ZAPPA was in town recently (his latest LP is appropriately called "Zappa in New York," Discrete 2D 2290) he was appalled to discover that B.J. was trying to coax culinary miracles out of a hot plate. The kind Prince sent his chamberlain John out for a real live stove. John hopped a taxi down to a secondhand shop on Canal Street, bought a stove, tossed it into the cab's back seat, and hauled it back to a surprised and grateful B.J., shown here with Zappa sort of heating up a little something on the back burner. And so they ate happily ever after.

□ French music-maker JEAN-MICHEL JARRE visited New York recently to sample the famous air. Although some consider his first LP ("Oxygene," Polydor 6112) to be electronic music, Jarre says *non*. "It's not the *music* that's electronic," he told STEREO REvIEW, "it's just the *instruments*. I think a synthesizer is on the same level as a piano." Is Jarre on the same wavelength as his famous papa, film composer Maurice (*Lara's Theme*) Jarre? "My father likes my music, but my parents were divorced when I was very young, and I grew up with my mother. I would say that maybe I was influenced by him—but only through the chromosomes."





□ Scene: a paddy wagon. Place: Nuremberg, Germany. Cast (usual order): Jim Lockhart and Eamon Carr of **HORSLIPS**, an Irish band that got into a bit of a predicament when German police decided they were just the group to match up against a blurred photo of the Baader-Meinhof terrorist gang. The B-M group can do many things but not, apparently, play rock-'n'-roll; Lockhart and Carr were released when they sang a song from their new LP ''Aliens'' (DJL PA-16). Now, if the B-M boys had any sense....



□ It might look like just another crass promotional idea—have country crooner JOHNNY PAYCHECK hype his latest ("Take This Job and Shove It," Epic KE 35045) by being photographed with a bunch of striking workers—but cynics take note: that's not exactly how it happened. Fact is, striking bookbinders in Mashville decided they needed a little hype, so they talked Paycheck into having his photo taken with them. The title tune has made Paychack a labor hero of sorts—the Teamsters local in Nashville has adopted it as their theme song.



□ Just in case **BUFFY SAINTE-MARIE** has made it to your "Whatever Happened To ..." list: she's still sing ng (her latest is "Sweet America," ABC 929), and she's also doing a lot of yelling—about Indian rights. Now a resident of Hawaii, she's been running back and forth to the mainland to (1) lobby for legislation □ aid American Indians and (2) appear regulary on TV's Sesame Street with her son Dakota (Big Bird, Sesame Streeters will remember, calls him "Cody"). "I'm a space-age Indian," 3uffy says, and proved it recently by flying via Concorde, with Cody, from Paris to New York.

□ JEFFERSON STARSHIP's lead guitarist Craig Chaquico recently had a couple of emcounters of the worst kind. Threatened with a ticket for speeding on his new motorized skateboard, he threw caution to the winds, revved up his motor, and sped off. The policeman mounted on a speedier vehicle, easily captured the outlaw and delivered a stern lecture. Later, on his way to finish up the latest Starship album ("Earth," Grunt DXL1-2515), Craig was stopped again by a suspicious highway patrolman for a computer check. He got an OK—and the patrol car get the "Jefferson Starship Loves You" sticker that wouldn't work on the horse's bumper.





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

FRANKIE AVALON: You're My Life. Frankie Avalon (vocals); vocal and instrumental accompaniment. The New Old Days; The Chapel of Love/I'm Gonna Get Married; You're My Life; Yakety-Yak; Personality; and five others. DE-LITE DRS-9504 \$7.98, ⁽¹⁾/₈ 8-9504 \$7.95, ⁽²⁾/₈ 4-9504 \$7.95.

Performance: **Too little too late** Recording: **Very good**

Frankie Avalon? Didn't he end up in a brokerage house on Wall Street? Apparently not. Frankie Avalon is back on records, recalling the days of blue jeans and his first success on radio in one ballad, celebrating marriage and parenthood in another, mourning the "midnight lady" who used to assuage his loneliness on Saturday nights, and extolling simple joys like taking a bath, falling in love, and having a "song in your heart." It is difficult to dislike Avalon, whose artless, open style has a certain nostalgic appeal today, but at the same time one wonders whether he mightn't after all be better off selling stocks than all these stale sentiments to support the wife and eight children shown surrounding him on the cover of "You're My Life." P.K.

AZTEC TWO-STEP: Adjoining Suites. Aztec Two-Step (vocals and instrumentals). I Wonder If We Tried; Brand New; You and I; One Thing I Forgot to Tell You; John Gary; Up in

Explanation of symbols:

- $(\mathbf{R}) = reel-to-reel stereo tape$
- (8) = eight-track stereo cartridge
- \mathbf{C} = stereo cassette
- = quadraphonic disc
- **R** = reel-to-reel quadraphonic tape
- $\mathbf{B} = eight$ -track quadraphonic tape

Monophonic recordings are indicated by the symbol $\widehat{\mathbf{M}}$

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

Lilly's Room; and four others. RCA APL1-2453 \$6.98.

Performance: Okay Recording: Clean

During the late 1960's there was a string of hit singles by various (mostly British) studio groups singing well-crafted pop. The groups had little personality, but they had competent singers and musicians assisted by good production and slick arrangements. After their one big hit, they were seldom heard from again.

It is something like that with the American group Aztec Two-Step. They, too, have little personality and are thus dependent on strong or "catchy" material. They are not blatantly pop-apparently they take themselves seriously-but they don't sound like they aspire to anything more than a comfortable pop success. Most of their material is written by members of the group, and it never quite comes off. Up in Lilly's Room and One Thing I Forgot to Tell You, both written by nonmember Billy Mernit, are the only tracks here in which the band appears to be going somewhere with something definite in mind. If Mernit had written the entire album it might have been something to hear. J.V.

BABY GRAND. Baby Grand (vocals and instrumentals). Never Enough; Can't Keep It Inside; Bring Me Your Broken Heart; Lady of My Dreams; Shinin' in the Spotlight; and three others. AB-4148 \$7.98.

Performance: Almost Recording: Good

A lot of promises are made (or implied) by Baby Grand, but they aren't fulfilled. The most we listeners get is an imitative mixture of Steely Dan and the Bay City Rollers—the former for chord changes and the latter for pop kitsch. Once in a while it sounds as though a song and a performance are going to amount to something, but . . . alas, alas, "almost" is a sad and final word. J.V.

BOBBY BORCHERS: Denim and Rhinestones. Bobby Borchers (vocals); instrumental accompaniment. What a Way to Go; Here in My Arms; Cheap Perfume and Candlelight; You Are Yesterday; Brass Buckles; and five others. PLAYBOY KZ 35027 \$5.98, ^(®) ZA 35027 \$6.98, ^(©) ZT 35027 \$6.98.

Performance: Above the material Recording: Clean

Sex is here to stay in country tunes, and that's all right, but some songwriters seem to think that dealing with it excuses them from the rest of the work involved in writing a song. I wish singers like Bobby Borchers didn't hook up with writers like that (or occasionally write like that themselves). I wish this album had one measly semblance of an idea in it somewhere, made one trifling observation about what life-or even, for that matter, sex-is really like. But it doesn't. It just skates around on the assumption that having bedroom eyes is all it needs. Borchers has a healthy baritone voice and some savvy about how to use it, but he's going to have to find something else to use it on if he wants to stav for breakfast. NC

DEE DEE BRIDGEWATER: Just Family. Dee Dee Bridgewater (vocals); instrumental accompaniment. Maybe Today; Sweet Rain; Night Moves; Melody Maker; Thank the Day; and four others. ELEKTRA 6E-119 \$6.98.

Performance: One good track Recording: Good

Dee Dee Bridgewater's big moment here (five minutes actually) is her performance of Elton John and Bernie Taupin's Sorry Seems to Be the Hardest Word. In it she transcends much of the essential banality of what has gone before and what follows in the way of repertoire and arrangements. Stalking through the lyrics like a night-prowling cat, she sings with a smoldering intensity that nailed me to the spot. But that track is the only peak on an otherwise flat landscape, and perhaps because it is so good it merely increased my impatience with all the claptrap around it. P.R.

KEITH CARRADINE: Lost and Found. Keith Carradine (vocals); vocal and instrumental ac-

companiment. Mr. Blue; Love Conquers Nothing; Smile Again, Laugh Again; San Diego Serenade; Homeless Eyes; Rain; and five others. Asylum 6E-114 \$6.98.

Performance: Mostly lost Recording: Very good

Here's another album from one of actor John Carradine's singing sons. I must say that I find David's voice more appealing than Keith's, however. And the ballads in "Lost and Found" apparently cannot decide whether they belong in the slick world of pop or the earthy one of folk music. Side one is called "Lost" and deals with lost loves and loneliness, deserted mates, and the "homeless eyes" of neglected children. Keith Carradine wrote most of these songs himself, yet he seems to be experiencing the emotions in them secondhand. They don't quite make it as songs and he never sings them with sufficient conviction. Nor is the chorus crooning behind him much help.

Side two is called "Found," and here things start to look up a bit in more ways than one. Carradine is more believable singing John Lennon and Paul McCartney's *Rain*, and he sounds far more persuasive celebrating than mourning. It all ends on a sour note, though, with *Neutron Bomb*, one of those anti-war songs cluttered with words that only serve to get in the way of the simple statement intended. But it is well sung, which suggests that Carradine should let somebody else write the songs and just stick to singing them. *P.K.*

CHECKMATES, LTD.: We Got the Moves. Checkmates, Ltd. (vocals); instrumental accompaniment. Take All the Time You Need; Let's Do It; Sunshine After the Storm; Loving You a Lifetime; and four others. FANTASY F-9541 \$6.98.

Performance: Mellow Recording: Very good

Remember the Checkmates? Seems this trio hasn't been heard from in some time, though I do recall their hit *Black Pearl*, which was produced some years ago by Phil Spector and featured all sorts of ghostly echo effects in the background. Well, they've cropped up again with "We Got the Moves," an album that has no ghosts but is chock full of spirited vocal performances.

The Checkmates amble easily through several numbers cast in a familiar r-&-b format, complete with an occasional plink-plinkplinking piano. At other times, they edge into a jazz-trio singing style. And they cap it all off with a finely wrought ballad called *Falling in Love*, which has hordes of singing strings to carry them off into the blue horizon that must exist somewhere beyond the end groove of this record. Sometimes the group's lead goes flat, but aside from this mildly distracting flaw "We Got the Moves" is a good set. *P.G.*

ERIC CLAPTON: Slowhand. Eric Clapton (vocals, guitar); Marcy Levy, Yvonne Elliman (vocals); Dick Sims (keyboards); Carl Radle (bass); other musicians. Cocaine; Wonderful Tonight; Lay Down Sally; The Core; and five others. RSO RS-1-3030 \$7.98, 8T1-3030 \$7.98, CT1-3030 \$7.98.

Performance: Very mellow Recording: Very good

Slowmouth would be more precise for this, but I suppose anything that puts speed freaks



W ARREN ZEVON's first album was too good to be true. At least, that's how *I* began to feel after publicly praising it to the skies and then living with the thing for a few months; the doubts rankled. For all the brilliance of many of the songs, for all the clever changes Zevon was able to ring on genre clichés (the genre being the L.A. School of Cool personified by, among others, the Eagles and Jackson Browne), the suspicion remained that perhaps he *was* just as sappy and parochial at heart as the people his work, however crazily, seemed to echo.

Consider, if you will, the kinds of characters he dealt with: groupies, rock musicians, gamblers, and outlaws. Pretty standard stuff, frankly, right out of the Hollywood Rock Handbook. When he portrayed down-and-out Angelinos wasting away in seedy music-biz hotels, did it really matter that he was setting up a bizarre musical joke whose punch line was a massively orchestrated ode to the hum of an air conditioner? Or, when Linda Ronstadt recorded (presumably with the author's approval) his Poor Poor Pitiful Me as a straight lament, did this prove that it was all in the irony of the beholder? Were dime-store sentimentalities like those in Hasten Down the Wind the rule and his off-the-wall rockers the exceptions? In short, was Zevon just a West Coast wimp who had gotten lucky?

The answers, I'm happy to report, are yes, no, no, and—emphatically—no. In fact, I feel slightly silly for having worried, because "Excitable Boy," Zevon's second effort, presents a vision of rock-and-roll that has absolutely nothing to do with the slicked-down Seconal sound of Seventies California pop. It is a vision that is as hilarious, idiosyncratic, and wonderfully sick as any in the music's twenty-year-plus history, a vision so uncompromising and intelligent that nowhere on the record is the scent of kitsch even faintly discernible. All that and a backbeat as well.

The songs themselves run about as wide a gamut, musically and lyrically, as you can imagine. There's a genuine rock anthem (Johnny Strikes Up the Band) and a disco evocation of George Antheil's Ballet Mécanique (Nighttime in the Switching Yard). There are tales of American playboys gaming at the tables of pre-Castro Havana in the company of Russian waitresses, of the Mexican gentry who watched their lives go up in smoke as Zapata's men took Veracruz, of the headless ghost of a Norwegian soldier of fortune who prowls the Dark Continent hell-bent on revenge, and of an English werewolf with an impeccable hairdo drinking piña coladas at Trader Vic's. There's cartoon violence and genuine passion. There's a hint of the Coasters' Fifties juvenile-delinquent stance in the title tune, some glorious early-Sixties Brill Building romanticism (Tenderness on the Block), and even some tongue-in-cheek cynicism (Accidentally Like a Martyr) that seems to presage the Eighties. Best of all, there's the spectacle of the Elektra/Asylum house band, featuring (usually ever-so-tasteful) Ronstadt guitarist Waddy Wachtel, playing flat-out rock-and-roll as if they'd just discovered that loud noises can be liberating (Lawyers, Guns and Money). And that reinforces my suspicion that, on top of everything else, Zevon is one hell of an arranger and leader.

■ OOK, what more could you want from him? "Excitable Boy" gives you the guitar raunch of the Rolling Stones, the wit and verbal facility of Randy Newman (perhaps Zevon will go Newman one better by getting the subject of equal rights for lycanthropes onto the American breakfast table), and some fantasies that make Elvis Costello's seem as mundane as Barry Manilow's. Clearly, this is the first truly subversive album of 1978. Miss it at your peril. — Steve Simels

WARREN ZEVON: Excitable Boy. Warren Zevon (piano, vocals); Waddy Wachtel (guitar); other musicians. Johnny Strikes Up the Band; Roland the Headless Thompson Gunner; Excitable Boy; Werewolves of London; Accidentally Like a Martyr; Nighttime in the Switching Yard; Veracruz; Tenderness on the Block; Lawyers, Guns and Money. AsYLUM 6E-118 \$7.98, [®] ET8-118 \$7.98, [©] TC5-118 \$7.98.



Saturday Night Bee Gees

BEING fundamentally suspicious of any film advertised heavily in the subway, I have so far refrained from seeing Saturday Night Fever, though some cinema addicts have judged it the harbinger of an emerging bluecollar chic. But after listening to this stunning two-record set, with its unrelenting disco rhythms, I think I'd enjoy the movie whether or not John Travolta really is a new and more agile Marlon Brando (as some claim).

The music here has an unflagging thrust, yet it is sufficiently varied in style, mood, and instrumentation to transcend the trite strictures commonly associated with disco. The featured Bee Gees provide a thread of consistency that binds into a more or less coherent listening experience the high-level offerings by Yvonne Elliman (If I Can't Have You), Tavares (More Than a Woman), and a host of others—including the Trammps, who drive it all home to a fiery conclusion with Disco Inferno. Some of the material has been begged or borrowed, but apparently not stolen, from previously released sets, and the selections achieve a collective impact that exceeds the mere sum of their separate impressions. Tastelessness intrudes only twice, with Night on Disco Mountain and A Fifth of Beethoven, but these excursions into awfulness may be overlooked in view of the overwhelming excellence of everything else. —Phyl Garland

SATURDAY NIGHT FEVER. Original-soundtrack recording. Bee Gees, Yvonne Elliman, Walter Murphy, Ralph McDonald, K. C. and the Sunshine Band, Kool and the Gang, the Trammps, Tavares, David Shire (vocals and instrumentals). RSO RS-2-4001 two discs \$9.98, (a) 8T1-4001 \$9.98, (c) CT1-4001 \$9.98.

on notice will do; this is a rawther laid-back album. Pretty too. It drags a bit during the first side, although there are subtle things there in both voice and guitar that do wear well. And Wonderful Tonight is the kind of ultrasimple, patently commercial thing Clapton can do and not get on my nerves-much. But the second side is more interesting mainly because it has a more varied assortment of songs. None of them are really fast or bombastic, though; Clapton has to move his fingers fairly fast a few times, but there's no hot-dogging or even any fills for the sake of fills. Clapton's vocals have gotten even craggier and mellower, and I think I wish they were mixed a little louder here. It's hard to say; the mix is in some ways brilliant, with a great sense of space and presence in some of the tracks, so maybe what I really want is for Clapton to sing a little louder. Or, as musicians put it, to sing out, as in away from one's own chest, which is where he seems to aim some of this. But a certain kind of self-effacement is part of his style. He's good-I agree with Steve Simels' choice (in the February issue) of Clapton's "Laylah" as one of the best rock albums of the last twenty years. This current one is not, but if you want to be calm with Clapton, it will fill the bill. N.C.

RANDY CRAWFORD: Miss Randy Crawford. Randy Crawford (vocals); instrumental accompaniment. This Man; At Last; Half Steppin'; Over My Head; Desperado; and five others. WARNER BROS. BS 3083 \$6.98, ^(®) M8 3083 \$7.98, ^(©) M5 3083 \$7.98.

Performance: Bouncy Recording: Good

"Cute" has been used in the pejorative sense for so long that one hesitates to apply it to any performer. But there's really no more accurate a way to describe Randy Crawford, who is early Aretha in style and bubbly all the way. She gets fine support here from a group of Muscle Shoals musicians, and she's particularly good in *Take It Away from Her (Put It on Me)*, which she bounces through with a kind

of sparkle not heard too much in these days of soulful solemnity. Nice work. *P.R.*

RECORDING OF SPECIAL MERIT

BLOSSOM DEARIE: Winchester in Apple Blossom Time. Blossom Dearie (vocals, piano). Sunday Afternoon; A Wonderful Guy; Lucky to Be Me; Sammy; It Amazes Me; You Are There; Sweet Surprise; The Wheelers and Dealers; and twelve others. DAFFODIL BMD 104 two discs \$11.98 (available from Daffodil Records, P.O. Box 695, Old Chelsea Station, New York, N.Y. 10011).

Performance: **One of a kind** Recording: **Good**

Blossom Dearie keeps adding her unique, stylish records to the catalog year after year, thank heaven. Like a new book by Jean Rhys or a new sculpture by Louise Nevelson, a new album from Blossom is a welcome reminder that there is still civilized, urbane life on this planet—and that while great ladies are always the first to deny that they *are* great or ladies, they are an unalloyed joy to have around.

And that is what this new two-disc album is-a joy to have around. Blossom runs through a lot of her own songs here, such as Sweet Surprise and Love Is an Elusive Celebration, mixing in with them such chestnuts (although they don't sound like chestnuts when she sings them) as If I Were a Bell, Surrey with the Fringe on Top, and A Wonderful Guy. She performs with all of her customary élan in that voice that can either charm or chill as she desires. There are pitifully few artists in any category who can be described as truly unique, but Blossom Dearie, if indeed any description can do her singularity justice, honest-to-God is. If you haven't experienced her yet, this is as good a place as any to begin. Then you can go back and pick up what you've missed. In the meantime Blossom will certainly have gone forward to new albums, P.R. which is a lovely prospect.

DOONESBURY'S JIMMY THUDPUCKER: Greatest Hits. Jimmy Thudpucker and the Walden West Rhythm Section (vocals and instrumentals). You Can't Fight It; Take Your Life; I Don't Know My Love; Stop; Indian Brown; Where Can I Go?; and four others. WINDSONG BXL1-2589 \$6.98.

Performance: Interesting prank Recording: Excellent

Rock star Jimmy Thudpucker is one of the characters in the syndicated comic strip Doonesbury, written and drawn by Gary Trudeau. Doonesbury's following is mostly composed of college students and all those people who survived the Sixties demonstrations against the Vietnam War and who now urge us to save the whales and ban the Concorde. Trudeau has a fine comic sense and real wit, and I am never quite sure whether he is a spokesman of the New Class (left-liberal, government-employed, high-salaried, suburban-dwelling) or has an affectionate contempt for it. He also knows enough about the emotional politics of rock superstardom, the rock media, and recording-studio life to make Thudpucker and his cohorts hilariously accurate characters. The eight-page booklet that accompanies this record reproduces several of the strips he has drawn chronicling Thudpucker's adventures.

(Continued on page 126)

THE SPARKOMATIC SOUND.

IF YOU'RE A TRAVELIN' MAN WHO THINKS CAR SPEAKERS SHOULD LOOK TOUGH BUT ACT SENSITIVE.

Car speakers have never looked as exciting. Or sounded as extraordinary.

Because these Sparkomatic "component" look 3-way speakers are a totally new outlook for 6X9 rear deck audio. And because they reproduce high fidelity like you were sitting center aisle instead of center lane.

With these Sparkomatic car speakers you get the most technologically advanced auto sound you can own. They're magnificently responsive across the full frequency range with minimum distortion, optimum dispersion, and can easily handle 50 watt power peaks.

Beneath the acoustically transparent heavy gauge wire

mesh grilles are foam-edge air suspension woofers with 20 ounce magnets, foam-edge air suspension midrange speakers with 3 ounce ceramic magnets and dome horn tweeters.

So, if you're a travelin' man who likes to travel in style, these speakers are tailored just for you.

Visit a Sparkomatic dealer for a beautiful eyeful and a magnificent earful.



Car Sound/CB Equipment/Auto Clocks/Shifters/Creepers

For our free complete Car Sound Catalog write: "For The Travelin' Man", Dept. SR, Sparkomatic Corporation, Milford, PA 18337. CIRCLE NO. 55 ON READER SERVICE CARD



R

Ð

E

1

1

1

闘

1

R

Į.

日

譋

The speaker shown above is the New Advent Loudspeaker - a new version of the system that has been this country's best-selling and most imitated speaker for several years.

If you have been thinking of getting, or improving on, a stereo system, the New Advent Loudspeaker can give you performance that's clearly in the "best" category for the price you would normally pay for "something pretty good." Its price is \$129 to \$159*, depending on cabinet finish and how far we have shipped it.

For full information, including a list of Advent dealers, please send us this coupon at the address below. Or call (toll-free) 800-225-1035. (In Massachusetts, the non-free number is 617-661-9500.) Thank you.



There is some mystery about the album. The songs, with one exception, are listed as being written by Thudpucker, and the lead vocalists are not identified; my efforts to find out who wrote what and who sings what have been unavailing. Of the credits that are listed, Steve Cropper is most prominent as producer. Cropper is, of course, the superb guitarist from Booker T. & the MG's. Trudeau himself probably had a hand in the writing of some of the material, which contains some delicious lines. Fretman Sam, about a studio guitarist who is much in demand and wealthy as a result, ends a chorus with "Last one to the fade gets scale" (fade means the fade-out at the end of a song and scale is the prescribed musician's union fee). I Don't Know My Love is a real/surreal complaint by a fellow who doesn't recognize his wife after ten years of marriage, and Where Can I Go?) is a supposedly autobiographical tune about Thudpucker's early years as a keyboard player and a true believer (read "sucker") in the religions in vogue at the time. Take Your Life, though, is a joke that may go wrong-the smooth, top-forty pop performance is just too damned palatable. It is sung in a sweet and tender tenor with a Liebfraumilch orchestral background, but the lyrics of the chorus are an invitation to suicide. I am sincerely concerned about its effect on someone who is going through a rough time.

The album is a satire not only on the superstar figure, eager and kid-pompous song-writing, and the studio world, but on the popmusic audience itself. Not that they all don't deserve, from time to time, a smart rap on the wrist, but the satire is so accurate that it occasionally becomes what it is intended to ridicule. In that case, who has the last laugh? And who has the first? J.V.

JESSICA DRAGONETTE: With Love, Jessica Dragonette. Jessica Dragonette (vocals); orchestra. Love Me Tonight; Nevermore; Wanting You; Kiss Me Again; Ay, Ay, Ay; Dream of Love; Make Believe; The Touch of Your Hand; and eight others. TOTEM 1029 \$6.98.

Performance: Unique Recording: Fair

For over twenty years Jessica Dragonette was one of the leading stars of radio. She was a class act all the way, and her soprano voice and not-too-taxing repertoire provided pleasure for millions. This release of transcriptions of her live performances from those days reveals her to have been charming, musicianly, and pouty-sweet in the manner of Grace Moore, Jeanette MacDonald, Yvonne Printemps, and Mary Bell. All of these ladies were at their peak in the Thirties-and why not, considering the gorgeous pop material that was being written in those days? Dragonette here sings such then-contemporary pop tunes as I Dream Too Much, Falling in Love with Love, Smoke Gets in Your Eyes, and Nevermore, all songs that need a real singer, which she most assuredly is. It says in the liner notes that Jessica is a close friend of Greta Garbo's. And, even in 1978, any friend of Greta's is a friend of mine. P.R.

THE EMOTIONS: Sunshine. The Emotions (vocals): instrumental accompaniment. Shouting Out Love; I Really Miss You; Ain't No Sunshine; Anyway You Look at It; and five others. STAX STX-4100 \$6.98.

Performance: Fresh Recording: Good

This material was apparently pressed by Stax some years ago, probably between 1971 and 1974, for one of the trio to be heard here is Theresa Davis, who worked with the Emotions during that period only. Much of it was produced by the late Al Jackson Jr., drummer for Booker T. and the M.G.'s back in the Sixties and later a producer of Al Green.

In spite of its age, though, "Sunshine" sounds amazingly fresh. Vocal artistry prevails over background effects as the Emotions weave their way in and out of cool, melodious songs such as Ain't No Sunshine and Put a Little Love Away. The opener, Shouting Out Love, bears a strong resemblance to the soul evergreen Groovin' and is an echo of a more relaxed musical period. Under the guidance of Maurice White, the commercially successful Emotions of today have more power and raw thrust, but the Emotions of yesterday had just as much basic appeal. P.G.

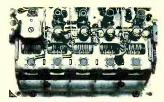
ENCHANTMENT: Once Upon a Dream. Enchantment (vocals); instrumental accompaniment. Sunny Shine Feeling; It's You That I Need; You Just Be an Angel; Up Higher; Silly (Continued on page 130)

ENCHANTMENT: high-stepping gusto



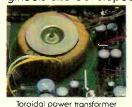
Nikko Sounds as Professional as it Looks





5-gang capacitor Alpha II amplifier.

One look at the front panel controls and it is obvious these units possess an unusual combination of creative features. Nikko engineers also developed the advanced technology you can't see.



Technology which makes these components truly professional in sound as well as appearance.

If you thought Nikko only makes

rock-solid, quality-built receivers, we

For the discerning listener, we pre-

sent a selection of rack-mountable stereo components from Nikko Audio's

Professional Series. The Gamma I

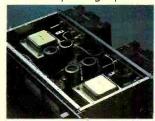
FM tuner, The Beta I preamp and the

have some pleasant surprises.

The advanced design 5-gang capacitor (highest rated capacitor available) gives the Gamma I tuner superior FM sensitivity (1.8 μ V) and selectivity (35dB wide, 85dB narrow). You get the signal you want, and

only the signal you want to hear.

The thinline Beta I preamp employs high voltage FET's for exceptionally fast signal reaction and extremely high efficiency and linearity in the high frequency range. A toroidally wound power transformer reduces hum radiation while the phono overload rejection capability is one of the highest ever measured. On the Alpha II amplifier, totally independent, dual power supplies offer far greater dynamic range and lessened crosstalk than the usual split single power supply and significant headroom. (120)



watts per channel, both channels driven into 8 ohms, from 15 Hz to 20 kHz with THD and IM distortion a phenomenally low 0.03%.)

These are but a few examples why Nikko sounds as professional as it looks. Nikko designs and builds all its stered equipment with dedication to total reliability, highest quality and superb performance. And the price is

Dual power supplies always affordable.

Take another look at the features and controls. Then visit your Nikko dealer and experience true professional sound. Available with black or brushed aluminum front panel



Nikko Electric Corp. of America 16270 Raymer St., Van Nuys, Calif<mark>.</mark> 91406 (213) 988-0105 In Canada: Superior Electronics, Inc. © Nikko Audio 1978

Tom T. Wants To Reform The Outlaws

"HE best and the brightest (and the first) song in Tom T. Hall's new RCA album "New Train-Same Rider" is called Come On Back to Nashville and subtitled Ode to the Outlaws. The co-kings of the "outlaws" he means are Waylon Jennings and Willie Nelson, and just about when Tom T. was beckoning them with this ode the two were releasing an RCA album they made together. It starts out by advising others not to be like them-Mamas, Don't Let Your Babies Grow Up to Be Cowboys-but of course there are some not strictly verbal messages in between the lines hinting that their kind of life is a big, glamorous romp, what they used to call "the berries."

Waylon and Willie are out there being firstnamed by slickers who are into their kind of music, so-called "progressive country," at least in part because it's still considered reasonably hip to be keeping track of that. And their duet album suggests that attracting more newcomers to the flock is still a priority, for "Waylon & Willie" is basically a sampler.

Sampler or not, it's a lot more interesting than Hall's new album. Yet I have a feeling that they ought to listen to Tom, who stayed back on Music Row and suggests in "New Train" that the times call for an entrenching action-finding safe, familiar ground and digging in. "They'll pat you on the fanny ..., and tell you you're a dandy-but they still don't want pickin' on network TV," Tom sings. This lead-off song and one other, Mabel, You Have Been a Friend to Me, are catchy little dudes, but even they are basically formula pieces and lack the old Hall panache. "New Train" and his previous "love-song" album ("About Love") indicate that Hall's songwriting ambition hasn't been very fancy lately. The old surprising-but-precise phrases aren't there with the old-time bite, and Hall's themes don't challenge a listener much in these recent outings. He seems more conservative in what he's trying to say, and this is even more pronounced in the tunes, especially here. Many of these seem to be the same one, the three-chord country tune that's legally available to anyone in the same way the basic blues melody is.

On top of that, Hall sings the wrinkle and style out of a tune or two he didn't write. Hardest to take is how his corner-cutting makes even *I'd Rather Die Young*, that wonderful old piece of schlock from the Hilltop-



pers, sound like the universal country tune. Just how you do the third line of a chorus (like the second shot in golf, it's unglamorous but the key to the rest) often determines whether you unlock a song's unique spirit, and Hall ought to go back and listen again to the way the immortal Jimmy Sacca phrased this one.

Two albums do not a pattern make, perhaps, and it hasn't been that long since Hall came up with *Faster Horses*, the kind of song some of us look to him to write, but there is clearly a settling deeper into hard-core, simple, tending-toward-mindless country-music conventions in his latest work. His move from Mercury has also left behind the ensemble sound Jerry Kennedy had made a secondary Tom T. Hall trademark, and I miss the clean, acoustic jangle of that too. Hall and RCA have taken a tentative step closer to the kind of sound the outlaw bands have, but again they've made it a low-risk, low-ambition step.

The band on "Waylon & Willie" sounds like a mixture of their regular bands, both of which are terrific and are major reasons powerful as these two singers are—why the outlaw branch of country music is still able to win friends and influence people in these inorganic times. My problem—that of anyone who's a Waylon-and-Willie follower—is that I've already got so many of these licks on other albums. That goes with having so many of these songs on other albums. I think they overplay the novelty of their recording together; after all, they've done it before in

th<mark>e</mark> audience is broad enough now to be thin in spots . . .

spurts here and there. I think Mamas, Don't Let Your Babies probably has a place here, but some of the others have been on too many albums already, and the gimmick of having Willie do songs that are identified with Waylon and vice versa just underscores the words "novelty" and "sampler" that tend to stick to the album. The gimmick isn't carried to such extremes that it crowds out all nuggets; Waylon does have a pretty good go at the rocker Gold Dust Woman, and there are a couple of Kristofferson songs worth a few listens. The overall effect, though, is of an album aimed at new listeners, at broadening the outlaw audience instead of deepening their hold on the one that already exists. The question that occurs to me is whether they've really thought this through and decided how broad they want it. My guess is it's broad enough now to be thin in spots.

HAT's the sort of thing Hall seems to be getting at: by work, deed, nuance—and by what he hasn't been doing lately. He seems to be retreating from most of the world while Waylon and Willie are going out to conquer the far corners of it-but I think better music for all (like The Truth) lies somewhere in between. Taken together, these albums suggest that country music's relationship to the world beyond its strongholds is much less predictable right now than it was a few years ago. The albums take opposite directions in responding to the new, slippery footing, but in a sense they wind up in the same place. They both appeal more to people who don't know the artists than to people who do. Both fail to nurture the faithful with New Stuff.

–Noel Coppage

TOM T. HALL: New Train—Same Rider. Tom T. Hall (vocals, guitar); instrumental accompaniment. Come On Back to Nashville (Ode to the Outlaws); I'm Not Ready Yet; Burning Bridges; Dark Hollow; I'd Rather Die Young; May the Force Be with You Always; Whiskey; No One Feels My Hurt; Mabel, You Have Been a Friend to Me; I Wish I Loved Somebody Else. RCA APL1-2622 \$7.98.

WAYLON JENNINGS/WILLIE NELSON: Waylon & Willie. Waylon Jennings (vocals, guitar); Willie Nelson (vocals, guitar); instrumental accompaniment. Mamas, Don't Let Your Babies Grow Up to Be Cowboys; The Year 2003 Minus 25; Pick Up the Tempo; If You Can Touch Her at All; Lookin' for a Feeling; It's Not Supposed to Be That Way; I Can Get Off on You; Don't Cuss the Fiddle; Gold Dust Woman; A Couple More Years; The Wurlitzer Prize (I Don't Want to Get Over You). RCA AFL1-2686 \$7.98.

Now, a true state-of-the-art speaker system from Jensen.



Jensen has finally closed the gap between "home" and car stereo reproduction. The speakers and crossover networks were optimized to provide the best sound obtainable not only from today's finest car stereo equipment...but also from tomorrow's bi-amplified electronics.

The principle. Acoustically, the interior of a car is nothing like a living room. So for optimum sound reproduction in a car all sound should not emanate from the same location.

The woofer needs the large volume of the trunk to provide solid, deep bass. While the midrange and tweeter should be located in the front area to deliver all of their very directional frequencies.

Bi-amplification. The Jensen Separates offer this advanced capability. That is, sending the low and high frequencies to sepa-



rate amplifiers for each channel. One amp drives the woofer, another the tweeter and midrange. The result is more "punch" and lower distortion.

The control unit. Lets you adjust your music to suit your car and your musical taste...just ike the controls found on sophisticated home speaker systems. Offering two controls for each channel, one for midrange and one for the tweeter, it permits optimum balance of sound. A feature you'd hardly expect to find in a car high fidelity system. Yet an integral part of the Lensen Separates.

The Jersen Separates. Now you know why we call them state of the art.

Two 2" Cone Tweeters True hi-fi componentry. These sensitive tweeters offer wide dispersion. Position them high in the front doors to get the full benefit of all the clean, crisp highs.

Two 3½" Mid anges Extraordinarily accurate in reproducing the all important vocal range between lows and highs. Mount them below each tweeter in the door.

Control Box Mounts under the dash with separate controls for each tweeter and midrange. Enables adjustment for acoustical characteristics and musical preferences. Twc 6" x 9" Woofers Featuring 20 oz. magnets for extra power handling and greater linearity Flexair foam cone suspension for lower distortiom. Mount in rear deck for ight, well-defined bass.

If your cartridge is more than three years old, don't replace your stylus!

Don't get us wrong. There is nothing worse than playing your records with a worn stylus. And no better way to restore your old unit to its original glory than a new diamond

But frankly, there have been significant strides made recently in the phone cartriage field. And the new cartridges of today stand head and shoulders above even the finest of a few short years ago.

Here's the choice: Get fresh – but butdated – performance with a replacement stylus, or enjoy all the benefits of modern cartridge research and development for just a few collars more. You'll find that you can upcate your system for far less than you might imagine. It's probably the most dramatic single improvement you can make.

For instance, Audic-Technica offers Universal¹⁴ cartridges equipped with a genuine Shibata stylus and our uniquely effective Eual Magnet¹⁴ system beginning at just \$75,00 list. Or you can replace your present cartridge with a fresh new Audio-Technica cartridge with highly-polished elliptical tip for as little as \$45,00 list.



Are these new models worth the d fference? Absolutely. You'l. be amazed at what you hear from today's generation of phone cartridges. Improved frequency response. Lower distortion. Better separation. Less record wear. Truly better sound.

A new Audio-Technica cartridge. Your best value in hi-fi.

audio-technica

AUDIO-TECHNICA L.S., INC., Dept. 5E F, SE Shiawassee Avenue, Fairlawn, Ohio 44313 CIRCLE NO. 12 ON READER SERVICE CARD Love Song; and four others. ROADSHOW RS-LA811-G \$6.98, ⁽³⁾ EA811-H \$7.98, ⁽³⁾ CA811-H \$7.98.

Performance: Vigorous Recording: Good

"Enchantment" is a misnomer for this quintet; their music is too raucous. Yet they do sing with a high-stepping gusto that is always invigorating. Furthermore, they manage to avoid sounding like just another in that batallion of male soul-singing groups out there by featuring the high tenor of Emanuel Johnson. He is not individually credited here, which is a shame, for he's the group's major asset sort of a male Gladys Knight, though lacking her class and depth. The range here is from fast-tempo rompers to a relaxing little tidbit called It's You That I Need. A fine disc. P.G.

ART GARFUNKEL: Watermark (see Best of the Month, page 87)

JUDY GARLAND: The Wit and the Wonder of Judy Garland. Judy Garland (vocals); instrumental accompaniment. Thanks for the Memories; Dardanella; Americana; People Will Say We're in Love (with Bing Crosby); Dixieland Jazz; Long Ago and Far Away; Why Was I Born?; Loma. Interviews (with Jack Paar) in New York, London, and Hollywood. DRG SL 5179 \$7.98 (from DRG Records, 200 West 57th Street, New York, N.Y. 10019).

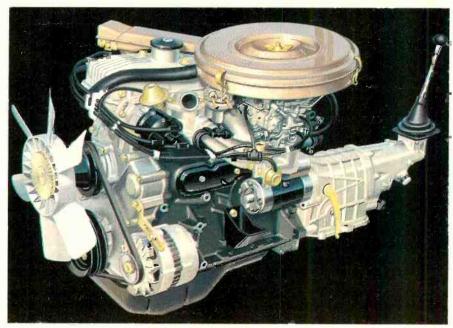
Performance: **More wit than wonder** Recording: **Not improved with age**

The first half of "The Wit and the Wonder of Judy Garland" is devoted to her singing-the "wonder"-and though it contains some rarities salvaged from tapes of broadcasts and stage shows (some of them of rather poor quality technically), there are few surprises. It is intriguing, though, to hear a very young Judy (in 1938) putting her heart into a fairly wrong-headed interpretation of Thanks for the Memories or applying a swing treatment to the ancient melody of Dardanella (the former from a radio broadcast, the latter from her first stage show, at Loew's State in New York-which a misprint on the album cover mistakenly places in 1968). But there are some pretty dull moments. Judy's was not the style for the drippy Long Ago and Far Away, and, despite her tragic personal history, Why Was I Born? sounds insincere coming from her, however urgently she phrases the question. She sounds far more at home airily running through People Will Say We're in Love

with Bing Crosby in a Forties G.I. broadcast. But it is side two, "The Wit," that makes this release well worth owning. On it we hear Judy talking, at her spontaneous best, in television appearances during the Sixties with that expert interviewer Jack Paar (who is not mentioned in the album credits). In New York in 1962 we hear her telling devastating stories about Elizabeth Taylor, erstwhile classroom buddy at the little MGM schoolhouse; describing the world of vaudeville her family, the Gumms, didn't exactly conquer; and revealing that Bert Lahr, Ray Bolger, and Jack Haley were always crowding her off the Yellow Brick Road on the way to Emerald City.

With Paar in London in 1964, she relives the time she and Noël Coward were trapped in a room by Marlene Dietrich and forced to listen to a record of one of Marlene's tours that consisted entirely of applause. In Hollywood (Continued on page 132)

Introducing our two-barrel, four-cylinder, twelve-valve, smooth-running, low-emissions wonder.



If you're really into cars and driving, you should know more about our amazing new MCA-Jet System with Silent Shaft. We think it's one of the most significant engine developments to come down the pike since the first American high-compression V8.

First off, it offers all the advantages of a fourcylinder engine...but without the vibration usually

associated with the proverbial "four-banger." Its unique Silent Shaft design (available only with the five-speed manual and automatic transmissions) is the reason. Two counterbalancing shafts rotate in opposite directions to cancel out the noticeable power pulses inherent in normal four-cylinder designs.

Now comes the MCA-Jet

A cutaway of our amazing little engine.



Induction and compression phase.



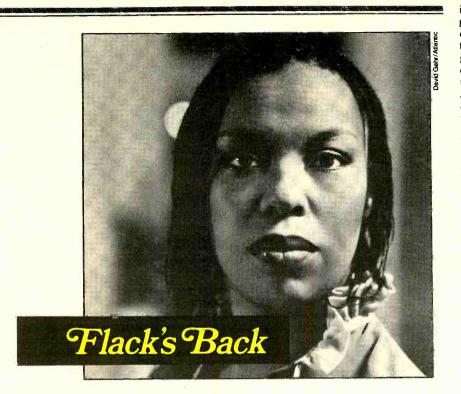
Ignition and combustion phase.

part of our system. MCA stands for Mitsubishi Clean Air. The MCA-Jet System meets...even exceeds...the stringent emissions requirements now in effect in both Japan and America. Without loss in performance, too. A revolutionary new cylinder-head design that incorporates a third, or "jet," valve does the job. This valve introduces an extra swirl of air into the combustion chamber

> which swirls the fuel-air mixture and promotes a faster, more even, thorough burning of the mixture at ignition.

The MCA-Jet System. It's a simple, yet highly sophisticated, answer to a very complex problem. The kind of answer you would expect from people who care about cars and driving as much as you do.

MCA-JEI SYSIEM. Exclusively available on Dodge Challenger, Dodge Colt, Plymouth Sapporo, and Plymouth Arrow. MITSUBISHI MOTORS CORPORATION CIRCLE NO. 35 ON READER SERVICE CARD



ROBERTA FLACK, the woman with the honey-velvet voice, has emulated Stevie Wonder in putting more than two years nearly three, in fact—between her last album, "Feel Like Makin' Love," and her new one, "Blue Lights in the Basement." Only very special people can keep their fans waiting that long, greedy and impatient as we are. Trouble is, I don't think that "Blue Lights" is quite worth the wait. Since I've been anticipating it for so long, perhaps no record she released could have entirely satisfied me, but I do feel that here she has given us considerably less than her all.

Overall, it is a quiet, tasteful album—as could have been predicted, given that these are the qualities most commonly associated with Roberta Flack. Subtlety has been her hallmark, from her choice of songs to the way she sings them—in a style that embraces the listener, but coolly, with restraint. Control is evident in her every utterance, so that usually when the climaxes come they seem almost painfully delicious. But restraint itself seems to have gotten out of hand in "Blue Lights," and we wait too long for peaks of pleasure that, when they come, are less lofty than we had hoped they would be.

It's a point in the album's favor that the fare on it is much more varied in both style and pacing than on some of Flack's previous outings. Unfortunately, it opens with a real loser, Why Don't You Move In with Me-a trite disco reject completely unworthy of Flack's singular talents. Strangely, it was written by Eugene McDaniels, who is usually as imaginative a collaborator as can be found. He makes up for it by contributing two pensive numbers, 25th of Last December and Love Is the Healing, that are ideally suited to the singer's ballad style. Sprinkles of reggae flavor Fine, Fine Day, and Soul Deep, with a female group shoo-be-dooing in the background, is a time trip back to the Motowndominated Sixties. It's somewhat disconcerting to hear audience chatter suddenly intrude on *I'd Like to Be Baby to You*, but Flack's rendition of this smoke-tinged, after-hours, slow-drag number is so sensuously effective that even Carmen McRae might be moved to call out a "Yeah!" on hearing it.

The Closer I Get to You has already, justifiably, been fingered by Atlantic as the hit that will pull "Blue Lights" up the sales charts. It's the only cut on the album that really lets us hear the Roberta we've been waiting for, and her performance is enhanced by the participation of the long-silent Donny Hathaway, whose gifts she applauded early in his inexplicably interrupted career. It is a shame he didn't linger for a few encores, for their voices mesh perfectly.

N sum, I found "Blue Lights in the Basement" very disappointing. There are some jewel-like moments on it, precious and shimmering, but involvement and depth of feeling seem to be missing almost throughout. Perhaps the songs here simply aren't as good as her earlier ones, but somehow Flack's elusive quality of quiet fire (or understated passion), the key to her art, fails to come through. It is difficult to pass a final judgment, for Roberta Flack's music should be carefully savored, which takes time; but I am still searching for sparks of her inner self amidst all those blue lights. —Phyl Garland

ROBERTA FLACK: Blue Lights in the Basement. Roberta Flack (vocals); Donny Hathaway (vocal); instrumental accompaniment. Why Don't You Move In with Me; The Closer I Get to You; Fine, Fine Day; This Time I'll Be Sweeter; 25th of Last December; After You; I'd Like to Be Baby to You; Soul Deep; Love Is the Healing; Where I'll Find You. ATLAN-TIC SD 19149 \$6.98, (1) TP 19149 \$7.97, (C) CS 19149 \$7.97. in 1967, she goes over some of the earlier ground again, but the repetition is worth enduring to hear her tell about the Munchkins, those clunky midgets in *The Wizard of Oz*, getting smashed every night in Culver City during the shooting and having to be "picked up in butterfly nets." It all makes one miss Judy Garland even more, for in her untranquilized moments she was not only a clever woman but a very funny one. *P.K.*

LEIF GARRETT. Leif Garrett (vocals); vocal and instrumental accompaniment. Runaround Sue; Surfin' USA; That's All; Bad to Me; and six others. ATLANTIC SD 19152 \$6.98, ^(a) TP 19152, ^(c) \$7.97, ^(c) CS 19152 \$7.97.

Performance: **Routine** Recording: **Very good**

Hot on the golden heels of little Shaun Cassidy comes little Leif Garrett to complicate even further the vie interieur and shake the poise of little Ms Teenybopper. His two single hits (both warmovers), Dion's Runaround Sue and the Chuck Berry/Brian Wilson Surfin' USA, are presumably the reason for the album. Garrett's performances have a sittingon-a-waffle-iron, squirmy intensity about them that is sure to light up the life and bring a glint to the eye of the most jaded child fan. As is usual in most such cases, voice and technique are almost nonexistent, but the production by Mike Lloyd is as artful and cosmetic as a pimple pencil. PR

ANDREW GOLD: All This and Heaven Too. Andrew Gold (vocals, guitar); other musicians. How Can This Be Love; Oh Urania (Take Me Away); Still You Linger On; Never Let Her Slip Away; Always for You; and five others. AsyLUM 6E-116 \$7.98, [®] ET8-116 \$7.98, [©] TC5-116 \$7.98.

Performance: **Deadly** Recording: **Good**

Poor Andrew Gold. After departing the security of Linda Ronstadt's band for a solo career, he gets lucky with a left-field hit single, and whaddya think happens? *Rolling Stone* jumps on it as the worst record of the year, merely because it's got a dumb lyric that posits sibling rivalry as the root of the L.A. malaise. For shame, *Rolling Stone. Lonely Boy*, the work in question, happens to be a great pop tune, with swell production and an irresistible hook.

But Gold's new album is indefensible, a totally tuneless exercise that seems to exist for no other reason than to allow him to demonstrate a bit of a Beatles fetish. After hearing a harmonium (!) on one track, I spent the rest of the album cringing in anticipation of a harpsichord/sitar duet that mercifully never materialized. It's time to move on, Andy. S.S.

RECORDING OF SPECIAL MERIT

AL GREEN: The Belle Album. Al Green (vocals, guitar); vocal and instrumental accompaniment. Belle; Loving You; Georgia Boy; Chariots of Fire; and four others. HI HLP 6004 \$6.98, (1) 8357-6004H \$7.95, (2) 5357-6004H \$7.95.

Performance: Belle

Recording: Satisfactory

Ostensibly, "The Belle Album," Al Green's latest, represents something new in his ca-(Continued on page 134)

Our theory sounds fantastic.



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

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

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

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

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

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

Image: Contract of the second sec

KOSS CORPORATION, 4129 N. Port Washington Ave., Milwaukee, Wisconsin 53212 Koss International/London, Dubliri, Paris, Frankfurt + Amsterdam • Koss Limited/Ontaria • Koss K.K. Tokyo reer: namely, the first time he has run the whole recording show. He wrote all the songs (with some help from Fred Jordan and Reuben Fairfax, Jr.), produced the set in his own Memphis studio, plays lead guitar, and, of course, sings. Fortunately, nothing here is so "new" that it differs markedly from his best efforts of the past. Al Green has one of the most immediately recognizable vocal styles of the current decade. He teases his way through a song, jabbing at notes and then bouncing back from them like a crafty pugilist. He avoids slugging it out in the manner common to soul screamers. Rather than blasting a note on the head, he toys with it. And, like any champion, he knows when to hold back, permitting the music to bound ahead while he

prances around on the edge of the ring. The result is a distinctive lightness in his sound. He seems to float along, elevated just slightly above the straightforward rhythms and pleasantly uncomplicated melodies.

Though Green has been criticized for giving less-than-satisfactory stage performances, he is capable of generating waves of joy on disc. Admittedly, some of his recent albums have bogged down in banality, but he has broken out of that slump with this one, which should rank among his finest.

Changes in his personal life are behind the many religious references here (as in *Chariots* of Fire, All 'n' All, and Belle), but he isn't obtrusively dogmatic, and, ironically, some of the most danceable tracks are the more re-

cludes wholly new circuit concepts for

unmatched sonic performance, and new

line noise completely out of the signal

flat for accurate reproduction of input. Or

adjust the sophisticated, equalizer-type

tone controls to your taste. Select one of

ten built-in ISO compensation curves.

Control your choice of external processor.

Unbelievably accurate digital control of

level and balance. A new concept in stereo

Crown Distinction DL-2 Controller, you'll have to try to hear it. At your dealer. Soon. Write for free brochure on the DL-2.

To believe the sonic excellence of the

The separate power supply keeps AC

The control module sets a new standard of control freedom. Leave all controls

convenience in hook-up.

path.

imaging.

It, too, makes sense.



You bet it does. Especially if you care about absolutely accurate reproduction of recorded sound.

The new Crown DL-2 Distinction Series Controller is close to being the perfect pre-amplifier. It controls the signal level but changes nothing else unless you want it to.

The DL-2's sonic excellence is impeccable. New, patent-pending circuitry and no-compromise, common-sense design have resulted in outstanding specifications. Signal-to-noise ratio is better than 97dB unweighted. Frequency response ±0.2dB, 3Hz to 100KHz. THD, IMD and TIM are simply not audible.

One of the reasons you can't hear the DL-2 is that it is three components.

The revolutionary phono preamp mounts next to the turntable. That eliminates most RFI problems. But it also in-



1718 W. Mishawaka Road, Elkhart, Indiana 46514 American innovation and technology...since 1951. ligious ones. He is convincing, though more than a little coy, when he slips into a country groove on *Georgia Boy*, but anyone who works out of Memphis has a right to pretend that he is less sophisticated than he really is it's all just part of that Southern style. The final selection, *Dream*, is sweetly wistful, the sort of introspective fare too rarely encountered in the soulstream. I, for one, would like to thank Al Green for bringing us a bit of grace that cuts through the clutter of this decade. *P.G.*

RAY GRIFF: Raymond's Place. Ray Griff (vocals, keyboards); instrumental accompaniment. A Cold Day in July; I Keep On Forgetting; You're Wearin' Me Down; Raymond's Place; Cora Lee; and five others. CAPITOL ST-11718 \$6.98. (2) 8XT-11718 \$6.98.

Performance: Variable Recording: Good

Ray Griff is one of country's carefully coiffed crooners. In this particular album, he is given to emoting to such a degree that the effect is the same as if he'd undertaken to be mechanical. The emotion is so obviously faked that he might as well have avoided it altogether. Technically, his voice could amount to something in the upper half of its range, but it's a little shaky about pitch in the lower half. He wrote all the songs, but only the title tune really gets up and swings, and most of the stuff is derivative if not limp. I'd like to hear him step back from the conventions of putting a song across and just find a nice song and sing it. If you'd like to hear that too, you'll find "Raymond's Place" somewhat less than wonderful. N.C.

EMMYLOU HARRIS: Quarter Moon in a Ten-Cent Town. Emmylou Harris (vocals, guitar); vocal and instrumental accompaniment. Easy from Now On; Two More Bottles of Wine; To Daddy; My Songbird; Defying Gravity; One Paper Kid; and four others. WARNER BROS. BSK 3141 \$7.98, [®] M8 3141 \$7.97, [©] M5 3141 \$7.98.

Performance: Very good Recording: Very good

I'm slightly disappointed with this-I expect so much of Emmylou Harris-but I do like it. I'm not that fond of To Daddy, the 1976 Dolly Parton song that's become a hit; it's a cartoon with an O'Henry ending. And Jesse Winchester's writing is represented unnecessarily weakly twice (Defying Gravity and My Songbird). The singer and the band and the production continue to be exceptional, though, and the thing does close with a flourish: harmony singing by Willie Nelson in One Paper Kid, a strange but reasonably good song by Walter Martin Cowart, followed by a nice folkie do of Utah Phillips' Green Rolling Hills and a spunky, honky-tonk-queen kind of version of the old Winfield Scott song Burn That Candle. Emmylou, who writes well but not much, wrote nothing for this one. The slant I have on it is that too many of those she chose for it suit her image rather than challenging her to grow as a singer. But she is growing anyway. And she is already one of the best. N.C.

RUPERT HOLMES: Pursuit of Happiness. Rupert Holmes (vocals); instrumental accompaniment. Less Is More; Show Me Where It Says; Speechless; Cradle Me; Bedside Com-(Continued on page 138)

CIRCLE NO. 16 ON READER SERVICE CARD

You know what quartz does for turntables. Now know what Technics does for quartz.



Technizs MKII Series. The 5L-1300 MKII automatic, the SL-1400 MKII semi-automatic and the SL-1500 MKII manual.

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

Like torque that cuts start-up time to an incredible 0.7 seconds. And at the same time maintains 0% speed fluctuations with loads up to 300 gms. That's the equivalent weight of 200 tonearms!

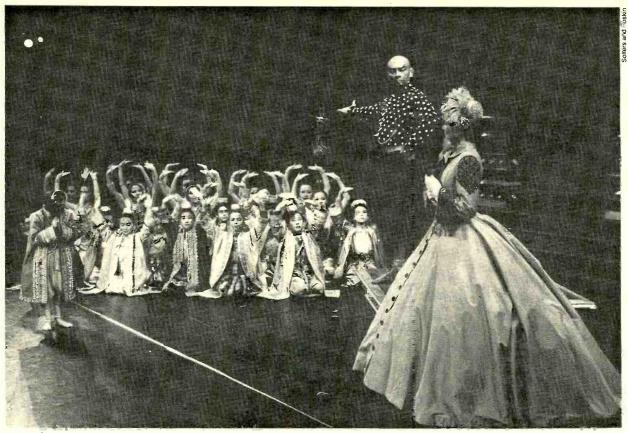
And that's not a I. Technics MKII Series adds quartz accuracy to whatever pitch variation you desire. In exact 0.1% increments. At the touch of a buttor And instantaneously disp ayed by the front-panel LEDs. And to take advantage of all that accuracy, Technics has a ow-mass S-shaped universal tonearm that's so accurate friction is down to 7 mg. (vertical and harizontal).

Technics MKII Series. Compare specificat cns. Compare quartz. And you'll reclize there's really no comparison.

MOTOR: Brushless DC motor, quantz-controlled phase-lacked servo circuit. SPEED: $33\frac{1}{2}$ and 45 RPM. START NG TORGJE: 1.5 kg. per cm. START-LP TIME: 0.7 seconds (= 20° rotation) to $33\frac{1}{3}$ RPM. SPEED DRIFT: Will-in \pm 0.002%. WOW & FLUTTER: 0.025% WRMS. RUMBLE: -73dB. PITCH VARIATION: \pm 9.9%.

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





The King (Yul Brynner) introduces Anna (Constance Towers) to his children, her charges

"The King and T": Remaking History

T was Gertrude Lawrence who persuaded Richard Rodgers and Oscar Hammerstein II to take a look at the 1946 movie of *Anna* and the King of Siam (Irene Dunne and Rex Harrison) and turn it into a stage musical in which she could star. They took her advice. and the rest is musical-comedy history.

Lawrence did not have the most spectacular of voices for the part of Anna, but she brought so much subtlety and charm to it, as she did to everything she ever undertook, that until now this devotee was quite content to keep playing his old Decca original-cast recording, confident that it would never be surpassed. Columbia issued a later treatment with Barbara Cook as the schoolteacher and Theodore Bikel as the King; RCA brought out a record of the 1964 Lincoln Center revival; Capitol wished on an unsuspecting public the dismal soundtrack of the movie remake with Yul Brynner and Deborah Kerr; I stuck with the Decca. And I greeted the arrival of the new entry from RCA, based on the recent Broadway restaging, with suspicion and little enthusiasm.

B_{UT} I hadn't reckoned on Thomas Z. Shepard's ability to put together a musical show on records so cleverly that it becomes far more than a mere souvenir of a stage production. This latest recording of *The King and I*, with Constance Towers as the schoolmarm and Yul Brynner in better form than ever as the arrogant King she twists around her little English finger, is a must for any musical-comedy collection. Not only can Miss Towers sing, but she is surrounded here by such persuasive choruses of women and children and is such an expert match for the King himself that one begins to forget about the ghost of Lawrence hovering over the enterprise and to accept Towers on her own terms. As the young lovers of the subplot, Martin Vidnovic and June Angela are as engaging as they should be; Alan Amick as the teacher's son and Gene Profanato as the prince who is the son, heir,

This recording is a must for any musical comedy collection

and miniature replica of his imperious father are just right for their roles. And the record so adroitly blends dialogue, ballads, and spectacular choruses that one gets the feeling of attending a real performance rather than of listening to a series of spliced-together excerpts from it.

Some of the material here was left out of the original recording of what is probably the finest of all the Rodgers and Hammerstein scores. The King's song So Big a World, the first-act finale, Western People Funny, The Royal Bangkok Academy. and other winning moments (as well as some saccharine ones at the end) set off entertainingly the more familiar and by now classic highlights: I Whistle a Happy Tune, Hello Young Lovers, A Puzzlement, Shall We Dance?, and The March of the Siamese Children. Since so much of the score was being restored. it was a real disappointment not to hear the marvelous music for the show's Jerome Robbins ballet, that Siamese interpretation of Harriet Beecher Stowe, The Small House of Uncle Tom. I am told, however, that its seventeen-minute length made it impracticable for inclusion on a single disc. I would gladly have settled for a set of twomaybe even with complete dialogue. Oh, well. I suppose I ought to be grateful for favors already bestowed rather than be greedy for still more. —Paul Kresh

THE KING AND I (Richard Rodgers-Oscar Hammerstein II), Yul Brynner, Constance Towers, Hye-Young Choi, Martin Vidnovic, June Angela, Gene Profanato, Alan Amick (vocals); chorus and orchestra, Milton Rosenstock cond. RCA ABL1-2610 \$7.98, @ABS1-2610 \$7.98, @ABK1-2610 \$7.98.

Yes, the new Dual 604 is direct drive. Now let's talk about something <u>really</u> important.

11.1

You may have noticed that most turntable stories begin and end with the drive system. The tonearm is more or less an afterthought.

But not with Dual. Because the tonearm can make a big difference in how records sound and how long they last. Which is why Dual is very serious about tonearm design and performance. And why we can be very serious about tonearms in our advertising.

Let's consider the 604 tonearm.

The straight-line tubular design provides maximum rigidity with minimum mass. The four-point gimbal centers and pivots the tonearm precisely where the vertical and horizontal axes intersect. And the counterbalance houses two specially-tuned anti-resonance filters that absorb parasitic resonances originating in the tonearm/cartridge system and chassis.

Operation is semi-automatic, with another unique

Dual difference: the mechanical sensor. Switch it in and you feel when the stylus is positioned precisely over the 12" and 7" lead-in grooves. At the end of play, the tonearm lifts and returns to its post, and the motor shuts off. Automatically.

Now let's talk about the drive system. It employs a newly developed DC electronic motor with a highly sensitive CMOS regulator circuit and integral frequency generator. Platter speed is checked against rated speed 120 times per revolution. Wow and flutter are less than 0.03 percent, rumble is better than 70 dB. Well beyond the limits of audibility.

But the important story with any turntable is simply this. The drive system merely turns the record. It's the tonearm that plays if.

Dual 604, semi-automatic, less than \$260. Dual 621, fully automatic pleis continuous repeat, less than \$300. Both with base and cover. Actual resale prices are determined individually and at the sole discretion of authorized Dual dealers.



For the life of your records

United Audio, 120 So. Columbus Ave., Mt. Vernon, NY 10553 CIRCLE NO. 50 ON READER SERVICE CARD

The Pulsating Hemisphere



A pulsating sphere represents one ideal of loudspeaker design. Such a speaker could be made any size desired and would still have completely omnidirectional output at all frequencies. For use close to a room wall, a pulsating hemisphere would be equivalent.

But in practice it has always been necessary to compromise between dispersion and output capability. Making a normal tweeter smaller increases its high-frequency dispersion, but reduces the amount of acoustic power it can radiate. With all traditional horn, cone, and piston-type tweeters (including domes) it is not possible to achieve really satisfactory performance in both respects simultaneously. Flat-panel radiators are especially poor in highfrequency dispersion. And those of cylindrical shape, while having excellent horizontal dispersion, do not do well vertically.

There is now an elegant way to avoid this "either/or" dilemma. The Convex Diaphragm tweeter (used in all Allison loudspeaker systems) has as much cone area as a piston 11/16 inches in diameter, and can radiate as much acoustic power. But it does not operate as a piston. Generally convex in shape, the side of the cone curves inwardly to the voice-coil diameter, and the outside edge is fastened securely to the mounting plate. Because there is no compliant suspension the entire cone surface is forced to flex (changing its radius of curvature) as the voice coil moves axially. Every point on the cone moves diagonally, with an in-phase component of motion perpendicular to the voice-coil direction as well as a component parallel with it.

The tweeter thus simulates the motion of a pulsating hemisphere to a remarkable degree.

Complete technical specifications for all Allison loudspeaker systems, and a statement of Full Warranty for Five Years, are available in our new catalog (free on request).

Allison Acoustics

7 Tech Circle, Natick, Massachusetts 01760 CIRCLE NO. 7 ON READER SERVICE CARD panions; and five others. PRIVATE STOCK PS 7006 \$7.98.

Performance: Too calculated Recording: Very good

Rupert Holmes now and then comes up with some real flesh-and-blood stuff here-such as starting a song with "I'm so weary of acting like a man/I've been a man since I was a child"-but overall the album has an untouched-by-human-hands quality, with more emotion planned out of it than into it. Most of it strikes me as an exercise, as somehow abstract. Holmes' instrumentation, for instance, of a little song called Guitars is technically brilliant, but the more you try to listen through that for a little human contact, the more frustrated you'll be. "You're off the hook when you're off the wall," he says, but he says it in a song called Let's Get Crazy Tonight whose nonverbal message is not really about getting crazy but merely about blowing off a little steam in a controlled sort of way.

Altogether—and the melodies, arrangements, and soft-spoken vocals do this more than the lyrics—"Pursuit of Happiness" seems much too accepting of the Way It Is to be coming from the kind of intellect Holmes apparently has. You get a provocative phrase now and then, or an inspired instrumental shimmer, but the sparks they make are promptly drenched by addlepated, largely escapist, pop-music conventions of the largely escapist late Seventies. I think Rupert Holmes has a little more talent and a lot more individuality than you can tell from this. N.C.

THE JAM: This Is the Modern World. The Jam (vocals and instrumentals). The Modern World; All Around the World; I Need You (for Someone); London Traffic; Standards; Life from a Window; In the Midnight Hour; and six others. POLYDOR PD-1-6129 \$7.98.

Performance: **Tiresome** Recording: **Okay**

The Jam, in case you've forgotten, represents the conservative faction of the New Wave; no safety pins or slaps at the Queen for these lads. Instead, we get a group costumed in early Mod and a music almost entirely derivative of the Who circa 1966. There are crucial differences, of course, the most basic being that the Jam has none of the Who's humor. In fact, Jam leader Paul Weller's writing has gotten awfully self-righteous in a startlingly short time, and as a result his new tunes are annoyingly strident youth manifestos. "You think I know nothing of the modern world?" he yowls in the title tune. Well, no, Paul-I just think you can't sing and haven't got a real flair for melody, and consequently I don't much care if you think society and the older generation stink. There are, after all, plenty of windy bores on the side of the angels. The Jam isn't quite that bad, but, with two albums down, it's beginning to look like they will be. S.S.

LA COSTA. La Costa (vocals); instrumental accompaniment. Jessie and the Light; Hung Up in Your Eyes; Honky Tonk Woman; Stop in Nevada; and six others. CAPITOL ST-1173 \$6.98, **(B)** 8XT-11713 \$6.98.

Performance: Passable Recording: Very clear

A person *ought* to play an album a lot because he likes it. I've played this one a lot because I



RUPERT HOLMES Real flesh-and-blood stuff—now and then

can't figure out what it is about it that bothers me. La Costa, who is Tanya Tucker's older sister, is reasonably secure in the technicalities of singing, but I think she is still learning what her style is-still automatically aping standard country-girl phrasing, among other things-and here I frankly just don't find her that interesting. That's part of it. Another part is that this is a weird assortment of songs, almost obstinately so. Neil Diamond's Play Me doesn't fit La Costa too badly, but Mick Jagger and Keith Richards' Honky Tonk Wom a_n —well, she handles it about as well as a .217 hitter handles a good knuckle ball. The repertoire here seems to be mainly an attention-getting device. It doesn't work as much of anything else. The back-up, for what it's worth, is tasty and clean, and so's the engineering. Mostly I think the trouble lies with what questions La Costa asked herself before the project started. It sounds like they included too many on the order of "Will this song sell a few copies?" and not enough on the order of "Is this song really me?" N.C.

JERRY LEE LEWIS: The Best of Jerry Lee Lewis, Volume II. Jerry Lee Lewis (vocals, piano); instrumental accompaniment. Chantilly Lace; Think About It Darlin'; Sweet Georgia Brown; Touching Home; Would You Take Another Chance on Me; There Must Be More to Love Than This; and six others. MERCURY SRM-1-5006 \$7.98, **(a)** 8-1-5006 \$7.95, **(c)** 4-1-5006 \$7.95.

Performance: Mostly detached Recording: Mostly good

Most of this is from Jerry Lee Lewis' "second" career, after he declared himself several years ago now (how time flies)—a country performer. As a practical matter, what that means is more slow songs than in the old days. Lewis has been more of a *name* than an active factor in country music since that declaration, probably because he has remained trapped in the role of Jerry Lee Lewis, Manic Rocker.

Lewis *can* be expressive about something besides destroying a piano---the subtlety of inflection he could plant, on the fly, on pellmell stompers of the *Whole Lotta Shakin'* sort is legendary--but for one reason or another he has given a lot of non-rockers a lot (*Continued on page 140*)

Maxell? TDK? Scotch? BASF? Memorex? Ampex? Sony? Suddenly there's a new name that eliminates the confusion (and ad-fusion):



Supertape Gold.



"I'm Peter Nero. I kid you not. Supertape Gold is everything they say it is even though the guy who wrote the ad is a personal friend."

Could a Radio Shack own-make cassette tape be the greatest new formula in ferric-oxide 5-step-calendering audio tape? And isn't it neat that Supertape Gold requires no special bias settings? Well, we've built the tape, we've compared it in our labs with the summa cum hi-fi brands named above. And now it's your turn to see if your ears and your tape head confirm our findings. Fortunately, the price for your experiment is trifling. If we're right, and Supertape Gold is indeed a breakthrough, then we both win. You get cleaner sound. And Radio Shack gets to be your cassette tape company — all 6,444 of our American and Canadian stores and dealers. 'Tis a consummation devoutly to be wished!





MUDDY WATERS AND JOHNNY WINTER

Ever-ready Waters

MUDDY WATERS, *a.k.a.* McKinley Morganfield, is virtually the last of the great Delta bluesmen. He sings with a brawling grandeur and an intimate delicacy that would be remarkable even if he were thirty years younger (he is sixty), demonstrating that the years, far from diminishing or diluting his artistic powers, have only added to them.

From the snippets of studio conversation the mike managed to catch, and from his gutsy chuckles after some of the takes, it is obvious that Waters was very happy about his latest Blue Sky session, now released under the title "I'm Ready." The album combines new material with rerecordings of three of Waters' classics-I'm Your Hoochie Coochie Man, I'm Ready, and Rock Me. It's important to note that these rerecordings are more than just "cover" versions; they were done because Waters still feels the songs-as is evident from his performances of them hereand also because they are perhaps even more valuable musically today than they were twenty-five years ago.

After all the cant, puff, and arrant nonsense that have been written about the blues (claiming that the form is both the ultimate in human expression and the cultists' private preserve), hearing Muddy Waters sing is like taking a clear, refreshing draught from the source. Waters proves that whatever the *artfulness* of blues—and it is considerable—it derives not from "artistic" pretensions but from professional entertainers' need to please their audiences. Waters sings with plenty of art, but he sings to please, just as he has been doing since he was a teenager in Mississippi playing for backwoods dances and getting paid in fish sandwiches and rotgut.

A word—several hearty words—should also be said here about Johnny Winter, who produced "I'm Ready" and plays on it. This Texan rock guitarist, the victim of an unfortunate hype in the late Sixties, had until recently been putting out rather pedestrian albums. But his latest one, "Nothin' but the Blues" (Blue Sky PZ 34813), has Muddy Waters' group backing him, and it is unquestionably his best, showing him to be a fine musician. Here he's returned the favor, and his production of "I'm Ready" is so absolutely right and his solos on slide guitar so straightforward and true that a portion of the album's artistic success must be credited to him. This is surely one of Waters' own finest recordings, which means that it both contributes to and displays what is best in American music. -Joel Vance

MUDDY WATERS: I'm Ready. Muddy Waters (vocals, guitar); Johnny Winter, Jimmy Rogers (guitars); Walter Huston, Jerry Portnoy (harmonicas); "Pine Top" Perkins (piano); Bob Margolin (bass); Willie "Big Eyes" Smith (drums). I'm Ready; 33 Years; Who Do You Trust?; Copper Brown; I'm Your Hoochie Coochie Man; Mamie; Rock Mæ; Screamin' and Cryin'; Good Morning Little School Girl. BLUE Sky JZ 34928 \$7.98. ^(B) JZA 34928 \$7.98, ^(C) JZT 34928 \$7.98. of perfunctory, let's-get-this-over-with treatments as the years have worn on. So *Me and Bobby McGee* comes off here as damned near the same song as *Chantilly Lace*. He does manage, however, to avoid self-parody to any painful degree in *Boogie Woogie Country Man*, and he does listen to the words and gets some real pathos into *Middle Age Crazy* (about a guy who turns forty and trades in his business suit for jeans and his Olds 98 for a Porsche). If there's a Volume III of these "Bests," I hope it goes in that direction, but there's not really much here to suggest that it will. *N.C.*

GORDON LIGHTFOOT: Endless Wire (see Best of the Month, page 91)

TAJ MAHAL: Evolution (The Most Recent). Taj Mahal (vocals, guitar); instrumental and vocal accompaniment. Sing a Happy Song; Queen Bee; Lowdown Showdown; The Most Recent (Evolution) of Muthafusticus Modernusticus; Why Do You Do Me This Way; and four others. WARNER BROS. BSK 3094 \$7.98, (1) M8 3094 \$7.97, (2) M5 3094 \$7.97.

Performance: Very good Recording: Very good

Taj Mahal started off as a blues singer dealing in riffs and vocal inflections that sounded like field recordings made of country blues singers in the 1920's. Among musicians he was a cult favorite. Gradually he built up a commercial audience and moved away from revisited blues styles to a fascination with things Caribbean. His present backing group is composed of American and West Indian musicians, and the material and performances here are delightfully diverse. At times in his various recordings, Mahal has seemed alienated from his listeners and resentful of having to perform for them. At other times he seems perfectly content to be a skilled entertainerwhich he is-and entirely lost in the pleasure of making music for its own sake. In "Evolution" he's an entertainer.

What is always appealing about Taj Mahal, whether his albums are good or bad, is his refusal to be limited to a single musical style during the course of an album. In these days when, for commercial reasons, most LP's must be one thing or entirely another thing, Mahal mixes blues, jazz, West Indian rhythms, and blatant American pop on a disc. Sing a Happy Song is the kind of cutesie-poo pop item that you would not ordinarily associate with him. Lowdown Showdown is reggae, and Why Do You Do Me This Way is a bumpand-grind rhythm-and-blues number. All three were produced and written by his keyboardist L. Leon Pendarvis. Oueen Bee, written and produced by Mahal, is another reggae ditty, while The Big Blues and Southbound with the Hammer Down, again with Mahal as writer and producer, are urban blues sung very much in the manner of the late Howlin' Wolf. Indeed, The Big Blues is wholly based on Wolf's My Country Sugar Mama and con-tains lines (such as "She got a lien on my body and a mortgage on my soul") that have been, um, appropriated from blues songs of fifty years ago. It is fascinating to hear Mahal's rewrite, though, if only for the novelty of Caribbean steel drums playing blues lines behind him. All in all, this is a sprightly and enjoyable album. IV

If you thought **ReVox made just** the world's finest tape recorders

guess again ... and again.

REVOX

We also make the world's finest tuners and amplifiers, including this incomparable matched pair of state-of-the-art components. The B760 Digital Frequency Synthesizer FM Stereo Tuner and B750 Integrated Control Amplifier are to separate components what the B77 is to tape recorders; they are simply the best there is. Willi Studer wouldn't have it any other way.

We urge you to test our claim by visiting your ReVox dealer to compare our B760 and B750 against any other tuner and amplifier regardless of price. If you can find anything that sounds demonstrably superior to this incomparable pair, Herr Studer would like to hear from you. But first, you'll have to audition these exciting new ReVox components for yourse f, so write to us for

REVOX

C

complete information and the name of your nearest demonstrating dealer.



Studer Revox America, Inc., 1819 Broadway, Nashville, Tenn. 37203 / (615) 329-9576 - In Canada: Studer Revox Canada, Ltd. CIRCLE NO. 57 ON READER SERVICE CARD



C. W. McCALL: Roses for Mama. C. W. McCall (vocals); instrumental accompaniment. Roses for Mama: The Only Light; Livin' Within My Means; Battle of New Orleans; I Don't Know; and five others. POLY-DOR PD-1-6125 \$6.98.

Performance: Newp Recording: Passable

You know how Loretta Haggers pronounces "nope"? Newp it is, as nearly as it can be spelled, and Mary Kay Place shows a good ear for regional speech in getting Loretta to say it just right. C. W. McCall has a very good ear for the vernacular too, but in this album it's largely wasted. Talking is his thing, of course, not singing, as the success of his CB ditties like Convoy proved, but here he's constrained to sing quite a bit. Singing is something he probably could learn to do, but here he makes the amateur's basic mistake of sounding tentative. And then when he's got a talking song to do, it never turns out to be as funny as the old ones (Wolf Creek Pass is still the funniest thing he ever did). Once he tries here to switch from trucks to a train, but the result is a little too contrived. As if sensing he's in trouble, he even invokes the flag on his way out. All in all, this is certainly something to say newp to. N.C.

RECORDING OF SPECIAL MERIT

ANNE MURRAY: Let's Keep It That Way. Anne Murray (vocals); Barry Keane (drums); Tom Sczcesniak (bass); Brian Russell (guitar); other musicians. Let's Keep It That Way: Walk Right Back: You Needed Me; You're a Part of Me; Hold Me Tight; and five others. CAPITOL ST-11743 \$6.98. 8XT-11743 \$7.98, © 4XT-11743 \$7.98.

Performance: Getting there Recording: Excellent

Anne Murray's voice, like Canadian mountain air, is almost shockingly clear and a little on the cool side. You'd have to conduct quite a search to find a singer with a better sense of pitch or one who makes singing seem as easy as she does. What Murray-actually her albums-makes seem more difficult is producing. Other producers have put all sorts of arrangements behind her and given her albums more flavors than a Howard Johnson's, but here Jim Ed Norman has used a straightforward approach, and it works pretty well. I'll even forgive him (or whoever) for digging up Tennessee Waltz-which, incidentally, Annie does somehow put some of her own self into. It's the way her phrasing is developing, I think, that's behind that and much of my generally good feeling about the album.

Several of the songs' basic appeal is in their melodies; their words aren't dumb exactly, just blah. Even so, they're better than the average batch in an Anne Murray record. And Norman, as I suggested, has backed her rather than trying to surround her. Strings are used with restraint, subordinate to the rhythm guitar, which is subordinate to her voice---which seems to ring like a clarion above the valley on a spring morning. A couple of oldies from Johnny Nash and Sonny Curtis offset Tennessee Waltz in addition to bolstering the idea that sound counts more than words here. Thematically, the album is not focused at all, but sonically Norman has pointed everything toward the clear and beautiful tones Anne Murray makes. I don't know if you remember

ANNE MURRAY A voice clear as Canadian mountain air

the old Salem TV commercials in color, but this is even more refreshingly springlike, thanks to those Anne Murray tones. N.C.

ROCKETS: Love Transfusion. Rockets (vocals and instrumentals). My Heart Needs You; Fell Out of Love; Lookin' for Love; I Got to Move; and five others. TORTOISE INTERNATIONAL BYL1-2572 \$7.98, BYS1-2572 \$7.98, BYS1-2572 \$7.98.

Performance: Below par Recording: Good

Once upon a time, before rock-and-roll musicians in Michigan began taking André Breton's "revolution is poetry" literally, there was a Motor City band-Mitch Ryder and the Detroit Wheels-that many thought had the potential to become the American Rolling Stones. That they didn't, despite a string of some of the toughest r-&-b-inflected singles of the Sixties, was, sadly, largely because of the psychological instability of their front man. The Rockets, it turns out, are the self-same Wheels, sans Mitch, dispensing a more conventional kind of scrapheap boogie that sounds a bit like Bob Seger during one of his tedious, rote, Chuck Berry encores. For all their potential-and make no mistake, these guys obviously still have it, as a listen to Ramona or the title track makes clear-there's something bloodless and tentative about this comeback attempt; they never really cut loose. But drummer John Badanjek is still very strong, and guitarist Jim McCarty has shaken the horrible Cream-isms he dispensed during his tenure with the mercifully forgotten Cactus, so it's possible that a few months on the road (they've been playing small hometown dives almost exclusively for the last few years) will make all the difference. As the Count of Monte Cristo once advised, wait and S.S.hope.

RECORDING OF SPECIAL MERIT

ROOMFUL OF BLUES. Roomful of Blues (vocals and instrumentals). Red. Hot & Blue; Love Struck; That's My Life; Duke's Blues; Texas Flood; Give It Up; and four others. Is-LAND ILPS 9474 \$6.98.

Performance: Excellent Recording: Clean

Roomful of Blues is a seven-man combo that plays the roughhouse, saxophone-dominated (Continued on page 144)

Fara-Power

(Parametric Equalizers by SAE)

me - gatitte r 3

SAE has long been involved in the field of tone equalization. From our pioneering efforts in variable turn over tone controls to our more recent advancements in graphic equalizers, we have continually searched for and developed more flexible and responsive tone networks. From these efforts comes a new powerful tool in tone equalization the Parametric Equalizer. Now you have the power of precise control.

Our 2800 Dual Four-Band and 1800 Dual Two-Band Parametrics offer you controls that not only cut and boost, but also vary the bandwidth and tune the center frequency of any segment of the audio range.

an line a basilista a la companya a basilista a la companya a la companya

11111 ------

ينبيه الما و

ال بېشتىندا (100 مىلىكى 100 مىلىنى ئۇرۇمى) قال الدارى دىمىي مەربىر بىرى بورى مىلى مىلى بورى بىرى بىرى بىرى بىرى مىلى مىلى

فالدا الماشط

With this unique flexibility, any problem can be overcome precisely, and any effect created precisely.

With either of these equalizers, you have the power to correct any listening environment or overcome any listening problems that you are faced with. Whether you need a third octave notch filter, tailored bandwidth to resurrect a vocalist, or a tailored cut to bury an overbearing bass, the control flexibility of Parametric Equalizers can fill these needs and many more. And of course, as with all SAE products, they offer the highest in sonic performance and quality of construction.

- I 1999

-

head





Minimum Order 12 Tapes Blank Tapes Blank Prices! at wholesale prices!	maxelluo
CASSSETTE TAPES AMPEX C-90 3 pk/w stackette \$4.99 for 3 BASF Studio C-90 2.39 Fuil FX C-90 2.80	FUJI
Máxeil LN C-90 1 99 Maxell UD C-60 1 93 Maxell UD C-60 284 Maxell UD C-120 3.84 Maxell UDXL 1 or 2 C-60 2 47 Maxell UDXL 1 or 2 C-60 2 47 Maxell UDXL 1 or 2 C-90 3 47 Memorex C-90 3 pk 5 99 for 3 Scotch Master 2 or 3 C-90 3 29 Sony C-60 1 79 TOK D C-60 1 14	NEW OF
TDK D C -90 1 56 TDK D C -180 (180 minutes) 2 88 TDK AD C -60 1 62 TDK AD C -90 2 40 TDK AD C -120 3 30 TDK SA C -60 1 99 TDK SA C -60 2 88 Maxwell UD 50, 60 (1200 ft) 4 33	X SO
Maxell UD 35-00 (1800 ft.) 4.91 Maxell UD 35-00 (1800 ft.) 6.07 Maxell UD 35-908 (1800 ft.) 6.07 Maxell UD 35-100 (1800 ft.) 12.99 Scotch 212 (1800 ft.) 3.79 Scotch 212 (1800 ft.) 4.99 TDK L-1800 (1800 ft.) 4.64 8-TRACK 1.49 Maxell LN 87 90 min. 1.99	BO.
Memorex 2 pk 90 min 3.99 lor 2 Scotch 2 pk 90 min 3.99 lor 2 J & R Music World 33 Park Row, N.Y.C. 10038 Dept. SR (212) 732-8600 MAIL ORDERS: For shipment within 48 hours send 40005 doing	axellio Sarta
billing offel of Certaineo Cireck, Workers Octay on personal checks. Piease add \$2:50 per order for shipping & handling. N.Y.S. Residents add tax. NO C.O.D.S. ALL TAPES 100% GUARANTEED Minimum Order 12 Tapes Write for free tape catalog CIRCLE NO. 29 ON READER SERVICE CA	RD
	and the second second
LINE	

That's right, a "Hi-Fi Hot-Line!" Now you can call for quotes from one of the Largest Hi-Fi Mail Order Companies in the World!

CALL TOLL FREE 1-800-638-3920 Send for our Free Catalog and

compare our Selection and Prices. You'll see how we got our name! Over 75 major brand names.

Name	
Addr.	
City	
State II Zip	
() ()	SR-5
STEREOM	
DISCOUNT	BRS
6730 Santa Barbara Ct., Balto. M	d. 21227

rhythm-and-blues of the late 1940's and 1950's. Their material is drawn from the repertoires of several urban pop bluesmen of that time. Notable here are Chuck Willis' Take It Like a Man and Love Struck, Aaron Walker's famous Stormy Monday, and the Joe Turner version of Honey Hush. And, like most rhythm-and-blues combos of the era they re-create, Roomful of Blues combines barrelhouse slugging power with a concern for jazz. Their antecedents are the jazz combos on 52nd Street in the 1930's and 1940's, with Coleman Hawkins and Lester Young as the shaping forces on sax and with Billie Holiday and Billy Eckstein among the most influential vocalists.

The whole Roomful is commendable, but acoustic bassist Preston Hubbard, vocalist/ guitarist Duke Robilliard, pianist Al Copley, and tenor saxophonist Greg Piccolo are standouts. This is a most enjoyable album. J.V.

SANFORD AND TOWNSEND: Duo-Glide. Ed Sanford, John Townsend (vocals); instrumental accompaniment. Paradise; Ain't It So, Love; Cryin' Like a Child; Livin's Easy; Starbrite; Voodoo; and four others. WARNER BROS. BSK 3081 \$7.98, ⁽³⁾ M8 3081 \$7.97, ⁽³⁾ M5 3081 \$7.97.

Performance: **Disappointing** Recording: **Good**

The Sanford-Townsend Band's "Smoke from a Distant Fire'' was a fine album, but this one is disappointing. The first album lay dead for two years after its release before the title song took off as a hit single. In the interim the band dissolved, and it was that delayed success that sent Ed Sanford and John Townsend back into the recording studio to do a new album backed by session musicians. Although the vocals on "Duo-Glide" are strong and the construction of the material is sometimes interesting, the lyrics and plots of the songs are not as arresting as those on the first album. The session musicians play well but with little style, and the jazz elements present before are missing here. There's no intimate give and take between the singers and the back-up men, as there would be if the Sanford-Townsend Band were still in existence. "Duo-Glide'' sounds concocted rather than per-formed. Too bad. J.V.

STORMIN' NORMAN AND SUZY: Oceans of Love (see The Pop Beat, page 67)

10CC: Live and Let Live. 10cc (vocals and instrumentals). The Second Sitting for the Last Supper; You've Got a Cold; Honeymoon with B Troop; Art for Art's Sake; People in Love; Wall Street Shuffle; Ships Don't Disappear in the Night (Do They?); I'm Mandy Fly Me; and seven others. MERCURY SRM-2-8600 two discs \$11.98, (*) MCT8-2-8600 \$11.98, (*) MCT4-2-8600 \$11.98.

Performance: **Redundant** Recording: **Very good**

I am an admirer of 10cc, but it is difficult to recommend or even to be patient with their punning "Live and Let Live," for all the many reasons that live rock albums are usually failures, including redundant material, ragged performances, and poor technical quality. In this case, fully eight of the fifteen selections repeat cuts on their more recent studio album, "Deceptive Bends," which was released less than a year ago. Why plunk down your dollars to duplicate what you already have? Most of the other selections fall into the ''greatest hits'' category, and they too are still available on older 10cc albums (on their previous label) made when Lol Creme and Kevin Godley were still with the group. I'm looking forward to 10cc's next studio album, but this one is for devoted fans and fanatical collectors only. J.V.



DR. BUZZARD'S ORIGINAL SAVANNAH BAND: Meets King Penett. Dr. Buzzard's Original Savannah Band (vocals and instrumentals). Mister Love; Nocturnal Interlude; The Gigolo and I; I'll Always Have a Smile for You; and four others. RCA AFL1-2402 \$7.98. @ AFS1-2402 \$7.98. © AFK1-2402 \$7.98.

Performance: Too tricky Recording: Fine

On the basis of contents rather than reputation, Dr. Buzzard's Original Savannah Band's new album doesn't really belong in the disco section. It contains a waltz, a circus-sideshow calliope song, a couple of Forties dance-band numbers, and *some* disco. The group clearly is trying to chart out a unique turf that defies categorization.

The band is as musically clever here as they were in their smash debut album, blending the musical experimentation of the Seventies with Forties and Fifties styles. But this time things get so complex—melodies so multifaceted, gimmicks so compounded—that the cleverness gets in the way of the music. *Mister Love*, for example, is almost too complicated to follow just listening, much less to dance to. As with their first album, repeated hearings tend to sort things out a bit, but most of this one is just too demanding.

When they relax, Savannah is still very exciting, as in *The Gigolo and I*, a nifty Forties big-band song (complete with the back-up players talk-singing the choruses) filtered through a contemporary nightmare. My favorite cut is *I'll Always Have a Smile for You*, with its coy cowboy touch (a ki-yi-yippeeyippee-yay refrain). But too few of the cuts hold together, and, worse, the trickiness begins to be predictable and everything starts to sound rather like everything else.

–Edward Buxbaum

MECO: Encounters of Every Kind. Meco (instrumentals). In the Beginning; Lady Marion; Hot in the Saddle; Meco's Theme/3 W. 57; Theme from Close Encounters of the Third Kind; and four others. MILLENIUM MNLP 8004 \$6.98.

Performance: Imaginative Recording: Just fine

This is another disco concept album. The whole record is a time trip-starting in

1,348,264 B.C. (In the Beginning) in the nest of a ferocious pterodactyl and winding up in 1979 A.D. at the Devil's Tower in Wyoming, where the "close encounter of the third kind" in the movie of that name takes place. It's like dancing through a space-time travelogue, for these are very "visual" cuts, with the various settings evoked by appropriate music and sound effects. Lady Marion (Sherwood Forest in 1690 A.D.), Topsy (a jukebox-equipped mid-American café in 1952), and Meco's Theme (high at op New York's imaginary Millenium Building in 1978) are knockout disco numbers. Of course, it all leads up to the theme from Close Encounters. As with his hit version of the Star Wars music, Meco here takes us through that super movie experience in just a few minutes of danceable delight.

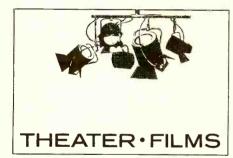
The record does get a bit silly at times. I could, for instance, do without the Indian war whoops and the cavalry charge in Hot in the Saddle (though it does recall how Westernmovieish the Star Wars soundtrack really is). Still, it's great fun, and the disco rhythm never fails. -Edward Buxbaum

RECOMMENDED DISCO HITS

• DETROIT -- EMERALDS: Let's Get Together. WESTBOUND WB 6101 \$7.98.

• SILVER CONVENTION: Love in a Sleeper. MIDSONG INTERNATIONAL MCA 3038 \$7.98

 USA-EUROPEAN CONNECTION: Come into My Heart. MARLIN 2212 \$7.98.



PETE'S DRAGON (Al Kasha-Joel Hirschhorn). Original-soundtrack recording. Helen Reddy, Mickey Rooney, Sean Marshall, Red Buttons, Jim Dale, Shelley Winters, Charles Tyner, Gary Morgan, Jeff Conaway, Charlie Callas (vocals); chorus and orchestra, Irwin Kostal cond. CAPITOL SW 11704 \$7,98.

Performance: Pert and pretty Recording: Very good

This score from the Disney movie about a nine-year-old boy's friendship with a creature that has the head of a camel, the body of a crocodile, the wings of a bat, the tail of a rooster, and the ears of a cow-and therewith terrorizes an entire New England town-has more going for it than those of most "musical fantasies" in which animated animals cavort with human beings. The music and lyrics have a pungency that is not at all typical, and the performances, while cute, are at least not nauseatingly so. Particularly easy to take is Helen Reddy's treatment of the gentle ballad Candle on the Water. Red Buttons and Jim Dale are diverting in Every Little Piece as the (Continued on page 148)





FM/FM STEREO - AM TUNER AND PREAMPLIFIER		
SEND	McIntosh Laboratory, Inc. East Side Station P.O. Box 96 Binghamton, N.Y. 13904 Dept. SR	
TODAY!	ADDRESS	
	I CITYSTATE ZIP	

If you are in a hurry for your catalog please send the coupon to McIntosh... For non rush service send the Reader Service Card to the magazine. CIRCLE NO. 33 ON READER SERVICE CARD







Dancers Fred and Adele Astaire

Musical Comedy Archives

WHEN the Smithsonian Institution was founded in Washington, D.C., in 1846 as a research and education center for the "increase and diffusion of knowledge among men," who could have guessed that the organization would wind up in the record business? Yet today, if you pick up a copy of *Smithsonian* magazine, you'll find a full-page ad for "The Smithsonian Collection," produced in cooperation with major recording companies and featuring LP's ranging from French harpsichord music of the eighteenth century to the jazz of Dizzy Gillespie. Music from the "Age of Jefferson" is even available on a cassette.

Among the most entertaining as well as historically valuable albums the Smithsonian has issued to date are those devoted to musical comedy, in its American Musical Theater Series. Assembled by the Smithsonian's Division of Performing Arts in the Office of Public Service, these artful packages represent a fascinating variety of sources, are lavishly annotated, and are illustrated with period photographs. Of the three albums put out so far, Ziegfeld Follies of 1919 and the Gershwins Lady. Be Good bear the label of Columbia Special Products, while Cole Porter's Anything Goes was "produced in association with RCA Special Products." Imagine getting both those fierce competitors to cooperate in anything, let alone the production of a series of recordings!

From the point of view of historical restoration, the most intriguing of the three records is Ziegfeld Follies of 1919. Martin Williams' superbly researched liner notes take us back to the balmy evening of June 16 of that year, when the audience at New York's Amsterdam Theatre was waiting impatiently for the arrival of Florenz Ziegfeld's "radiant wife" Billie Burke. Ah, here she comes at last, seventeen minutes past the scheduled curtain time, floating down the aisle, waving and blowing kisses. Now the show can begin-and what a show! This thirteenth of the annual Ziegfeld revues featured "draped and undraped ladies" in living tableaux; a burlesque bullfight scene; jokes and songs about prohibition; Tulip Time, a lavish spectacle featuring a windmill in a field of dancing tulip girls augmented by the "Follies Kiddies"; another dance number based on that wiggling craze of the day known as the shimmy; blackface comedy by Eddie Cantor and a genuine black comedian named Bert Williams; a first-act finale in the form of a minstrel show; Near East opulence in a harem ballet; a corps de ballet of riders and clowns in a circus number; a salute to the classics, which in those days meant such things as Dvořák's Humoresque and Mendelssohn's Spring Song; and a final Victory March

to celebrate the bravery of American troops in the Great War and the "dedication of the Salvation Army lassies."

The first-night performance went on for three hours. On the record you can hear the mercifully forgotten music of Tulip Time and (thanks to many a subsequent beauty pageant) the still unforgotten hit of the season, Irving Berlin's A Pretty Girl Is Like a Melody, sung in a high-tenor bleat by John Steel, who introduced it on stage as the skyscraper-high Ziegfeld girls came on in their lavish outfits. Eddie Cantor is heard applying his manic style to the postwar comic ballad I've Got My Captain Working for Me Now, When They're Old Enough to Know Better, and Oh! The Last Rose of Summer, interspersed with the kind of homely jokes that, for some now unfathomable reason, endeared him to radio audiences for so many decades. Then there are Van and Schenck, a couple of comics with patent-leather hair and shiny grins, introducing the show's other hit, Mandy, a racist little item if there ever was one.

The big surprise here is the comedy of Bert Williams, a "mulatto from the West Indies" with comic skill to spare, pining for a prewar past in *Bring Back Those Wonderful Days* and twitting the then-current vexation of prohibition in *The Moon Shines on the Moonshine* and *Everybody Wants a Key to My Cellar*. Several other novelty items also gave him the opportunity to apply his deliciously downbeat style to topical matters of the time. Carl Scheele and John M. Raymond, Jr., deserve credit for reconstructing this program from a variety of recorded sources, beautifully restored for the occasion without recourse to the ugly artifice of rechanneling.

HE "archival reconstruction" of George and Ira Gershwin's Lady, Be Good, which opened to critical acclaim and a subsequently packed house on December 1, 1924, at New York's Liberty Theatre, is full of pleasant moments. George Gershwin himself is at the piano, limning Fascinating Rhythm, So Am I, The Man I Love (cut, if you can believe it, from the score of this show before it opened), and The Half of It Dearie Blues. This material was culled from old radio airchecks, piano rolls, and, thanks to a happy custom instituted early on by English Columbia, the recorded scores of musicals as performed by their original casts in London. Those 1926 records preserve for us Fred Astaire and his sister Adele singing together before anybody had ever heard of Ginger Rogers. They sound marvelously young and breezy in Fascinating Rhythm, Hang On to Me, and Swiss Miss, all of which must have provided welcome relief from a plot about the eviction of a sister and brother from their old family home and the pitiful non-adventures that then befall them.

The Astaires are joined several times at the piano by Gershwin, notably in the piquant and tricky *I'd Rather Charleston*. Astaire's *feet* are featured, too, in the first record ever of a tap dance. There is also Cliff Edwards, ages before he entered Pinnochio's life as the voice of Disney's Jiminy Cricket, strumming his "uke" and croaking out several Gershwin tunes in his very own, inimitable irritating twang. As a dubious bonus, we get a chance to hear the insipid voice of William Kent, who played the male romantic lead in the London production and makes less of the title song than it deserves. Edward Jablonski's extensive notes are invaluable.

From a technical point of view, the easiest on the ears of all three productions is Cole Porter's Anything Goes. This 1934 bonbon. with its imperishable score, was originally dreamed up by P. G. Wodehouse and Guy Bolton as the story of a wrecked cruise ship and its assorted survivors. But when the Morro Castle sank for real off Asbury Park, New Jersey, shortly before the scheduled opening, Howard Lindsay and Russell Crouse were called in hastily to revise the plot. One suspects that it was the Porter score rather than their book that kept the show going for 239 performances on Broadway. That's what we get on the record, and it's well worth hearing once again. This time it's not only Ethel Merman who sings You're the Top, but composer Porter as well. He was one of the few songwriters of his era who could carry a tune, and, in a thin but game treble, he projects it engagingly. Still a third version of the song is supplied by Jack Whiting, who appeared in the original London production, for which some familiar references were changed to be clearer to British audiences. Lines like "You're the sun on the Crystal Palace" and "You're the cream from the shire of Devon" were among the results.

AN Englishman named Sidney Howard played the part of Moonface Martin, Public Enemy Number Thirteen, in the London version of Anything Goes. Judging from a skit preserved on this disc and his delivery of Be Like the Bluebird, he was no match for the droll Victor Moore, who made the part so memorable on Broadway. (Just to rub the point in, Porter himself is heard singing the same comic ballad immediately afterward.) As for Jeanne Aubert, who played the female lead in London, to put her on the same record with La Merm, heard here in fine, full honk at the height of her career, is a disservice to both of them. But, on the whole, this reconstructed performance is another indispensable delight for collectors of musicals on discs. Richard C. Norton's album notes are well organized and illuminating. -Paul Kresh

ZIEGFELD FOLLIES OF 1919 (Irving Berlin and others). Eddie Cantor, Bert Williams, Van and Schenck, John Steel, others (vocals); orchestra. SMITHSONIAN COLLECTION R 009 \$6.99 plus 90¢ postage and handling charge from Smithsonian Customer Service, P.O. Box 10230, Des Moines, Iowa 50336.

LADY, BE GOOD! (George and Ira Gershwin). Fred and Adele Astaire, Cliff Edwards, others (vocals); Victor Arden and Phil Ohman. George Gershwin (pianos); Empire Theatre Orchestra, J. Heuvel cond.; other instrumental accompaniment. SMITHSONIAN COLLECTION R 008 \$6.99 (plus 90¢ from Smithsonian Customer Service).

ANYTHING GOES (Cole Porter). Cole Porter, Ethel Merman, Jack Whiting, Jeanne Aubert, others (vocals); Cole Porter (piano); orchestra. SMITHSONIAN COLLECTION R 007 \$6.99 (plus 90¢ from Smithsonian Customer Service). It's true. Quanta turntables by BSR are good looking. But many people think our specs are even better than our bodies.

For instance, consider the 500. It's a single-play turntable with an exclusive feature. "The Final Touch." What is it? Well, at the end of a record, the power shuts off. Then, magically and silently, the arm rises from the record and returns to its rest position. Automatically.

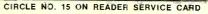
The 50C is made with DC Servo-Controlled Motor, which is the quietest motor made. It's belt driven. And it's got electronic speed control to assure you constant record speed. Wow and flutter are less than .06% (WRMS). Rumble is better than-65 dB (Din B).

If you like those specs but prefer a multiple play turntable, then think about Quanta's 550-S.

Of course, both the 500 and the 550-S have a few things in common with our other Quanta turntables. Great value as well as great beauty. So come take a look at the entire Quanta line at your nearest Quanta dealer.

We give you a lot to choose from because we want: you to ESR like us for more than our good looks. BSR consumer PRODUCTS GROUP Route 303. Blauvelt, N.Y. 10913

Beauty and the best.



villains who want to cut up the poor dragon and profitably dispose of the carcass. Mickey Rooney joins with Reddy in a number of lively duets, including I Saw a Dragon and Brazzle Dazzle Day (a kind of day that is a shade less sickeningly wholesome than a Zippety-Doo-Dah one). There are also a square-dance number that's a real rouser and a charming song about a New England town called Passamashloddy. As the boy who finds the dragon, Sean Marshall is surprisingly likable, and the dragon himself, whose voice is supplied by Charlie Callas, whoops, whiffles, and spits fire in a droll bass that is difficult to resist. Good, clean fun, and not the kind that makes you wish you could break the record over the head of whatever kid is playing it. P.K.

VERY GOOD EDDIE (Jerome Kern-Schuyler Greene). Goodspeed Opera House production. David Christmas, Spring Fairbank, Travis Hudson, Charles Repole, Virginia Seidel, Hal Shane, Cynthia Wells, Nicholas Wyman (vocals); orchestra, Lynn Crigler cond. DRG 6100 \$9.98 (from DRG Records, 200 West 57th Street, New York, N.Y. 10019).

Performance: The past recaptured Recording: Very good

A couple of years ago, the hundred-year-old Goodspeed Opera House, spectacularly situated on the banks of the Connecticut River in East Haddam, Connecticut, reopened after half a century of disuse with a revival of Very Good Eddie, a musical by Jerome Kern (with



a book by Guy Bolton) that packed them in at the Princess Theatre on Broadway back in 1915. It did the same at the Goodspeed in East Haddam in 1975, later moving to Broadway for 304 performances and spawning a duplicate and even more successful production in London.

To what does this half-forgotten musical owe its second life? It surely isn't the book, an impenetrable mishmash concerning a pair of couples on their honeymoon about to take off on a Hudson River Dayliner bound for the Catskills. Eddie, you see, is short, and his bride Georgina is exceptionally tall, while Percy is tall and Elsie ... oh, the hell with it. No, what makes Very Good Eddie worth hearing is, as you might have guessed, Kern's score, the highlights of which are put over here with period charm and skill by a praiseworthy cast.

In those days, Kern took his lyrics where he found them. There's a ballad called Some Sort of Somebody with words by Elsie Janis, the darling of the AEF in World War I. Others have words by P. G. Wodehouse (Bungalow in Quogue, Honeymoon Inn), Frank Craven and Anne Caldwell (Good Night Boat, Left All Alone Again Blues, Hot Dog!, Moon of Love), Harry B. Smith (Old Boy Neutral, Babes in the Wood), Harry Graham (If You're a Friend of Mine), and Schuyler Greene, who gets the credit for the rest. Except for those by Wodehouse, most of these cloying, mindless songs are negligible lyrically. But what bright musical raiment Kern supplied for them! And the quartet of lead singers-Cynthia Wells, David Christmas, Travis Hudson, and Charles Repole-bring them to life beautifully with the aid of a good ensemble and orchestra directed by Lynn Crigler. P.K.



CHET BAKER: You Can't Go Home Again. Chet Baker (trumpet); instrumental accompaniment. Love for Sale: Un Poco Loco; and two others. A&M/HORIZON SP-726 \$7.98.

Performance: Disappointing Recording: Very good

Chet Baker hit the big time in 1952 when, at the age of twenty-three, his velvety, ethereal trumpet oozed ever so softly through a Gerry Mulligan Quartet recording of My Funny Valentine. The success of that record won Baker an enormous following that reached far beyond the boundaries of jazz, but after five years of the kind of wide popularity few jazz men experience, Baker's personal life became a drug addict's nightmare that was to last more than a decade. Few expected to see his return to professional activity, but Baker won his harrowing bout with drugs and reappeared on the scene in 1973.

Except for one selection, this album is a (Continued on page 150)

MOST COMPANIES VIEW PERFECTION AS A DISTANT GOAL. WE BELIEVE IT'S THE BEST PLACE TO START.

At Setton, for years we've been obsessed with perfection in the reproduction of sound. We're our own toughest critic because we never stop thinking, or rethinking a problem through. Our line of highest fidelity equipment was developed by a demanding team of men with different, yet complementary disciplines. The result is a degree of perfection worthy of consideration by even the most discerning audiophile.

Perfection is the child of time.

When units arrive from overseas, a grueling, eight-hour heat test reveals any element that might fail under more normal use. Then, in an arduous quality control check of well over an hour, we test power and adjust distortion levels using equipment you'll find only in the most exacting electronic laboratories. We spend time on every piece of electronic equipment so we can provide a full, five-year guarantee for both parts and labor.

We deliver more than we promise.

Figures help tell how equipment will sound. (For example, our RS660 Receiver provides 120 watts per channel with only 0.035 IMD and THD.) But with Setton, you get a listing of the exact specs for each piece of equipment, which are always better than what we promise in our literature. And more important, we start with perfect sound in mind. By balancing IMD and THD we attain an airy, transparent sound, almost as if the electronics were not even there, for everything from the softest sonata to the hardest rock.

Ideas that make us ideal.

The Setton RCS-X 1000 Control Center is a tuner/preamp that also provides remote control

of all basic functions. You can select sources, change speakers and record and transfer on tape. It's beautifully designed on the outside, while a glimpse inside reveals an elegant solution in sophisticated circuitry, with IC's neatly packaged into a startlingly small space. Illuminated digital displays show input selection, FM frequency and $\pm dB$ readings for each of the four tone

controls. FM sound is at its best because LED's tell you instantly when you're center tuned.

AFC is cancelled when you touch the tuning control so you can find weak stations, but it returns in seconds for drift-free reception. LED's act as instantaneous VU meters so you can see clipping as it occurs. All our electronic gear, including the RCS-X 1000, has a security panel that protects against overheating, distortion and speaker overload.

Our TS-11 Automatic Front Loading Turntable takes a new turn in design. The dustcover slides back, instead of lifting up, so you gain space and lose vibration. And vertical controls cut vibration still more. Taping from a TS-11 assures a clean transfer of sound.

Special equipment for the special few.

Perhaps no company will ever achieve perfection, but by taking it as our starting point, we know we'll never be far away. As you might gather, Setton equipment is not inexpensive. But for its price, it offers uncommon value. We believe there is a relatively small

number of customers able to fully appreciate this highest fidelity equipment. If you are interested in learning more about the line that starts with perfection, write Barbara Beachy, Setton International Ltd., 60 Remington Boulevard, Ronkonkoma, N.Y. 11779.



Perfection. The best place to start.

2336 Kew New Jorse Solution KV214 100% solution \$4 SL820	SIII YTHING IN medy Evolution Y 201/963-6300 OI IR 21" meas. do 1R 21" meas. do 1R 21" meas. do 18 21" meas. do 19 95 00 Befamax 01 \$545	Jersey City, J Hew Y Now Y K KV191 100% set	And Jorney 07306 and 212/344-7070 COLOR COLOR TV COLOR 000 19" monet. dag. 1 state. 5425
KV 195 KV 192 KV 194 KV 175 KV 177 TI-1000 TI-1025 TI-2550 TI-5040	51 \$450 21 \$435 11R \$525 51 \$420 12 \$399 x4\$ INSTRUM 7.50 9.24 III. 23.40	KV 17 KV 15 KV 15 KV 12 KV 12	41R . \$450 12\$340 41R \$399 15\$299 04\$289 ULATORS
pho in ti BAC EXP All cart		We deliver arge it by FER CHARG C.O.D. orders in facto sed lowest p	anýwhere phone on E, AMER. saccepted ry sealed
WHOLESALE PRICI	DNY • JVC • PIONEER • ENWOOD • DUAL HONEMATE • SHARP AID • HOTPOINT	Minimum order anty • Prompt Your Customer	of . SR-5 Action Control of the Catalog
ALL MAJOR BRANDS AT WHOLESALE P	PANASONIC & RCA & QUASAR & ZENITH & SONY & JVC & PIONEER SANYO & MARANTZ & TEAC & JENSEN & SANSUI & KENWOOD & DUAL GARRARD & KOSS & MEMOREX & MAXELL & ATARI & PHONEMATE & SHARP TEXAS INST. & SEIKO & AMANA & LITTON & KITCHEN AID & HOTPOINT WHIRPOOL & BEARCAT & OTHERS	No Investment Necessary • Any Quantities - Never a Minimum order Factory Sealed Cartons • Full Manufactures Warranty • Prompt Delivery Shipped Anywhere • To You or Your Customer	CALL (914) 425-1200 or Write: Dept . SR.5 A NCI PREMIUM DISTRIBUTORS 32 South Central Avenue, P. O. Box 8 Spring Valley, New York 10977 Send 34.00 (Refundable 1st Order) For our new 265 page Illustrated Wholesale Price Catalog
ALL MA.	 PANASONIC - RCA - QUAS. SANYO - MARANTZ - TEAC - JE GARHARD - KOSS - MEMOREX - EXAS INST SEIKO - AMANA WHIRLPOOL - BEARART & OTHERS 	No Investment N Factory Sealed Delivery Ship	NCI 25 So Spring Sering

disappointing, formula-ridden echo of the CTI sound that buried the artistry of so many fine jazz soloists over the past few years. Indeed, a good many of the CTI crew are on hand, including Don Sebesky-who, having done these arrangements, is undoubtedly the main culprit. Only the title selection, You Can't Go Home Again, can begin to compare with Baker's earlier recordings or even, ironically, with the work he did for CTI following his comeback. It features a sextet with pianist Kenny Barron and the late Paul Desmond, neither of whom appear on the other three selections. Though there are strings added, the arrangement is unobtrusive and straightforward. Desmond-whose last recording this was-plays with the same lyricism that gave Baker his wide appeal, and it is sad that the two will never play together again. Fortunately, they did collaborate on Baker's fine 1974 release "She Was Too Good to Me" (CTI 6050), which should have priority over this one on your record shelves. C.A.

BARBARA CARROLL: From the Beginning. Barbara Carroll (piano); orchestra. Together; Isn't She Lovely; Lazy Love; Easy Living; and three others. UNITED ARTISTS UA-LA778-H \$7.98.

Performance: Too nice, mostly Recording: Good

Barbara Carroll's elegant piano playing displays impeccable jazz manners, but her choice of material seems to lean toward an excruciatingly well-bred "atmospheric" sound. She doesn't really do herself justice with her lotus-land lolling about in such things as Easy Living and Isn't She Lovely. Just how rumpled and vital (and, I suppose, inelegant) she can be is shown in Blues Country, where she switches from a grand to a Fender Rhodes electric piano and lets loose with a kind of high-flying, low-down playing that makes most of the rest of the album seem like so much empty chic. The sound is very good, very sleek. P.R.

BILLY COBHAM: Magic. Billy Cobham (drums, vocal); instrumental accompaniment. AC/DC; On a Magic Carpet Ride; Leaward Winds; and three others. COLUMBIA JC 34939 \$7.98, (a) JCA 34939 \$7.98, (c) JCT 34939 \$7.98.

Performance: Mechanical Recording: Good

Billy Cobham's considerable talent as a drummer is incontrovertible, but this souped-up album won't do much to further his already impressive career. There is something very regimented and mechanical about the sound here, something like that which sent Fillmore East and West audiences into a frenzy at the beginning of this decade. Cobham is simply too good a musician to waste his talent on such bland fare. C.A.

RECORDING OF SPECIAL MERIT

DOUBLE IMAGE. Double Image (instrumentals). *Rag-Out; Mist; Truce*; and three others. INNER CITY IC 3013 \$6.98.

Performance: Excellent Recording: Excellent

Double Image is a new quartet—formed last year—but its roots go back to 1973, when bas-(Continued on page 153)



CIRCLE NO. 38 ON READER SERVICE CARD

BROOKLYN, N.Y. 11219 CIRCLE NO. 20 ON READER SERVICE CARD



ist Harvie Swartz and vibraphonist David Friedman first began working together as a duo ("Futures Passed," Inner City IC 3004). Vibraphonist David Samuels made it a trio in 1976, and drummer Michael DiPasqua gave Double Image its present form the following year. With Friedman and Samuels doubling on marimba-an instrument largely neglected by jazz musicians-and with all but Swartz also playing various percussion instruments, Double Image has a sound of its own-a cross between Balinese music and that of the late Modern Jazz Ouartet. Like the MJO, the members of Double Image are highly skilled musicians, and all have impressive past associations. Though their music can get a mite too clinical at times, the four work as one, generating music that is both physically and intellectually stimulating.

Their debut album consists entirely of original-and I do mean original-material. It was recorded in Germany (using a studio and engineer favored by the ECM label) last summer, and it is, I hope, only the beginning of what should be a long life for a worthy group. CA.

RECORDING OF SPECIAL MERIT

BILL EVANS: Alone (Again). Bill Evans (piano). People; Make Someone Happy; The Touch of Your Lips; and two others, FANTAsy F-9542 \$6.98.

Performance: Exquisite Recording: Very good

They have not yet invented all the superlatives needed to describe the music of Bill Evans. His first Riverside recordings are as stunningly beautiful and valid today as they were twenty-two years ago, and time will not wither, nor custom stale the delicate beauty of this superb solo excursion. Evans doesn't just play a tune; he caresses it, embellishes it, and turns it into a new and very personal experience. Each Bill Evans album is one of his best-and this one, recorded in 1975, is no exception. CA

RECORDING OF SPECIAL MERIT

CHARLIE HADEN: The Golden Number. Charlie Haden (bass); Ornette Coleman (trumpet); Don Cherry (trumpet, flutes); Archie Shepp (tenor saxophone); Hampton Hawes (piano). Shepp's Way; Turnaround; and two others. A&M/HORIZON SP-727 \$7.98.

Performance: Bassically interesting Recording: Very good

Bassist Charlie Haden's first album of duets ("Closeness," A&M/Horizon SP-710) had him teamed with Alice Coltrane, Paul Motian, Keith Jarrett, and Ornette Coleman, but it was only with the latter two that he achieved memorable results. For his second round, Haden has chosen Coleman again (this time on trumpet), Don Cherry, Archie Shepp, and the late Hampton Hawes, and the result is of more uniform quality. Haden is an exceptional bassist who extracts a fat, clean tone from his instrument and consistently evinces both taste and imagination. He plays superbly throughout this album, obviously inspiring his well-chosen partners.

Turnaround, an Ornette Coleman composition, features Haden with pianist Hampton Hawes. A soulful blues number, it is the al-



CIRCLE NO. 63 ON READER SERVICE CARD

Zin Cod

(Crive

CIRCLE NO. 67 ON READER SERVICE CARD



Needle in the hi-fi haystack

Even we were astounded at how difficult it is to find an adequate other-brand replacement stylus for a Shure cartridge. We recently purchased 241 random styli that were not manufactured by Shure, but were being sold as replacements for our cartridges. Only ONE of these 241 styli could pass the same basic production line performance tests that ALL genuine Shure styli must pass. But don't simply accept what we say here. Send for the documented test results we've compiled for you in data booklet # AL548. Insist on a genuine Shure stylus so that your cartridge will retain its original performance capability-and at the same time protect your records.

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



Manufacturers of high fidelity components. microphones, sound systems and related circuitry. CIRCLE NO. 49 ON READER SERVICE CARD

bum's most accessible track. It is also the only one on which Haden seems to take the role of an accompanist, though he does contribute a solo. The remaining three selections-all written by Haden, or at least credited to him-are more in the nature of dialogues with shifting moods. Tenor saxophonist Archie Shepp proves, on Shepp's Way, that he is a traditionalist at heart, sounding more like Ben Webster and Coleman Hawkins than the man who once wiped away The Shadow of Your Smile. Trumpeter Don Cherry proves that he still has a bit of the musical rebel in him, but his playing too has mellowed with the years. Ornette Coleman-who (with his disciple, Cherry) fathered the revolutionary free-form movement in jazz-demonstrates the rapport he and Haden have developed over the years, but he has not achieved total command of the trumpet. Nevertheless, Coleman's performance here is almost as satisfying as the one he contributed to Haden's first duet album, when he played the alto saxophone. This is not the sort of album a record company can expect great sales from, but it is a fine release, and A&M is to be commended for what is obviously an artistic rather than a C.A. commercial venture.

THAD JONES/MEL LEWIS: Live in Munich. Thad Jones/Mel Lewis Orchestra (instrumentals). Come Sunday; Central Park North; Mach II; and two others. A&M/HORIZON SP-724 \$7.98.

Performance: **Spirited** Recording: **Good remote**

I was disappointed in the Thad Jones/Mel Lewis Orchestra's last release ("New Life," A&M/Horizon SP-707) because the band sounded lethargic and I found Jones' arrangements unimaginative to the point of dullness. I am happy to report that I have no such complaints about this album, recorded during a performance at Munich's Domicile Club in September 1976. Many of the solos sound genuinely inspired, Jones' arrangements are-in spots-wildly imaginative, and the ensemble passages reflect the spirit always associated with this band. Except for Mel Lewis' lengthy drum solo on Central Park North, which is tedious, the album moves along nicely, and it contains much that is worth going back to. CA.

RICHIE KAMUCA: Richie. Richie Kamuca (tenor saxophone, vocal); Mundell Lowe (guitar); Monty Budwig (bass); Nick Ceroli (drums). Some Other Spring; Symphony; When Day Is Done; I Concentrate on You; Say It Isn't So; and three others. CONCORD JAZZ CJ-41 \$7,98.

Performance: Fine tenor Recording: Very good

"This album is me—truly me. It's the first time I could ever admit or say that," Richie Kamuca wrote in his notes for this album, which he produced on his own. Tragically, he never lived to see it released; he died last July, the day after his forty-seventh birthday.

It is a good album. Kamuca never had a distinct style, but he knew his instrument well and played it with infectious cheer and a healthy imagination. The musicians he handpicked for this date include guitarist Mundell Lowe, who did club dates with Kamuca in the mid-Seventies after returning to the jazz scene from several years devoted to film and



CHARLES MINGUS Music that withstands the test of time

television work. Lowe's gentle style of playing was very popular in the Fifties, when soft guitars often accompanied soft voices. He's still playing like that, and the sound is just as attractive as ever.

Except for 'Tis Autumn, which has Kamuca singing in a husky whisper, I rather like this album. "In ten years, if I live that long, I'll be playing better than I am now," Kamuca wrote elsewhere in the notes. How very sad that we will never be able to confirm that. C.A.

JAY McSHANN: The Last of the Blue Devils (see Best of the Month, page 90)

RECORDING OF SPECIAL MERIT

CHARLES MINGUS: Three or Four Shades of Blues. Charles Mingus (bass); George Coleman, Sonny Fortune (saxophones); Jimmy Rowles (piano); Larry Coryell (guitar); Ron Carter, George Mraz (bass); other musicians. Goodbye, Porkpie Hat; Noddin Ya Head Blues; Better Git Hit in Your Soul; and two others. ATLANTIC SD 1700 \$6.98, (1) TP 1700 \$7.97, (2) CS 1700 \$7.97.

Performance: Very Mingus, very fine Recording: Very good

Charles Mingus has been active on the musical scene for about forty years, and his brilliance has been widely recognized for the past thirty. He is a man of many moods, both personal and musical, great wit, and imagination, and he has a wonderful ability to make the very traditional sound very modern. From a background that included stints with such New Orleans pioneers as Kid Ory and Louis Armstrong and such swing-era stars as Lionel Hampton, Art Tatum, and Red Norvo, Mingus sprang to the forefront of the bebop movement in the late Forties. In his music, Mingus draws from the past and aims at the present; his sound is uniquely his own-an amalgam of all his experiences laced with humor and satire. But beneath the humor there often lies a more serious statement, as reflected in such titles as Fables of Faubus (composed in 1959) and the more recent Remember Rockefeller at Attica.

In "Three or Four Shades of Blue," Min-(Continued on page 158)

THE INSIDE STORY ON HOWAKAI MAKES RECORDED HISTORY.

GX-650D Reel Capacity: Up to 101/2" reel; Tape Speed: 15, 7½ and $3\frac{3}{4}$ ips (± 0.5%); Wow/Flutter: Less than 0.04% RMS at 15 ibs; Frequency Response: 30 Hz to 30,000 Hz $(\pm 3 \text{ dB})$ at 15 ips; Distortion: Less than 0.4% at 15 and 7½ ips (1,000 Hz "O" VU); Signal-to-Noise Ratio: Better than 58 dB (measured via tape with peak recording level of +6 VU); Heads: (3) one GX Playback, one GX Recording and one Erase Head; Motors: (3) one AC Servo Motor for capstan drive; two Eddy Current Motors for reel drive.

GX-270D Reel Capacity: Up to 7" reel; Tape Speed: 71/2 and 3¼ ips (± 0.7%); Wow/ Flutter: Less than 0.06% RMS at 7½ ips; Frequency Response: $30 \text{ Hz to } 23,000 \text{ Hz} (\pm 3 \text{ dB})$ at 71/2 ips; Distortion: Less than 1% (1,000 Hz "O" VU); Signalto-Noise Ratio: Better than 60 dB (measured via tape with peak recording level of +6 VU); Heads: (3) one GX Forward Playback, one GX Reverse Playback, one combination GX Recording/Erase Head; Motors: (3) one AC Servo Motor for capstan drive, two Eddy Current Motors for reel drive.

4000DS Mk II Reel

Capacity: Up to 7" reel; Tape Speed: 7½ and 3¾ ips (\pm 2%); Wow/Flutter: Less than 0.12% WRMS at 7½ ips; Frequency Response: 30 Hz to 23,000 Hz (\pm 3 dB) at 7½ ips; Distortion: Less than 1% (1,000 Hz "O" VU); Signal-to-Noise Ratio: Better than 56 dB (measured via tape with peak recording level of +6 VU); Heads: (3) One 1-micron gap Playback head, one Recording head, one Erase head; Motor: 4-pole induction motor.



THE BEST-SELLING REEL-TO-REEL DECKS SINCE THE BEGINNING OF RECORDED HISTORY.

From the beginning, the name AKAI has been synonymous with some of the most significant discoveries in the audio recording field.

First, AKAI led the industry with the electronics and technology required to produce the very finest motors, the heart of a tape recorder. Another advancement was the exclusive AKAI glass and crystal ferrite (GX) head—it remains totally unsurpassed for optimum sound and wearability—guaranteed for 150,000 hours, the equivalent of playing 24 hours a day for 17½ years.

Today, AKAI continues to make one of the broadest lines of two and four channel reel-to-reel decks. And our 20+ years in the business go into every deck to keep sellers. From the high performance GX-650D loaded with features, to the mid-priced GX-270D with reverse record and playback, to the hottest-selling 4000DS Mk II. For multi-track recording, the Quadra-Sync® GX-630DSS is also available.

See your AKAI dealer today, because no matter which of the 11 AKAI decks you choose, you'll be getting the best there is into your system. As well as the best value for your money; something mummy always said to look for.





ART COLLECTORS: For an 18" x 24" reproduction of this Charles Bragg etching suitable for framing, send \$2 to AKAI, Dept. SR, P.O. Box 6010, Compton, CA 90224, ATTN: Tut.

TEREO REVIEW MARKET PLACE

REGULAR CLASSIFIED: COMMERCIAL RATES: For firms or individuals offering commercial products or services, \$2.25 per word. Minimum order \$33.75. **EX-PAND-AD® CLASSIFIED RATE:** \$3.40 per word. Minimum \$51.00. Frequency discount: 5% for 6 months; 10% for 12 months paid in advance. **PERSONAL RATE:** For individuals with a personal item to buy or sell. \$1.35 per word. No minimum! **DISPLAY CLASSIFIED:** 1" by one col., \$280.00. 2" by one col., \$560.00. Col. width 2-1/4". Advertiser to supply film positives. Please write or phone for frequency rates. **COLOR:** Color avail. for all classified ad styles at earned rate plus additional 25%. Color choice Publisher's option & subject to availability. Publisher reserves right to run ad in black if color not available on classified pages. In such cases color charge will be refunded or credited. **GENERAL INFORMATION:** Ad copy must be typewritten or clearly printed. Payment must accompany copy except when ads are to be billed on credit cards — American Express, Diners Club, Master Charge, VISA.— or when ads are placed by accredited advertising agencies. First word in all address and telephone number before ad can be run. Ads are not acknowledged. They will appear in the first issue to go to press after closing date. Closing Date: 5th of the 2nd month preceding cover date (for example, March issue closes January 5th). Send order and remittance to: Classified Advertising, **STEREO REVIEW**, One Park Avenue, New York 10016, Attn: Hal Cymes.

EQUIPMENT

WRITE for quotation on any Hi-Fi components: Sound Reproduction Inc., 460 Central Avenue, East Orange, N.J. 07018. 201-673-0600.

WRITE FOR DISCOUNT PRICES on your choice of components, District Sound, Inc., 2316 R.I. Ave, N.E., Wash., D.C. 20018. (202) 832-1900



DIAMOND NEEDLES and STEREO CARTRIDGES at DIS-COUNT PRICES for SHURE, PICKERING, STANTON, EM-PIRE, GRADO and ADC, Send for free catalog, LYLE CARTRIDGES, Dept. S, Box 69, Kensington Station, Brooklyn, New York 11218. For Fast Service call Toll Free 800-221-0906.

SAVE UP TO 69% on over 100 top brand audio components from Carston Studios, New England's Audio Supermarket, one of the oldest mail order firms (Est, 1952) and certainly one of the most reliable. All orders shipped from stocked warehouse. Send for price quote and price list, Carston Studios, Old Brookfield Rd., Danbury, Conn. 06810

PROFESSIONAL HI-FI COURSE-Instructors include Len Feldman, Julian Hirsch, Larry Klein, and Larry Zide. Home study course also available. Send \$2.00 for full color AUDIO PRIMER and full information on joining Society Audio Consultants (SAC), 49 E 34th St., Dept. SR, New York, New York 10016

PERFECTIONISTS PREFER DYNAKITS. Before Purchase You Owe Yourself Our Quote. Mainline IIr, 971 Fronheiser. Johnstown, PA 15902.



BUILD STEREO SPEAKERS WITH JUST GLUE AND STAPLES.

Save up to 50% of the cost of ready-built

Save up to 50% of the cost of ready-built speakers by assembling Speakerlab kits. We've done the design, carpentry and wiring, leaving you only the actual in-people take less than two hours to assemble a kit. Illustrated, easy-to-follow instructions check you each step of the way. (And if you still can't finish the kit, we'll do it for you for just the cost of return freight.) return freight.)

When you're through, you have a high quality, multielement stereo speaker with a resonance-free-enclosure, fiberglass damping, a crossover with level controls, and drivers that are some of the best in the industry.

Send for our free 52-page catalog. It's practically a manual on speaker building.

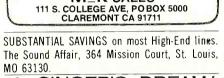


NEEDLE IN A HAYSTACK specializes in stereo styli and cartridges, accessories, special albums. All major brands and many hard-to-find replacements available. Free catalog. Dept. S, P.O. Box 17436. Washington, D.C. 20041.

SANSUI and PICKERING! BELOW mail order prices! Send to: GSH Super Savings, P.O. Box 86, Eden, N.C. 27288.



40 OTHERS



BUY HI-FI COMPONENTS THE MODERN WAY

PHONE & MAIL

Call TOLL FREE or write for LOW PRICES

NATIONWIDE

IN CALIFORNIA 800/472-1783 VIST Approved by phone

MCK SALES

AND OVER

CALIFORNIA



BRITISH and EUROPEAN Hi-Fi from England's Hi-Fi mail order specialists. Save on B&O, LS3/5A, KEF, Radford, Tandberg, Tannoy, etc. Shipping list free or send \$3 to include literature, Goodwins, 7 The Broadway, Woodgreen, London N22. Phone: 888 0077.

LOWEST PRICES and Biggest Mail Order Business in California: California Natural Sound, P.O. Box 99147, San Francisco, Calif, 94109.

AT LAST! NEW JERSEY Audiophiles esoteric Hi-Fi; I.M. Fried Loudspeakers; D.B. Systems; Top Names, available here now contact: Contemporary Sound Associates, 35 Little Falls Road, Fairfield, New Jersey 07006. (201) 575-1135.



RACK LABS stereo variable electronic crossovers and disco mixers for Hi-Fi and P.A. Write: 136 Park St., New Haven, Conn. 06511 (203) 787-4880.

STEREO COMPONENTS and SONY TV's at rock bottom prices. Why pay up to 40% more? Nedco Distributors, 68-A Watertown Street, Watertown, Mass. 02172.

DISKO MIX-MASTER IV outstanding performance, professional specs. Two phono inputs; tape, MIC inpts plus cueing. Literature available. Berkshire Audio. P.O. Box 35, Great Neck, N.Y. 11021.



SpeakerKit Box 12S, Menomonie, WI 54751

UNZOO obfuscation of salon audio. STATE-OF-ART: ADS. BOSE, YAMAHA, B&O, McINTOSH, KLIPSCH, AUDIOPULSE, SAE, THRESHOLD, ROGERS, KEF, DAHLOUIST, ANALOG, BRYSTON, etc. At lowest discounts. Professional Audio Engineers available for FREE, No. B.S. Advice/Information. (Send \$1 for priority mail, postage, literature). Trade-Ins. GOLDEN EAR AUDIO-ELECTRONICS. Specific quotes: G.E.A.-E., P.O.B. 296. Idaho Springs, Colorado 80452. (303) 582-5200, 9A.M. - 9P.M. (MST).

STEREOS at sound bargains, JVC, Technics, Craig, Jensen. Send for catalog. Sound Bargains, P.O. Box 3247, Martinsville, VA 24112.



BLANK TAPE SALE-

	•••			
MAXELL:		TDK:		
UDXL-C60 (or)\$				
UDXL-C90 (1 or 11)	3.35	SA-C90	2.95	
UD-C90				
LN-C90	i.93	Scotch Master C90	2.79	
UD-35-90	1.83	Scotch Master II or 111 C90	3.24	
UDXL-35-90B	5.94	BASF: Studio or CRO ² C-90	2.69	
Minimum order 12 pieces.				
All tapes can be assorted. PA	bbe	sales tax. Shipping \$2.50 per	order.	
Or write for complete catalog. (412) 287-5595				
Tape World, 220	Spr	ing St., Butler, PA 16001		
		A GIRA	the second s	

CUSTOM PHASE LINEAR Stack Cabinetry, Information. Benchmark, 550 Dorset, Goleta, CA 93017.

LOWEST PRICES ON STEREO-ESOTERIC COMPO-NENTS & TAPES!!! Over 150 brands. Send SASE for quotes. Audio Unlimited, 401 Reynolds Circle No. 2.B, San Jose, CA 95112. (408) 251-8776.

DYNAKITS, SME-Lowest Prices. Fastest Service. MC/VISA. Underground, 324a Broadwater, Arnold, MD 21012. (301) 647-0919.



Uses ten individually insulated wires braided together for each lead. Elimi-nates self-inductance, lies flat under carpeting, increases volume 1-1½ dB, delivers the most accurate audio signal available from home systems. Two

delivers the most accurate audio signal available from home systems. Two cables, each 25 feet: \$25,00; Two cables, each 50 feet: \$20,00; Send check or money order (New York State residents please add appro-priate sales tax) to: HAWTHORNE HOUSE, Box 64, Hawthorne, New York 10532

Complete catalog of accessories and books for the audiophile, record col-lector, music lover, free with order or send \$1

TAPE AND RECORDERS

GOLDEN AGE RADIO-Your best source for radio tapes. Free catalog. Box 25215-TA, Portland, Oregon 97225 OPERA CLASSICAL MUSIC Open Reels. Rare mostly live free catalogue. K. Lohan Tapes, P.O. 298, Mastic Beach, N.Y. 11951

TDK, BASF, Memorex, Maxell, cassettes, reels, 8-tracks. Lowest prices, new guaranteed. S&S Audio, P. O. Box 56039, Harwood Heights, III. 60656.

SCOTCH RECORDING TAPE, exclusively, all new, lowest prices. TAPE CENTER, Box 4305, Washington, D.C. 20012. RADIO'S GOLDEN DAYS on tape. Reel, Cassette, Cartridge catalog. Radio Memories, Box 2297, Newport News, VA 23602

EVERYTHING ON OPEN REEL! Classical. Popular. Dolby. Quadraphonic. Latest releases. For "Reel News, send \$1.00. Barclay-Crocker, Room 857 S, 11 Broadway, New York 10004

1930-1962 RADIO PROGRAMS. Beats Television !! Tapes. \$1.00 Hour! Established esteemed dealer. Informative 200 page catalog, \$1.25. AM Treasures, Box 192SR, Babylon, NY 11702

RADIO RERUNS best source for radio shows, remotes, chronologies, jazz, personalities. Box 724-SR, Redmond, WA 98052

HISTORICAL OPERA DISC & TAPE - Magnificent quality, speedy service. Greatest live performances of past 50 years, Reel, cassette, disc. Free catalog. Historical Recording Enterprises, Box 12, Kew Gardens, N.Y. 11415.

LIVE OPERA TAPES. Reels - CASSETTES. Unbelievable treasure since 1926. Over 2,500 selections. Free DELUXE Catalog: Mr. Tape, Box 138, Murray Hill Station, N.Y. 10016. CASSETTE SAMPLER SPECIALS (Dolby) Piano Concerti. Mozart No. 21, Beethoven No. 2, \$2.49 each, both \$3.98 Free Catalog. Musical Concerts, Box 53SR, Cedarhurst, N.Y. 11516.

VIENNESE LIGHT MUSIC SOCIETY - Waltzes, Polkas, Overtures on imported Dolby cassettes. Most non-Schwann. K.C. Company, Box 793, Augusta, Maine 04330.

LIVE OPERA TAPES, CASSETTES. Incredible selection since 1930's. Personal, quick service, bonuses. Magnificent free catalogue. LIVE OPERA, Box 3141, Steinway Station, L.I.C., N.Y. 11103.

NEW AND USED open reel tapes \$3.00 each. Rock, personal collection, some rare. Send self-addressed stamped envelope and 50 cents. Tapes, 624 Keats Court, Palo Alto, CA 94303

CLASSICAL CASSETTES, Stereo-Dolby, FREE catalog, Quality Guaranteed, Credit Cards Accepted, EKR Classics, GPO Box 1977SD, New York, New York 10001.

LIVE PERFORMANCE TAPES - Opera, Singers, Conductors, Instrumentalists. Open reel only. Emphasis on superior sound. Good Sound Associates, P.O.B. 263. Planetarium Station, New York, N.Y. 10024.

BASF TAPE: All widths 40-55% off. All tapes quaranteed. INTERGALACTIC, 1043 Kirts, Troy, Michigan 48084.

YOUR MAIL-ORDER Tape Specialist in Wash., D.C. Same day shipment --- Discount Prices. BASF, Scotch, Maxell, TDK & Capitol. Free Price List. Saxitone Tape Sales, 1776 Columbia Rd., N.W., Washington, D.C. 20009.

3600' NEW L/N Scotch or Ampex tape, 10-1/2" metal reel 5 for \$38.00. 24 page booklet on tape editing 80 cents, Sound, POB 88338, Atlanta, GA 30338.

RECORDING TAPE - Outstanding Values. Cassettes, 8-Tracks, Open Reels, Accessories, New, fully guaranteed. Free Catalog. Write: Magne House, 2015-A, 17th Street, San Francisco, CA 94103.

YESTERDAY'S RADIO ON TAPE, Reels-Cassettes, Quality Sound, Reliable Service. Catalog \$1.00 refundable with first order. ADVENTURES, Box 4822-S, Inglewood, California 90302

OLDTIME RADIO — original broadcasts on quality tapes. Free Catalog. Carl R. Froelich, Route One, New Freedom, Pennsylvania 17349.

8-TRACK TAPES. Wide variety of rock at lowest prices. Rock-On-Tape, P.O. Box 220, Bklyn., N.Y. 11214.

EMPLOYMENT INFORMATION

BADIO-TV JOBS Stations hiring nationwide! Free details: "Job Leads", 1680-HB Vine, Hollywood, CA 90028.

SERVICES

WRITING, RESEARCH, EDITING, All disciplines. Original! Professional Team. Confidential. Reasonable. Superior library facilities. Writers Unlimited, Box 4391, Washington, D.C. 20012. (202) 723-1715. Mastercharge - VISA accepted

INSTRUCTION

BROADCAST STATION: Start your own. Any type! Home, school, church, business operation. Get free equipment, records. Details free. "Broadcasting" Box 5516-R5, Walnut Creek, CA 94596.

WE TRAIN ELECTRICIANS and Engineers. Edison School of Electrical Engineering, P.O. Box 891, Kenner, Louisiana 70063

RECORDS

SHOW ALBUMS, Rare, Out-of-Print LP's. 64 pg, list, \$1.00. Bakers Wife cast LP \$9.95, Broadway/Hollywood Recordings, Georgetown, Conn. 06829.

PROTECT your LP'S-Poly sleeves for jackets 9 cents; Round Bottom Poly Inner sleeves 7 cents; Poly lined paper 15 cents; white jackets 35 cents. Postage \$1.50. Record House, Hillburn, N.Y. 10931.

COLLECTORS' Soundtracks. Mint. List 50 cents (refundable). Jemm's, P.O. Box 157, Glenview, III. 60025.

OLDIES oldies, 45rpm. Also current hits. Free Catalog. Corny's Record Shop, Box 166HX, Mason, Ohio 45040

CLASSICAL RECORDINGS for collectors. Bi-monthly lists. Collections bought. ARS MUSICA, 13 Dante St., Larchmont, N.Y. 10538.

PROTECT YOUR ALBUMS. White cardboard replacement jackets 35 cents. Plastic lined sieeves 15 cents. Postage \$1.25. Opera Boxes, 78 Sleeves. Free Catalog. CABCO 400-1, Box 8212, Columbus, Ohio 43201

NOTICE: **Record Raters** Wanted

(No experience required) Each month you will receive nationally released albums to rate There is no extra charge for the LP's you receive — all you pay is a small membership fee which covers all costs of the LP's including postage and handling. In return for your opinion you will build a substantial album collection - if irst come basis For application write

E.A.R.S. INC. Box 10245 Dept SR 5521 Center St. Milwaukee, WI 53210 "Guaranteed" © 1975 E.A.R.S., Inc.

THOUSANDS of like new LPs and prerecorded tapes catalogue \$1.50. Records, Hillburn, New York 10931.

SOUNDTRACKS. 1,000 Listings. DLX Catalog \$1.00 Re-fundable. "Mr. Soundtracks," 59-359 Pupukea Rd., Haleiwa, Hawaii 96712.

FILM - STAGE SOUNDTRACKS! Monthly Listings! Many rarities. Over 1,000 listings! AJLSR, Box 557342, Miami, Fla. 33155

RARE ORIGINAL RECORDS, all kinds, mostly mint. 5000 list \$2.00, refundable. Carl, Box 828, Princeton, NC 27569. DAYBREAK EXPRESS RECORDS Jazz imports from Europe and Japan. CBS-Sony, Trio-Whynot-Eastwind. Free Catalogue. Write: P.O. Box 582, Cathedral St. Station, New York, N.Y. 10025

HIGH DEFINITION RECORDINGS offers the most complete mail order service of direct-to-disk recordings, EMI's, audiophile pressings and accessories. Write for free catalog. HIGH DEFINITION RECORDINGS, P.O. Box 82566, Dept. BB-1, San Diego, CA 92138.

SOUNDTRACK CATALOG 25 cents. Robin and Marion, Caine Mutiny, many others. STAR-183, Box 7, Quarryville, PA 17566.

SEARCHING? LP's! DISContinued Records, 216 North Rose, Burbank, California 91505.

FREE DIRECT-TO-DISC Catalog. 63 Titles. High Fidelity Consultants. 2910G S. Greenville, Santa Ana, CA 92704.

BUSINESS OPPORTUNITIES

I MADE \$40,000.00 Year by mailorder! Helped others make money! Free Proof. Torrey, Box 318-NN, Ypsilanti, Michigan 48197.

MAILORDER MILLIONAIRE helps beginners make \$500 weekly. Free report reveals secret plan! Executive (1K5), 333 North Michigan, Chicago 60601

GET RICH with Secret Law that smashes debts and brings you \$500 to \$5 Million cash. Free report! Credit 4K5, 333 North Michigan, Chicago 60601.

STEREO REPRESENTATIVES NEEDED !!! Lowest Possible Prices!! Over 100 Brands!!! Krasco-Rep, 998 Orange Ave., West Haven, Conn. 06516.

NEW LUXURY Car without cost. Free Details! Codex-ZZ, Box 6073, Toledo, Ohio 43614.

MAKE BIG MONEY in spare time selling: Tubes, Antennas, Speakers, Test Equipment, Lite Bulbs, Hi-Fi, etc. No investment. Free information: Allied Sales, Pimento, IN 47866. (812) 495-6555

MILLIONS IN MAIL! Free Secrets. Transworld-17, Box 6226, Toledo, Ohio 43614

AUDIOPHILES WANTED !! Put your knowledge to use, earn an excellent spare time income. We need campus Dealers to sell name brand stereo equipment at substantial discounts in your area. No investment necessary. For information and application please write: ABCO, Dept. SR, 1201 East Main Street, Meriden, Conn. 06450. Call (203) 238-7979.

GET RICH!! Secret law erases debt. Free report exposes millionaire'\$\$ secrets. Blueprints, No. DD5, 453 W 256, NYC 10471

\$650 WEEKLY for beginners!! Free report: Mailorder Consuitants MDD5, 453 W. 256, Bronx, NY 10471.

HOW TO MAKE \$100 weekly/kitchen table! Free brochure. American, Box 428-ZD, Pomona, Kansas 66076

HI-FI ENTHUSIASTS WANTED !! Earn more than just spare money in your spare time. We need campus representatives to sell name brand stereo components at discount prices in your area. High commission, no investment required. Serious inquiries only, please. Contact: Mail Order Dept. K&L Sound Services Co., 75 No. Beacon St., Watertown, Mass. 02172. (617) 926-6100.

HYPNOTISM

FREE Hypnotism, Self-Hypnosis, Sleep Learning Catalog! Drawer H400, Ruidoso, New Mexico 88345.

SLEEP LEARNING, Hypnotic Method, 92% effective, Details free. ASR Foundation, Box 23429 EG, Fort Lauderdale, Florida 33307

AMAZING self-hypnosis record releases fantastic mental power. Instant results! Free trial. Write: Forum (AA5), 333 North Michigan, Chicago 60601

PERSONALS

MAKE FRIENDS WORLDWIDE through international correspondence. Illustrated brochure free. Hermes-Verlag, Box 110660/Z, D-1000 Berlin 11, Germany.

BUMPER STICKER PRINTING DEVICE. Cheap, simple, portable. Free details. Bumper, P.O.B. 22791(SR), Tampa, FL 33622.

MUSICAL INSTRUMENTS

UP TO 60% DISCOUNT. Name brand instruments Catalog. Freeport Music, 114 Q. Mahan St., W. Babylon, N.Y. 11704.

WANTED

GOLD, silver, platinum, mercury wanted. Highest prices paid by refinery. Ores assayed. Free circular. Mercury Terminal, Norwood, MA 02062.

THE COMMUNITARIAN CHURCH OF NEW YORK is expanding its educational program for runaway and homeless youths to include career training in the field of music. Our goal is to give young adults viable job skills in the electronic and recording areas so that they may find a place in our society. To help develop this project, we are seeking donations of various materials, such as mixer boards, preamps, receivers, turntables, musical instruments and other supplies. If you can offer us assistance, please contact us at (212) 338-1318. All donations are tax deductible.

JENSEN 9600 Triax Speaker. Bateman, Rt. 4, Box 132, Port Richey, FL 33568. 1-813-868-0255 eve.

TUBES

TV and Radio Tubes 36 cents. Free 48 page color catalog. Cornell, 4215-H University, San Diego, California 92105.

MAGAZINES AND BOOKS

BACK ISSUE MAGAZINES, FREE LIST. Send stamped envelope. EVERYBODY'S BOOKSHOP, Dept. ST, 317 West Sixth, Los Angeles, CA 90014.



MOVIE FILMS

16mm SOUND Features, Shorts, New, Used for Sale. Free Catalog. National Cinema, 333 W. 57th St., N.Y., N.Y. 10019.

EDUCATIONAL OPPORTUNITIES

LEARN WHILE ASLEEP. Hypnotize! Astonishing details, strange catalog free! Autosuggestion, Box 24-ZD, Olympia, Washington 98507.

RUBBER STAMPS

RUBBER STAMPS, BUSINESS CARDS. Many new products. Catalog. Jackson's, Dept. K, Brownsville Rd., Mt. Vernon, III. 62864.

MISCELLANEOUS



Order from STEREO DIRECTORY, P.O. Box 278, Pratt Station, Brooklyn, New York 11205. Enclose \$3.00° (\$2.50 plus 50d for postage and handling), *Residents of CA, CO, FL, IL, MI, MO, NY STATE, DC and TX add applicable sales tax. (Postage and handling charges non-taxable.) gus includes new versions of two 1959 compositions, the gospel-tinged Better Git Hit in Your Soul (originally Better Get It in Your Soul) and his beautiful eulogy to Lester Young, Goodbye, Porkpie Hat. Except for the solos, the present renditions don't differ significantly from the previous ones; but, as with all his music, these pieces withstand the test of time. Mingus has never moved with commercial trends-he has stayed away from synthesizers, crossover sound, disco beats, and the like-which is one reason his music endures. The title composition, recorded here for the first time, is a delightful montage in eleven sections, with splashes of Tad Dameron, Basie, Ellington (Mingus has always exhibited a special fondness for the Duke's music), Irish music (labeled "Caucasian Folk Blues"), and the Wedding March from Mendelssohn's Midsummer Night's Dream music. Somehow it all flows together and comes out pure Mingus.

Some of the ensemble playing is a bit sloppy, which is not unusual for Mingus and may well be intended. There are fine solos, especially by pianists Bob Neloms and Jimmy Rowles, saxophonist George Coleman—who has long deserved wider attention than he is getting—and guitarist Larry Coryell, but it is the genius of Mingus that dominates. I cannot think of a single record this man has made that isn't as valid today as it was when it was made. This album, too, will endure. C.A.

JOE PASS: Guitar Interludes. Joe Pass (guitar); vocal and instrumental accompaniment. A Time for Us; Go Back to Her; Blue Carousel; Peter Peter; Joey's Blues; and eight others. DISCOVERY DS-776 \$7.98 (from Discovery Records, P.O. Box 36553, Los Angeles, Calif. 90036).

Performance: Mostly atrocious Recording: Good

We have heard some excellent work by guitarist Joe Pass on Norman Granz's Pablo label in the last couple of years, but Pass should receive several demerits for involving himself in this awful album. Although the short guitar interludes that take up most of side one are not bad, someone should have pulled the plug when they recorded the second side, which consists of five indescribably bland songs (by one Irwin Rosman) performed with seven singers whose saccharine voices make the Lennon Sisters sound soulful. I don't know when this album was made, but it should have been never. C.A.

ZOOT SIMS: Down Home. Zoot Sims (tenor saxophone); Dave McKenna (piano); George Tucker (bass); Danny Richmond (drums). Bill Bailey; Jive at Five; Avalon; Doggin' Around; and four others. BETHLEHEM & BCP-6027 \$6.98.

Performance: Good Zoot, uneven rhythm Recordina: Good mono

Zoot Sims had been recording as a leader for ten years when he made this album in 1960. It's the kind of blowing session that was so often held in those days, but it is also good, enduring music. Sims has always been able to swing with the greatest of ease, and he does so here despite the fact that his rhythm section tends to rush things. There were some good men in that rhythm section, but I guess they got carried away by Sims' eloquence. "Down Home" is still a worthy reissue. C.A.

STEREO REVIEW ADVERTISERS' INDEX MAY 1978

READ	DER ADVERTISER	PAGE NUMBER
2	A.A.L. Speakers	
5 4	ADC-Accutrac	
3	ADC-Equalizer	
8	Advent Corporation	
_	Akal America Ltd.	
7 R	Allison Acoustics	
9	Angel/EMI Records	
1 2	Audio Discount Warehouse Sales	
3	Ball Corporation	
4 5	Bang & Olufsen of America BSR (USA) Ltd.	
6	Crown International	
7	Dahlquist	
0 8	dbx, Inc. Discount Music Club	
9	Discount Sound	
	Discwasher Dixle Hi Fi	
0	Duai	
1	Empire Scientific Corp.	
0	Fantastic Photo Electronics	
2 3	Fisher Corp. Ford Motor Company Fuji Photo Film, USA	
4	Garrard	
5	HI-FI Buys	
6	Hitachi	
27	Illinois Audio International HI-FI Dist	
9	J & R Music World	
	Jensen Sound Laboratories	
0	JVC America	
	Kenwood Electronica	
3	Koss Corporation	Cover 4
11	Koss Corporation	
	Lux Audio of America, Ltd.	97
_	Marantz, Inc.	
3	Maxell Corp. of America McIntosh Laboratory, Inc.	
14 15	Mitsubishi Mitsubishi Motors Corp.	
6	Musical Heritage Society	
17	Nakamichi Research (USA), Inc.	
8	N.C.I. Premium Distribution	
39 10	Oldamobile Onkyo	
12	Ortofon	
	Phase Linear	116
11	Pickering Company	
	Redio Shack R.J. Reynolds/Winston	
4	S.A.E.	
5	Sansui Electronics Corp.	
8	Setton International Ltd.	
7 8	Sherwood Electronic Labs, Inc.	
9	Shure Brothers	154
1 2	Sonic Research, Inc	
3 4	Sound Machine	
55	Sparkomatic	
56 57	Stereo Corporation of America Stereo Discounters Studer/Revox America	
58	Tandberg of America, inc.	
59	TDK Electronics	
78 B1	Teac Corporation Technics By Panasonic	
32	Technics By Panasonic	
83	Time Life Records Top Discount Audio	
84	Toyota	
50	United Audio	
85	U.S. National Guard U.S. Pioneer	
1		
66 67	Warner Bros. Records	
	Yamaha International Corp.	
	талнала ниеттацияа Согр.	



Any 3 Recordings of Your Choice—only \$1 Each

PLUS ALL THESE ADDED BENEFITS:

1. FREE CATALOG

of records and cassettes spanning our entire musical heritage: Medieval, Gothic, Renaissance, Baroque, Rococo, Classical, Romantic, Modern! 2. A SUBSCRIPTION FREE to Musical Heritage Review magazine, an 18 times a year periodical. It offers you 8 to 15 new recordings per issue. It's cover price is \$18.00 annually. 3. CHARGE ACCOUNT This permits you the convenience of charging your purchases—of paying for your recordings *after* you have received and tried them.

AND NO PURCHASE OBLIGATION—EVER! You'll enjoy these and many other benefits if you accept *Complimentary*

Nou'll enjoy these and many other benefits if you accept Complimentary Membership in Musical Heritage Society.

World Renowned Composers, World's Greatest Artists on the Society's Recordings

You can enjoy the superb artistry of such musical luminaries as Maurice Andre, Jean-Pierre Rampal, Lily Laskine, Jean Martinon, Ralph Munch, Alicía De Larrocha, Franco Gulli, Helmuth Rilling, Marie-Claire Alain, Jorg Demus, Nicolas Harnoncourt and many others. All recording the works of the world's great composers.

And the Society offers you not only the more popular works of the best-known composers, but perhaps more important to many music-lovers (and to schools, colleges and libraries) it also offers a large selection of works *not* available elsewhere.

Some composers, notably Telemann, Pachelbel, Fasch, Gilles and many others have become noteworthy in today's music world due almost solely to the Society's efforts!

Special Membership Prices

As a member you'll enjoy substantial savings. Members' prices are \$3.75 per LP and \$4.95 per Cassette. This is more than 25% below regular retail prices of \$4.95 per LP and \$6.95 per Cassette.

How the Society Operates

The Society's recordings are not sold in stores. They are offered directly through the MUSICAL HERITAGE REVIEW magazine at three week intervals.

When the Society receives your request. it sets up an account in your name, sends you its latest catalog and includes a certificate entitling you to buy up to three records of your choice for \$1.00 each plus shipping. (Or you may buy up to three cassettes for \$2.00 each.)

The Society will begin sending you MUSICAL HERITAGE REVIEW magazine for your edification and delight. There is no purchase obligation and you may discontinue the complimentary subscription at any time. As a subscriber two outstanding selections will be scheduled for shipment to you from each issue.

If you wish to audition the scheduled selections, do not return the advice form always provided. Or you may order only the recordings you'd like to audition or you may advise us to ship no recordings at all.

ENJOY OUTSTANDING AWARD-WINNING PERFORMANCES

Would you like to enjoy Tchaikovsky's immortal ballet Swan Lake in a definitive performance? Or Gounod's Faust in a Grand Prix winning edition? Or Monteverdi's monumental opera Orfeo in the most acclaimed rendition of all time?

Of the Society's more than 2,300 LPs, nearly 200 have received top honors from around the world. Why not ask for a complimentary membership today?

	Complimentary Members	ship Request Form
Mu 14 Tir	USICAL HERITAGE SOCIETY usical Heritage Society Building Park Road nton Falls, New Jersey 07724 dies and Gentleman of the Society,	OFFER OPEN TO NEW MEMBERS ONLY OFFER VALID IN U.S.A. ONLY.
Pĺe	ease enter my complimentary membership in the Soci	ety. I am interested in—
[]	12" Stereo Records [] Dolbyized Stereo Cassettes	[] Both Records and Cassettes
MU ma ead sei	Also, please set up an account in my name, send me y USICAL HERITAGE REVIEW magazine. It is understo by discontinue at any time. I understand that, as a sub ch issue will be scheduled for shipment to me. I furthe ections by not returning the response form; that I may returning the response form.	od that I am under no purchase obligation and scriber, two outstanding new selections from r understand that I may opt to audition these
NA	AME	

ADDRESS

STATE

SR-58

ZIP

CIRCLE NO. 36 ON READER SERVICE CARD



Now, professional 3-head monitoring in a cassette deck.

Up to now you had to choose between a cassette deck for convenience. Or, reel-to-reel for professional recording features. Now have it both ways in the Marantz 5030 cassette deck.

Here's how:

The Marantz 5030 has separate record and playback heads...the same as reel-to-reel. This gives you an instant check of the quality of your recording as you record. And, like some of the most expensive reel-to-reel decks, the record and playback heads on the Model 5030 are super-hard permalloy—a long-lasting metal alloy that gives better frequency response and signal to noise ratio than Ferrite material.

For precise azimuth alignment, both the playback/monitoring and record heads are set side-by-side within a single metal enclosure. They can't go out of tracking alignment.

Complementing this outstanding "headtechnology" is Full-Process Dolby* Noise Reduction Circuitry. It not only functions during record and playback...but during monitoring as well.

What drives the tape past the heads is

every bit as important as the heads themselves. For this reason the Model 5030 has a DC-Servo Motor System. The steadiest, most accurate tape-transport method. Speed accuracy is superb, with Wow and Flutter below 0.05% (WRMS).

To adapt the Model 5030 to any of the three most popular tape formulations, press one of the three buttons marked "Tape EQ and BIAS." There are settings for standard Ferric-Oxide, Chromium Dioxide (CrO₂) or Ferri-Chrome (FeCr) tape.

With Mic/Line Mixing, two sources can be recorded at the same time, combining line and microphone inputs. The Master Gain Control lets you increase or decrease the overall volume of the total mix.

What else could we pack into a front load cassette deck?

More features. Like a 3-digit tape counter with memory function. Viscous Damped Vertical-load Cassette Door. Switchable Peak Limiter. Fast-response LED Peak Indicators. 3" Extended-range Professional VU Meters. Locking Pause Control for momentary shut-off in record or play...and Total Shut-off in all modes when the tape ends.

And, of course, the unbeatable Marantz 5030 is front loading. Easy to stack or fit on a shelf. The styling is clean and bold. The sound is the truest recreation of what was put on tape. Your Marantz dealer has Model 5030 as well as the

> full line of Marantz cassette decks. If you want the best—then do what you really want to do go for it.

> > Go for Marantz.

25 Honiversary

000000

*TM Dolby Labs, Inc. © 1978 Marantz Co., Inc., a subsidiary of Superscope, Inc., 20525 Nordhoff St., Chatsworth, CA 91311. Prices and models subject to change without notice. Consult the Yellow Pages for your nearest Marantz dealer.



We just raised the standard of the industry.



The new Koss PRO/4 Triple A.

We did it again. We took the incredible sound and precision craftsmanship of the Koss PRO/4AA that has long made it the standard of the industry and made it even better. Because the PRO/4 Triple A's extra large voice coil and oversized Triple A diaphragm reproduce a dynamic, full bandwidth Sound of Koss that carries you back to the live performance like nothing you've ever heard before. You remember it all: the expectant hush of the crowd . . . until suddenly . . . the night explodes with the glittering splendor of the all engulfing performance. You're drawn to the full blown fundamentals and harmonics of each instrument. To the spine-tingling clarity of the lead singer's magical voice. To the rhythmic kick of the drum and the throbbing of the bass.

You see it and hear it all again, yet you're relaxed at home in your own private realm of listening pleasure. The PRO/4 Triple A's extra light construction and unique Pneumalite[®] suspension dual headband make wearing them as much of a pleasure as listening to them. And all the while, the Triple A's special, humanengineered, direct-contoured Pneumalite[®] earcushions create a gentle yet perfect seal for flat, low bass response to below audibility.

It's a whole new experience in stereophone listening. A new performance standard for those who set their standards high. Write c/o Virginia Lamm for our free full-color stereophone catalog. Or better yet, take your favorite records or tapes to your Audio Dealer and listen to them like you've never heard them before ... live on the new Koss PRO/4 Triple A.



KOSS CORPORATION, 4129 N. Port Washington Ave., Milwaukee, Wisconsin 53212 Koss International/London, Dublin, Paris, Frankfurt • Amsterdam • Koss Limited/Ontario • Koss K.K./Tokyo CIRCLE NO. 43 ON READER SERVICE CARD