

Stereo Review

MARCH 1971 • 60 CENTS

SPECIAL TAPE RECORDER ISSUE
VIDEO CARTRIDGES * A DREAM MACHINE * CHOOSING A MIKE



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D BUCHANAN
HAZEL GREEN ACAD C71
HAZEL GREEN KY 41332

In addition to the controls we've mentioned, there's a speaker selector switch and source selector switch.

And there are input and output jacks for everything imaginable; our engineers saw to that.

Every 701 goes through 1176 tests.

To make sure that every 701 performs the way we designed it to perform, we test each unit 1176 times. The tests, which are fully computerized, cover every aspect of the audio circuitry, power amplifiers and stabilized power supply, including all the controls, all the switches, every component function and every connection.

Four-channel sound is as big an improvement over stereo as stereo was over mono!

The four-channel era.

The Fisher 701 is the first four-channel AM/FM stereo receiver. But we're predicting it'll be the first of many.

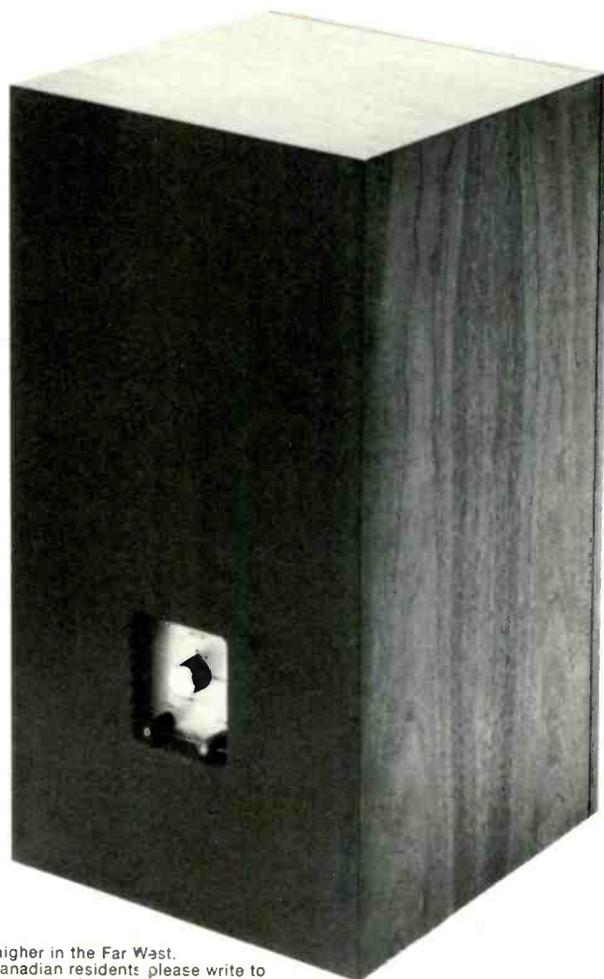
As more people hear the dramatic difference between four-channel and two-channel stereo, the repertory of four-channel source material will grow larger and larger.

And here's another prediction: Four-channel is going to be with us a long, long time. Because whatever the future brings, it's hard to imagine a development in high fidelity that would be as big an improvement over four-channel as four-channel is over stereo.

Shown at right:

The Fisher 701, at \$699.95, plus a pair of Fisher's least expensive 4-way bookshelf speakers (the Fisher XP-7B's, \$149.95 each), and a pair of the world's finest bookshelf speakers (the Fisher XP-9C's, \$199.95 each).

When buying speakers for the 701, keep in mind that the rear-channel speakers need not be identical to the front-channel speakers, since the 701 provides a full complement of tone controls on both the front and rear channels to compensate for differences in the program source or playback speakers.



The Fisher
We invented high fidelity.



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Overseas and Canadian residents: please write to
Fisher Radio International, Long Island City, N.Y. 11101

■ With mono, you had only one channel of information. No matter how good your components, there was no way for your system to convey spatial information. Even if the system was free of distortion, it didn't sound quite natural.

Stereo was a dramatic improvement. With one speaker on the left and one on the right, it became possible to convey spatial information—at least you could tell which instruments were on the left and which on the right. But the sound from the two speakers reflected off the back wall, adding the acoustics of your living room to the music to which you were listening.

With four-channel, the back-wall reflection is replaced by the sound from speakers on each side of the rear of the room. Those speakers are providing information about the acoustics—not of your living room, but of the room in which the music was recorded. So you feel as if you were really attending a concert. (That's a pretty big improvement over stereo!)

The Fisher 701, the world's first four-channel receiver, has to be heard to be believed!

The Fisher 701 is an amazing piece of equipment.

First of all, it's not just a four-channel receiver. It's also the finest two-channel stereo receiver in existence (that, alone, would justify the \$699.95 price tag).

As for FM, FM stereo, AM, or reproducing your mono or stereo records, the 701 is unexcelled.

So in a sense, the four-channel part of it is a bonus.

What four-channel program material is available?

As of now, the best source of four-channel program material is a four-

channel tape deck, of which several models now are on the market. But several methods of transmitting four channels of information over FM stereo, and methods of providing four channels of information in a phonograph record, are in an advanced stage of development. We just want you to know that the Fisher 701 has the input and output jacks to make it compatible with *all* four-channel methods now being worked on. So whichever emerges as the standard, the 701 will be ready for it. (It even has a circuit that creates a four-channel effect out of two-channel material!)

Three ways to tune the 701.

The Fisher 701 has conventional (yet unusually smooth) flywheel tuning.

And it has AutoScan® automatic push-button electronic tuning without moving parts. Push a button and you're tuning across the FM band silently. Release the button and you're tuned in to a station. Push the one-station-advance button and you're tuned in to the next station on the band. Tuned in with more accuracy than you could achieve with a meter or a scope.

Remote-control AutoScan® is also included at no extra cost (with the help of the Fisher accessory, RK-40).

The FM section has five Integrated Circuits.

All the active elements in the IF section are Integrated Circuits. And those five IC's in the IF and multiplex sections of the 701 comprise a total of fourteen amplification stages. The result? A tuner section that brings in more stations than had previously been thought possible. (FM sensitivity is 1.7 microvolts.)

And bringing in more stations is just the beginning. Even when a strong signal from a local station threatens to overpower a weak signal from a distant station, the 701 pulls in that weak signal with incredible clarity. (Alternate channel selectivity is 65 dB!)

The wide-band AM.

A lot of receivers with reasonably good FM have shamefully poor AM. But Fisher has a different policy. Our AM section is just about as good as it is theoretically possible to make an AM section. It closely approaches FM in quality.

The Fisher 701 has 250 (two hundred and fifty) watts of music power.

250 watts sounds like a lot of power. And it is, for a normal receiver. But considering that the 701 has to drive four speakers instead of two, 250 watts is not too much. The reserve power is worth having.

(Actually, the 701 is capable of driving not one, but two sets of four speakers, one main, one remote. That's eight speakers in all!)

The kind of distortion-free power the 701 delivers is made possible through unique circuitry in the amplifier section. The Darlington output stages are fully integrated (for the first time in a piece of commercial high-fidelity equipment). Which means that the resultant circuit takes up less space, yet is more reliable than the more conventional circuit it replaces.

The control panel.

Designing the control panel was quite a challenge to the Fisher engineers.

Because they had two goals which at first seemed to conflict: Make the controls as easy to use as possible. And make the controls as versatile as possible.

As you can see, the conflict was beautifully resolved. With some characteristically Fisher innovations. There are separate volume controls for front and rear channels. And the sliding volume controls move with the smoothness of professional studio faders.

The volume of the left and right channels is adjustable with the balance control.

There are Baxandall tone controls (the best kind), separate for bass and treble, clutched for front and rear. There's a tape-monitoring control that works for left and right channels. (Front and rear together, front separately, or rear separately.)

And there are loudness contour switches for front and/or rear channels. The high-filters also work on front and/or rear channels.

A muting switch quiets the noise between FM stations.

And a mode switch lets you listen to mono, two-channel stereo, four-channel stereo, four-channel reverse, or gives you the effect of four-channel stereo from a two-channel input.

Only 25¢! \$2 value!

Send for your copy of The Fisher Handbook, a fact-filled 80-page guide to high fidelity. This full-color reference book also includes complete information on all Fisher stereo components. Enclose 25¢ for handling and postage.*



New! 1971 edition!

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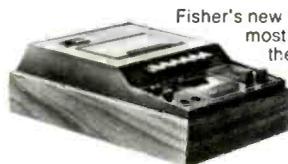
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*Please glue or tape coin on picture of handbook above.

These accessories go beautifully with the Fisher 701, or any Fisher receiver.



Fisher's new stereo cassette deck is the most advanced cassette deck you can buy. Incorporating the Dolby noise reduction unit. \$199.95.

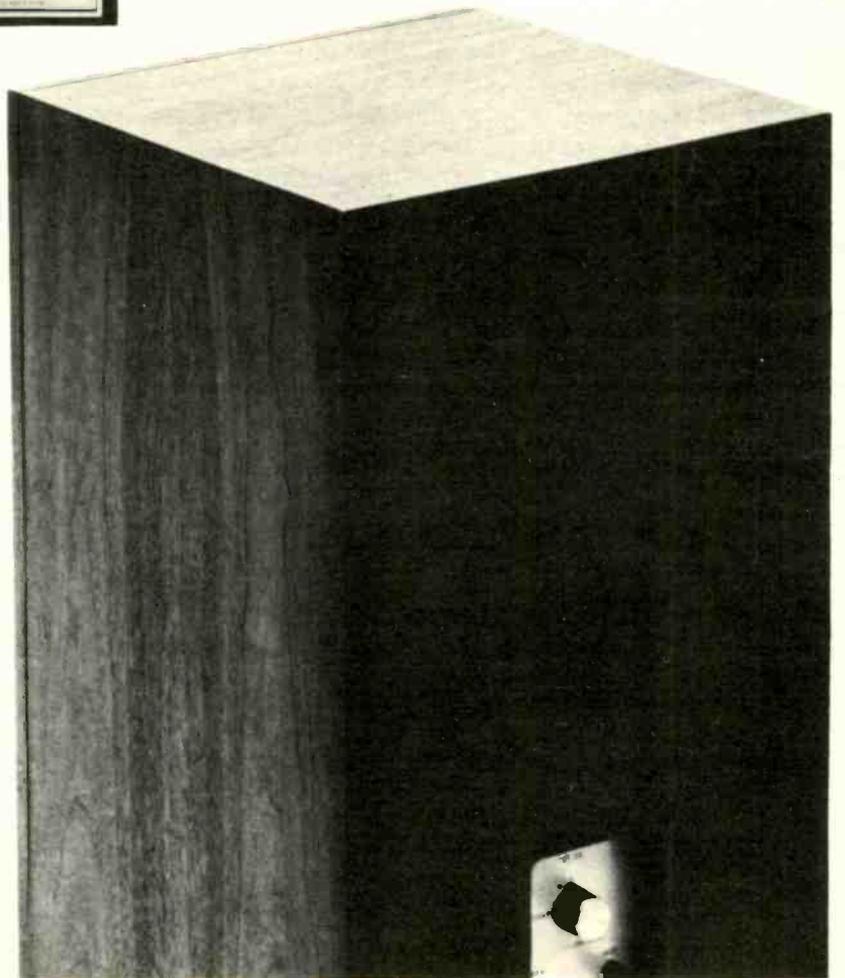
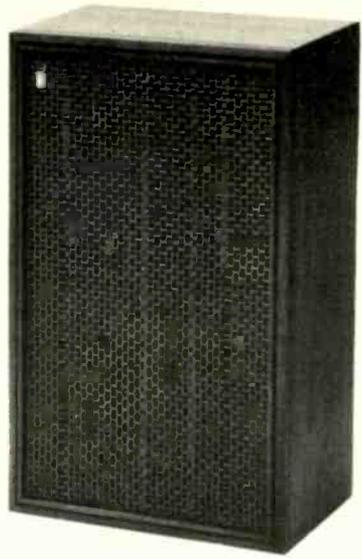


Fisher's best headphones (the Fisher HP-100) are among the world's finest.

And they cost only \$39.95.

**This is better
than stereo.**

(Lift flap.) →



Compulsive audio perfectionists! Let our nice \$279 speaker relieve you of your agony.

We fully understand how much you're suffering.

Maybe you just took a thousand-dollar loss getting rid of all your six-foot high electrostatic panels because they were blotting out the sun and killing your wife's potted plants.

Maybe you're lusting for a pair of those four-figure corner horns, but your listening room lacks corners.

Or perhaps you're tinkering with the electronic crossover for a quadri-amp speaker system with ionized-air tweeter.

Let us take you away from all this.

For only \$279, we offer you an elegantly simple device called the **Rectilinear III**.

It stands just under three feet tall on one and a half square feet of floor space and its sleek oiled-walnut cabinet houses everything you need: a 12" woofer, a 5" dual-cone midrange driver, two 2½" tweeters, two 2" tweeters and a crossover network, all of them of quite finicky design.

You connect the **Rectilinear III** to any low-distortion amplifier or

receiver of at least medium power, and what you hear will be easily in the same class with the most agonizingly exotic speaker system. We promise.

But, of course, you don't have to rely on our promise. The electronics editor of *Popular Science*, for example, wrote of the **Rectilinear III** as "the finest loudspeaker I've ever listened to, regardless of size, type or price." Stereo Review's equipment tester,

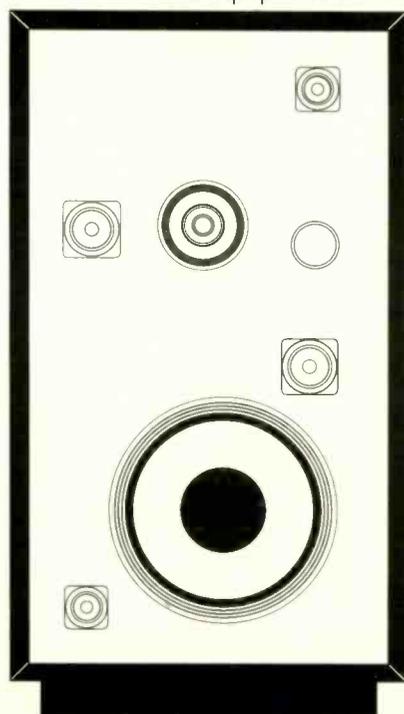
Julian Hirsch, wrote that "we have never heard better sound reproduction in our home, from any speaker of any size or price." Okay?

The only drawback of the **Rectilinear III** is that it may be too uncomplicated and painless for certain audio perfectionists. But just think how much time it can save for other, related hobbies.

Like music.

(For more information, including detailed literature, see your audio dealer or write to Rectilinear Research Corp., 107 Bruckner Blvd., Bronx, N. Y. 10454.. Canada: H. Roy Gray Co. Ltd., Markham, Ont. Overseas: Royal Sound Co., 409 N. Main St., Freeport, N.Y. 11520.)

Rectilinear III



CIRCLE NO. 42 ON READER SERVICE CARD

FORMERLY HI FI/STEREO REVIEW

Stereo Review

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COVER: ILLUSTRATION BY BERNARD BENJAMIN

Copyright © 1971 by Ziff-Davis Publishing Company. All rights reserved. Stereo Review, March 1971, Volume 26, Number 3. Published monthly at 1 Park Avenue, New York, N.Y. 10016, by Ziff-Davis Publishing Company—also the publishers of Airline Management and Marketing Including American Aviation, Boating, Business & Commercial Aviation, Car and Driver, Cycle Electronics World, Flying, Modern Bride, Popular Electronics, Popular Photography, Skiing, Skiing Area News, Skiing Trade News, and Travel Weekly. One year subscription rate for U.S., U.S. Possessions and Canada, \$7.00; all other countries, \$8.00. 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 1099, Flushing, N.Y. 11352. Please allow at least six weeks for change of address. Include your old address, as well as new—enclosing if possible an address label from a recent issue.

Stereo Review

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P.O. Box 1099, Flushing, N.Y. 11352

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EDITORIALLY SPEAKING

By WILLIAM ANDERSON

KEEPING THE FUTURE IN ITS PLACE

THE mind, as everyone knows, is an ashcan that cannot be emptied, and it has an often exasperating affinity for fantastic facts, for figures and fancies so strangely interconnected and otherwise in touch with each other that when you pull one, you pull them all—or so, at least, it seems. A reader in far Australia recently gave my associative chain a tug when he wrote to take me mildly to task for failing to “supply the reader with news of future recordings that are being made or are in the planning stage.” Aha, said I to myself, another Get-Ready Man, another Neophilic, another eagerly cooperating victim of the virulent virus of Future Shock—and all, sadly, in what ought to be a quiet eddy of temporal sanity in Traralgon, Vic., Aust.

I can't remember exactly where the Get-Ready Man comes from (a dimly remembered short story, poem, or play in which he appears as a kind of Sandwich Man for the Lord, warning everyone to “get ready” for Judgment Day), but he pops associatively into my mind whenever I discover another poor soul so busy teasing himself with what the future may hold that he seems not to realize there is more than enough to keep him occupied full-time in the present. And so it is that the Editor, in his Wisdom, and rejoicing in the exercise of his vast Power, stands opposed to all manner of Get-Ready Men, to all disseminators of non-news about events that have yet to take place, to long accounts of boring recording sessions, and to shorter tales of someone's future recording plans. Such stories have their functions, perhaps, but they are not of the sort one should brag about. Premature disclosure of “things to come” often makes it possible for two or even three companies to enter the lists eventually, if not simultaneously, with new recordings of the very same piece of music (of which the catalog may already boast several excellent versions). Recording-session puffs enable unscrupulous ruffians to arrange one-upmanship deadfalls for their less well-informed friends, or, at the very least, to take some silly credit to themselves for being the first bearers of good (or ill) tidings. And then, of course, there are those exquisite pains, those little agonies of anticipation, that can result from tickling the imagination with a promised pleasure which may be as much as a year or more from any kind of fulfillment—it's enough to make even Tantalus squirm with envy.

But the habit of anticipation is not only addictive, it is destructive of those contemplative faculties necessary for genuine artistic appreciation. It is also a great thief of time, and a notorious raiser of unfulfillable expectations. Since it is quite literally impossible for any single listener to keep up with the new record releases themselves, let alone the publicity floods that precede, accompany, and follow them, the thinking melomaniac will find his greatest satisfaction in cultivating a leisurely selectivity, taking what comes as it comes and keeping the future firmly in its place. It is an interesting comment on our times that the flight from an unsatisfactory present should now be into the future rather than the past. But let's try to remember nonetheless that someone, some day, is going to say “The Good Old Days”—and mean 1971.

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no cartridge

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LETTERS TO THE EDITOR

Views on Variations

● Robert S. Clark's article on Beethoven's Thirty-two Variations in C Minor ("Beyond the Basic Repertoire," January) brought to my mind the subject of variations in general. After listening to the acknowledged masterworks in this genre, I wonder if this form has any genuine claim to musicality. Unless the original theme is powerfully infectious, it is evident that the resulting variations based on it are bound to be, as in Beethoven's work, a piece of miserable mediocrity. J. S. Bach's Goldberg Variations likewise, though only slightly superior to Beethoven's, boast of very few inspired improvisations on the original theme. Take Paganini: if in his twenty-four caprices for violin he ultimately hit upon only one *cantabile* caprice (to which due homage has been paid by Rachmaninoff), then one simple question remains—what was the sense of this attempt to exploit the "resources" of the violin?

To realize to what extent even Mozart has spoiled two of his finest works by resorting to variations one can listen to the finales of his C Minor Piano Concerto and of the *Sinfonia concertante* for winds. Other instances can be cited, especially from Beethoven's last string quartets. Being totally deaf, Beethoven could not really "hear" these works the way he had heard the *Larghetto* in his Violin Concerto, or the solo violin in his *Missa Solemnis*. And this, despite the claims the musicologists pile up to defend his "inspiration," the so-called consummation of his genius!

The few instances where variations assist rather than hinder the original material—Bach's Passacaglia and Fugue in C Minor, for example—are rare exceptions. One cannot help concluding that the use of variations in a given composition has usually been its biggest weakness, and to assert that these tuneless, disjointed extensions of a theme can stand on their own as a separate entity of music is saying rather too much.

MADAN PATHANIA
Blacksburg, Va.

The Editor replies: "Tastes differ, but I think that reader Pathania is here holding the shorter end of the stick. If the form is so bankrupt, why is it that so many composers are drawn to it? If the answer be that it is only to show off, then why is it that the public is so willing to indulge them by making popular such 'tuneless, disjointed' examples as Brahms' Paganini Variations, Britten's Young Person's Guide,

Mozart's 'Ah, vous dirai-je, maman,' the Goldbergs, the Diabellis, and other Spanish Follies?"

Handel for What?

● My January STEREO REVIEW came recently, and I have a funny tale to relate in connection with the statement in James Goodfriend's "Going on Record" column that "The knowledgeable record salesman, whom I know to be in short supply at present in New York City, has apparently vanished everywhere else too."

And how! This morning I was in our finest local disc, tape, and equipment store. I overheard a customer ask a salesgirl, "Do you have any Handel?"

"Handle for what?" queried the salesgirl.

The customer looked a bit daunted but gamely went on, "I would like Handel's Concerti Grossi."

"Lady," replied the salesgirl, "we don't have handles for anything."

I was not in on your questionnaire, but I believe you will understand why I do not buy my classical records locally. I avidly read the STEREO REVIEW reviews, and, with the help of Schwann and a couple of knowledgeable musical friends, I make up periodic good-sized orders for a discount shop in Chicago. I get my records within a week, they are cheaper, and I find them in my rural mailbox—couldn't be easier or more pleasant.

LUCRETIA M. AUSTIN
Charlottesville, Va.

More Carols for Kipnis

● As one who has had the joy of Christmas enhanced by the carols written by Alfred Burt, I must protest their exclusion from Igor Kipnis' article on Christmas music (December). These extraordinarily beautiful carols may just be America's only lasting addition to the musical spirit of Christmas. I am certain they will outlast our fireproof trees, artificial snow, and *Santa Claus is Coming to Town*. They were composed, one yearly, as Mr. Burt's substitution for Christmas cards of the Hallmark variety. Mr. Burt was choirmaster of St. Michael's and All Angels Church in North Hollywood, California, in the 1940's.

On the chance that you are not aware of them, they are recorded on Columbia (out of print), Warner Brothers (likewise), and Word (WST-8371-LP). I hope to see them included in similar articles in future years. For those

(Continued on page 10)

STEREO REVIEW

And it is a little devil. Because it only weighs 12 ounces. And because the little devil delivers the exciting Sound of Koss. With an uncommon range and clarity that music lovers will more than likely call heavenly. (10-20,000 Hz.)

But then the heavenly Sound of Koss in a truly lightweight stereophone isn't all the Red Devil offers. Like the Red Devil's soft, resilient neoprene foam ear cushions that seal out



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The devil's waiting for you at your favorite hi-fi dealers. Just ask for it by name: Koss KR-D-711 Stereophone. In your choice of one devilish color: devil red. It's a devil of a Stereophone...especially when the little devil only costs \$29.95.

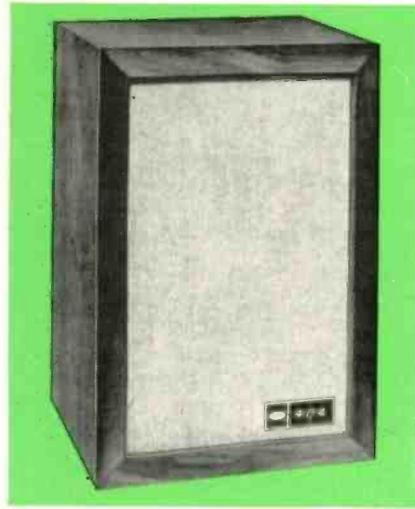
Our new lightweight Stereophone. So devilishly good we had to name it the Red Devil.

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 Price . . . \$55.00 each

Write for details about other ADC speaker systems. From \$75-\$325.



AUDIO FOR AUDIOPHILES

CIRCLE NO. 11 ON READER SERVICE CARD

who are interested, Word records may be purchased directly from the company, located at P.O. Box 1790, Waco, Texas, 76703.

BRAD HATHAWAY
 Van Nuys, Calif.

Correction

● Please note that there is a typographical error in the equipment test report on the Magnecord 2001 tape deck in the January issue, page 48: the price should read \$799.95 instead of \$795.

For the concerned audiophile we would also add that the Magnecord 2001 is manufactured completely in America and offers a two-year warranty, MuMetal head shielding, and a Whisper Fan to provide an optimum operating environment.

Our thanks to STEREO REVIEW for another splendid issue that maintains that vital communication link between the manufacturer and the consumer.

RUSS MOLLOY
 Marketing Director
 Telex Consumer Products

Dog Daze

● STEREO REVIEW made a boo-boo in the tale "Warner and Reprise—The Gold Dust Twins in Beautiful Downtown Burbank" (December). Martin Gottfried said "The Family Dog reached hit number one with his [Randy Newman's] *Mama Told Me Not to Come*." Three Dog Night made this record, not The Family Dog. Incidentally, this is not the first time Three Dog Night has had this sort of trouble. Late this past spring a two-page Columbia Record Club ad labeled their album "It Ain't Easy" with the wrong title.

MIKE SMITH
 Norman, Okla.

Tellin' It Like It Is?

● As a music lover of broad tastes whose limited encounters with rock have left him far from impressed, I nevertheless decided to keep an open mind and invest two bits in your offer of a Grace Slick/Jefferson Airplane stereo sampler. My reaction to this rock group, so highly touted both in your publication and by various rock critics, was simply this: after hearing one side of this little 7" record, the disc went down the garbage chute. The "tunes" were monotonous, I could catch only an occasional word by the "star vocalist," the drummer sounded like a kid who has taken one lesson, and the guitarists wouldn't pass muster in the sleaziest tourist trap of a Spanish café. I was amazed, upon looking at the record label, to learn that one number lasts just a little over two minutes. It seemed endless, and during the few seconds the "amazing Grace" wasn't singing, the feeble instrumental licks might just as well have been dead air.

Alright now, kids, enough is enough. No one in a previous generation ever claimed that Helen O'Connell, Bob Eberle, or the Pied Pipers were great artists. They were popular entertainers. Period. What bugs me is the pretentiousness of the rock critics, like Joe Goldberg, Mike Jahn, and Peter Reilly, in insisting that *their* favorite music is art, and that *their* heroes are great artists. Is the Jefferson Airplane's drummer really the equal of Connie Kay? Are their guitarists really the equals of Django Reinhardt and Charlie Byrd? Is Grace Slick really the equal of Ma Rainey and Bessie Smith? Do these fantastic, incredible rock groups truly have the mastery of the Budapest String Quartet, and do their soloists have the musician-

ship and technique of a Heifetz or a Segovia?

If one has real standards to apply, if one has heard real music and real musicianship, is one not forced to label rock for what it really is—junk for stupid kids?

BERNARD W. TREISTER
 Kew Gardens, N. Y.

Is there, indeed, only one set of standards for everything? Must a folk song be compared to a Beethoven quartet, a limerick to a Shakespeare sonnet?

● I'll admit I was biased about Grace Slick before I read Rex Reed's article. After all, this is the girl who had recently been quoted as saying she was a little worried about her unborn child, what with all the drugs she'd taken! But nothing could have prepared me for what I read in your interview with the "all-American girl-next-door."

She and her group have revolted against the Establishment, which represents a world crushed by the weight of ugly things such as war, material possessions, and codes of conduct. Rather, she advocates cool things like drugs instead. Although she puts down society because "we haven't figured out a way to love each other," she shows love by rejecting her parents ("very square"), leaving her husband ("I outgrew him"), and tampering with the health of her unborn child! She makes fun of society's ideas of rewards, preferring \$18,000 cars, pot, and new sound equipment. The Jefferson Airplane promotes peace, yet she seems to be at war with such diverse groups as RCA, the Finch debutantes, guys with "crew-cuts and . . . button-down shirts," Women's Lib, and even her own parents. She does seem proud of one member of her family, though—her little brother, who's in jail for smoking dope.

Personally, I'm revolted by Grace's standards, but then, I'm younger than she: I've got two more years to become as mature, as cool and groovy, as up-front as that lady. Meanwhile, I think I'll stay the way I am.

BARBARA MCCANN
 Baltimore, Md.

● In regard to your article on Grace Slick: "Dear Grace, I am into music quite heavily myself, and respect your talent and love your person. But no thanks; I'm seeking to become the total, aware person without the use of chemicals. So please don't sneak any LSD into my tea. Still, with love and respect . . ."

JEAN NASH
 Moosup, Conn.

Hatchet Job on Horowitz?

● Now that a short time has passed since STEREO REVIEW unleashed "Spiro" Jacobson on poor Vladimir's new recording of piano music by Schumann (November), admit it, don't you feel somewhat embarrassed by the hatchet job you printed?

To say that Horowitz is a "depressingly commonplace musician" who does not possess "any apparent talent for the creative side of music" must surely plumb the depths of fatuous amentia in music criticism. Perhaps Bernard Jacobson is affected by the unfortunately common dysphoria which one associates with "musicians who cannot play"—the noxious genre of critics who, though unable to perform even the simplest of exercises cleanly, are compelled by their self-bloated egos to denounce their musical betters as "mere technicians."

At any rate, why not do your subscribers a
(Continued on page 12)

STEREO REVIEW

First the Citation Eleven

preamplifier

"I started off heaping praise on the Citation Eleven. That praise is unqualified. Granted, there are not too many separate preamplifiers left on the market. But of these, the Citation Eleven must be the best

— and more important — it will not be bettered in the near future. At \$295, it represents the culmination of a purist's dream."

(Stereo & Hi-Fi Times)

Then the Citation Twelve

amplifier

"... an ability to handle normal listening levels in a "coasting" state of operation, imparting to the music a sense of utter ease, clarity, transparency and openness — which in sum makes you feel as if you are listening through the amplifier back to the program source. Subtle nuances of

definition, of attack, of inner musical fabric are more clearly presented — and suddenly you want to stay up all night rediscovering all the old records that you thought you had heard enough of."

(High Fidelity Magazine)

Now the Citation Thirteen

a revolutionary omnidirectional speaker system

When Harman-Kardon decided to develop a speaker system worthy of the Citation name, it was clear that the approach had to be totally uncompromising. It had to meet the Citation philosophy to the effect that faithfulness of reproduction is not merely a compilation of impressive specifications, although the Citation Thirteen specs are impressive indeed! Final judgment must be made by the listener — by the ability to thoroughly enjoy many hours of listening without strain or fatigue.

Such realism in sound reproduction had been the elusive goal of musical artists, audiophiles, designers and engineers from the earliest days of the industry.

Over the years, some fine speakers have been produced. But often, such speakers have *added* characteristics to the music — characteristics not intended by the

composer or the performer and certainly not desired by the exacting music lover.

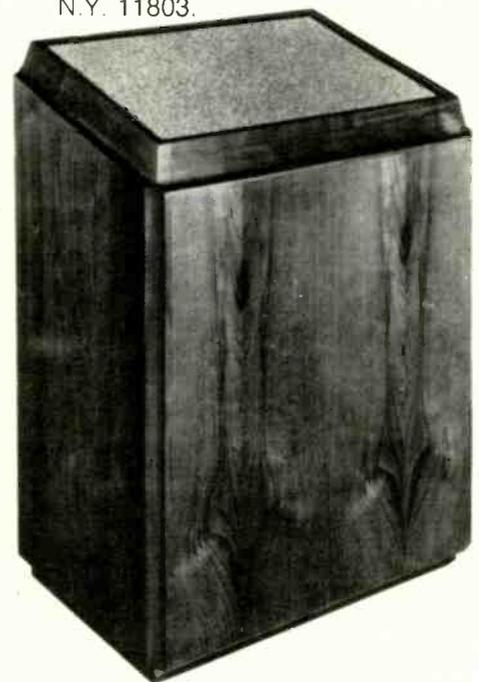
Now here is a profound statement of the utmost significance to lovers of music:

The Harman-Kardon Citation Thirteen Speaker is neither brilliant, sweet, deep-throated. It reproduces sound as you would hear it at a live performance in the concert hall — spacious, transparent and with total dimension.

A simple statement and a claim made by many, with varying degrees of accuracy. Yet, it's one we make proudly in full confidence that when you listen to the Citation Thirteen Speakers just once — you will be in enthusiastic agreement.

See and hear Citation Thirteen at your Harman-Kardon dealer. And, where possible, in combination

with Citation Eleven and Twelve. We're eager to forward complete details. Write to Harman-Kardon, Inc., 55 Ames Court, Plainview, N.Y. 11803.



harman kardon

A subsidiary of Jervis Corporation

A CASSETTE DECK FOR PEOPLE WHO DON'T LIKE THE WAY CASSETTE DECKS SOUND.

We don't blame them. Because we haven't liked the way they sounded either. So we've brought out the Pilot PTD100. And have made sure people won't be disappointed.

First of all our stereo cassette deck has an Automatic Level Control. By pressing a latching button below the recording and playback controls, the recording level is controlled automatically. Overload distortion is virtually prevented within a wide range of signal levels.

The PTD100 has a superior magnetic playback head. The biasing frequency is 100 KHz. The frequency response is 30 Hz-15 KHz with a total distortion ratio of less than 2%. Wow flutter is shown in our specs as 0.2% but actually has been measured at less. The PTD100's S/N ratio is 45dB.

A solenoid operated mechanical shutoff system (plus a manual one) works when the tape stops, or when the power is disconnected. The PTD100 is a 4-track 2 channel system that takes any standard cassette cartridge. The erasing effectivity is more than 60dB. And the rewind time for a full 60 minute cassette is just 90 seconds.

So here it is, the first stereo cassette deck from Pilot. We put a lot of time and effort into making it. But until we were happy with it, we couldn't expect you to be.

For the address of the Pilot Dealer nearest you write: Pilot, 66 Field Point Road, Greenwich, Conn. 06830.



A subsidiary of National Union Electric Corp. (NUE)



Pilot Model PTD100. Manufacturers suggested retail price \$169.95.

CIRCLE NO. 36 ON READER SERVICE CARD

large favor and spare them any additional foolish diatribes by Mr. Jacobson?

JAMES KARAGEANES
St. Clair Shores, Mich.

The Editor replies: "Being a critic of critics is very hard work, fraught with dangers and heavy with duties and responsibilities—all of which Mr. Karageanes has shirked. Instead of challenging Mr. Jacobson on even one musical point in a review chock full of them, he has settled for (1) Spiromania (giving a dog a bad name), a tired and tiresome verbal reflex of the day, (2) an oddly clinical version of the argumentum ad hominem, and (3) the oldest cliché of pseudo-wisdom in the book—'those who can, do; those who can't, criticize.' Mr. Karageanes can have his slingshot back after he has written 'datribe' one hundred times on the blackboard."

Silent Jam Session

● I have just gotten around to reading James Goodfriend's column entitled "Air Pollution" in the November 1969 issue of STEREO REVIEW. I thought I was the only one annoyed by unwanted "music." I became so obsessed with this monster that I might have become neurotic: the sound of transistor radios was everywhere—in taxis, autobuses, the streets, hotels—everywhere. A friend came to my rescue and out of a pocket-size transistor radio fashioned a kind of transmitter which could be tuned to the channel of the offending radio. How delighted I was to ride in a taxi, tune in my little gadget to the driver's transistor, and watch him finally turn off his radio in disgust! Wherever I went I now went in peace, tuning out any transistor within hearing distance. Unfortunately, the gadget went out of order, and I have never been able to obtain another. It is a wonder to me that such a device is not on the market for others to purchase.

EARL WILLIAMS
Altea, Spain

Although it would seem that, in this instance, two wrongs can make a right, it is illegal to transmit a jamming signal deliberately, even in the service of cleaner air waves.

Cassette Decks

● As a long-time advocate of the cassette deck, I would like to take this opportunity to extend to STEREO REVIEW and Julian Hirsch a big fat "thank you." The report on the seventeen decks (November) was very welcome and very well done. Because all the decks on the market were not necessarily available at the time of testing, I for one would welcome additional reports.

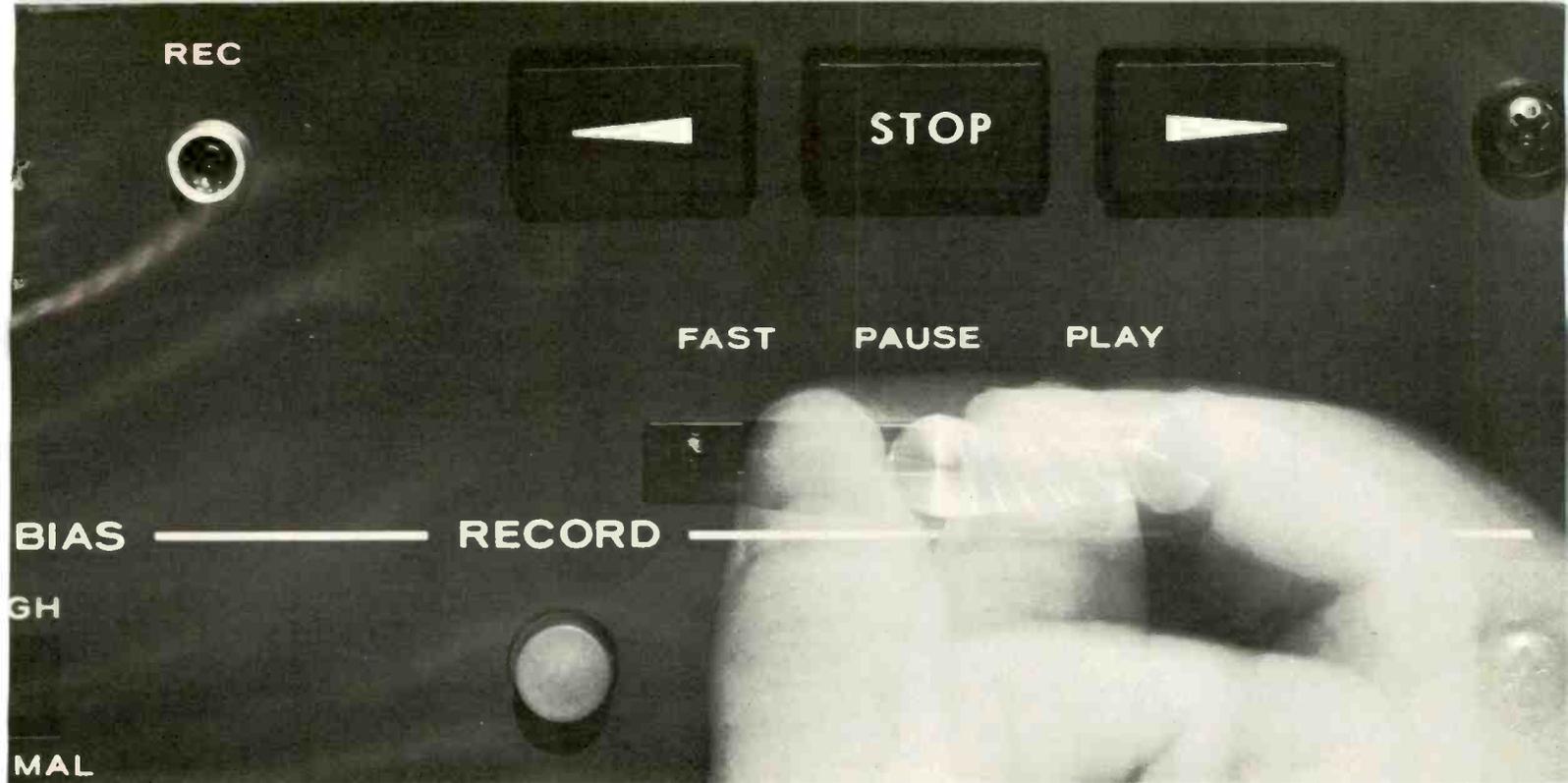
RON FELDMAN
Van Nuys, Calif.

Rock Reviews

● I am a sixteen-year-old reader of your magazine, and as a lover of rock music, would like to congratulate you for your staff of excellent reviewers, who can view a rock record without the preconceived notion that they will not like it. They should keep on setting people straight about rock music. One of the best reviews was Noel Coppage's of "Workingman's Dead" by the Grateful Dead ("Best of the Month," October). To use a bad cliché, "it tells it like it is." In the same issue, Donovan is given a good bit of well-deserved praise in the review of "Open Road." Thank you for listening.

BRUCE RAYKIEWICZ
Fair Lawn, N.J.

STEREO REVIEW



Wait till you get your pause on a TEAC A-1230

You'll be making the cleanest tapes on the new TEAC A-1230. Thanks to TEAC's unique symmetrical control system with Edi-Q. This advanced system allows you to edit while recording – instantaneously. In a flash, before that unwanted FM commercial is upon you, flick – and you're in PAUSE mode. Your tape stops silently, instantaneously. Record amps are fully fired and at standby for the first note of your recording restart. End of commercial and you toggle deftly back to "PLAY." You are off to a clean new recording start.

But Edi-Q is only one of a whole host of professional features on the A-1230. It also incorporates the same kind of advanced design and new-features engineering philosophy that established TEAC's famous Model A-1200 as the best value in various consumer tests.

There's a record bias switch for both high-output, low-noise tape and standard tape alike. So you get the fullest dynamic range with any type of tape. It also ensures the TEAC A-1230's high-performance characteristics.

So much for new refinements. Remember those other advanced A-1230 features: three-motor solenoid operation, three heads; tape/source monitoring, mic and line mixing, independent record mode switches for 1/4-track

stereo/mono operation, independent stereo headphone monitor, tape tension and spring-loaded automatic shutoff arms.

And the price, too, will give you pause; it's sensible.

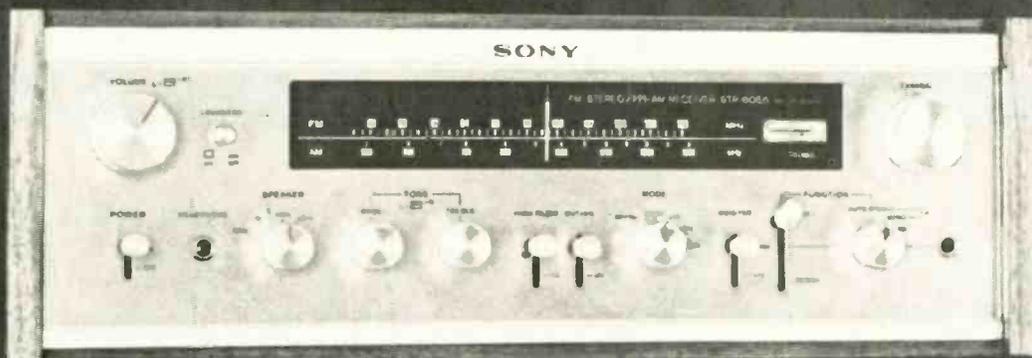


Dust cover optional

TEAC®

TEAC Corporation of America 2000 Colorado Avenue Santa Monica, California 90404
CIRCLE NO. 54 ON READER SERVICE CARD

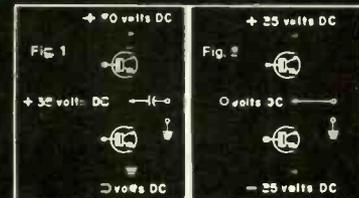




Nothing stands between you and the music.

We've eliminated the output coupling capacitor, a modest but important improvement. For example — you need all the power your amplifier can deliver at those gut-stirring, low frequencies. But, the output coupling capacitor found in most of today's amplifier circuits inhibits your amplifier from delivering its best.

If that capacitor, for instance, is 2500 microfarads (a typical value) and your speaker is 8 ohms (ditto), then at 20 Hz., the capacitor absorbs about *one-third* the power available from your amplifier (and with a 4-ohm speaker, nearly half your power).



It also cuts down the damping factor. At middle and high frequencies, your amplifier might have a nice, high damping factor of 100 or so to keep the excursions of your speakers' diaphragm under tight, close control. But at 20 Hz., a 2500-microfarad coupling capacitor cuts that factor to a labby, apathetic 2.5.

No such capacitor inhibits the performance of our 6055, 6065 and 6200 receivers (or of our four newest amplifiers, either). Because we engineered it out by engineering away its only reason for existence.

Conventional amplifier circuits only need output coupling capacitors because they make each output transistor pair split a single D.C. power supply voltage from a single power supply (Fig. 1: Theirs). Without that coupling capacitor, as you can see, half the total voltage used to power those transistors would go through the speaker.

But our new receivers all have *dual* power supplies. One output transistor in each push-pull pair gets a positive D.C. voltage from one power supply; the other transistor gets an equal and opposite negative D.C. voltage from the other supply (Fig. 2: Ours). Halfway between them, where the speaker ties in, there is no D.C. voltage. And there is no coupling capacitor because you just don't need one any more.

So you get perfect power transfer, and the amplifier's full damping factor, at *all* frequencies. And you get the best sound that your speaker is capable of.

Your Sony dealer can give you a demonstration of just how good that is on any of our three newest receivers: our new STR-6055 offers 145 watts* of immoderately good performance at a moderate \$299.50. Our 255-watt* STR-6065, at \$399.50 helps you discover stations you thought were hardly listenable. And for \$499.50 our STR-6200 gives you 360 watts* of precisely controlled power, and FM sensitivity approaching the theoretical limit.

Now the only thing that stands between you and the music is a trip to your Sony dealer. Sony Corporation of America, 47-47 Van Dam St., Long Island City, N.Y. 11101. *IHF constant supply method at 8 ohms.

SONY

NEW PRODUCTS

THE LATEST IN
HIGH-FIDELITY
EQUIPMENT

Teac A-23 Stereo Cassette Deck

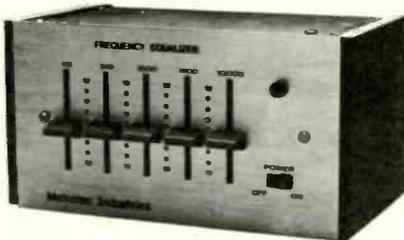


● TEAC has added a moderately priced stereo cassette deck to its line of cassette equipment. The Model A-23 has a frequency response of 60 to 10,000 Hz ± 3 dB, and a signal-to-noise ratio of 43 dB. Wow and flutter are under 0.23 per cent. The deck's controls include separate rotary knobs for each channel to adjust recording and playback levels, six push keys (record, play, stop-eject, fast-forward, rewind, and pause), and an on/off push-

button. Other features are a large dual-pointer recording-level meter and a three-digit resettable tape counter, as well as line inputs and outputs, two microphone-input jacks, and an 8-ohm headphone jack. The drive motor is of the hysteresis-synchronous type. The Model A-23 is trimmed in walnut on four sides, and measures approximately $4\frac{1}{4} \times 10\frac{1}{2} \times 9\frac{1}{4}$ inches overall. Price: \$139.50.

Circle 146 on reader service card

Metrotec Frequency Equalizer



● METROTEC's Frequency Equalizer, available preassembled or as a kit, has five slider-type controls that can be used to provide up to 12 dB of continuously variable boost or cut centered at 60, 240, 1,000, 3,500, and 10,000 Hz. The stereo device is intended for modification of frequency response to correct for the characteristics of the program material, playback equipment, room acoustics, and the ear's frequency nonlinearity at low listening levels. The equalizer's frequency response with all controls set flat is 5 to 250,000 Hz ± 1 dB. Maximum input/output signal before overload is 9 volts. Gain is +0, -2 dB. Harmonic and inter-

modulation distortion are 0.05 per cent for an output of 2 volts, and hum and noise are 80 dB below 1 volt.

The Frequency Equalizer is intended to drive loads of at least 10,000 ohms. It connects between the preamplifier and amplifier of a stereo system, or to the tape input and output jacks of an integrated amplifier or receiver. The tape-monitoring functions are then taken over by the equalizer, which has a tape-monitor switch and jacks on its rear panel. Overall dimensions are approximately $8\frac{1}{2} \times 5\frac{1}{2} \times 4\frac{1}{2}$ inches with walnut trim. Prices: kit, \$79.95; assembled, \$99.95.

Circle 147 on reader service card

Dynaco A-50 Speaker System



● DYNACO's new A-50 speaker system employs an enclosure containing two sealed air chambers of identical size connected internally by a resistively damped slot. A pair of 10-inch woofers are mounted in the upper chamber, which provides acoustic loading for bass frequencies above 50 Hz. For frequencies below that the lower air volume is coupled to the upper by means of the slot to provide efficient deep-bass operation. A $1\frac{1}{2}$ -inch soft-dome tweeter driven through a resistance-capacitance crossover network oper-

ates above 1,000 Hz, with a five-position control to adjust its output over a 15-dB range at 10,000 Hz. Power-handling capability is 50 watts continuous, and an amplifier with at least half that power per channel is recommended. The impedance of the system is 8 ohms. It has overall dimensions of $28 \times 21\frac{1}{2} \times 10$ inches, and it comes with detachable beige-colored linen grille cloth that is secured by Velcro fasteners. Price, in a walnut-finish cabinet: \$179.95.

Circle 148 on reader service card

Sansui Model Eight Receiver



● SANSUI has introduced the Model Eight AM/stereo FM receiver. Available power with both channels driven is 60 watts continuous per channel into 8 ohms, at less than 0.3 per cent harmonic and 0.4 per cent intermodulation distortion. Hum and noise are better than -70 dB for phono inputs and -80 dB for high-level inputs. The power bandwidth is 10 to 40,000 Hz. The receiver has switching facilities and terminals for three pairs of speakers, which can be driven separately or simultaneously in groups of two. (Stereo or mono operation of the third pair is selectable by means of a rear-panel switch.)

Along with the customary bass and treble controls, the Model Eight has a mid-range tone control that acts over a ± 5 -dB

range at 1,500 Hz. One auxiliary and two magnetic-phono inputs are provided. Special functions—mode, high- and low-cut filters, loudness compensation, interstation-noise muting, and two tape-monitor switches for the front- and rear-panel tape jacks—are operated through a line of pushbuttons below the tuning dial. An unusual feature of the Model Eight permits switching the electrical outputs of the two channels to register on the channel-center tuning meter for balancing. The preamplifier and power amplifier are connected through removable jumpers at the rear panel. There is a front-panel headphone jack.

The Model Eight's FM section, which employs a crystal filter in its i.f. stage, has

(Continued on page 20)

STEREO REVIEW



195727



196709



197913

FREE—if you join now
**REVOLUTIONARY SELF-
 THREADING TAKE-UP REEL**



Just drop the end of the tape over this reel, start your recorder, and watch it thread itself! (Unique Scotch® process automatically threads up tape of any thickness, releases freely on rewind.)



COLUMBIA TAPE CLUB
now offers you

ANY 5

7" REEL-TO-REEL STEREO TAPES

for only \$1.00

plus mailing
and handling

If you join now, and agree to buy five additional tapes, during the coming two years, from the hundreds to be offered.

188060	196717	186809	191825
196742	196493	188367	196444
196972	196246	195891	195693
195073	195487	186114	195685
191809	194712	181909	193789
193177	187088	167692	189035
193623	191205	193821	197004
188136	195701	174607	171504
193425	187666	191189	143024

JUST LOOK AT THE FABULOUS SELECTION of best-sellers the Columbia Stereo Tape Club is now offering new members! The greatest stars . . . the biggest hits . . . and all available in the incomparable stereo fidelity of 4-track reel-to-reel tape! To introduce you to the Club, you may select any 5 of the stereo tapes shown here, and we'll send them to you for only one dollar! That's right . . . 5 STEREO TAPES for only \$1.00, and all you need to do is agree to purchase as few as five more tapes during the coming two years.

AS A MEMBER you will receive, every four weeks, a copy of the Club's entertaining and informative music magazine. Each issue describes the regular selections for each musical interest . . . hits from every field of music, from scores of different labels.

If you do not want a tape in any month—just tell us so by returning the selection card by the date specified . . . or you may use the card to order any of the other tapes offered. If you want only the regular selection for your musical interest, you need do nothing—it will be shipped to you automatically. And from time to time, the Club will offer some special tapes which you may reject by returning the special dated form provided . . . or accept by doing nothing.

YOUR OWN CHARGE ACCOUNT! Upon enrollment, we will open a charge account in your name. You pay for your tapes only after you've received them. They will be mailed and billed to you at the regular Club price of \$7.98 (occasional Original Cast recordings somewhat higher), plus a mailing and handling charge.

FANTASTIC BONUS PLAN! Once you've completed your enrollment agreement, for every tape you purchase you will be entitled to an additional stereo tape of your choice for only \$2.00 . . . or you may choose one FREE tape for every two tapes you buy.

Columbia Tape Club
a service of
Columbia House
Terre Haute, Indiana 47808

SEND NO MONEY Just mail postpaid card

Note: All tapes offered by the Club must be played back on 4-track reel-to-reel stereo equipment.

T-611/S71

NEW PRODUCTS

THE LATEST IN
HIGH-FIDELITY
EQUIPMENT

an IHF sensitivity of 1.7 microvolts, 1.5 dB capture ratio, selectivity of better than 60 dB, and more than 35 dB stereo separation at 400 Hz. Tuning is facilitated by large signal-strength and channel-center meters. The AM section employs FET's. The output levels of both the AM and FM tuners can be adjusted by means of rear-

panel controls to match the levels of other program sources. Dimensions of the Model Eight are $17\frac{1}{2} \times 5\frac{1}{2} \times 12\frac{3}{8}$ inches. Its price is \$499.95, including a walnut cabinet with adjustable feet that will accommodate installation surfaces of various dimensions.

Circle 149 on reader service card

Harman-Kardon Festival Compact



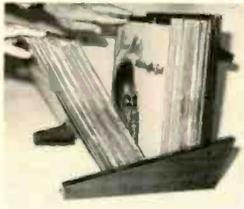
● HARMAN-KARDON's new Festival line of compact stereo music systems combines unique styling with several performance and built-in program-source options. The top model, the 445, unites an AM/stereo FM receiver, an automatic turntable (with Pickering magnetic cartridge), and a cassette deck in a single module. The performance of the cassette deck is comparable to that of the Harman-Kardon CAD-4: frequency response of 30 to 12,500 Hz ± 2 dB, 0.2 per cent wow and flutter, and a 49-dB signal-to-noise ratio. The FM tuner section has an IHF sensitivity of 2 microvolts, capture ratio of 3 dB, and 35-dB stereo separation. The tone (bass, treble, and mid-range), volume, and balance controls are vertical slider types. Pushbuttons are used for speaker switching (two pairs accommodated), tape monitoring, and loudness compensation. The FM section can be tuned manually, or automatically by means of a rocker control that advances one station at a time in either direction. Besides the usual transport push keys, the

cassette section has a single recording-level control and meter; balance between the two channels is preset.

The audio section of the 445 has a power output of 50 watts continuous per channel with both channels driven into 8-ohm loads. Harmonic and intermodulation distortion are 0.5 per cent at rated output. Frequency response is 7 to 50,000 Hz ± 1 dB, and power bandwidth is 10 to 40,000 Hz. Signal-to-noise ratios are 57 and 72 dB for the phono and high-level inputs, respectively. The speakers supplied with the 445 are two-way acoustic-suspension types. Each has a 10-inch woofer and 3-inch tweeter, crossing over at 1,500 Hz. Nominal impedance is 8 ohms, and power-handling capability is 60 watts music power, with a frequency response of 30 to 20,000 Hz. The speakers, in walnut, measure $20\frac{1}{2} \times 13 \times 11$ inches each. The control unit, which is trimmed with walnut, is $20\frac{1}{4} \times 19 \times 9$ inches with its optional tinted-plastic dust cover (\$14.95). Price: \$569.95.

Circle 150 on reader service card

Tilta-Rack Disc Storage



● TILTA-RACK has introduced a disc-storage unit that has a capacity of up to seventy 12-inch records. The albums can be stored vertically, as shown in the photograph, or the rack can be tilted back to rest on the crossbar attached to the rec-

ord-supporting surface in the rear. The Tilta-Rack is constructed of walnut with an oiled finish. Price: \$19.95. A similar rack for 7-inch tape-reel boxes is expected to be available in the near future.

Circle 151 on reader service card

Concord Mark 20 AM/FM Receiver



● CONCORD has brought out a line of AM/stereo FM receivers headed by the Mark 20, which is rated at 110 watts continuous power into an 8-ohm load, one channel driven. Harmonic distortion at rated output is 0.5 per cent. Other specifications include a frequency response of 10 to 35,000 Hz ± 1 dB, a power bandwidth of 5 to 40,000 Hz, and a 65-dB signal-to-noise ratio. The IHF sensitivity of the FM-tuner section is 1.7 microvolts, with a capture ratio of 1 dB. Selectivity is 45 dB, and stereo FM separation is better than 35 dB at 1,000 Hz. The Mark 20 employs vertical slider-type controls for volume, balance, bass, and treble, and

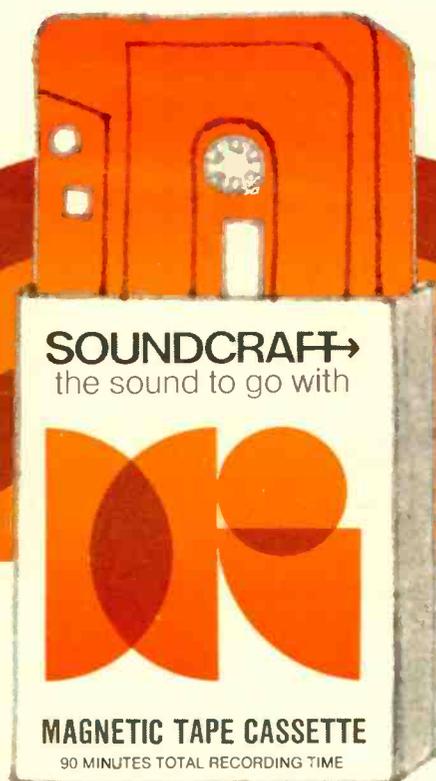
lever switches for tape monitor, mode, interstation-noise muting, AFC, high-cut filter, and loudness compensation. An FM channel-center tuning meter becomes a signal-strength indicator during AM operation. The Mark 20 has facilities for switching between two pairs of speakers (either on, both on, or both off) and a headphone jack on the front panel. Besides AM, FM MONO and FM AUTO, the input selector has positions for magnetic phono and auxiliary. In the walnut cabinet supplied, the Mark 20 measures $17\frac{1}{2} \times 14 \times 5\frac{1}{8}$ inches. Price: \$299.79.

Circle 152 on reader service card



**You're not ready to
punch this**

**until you've inserted
this.**



There are any number of magnetic recording cassettes available, to be sure.

But only one of them is *the* sound to go with. The Soundcraft sound.

And that's as it should be. For only a Soundcraft cassette is loaded with the very best in magnetic recording tape for home (or business) recorders.

The Soundcraft cassette. It's the one that captures all the sound with full, rich fidelity. On tapes that last a lifetime. From the specialists in professional and consumer and sound tape products.

You could buy a lesser tape for the same money. Or a real off-beat brand for a little less. But don't. Not if you're serious about recording. Not if you want the best results.

The Soundcraft cassette. The only one to specify before you hit the button.

At leading stores everywhere.



SOUNDCRAFT → *the sound to go with*
CBS RECORDS

a division of Columbia Broadcasting System, Inc.,
Great Pasture Road, Danbury, Conn. 06810

Have the high notes on your records become only a memory?

When Jascha Heifetz plays a high note on your favorite violin recording, are you actually hearing it? Or are you just remembering it?

That's something to think about when you consider how many hundreds of dollars you've invested in your records. And what can happen when you play them.

As soon as the stylus touches down in the groove, a running battle begins. The stylus is violently tossed up, down and sideways, thousands of times a second. These motions are either producing beautiful high notes, or expensive memories. It all depends on the tonearm.

How the tonearm should work.

If the tonearm does its various jobs properly, your records can last a lifetime. So we think it is worth investing a few minutes of your time to understand the essentials of what a tonearm is supposed to do.

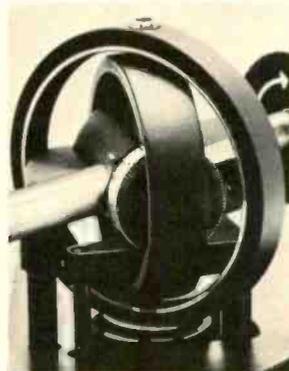
The tonearm must apply just the right amount of pressure to the stylus, keep this pressure equal on both walls of the groove, and follow the stylus without resistance as the groove spirals inward. Then the stylus will be able to respond freely to all the twists and turns in the record groove, without digging in or chopping away.

And the pending four-channel records are likely to require the stylus to perform even more complex gyrations.

It takes some engineering.

Dual tonearms do all these jobs extraordinarily well. For example, the tonearm of the 1219 works like a gyroscope. It pivots up and down on one ring, left and right on another.

And all four pivot points are identical. This suspension system is called a gimbal. And no other automatic tonearm has a pivot system like it.



Twin-ring gimbal system of Dual 1219. Arm pivots vertically from inner ring, horizontally from outer ring. All four suspension points have identical low-friction bearings.

It takes extraordinary precision.

Every stylus is made to apply even pressure on the groove walls. But during play, the groove pulls the stylus against the inner wall. Better tonearms have a special setting to compensate for this "skating" effect.

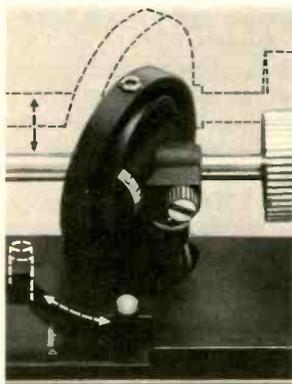


Anti-skating system of Dual 1209 and 1219 has separate calibrations for elliptical and conical styli.

However, for an anti-skating system to be effective, bearing friction must not only be low, but consistent. If you can imagine fifteen thousandths of a gram, that's the maximum bearing friction of the 1219. Guaranteed.

And some other angles.

Apart from preventing record wear, tonearm design should prevent distortion. This largely depends on the angle of the



Mode Selector of Dual 1219 lowers tonearm base for single play. Stylus tracks at correct 15° angle.

stylus in the groove. Which depends in some cases on tonearm design, in others on the way the cartridge fits into the tonearm head.

The longer the tonearm, the lower the tracking error. The 1219 is 8 $\frac{3}{4}$ " from pivot to stylus tip, longest of all automatic tonearms.

The angle of the stylus in the groove alters during play depending on whether you are playing one record or a stack. The Dual 1219 is an exception because its tonearm can be set for the correct angle in either single or multiple play.

The professionals' choice.

Dual turntables have been the choice of professionals for many years because of their precision, ruggedness and simplicity of operation. And not always the most expensive Dual, either.

If you'd like to know what independent test labs say, we'll send you complete reprints of their reports. Plus an article on what to look for in record playing equipment reprinted from a leading music magazine.

But if you're already convinced and can't wait, just visit your authorized United Audio dealer and ask for a demonstration.

Dual automatic turntables are priced from \$99.50 to \$175.00. When you think about it, that's not very much to pay to keep your records from becoming a costly memory.

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The London Symphony Orch.—Sir Arthur Bliss STS 15112

CIRCLE NO. 32 ON READER SERVICE CARD

24

AUDIO QUESTIONS and ANSWERS

By LARRY KLEIN *Technical Editor*



Receivers vs. Separate Components

Q. *I am sure you have answered this question many times before in your column, but what is the advantage of buying separate components, (i.e. an amplifier and tuner, or a preamplifier, power amp, and tuner) over an all-in-one receiver?*

HERMAN LESSAR
Brooklyn, N.Y.

A. Yes, I have answered the question several times before, but it is certainly worth another go-round. There are three different considerations to be examined: (1) ease of installation and compactness; (2) servicing and up-dating; and (3) price and technical performance.

As far as the installation is concerned, that is a question best resolved by consultation with a tape measure and your wife. In respect to the servicing: when you have separate components, a failure on the part of the FM tuner, say, leaves the rest of the system intact while the defective component is being repaired. However, if you have a receiver your record player is also *hors de combat* until things are put right.

In respect to updating: you may one day move to a different geographical area that places greater demands upon your tuner's sensitivity, or capture ratio, or whatever. A tuner that sufficed for a metropolitan area may not be adequate in the distant suburbs. Or you may find that you need a higher power amplifier because you want to convert to lower efficiency speakers. If you have a receiver you will have to trade in your entire unit. With separate components just the tuner—or amplifier—gets replaced.

The price and performance question requires greater elucidation than the others. By and large the tuners built into the better receivers are frequently as good as the tuners that come as separate components. The amplifiers, however, are not. The

area where amplifiers fail to match the performance of separate components is usually that of low-frequency power. In order to achieve low distortion and high power in the frequency range below 60 Hz or so, an amplifier's power supply has to be very well regulated. In practical terms, this means that the power transformer and filter capacitors have to be larger—and more expensive—than for a supply of lesser capacity.

It is up to the receiver manufacturer to decide whether or not he wants to install a more expensive power supply (assuming that there is room in the chassis for the larger parts). Undoubtedly his decision is influenced by two factors: the selling price of the receiver may have to be raised by perhaps \$20 to compensate for increased costs; and the vast majority of the purchasers of the equipment will never know—or hear—the difference. Mind you, the power/distortion rating at 1,000 Hz—which is quoted in the ads—will remain the same with either power supply. And at the low levels most people play their equipment, the fact that below 60 Hz there is only about half power available (at a given distortion) will usually not be audible. However, those audiophiles who want to drive low-efficiency speakers to a loud level had better check the published test reports and the manufacturer's specs very carefully to determine whether an amplifier with a power-per-channel rating of 40 or 50 watts at 1 per cent distortion is also able to sustain that performance at 30 or 40 Hz. The Hirsch-Houck lab reports indicate that most receivers just don't make it.

Turntable-Testing Discrepancies

Q. *I have noticed that in the Hirsch-Houck turntable reports there is frequent disagreement with the manufacturers in two areas: the amount of stylus overhang needed for minimum tracking error and the calibration of the anti-skate.*

(Continued on page 26)

STEREO REVIEW

The new Pioneer SX-9000 is the only AM-FM stereo receiver with a built-in reverberation amplifier... microphone mixing... inputs for 2 turntables, 2 tape recorders, 2 headsets, 2 microphones, 2 auxiliaries... 4-position tone selector... outputs for 3 pairs of speakers... 240 watts (IHF). And it's all in just one oiled walnut cabinet.

We had to stop somewhere.



And if you want to get down to the nitty gritty, the SX-9000 has an FET front end with sensitivity at 1.6 microvolts to bring in the most faint heat-sealed stations. There are 4 IC's in the IF combined with a 1dB capture ratio and 40dB selectivity, you can pin-

point stations on the most crowded dial. Extra conveniences are afforded by the loudness contour and twin tuning meters. Visit your Pioneer dealer. He'll demonstrate the whole new world of enjoyment that's yours with the SX-9000 as a stereo listener

or experimenter. \$499.95
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179 Commerce Road
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**It takes
a lot of guts
to say a new
stereo cassette deck
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Wollensak can say it.

The new Wollensak 4750 stereo cassette deck brings true hi-fidelity to cassette listening.

Here's why: It has one of the lowest wow and flutter characteristics of any deck available. The precise heavy-duty tape transport mechanism is considered by independent audio experts to be the finest in the industry. A mechanism that includes the only full-size flywheel and capstan available to assure constant tape speeds and eliminate sound distortion.

Record-playback frequency response is truly exceptional: 60—15,000 Hz \pm 3 db. Fast-forward and rewind speeds are about twice as fast as any other.

A massive, counter-balanced bi-peripheral drive means years of dependability. Interlocked controls

allow you to go from one function to another without first going through a stop or neutral mode. The Wollensak 4750 features end-of-tape sensing which stops the cassette, disengages the mechanism and prevents unnecessary wear. The Wollensak "Cassette Guardian" automatically rejects a stalled cassette in play or record position. The 4750 complements your present component system by providing cassette advantages. American designed, engineered and built. Styled in a hand-rubbed walnut base with Plexiglass[®] smoked dust cover.

All of these features add up to the truest stereo sound with reel-to-reel quality from a stereo cassette deck. Become a believer. Hear and compare the new Wollensak 4750 deck at your nearby dealer.

SPECIFICATIONS: FREQUENCY RESPONSE: 60—15,000 Hz \pm 3 db @ 1 7/8 ips. WOW AND FLUTTER: 0.25% RMS. SIGNAL TO NOISE RATIO: Greater than 46 db. FIXED PRE-AMP OUTPUT: 1.0 V. per channel. CONTROLLED PRE-AMP: 0.5 volts per channel. PRE-AMP INPUT: 50mV to 2 volts. MICROPHONE INPUT: .1mV to 3mV, low impedance.

Wollensak 3M
3M CENTER, ST. PAUL, MN 55101

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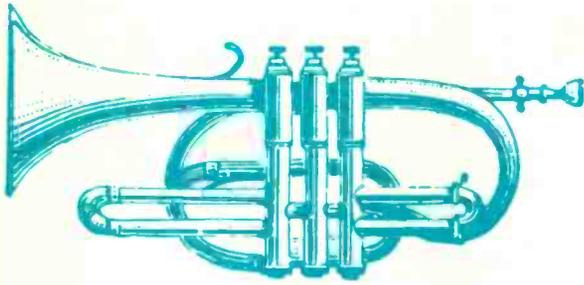
ing devices provided. Why should the discrepancies for these two factors be greater than those of any other that Julian Hirsch measures?

ERIC FOX
Trenton, N.J.

A. Let's look at the question of minimum tracking error first. Most of the time, the excessive error arises in the assembly or installation of the tone arm and cartridge. A mislocation of less than 1/16-inch in mounting the arm can cause a very large increase in tracking error, and it is therefore incumbent upon the manufacturer to control all the assembly variables—including the cartridge mounting—as best he can. One problem arises from disagreement as to where on the record minimum tracking error should be obtained. Since a correctly designed pivoted tone arm with an offset head will have zero error at only two points on a disc, the manufacturer must decide the best location for these two points. A few manufacturers believe that a setting that achieves the lowest *average* tracking error across the disc is to be preferred. In our view this is incorrect, since the distortion caused by a given tracking error increases in severity as the tone arm approaches the center of the record. This being the case, it is most sensible to set up the tone arm so that one of the two zero-error points falls in the area of the inner grooves—in other words, about 2 1/2 inches in from the center hole.

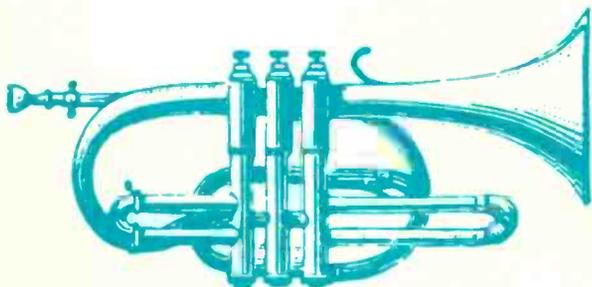
In respect to skating-force measurement discrepancies, apparently a number of manufacturers calibrate their anti-skating force adjustment using a blank (ungrooved) disc. They adjust the anti-skating force calibration so that the tone arm skates neither inward nor outward at a given tracking force as the disc revolves. But since under actual playing conditions skating force is the result of the offset angle of the tone arm head and the friction of the stylus *in the record groove*, an ungrooved record does not provide a true picture of what actually occurs when the stylus is in playing contact with the two groove walls. The double indentation of the vinyl is far greater than that which results from the stylus skimming across the surface of an ungrooved (blank) disc. Hirsch-Houck Labs tests the accuracy of anti-skating force calibration by playing a test record that has equivalent high-level signals in both channels. For the purpose of the test, the stylus force is set near its minimum allowable level, and then anti-skating force is applied until there is an equal amount of distortion in both channels—which in effect is what anti-skating is designed to achieve.

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



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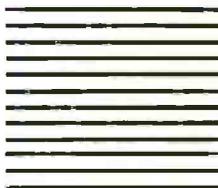
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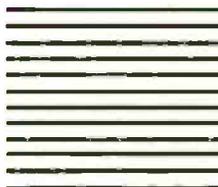
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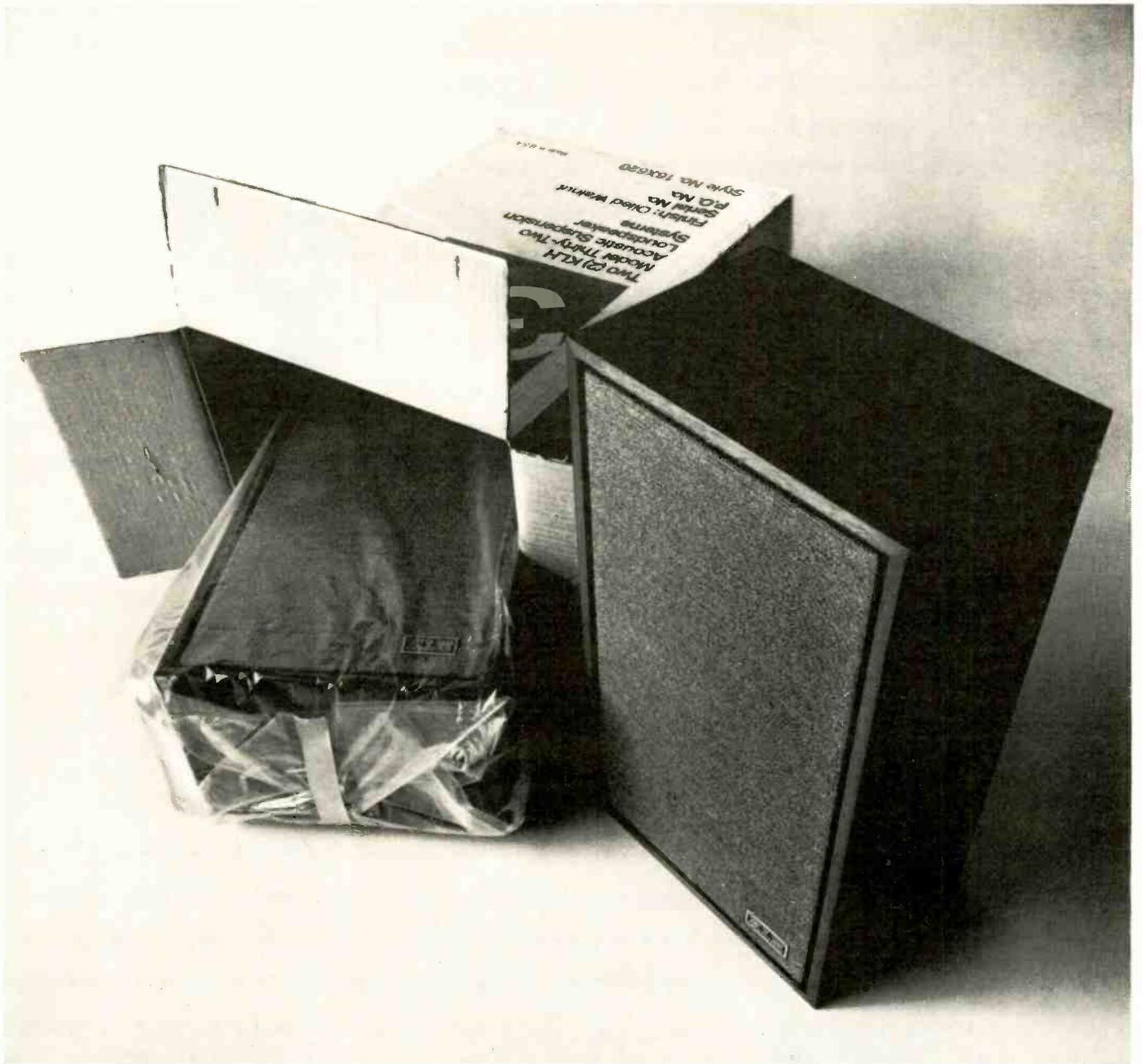
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You see, the Thirty-Two sounds like a very close relative of our now famous Model Six.

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It's designed like a Six. It's built like a Six. And it shares many of the Six's finest listening qualities. Bass response that curls your toes. A mid-range that seduces you with its smoothness. And an overall sound quality that finally puts an end to listening fatigue.

But the Thirty-Two not only sounds like an expensive speaker, it looks like one, too. It is unquestionably the

†suggested retail price. Slightly higher in the west.

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Almost as amazing as the sound. Just \$47.50 (\$95 the pair).†

Make sure you hear—and see—the new KLH Thirty-Two soon. And compare it with the best-known speaker in its price range. We are sure you will agree that there's never been anything like it for the money.

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For more information on the Model Thirty-Two, write to KLH Research and Development Corporation, 30 Cross St., Cambridge, Mass. 02139. Or visit your KLH dealer.



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AUDIO BASICS

By RALPH HODGES

LOUDSPEAKER BASS RESPONSE

GOOD low-frequency reproduction is the most expensive aspect of speaker performance. Once associated with great physical size, excellent bass response can now be obtained from comparatively small speaker systems, but at the cost of efficiency—the amount of electrical-signal power that must be put in for a given acoustical output. In general, acoustic-suspension speakers require much more power—*i.e.*, are much less efficient—than the large bass-reflex and horn designs. At this point in time, however, it is often less expensive to buy a powerful amplifier and inefficient speakers than *vice-versa*.

A speaker's potential for strong output at the very low frequencies is not difficult to detect; a well-recorded orchestral bass drum will quickly reveal it. The characteristic bass-drum sound is a somewhat muffled but tight-sounding "bung," accompanied by an (essentially) inaudible but very palpable surge of room-filling power. Any speaker that can deliver such impact in the near-subsonic regions (around 30 Hz) is at least physically equipped to deal with the low bass. But this is not the whole story.

In our view, *quantity* of bass—even very deep bass—is secondary in importance to bass *quality*. It is easy enough to design a resonance into a woofer-enclosure combination that will encourage the woofer to vibrate enthusiastically at a certain predetermined low frequency; in fact, it is an entirely valid means of extending a speaker's bass response. But if the resonance is not properly controlled (damped), it will at the very least cause the phenomenon known as "overhang," in which the woofer continues to vibrate at its resonant frequency for a brief interval after the electrical signal has ceased. Another possible problem is harmonic distortion. Like any vibrating object, a speaker tends to generate frequencies that are multiples of its basic frequency of vibration, because all parts of its cone are not moving in exact accordance with the input signal. Because overhang and low-frequency harmonic distortion are additions to the program material, they may sound like increased bass, but they do so at the expense of clarity and tonal integrity. Time and again Hirsch-Houck Labs has discovered that the best reproducers of low bass are often those speakers that at first seem to lack it, because there is no counterfeit mid-bass emphasis produced by spurious resonances.

If you're comparison-shopping for speakers, you'll find that the foregoing considerations are complicated by showroom listening conditions such as the inevitable differences in speaker placement (all things being equal, a corner-placed speaker delivers more bass than one in a mid-wall position), and response irregularities due to room acoustics. I therefore recommend that you check the speaker test reports in this (and some other magazines), in which bass output of speakers is compared against a speaker system calibrated in an anechoic chamber, using known inputs and controlled test conditions.

STEREO REVIEW

RABCO INTRODUCES THE ST-4

A COMPLETELY STRAIGHT- FORWARD APPROACH TO PLAYING RECORDS.

All the experts agree. The ideal way to play a record is exactly the way it was cut, in a straight line. But until Rabco introduced the SL-8, no one had been able to devise and manufacture a straight-line tone arm, which could completely realize this theoretical ideal.

In achieving this design breakthrough, Rabco was able to avoid all of the problems and limitations inherent in the conventional pivoted tone arm.

The result: a tone arm that performs so well that Stereo Review was moved to comment, "... it (the Rabco SL-8) is probably the closest approach to perfection in a record playing arm ..."

Now this nearly perfect approach to playing records has been incorporated in a new playback system, the Rabco ST-4. The Rabco ST-4 is an integrated tone arm and turntable combination that offers all the advantages of straight-line playing in a convenient, moderately priced unit. In addition to servo-controlled straight-line tracking, the ST-4 boasts a number of other unique operating features including feather-touch push button cueing; automatic end-of-record lift; simple balance and tracking adjustments; and an "easy-on" plug-in cartridge holder with fool-proof overhang adjustment.

As for the turntable, it does everything a good turntable should do. A hysteresis synchronous motor maintains absolutely constant speed regardless of fluctuations in

line voltage. And a special instant-start mechanism brings the turntable up to speed in less than one revolution. Rumble, wow and flutter are virtually undetectable, thanks to a simple but effective belt-drive system. And finally, a convenient lever allows you to change speed, either 33 or 45 rpm.

The Rabco ST-4 is \$159 and that includes a beautifully finished heavy walnut base. A rather modest price to pay for perfection.

- Servo-controlled tone arm for zero tracking error.
- Ability to track at $1/3$ gram with any top cartridge.
- Pushbutton cueing.
- Automatic photo-electric end-of-record lift.
- Belt driven turntable with hysteresis synchronous motor.
- Rumble -60db.
- Wow and flutter .08%.
- Optional two-piece hinged and removable dust cover.



RABCO

11537 Tach Road, Silver Springs, Maryland 20904.

Without The Noise, Your Recorder Can Be Twice The Recorder You Think It Is.



The Advocate Model 101 Noise Reduction Unit: \$125

BACKGROUND NOISE, of the kind most people have learned to live with and ignore, keeps most tape recorders from being the recorders they could be. The better the recorder, the more it has to lose—and does.

No one talks very much about tape noise. One good reason is that practically nobody has ever heard a tape recording without it. Not having blessed background silence as a reference is like never having seen a television picture without "snow." If you don't know the interference isn't supposed to be there, you don't think much about it. You just look or listen past it and accept it as part of the medium.

But take away the dusting of noise that accompanies every conventional tape recording, and life is different. There is a striking improvement in clarity and the definition of individual musical instruments, and quiet passages previously "lost in the soup" emerge for the first time.

From that point on, noise becomes something to talk about, and do something about.

The need to do something gets even more urgent at low tape speeds, where noise becomes loud enough to compete actively with music for your attention. Get rid of the noise that plagues wide-range recording at low speeds, and the full performance of many present recorders can be realized for the first time. The 3¾-ips tape speed can become the highest needed for critical musical recording, enormously extending both the convenience and economy of tape recording. And the 1½-ips speed, both in open-reel and cassette recording, can become as satisfactory for music as the 33⅓-rpm record speed.

The only way to get rid of the noise without also sacrificing some music is to employ the famous Dolby® System of noise reduction, now used for

master taping and other critical studio applications by virtually every major recording company. Using the circuitry developed by Dolby Laboratories specifically for home tape recording and pre-recorded tapes, we have designed the Advocate Model 101 Noise Reduction Unit: a simple and moderately-priced component that brings the full performance of the Dolby System to any good home tape recorder.

The Advocate Model 101 can be added to any tape deck or any self-contained recorder with audio inputs and outputs. Besides providing the Dolby System, it becomes a nicely functional recording center that takes over the setting of recording balances and levels. Its form is the simplest that will maintain the full benefits of the Dolby System, and the 10 db of noise reduction that the system provides is enough to eliminate noise as a practical consideration. A simple calibration procedure matches the Model 101 to any recorder and to the universal playback characteristic specified by Dolby Laboratories.

The Advocate Model 101 is the answer to the vague but persistent dissatisfaction that many people feel with good tape recorders. It does what the best, lowest-noise tape electronics can't do, and by peeling away the residual tape noise you've taken for granted, reveals a level of performance in your recorder that you haven't had reason to suspect. It also more than doubles both the convenience and economy of tape recording by opening up the world of low-speed recording.

We hope you will explore the difference the Advocate Model 101 can make in your recorder's performance and your overall enjoyment of tape recording. If you would like further information, including an explanation of the Dolby System, please write us at the address below.

Advocate Products

Advent Corporation, 377 Putnam Avenue, Cambridge, Massachusetts 02139

"Dolby" is a trademark of Dolby Laboratories.



TECHNICAL TALK

By JULIAN D. HIRSCH

• **TONE CONTROLS:** The design of bass and treble tone controls hasn't changed much over the past decade, except that more use is being made of the sliding-inflection-point type of control (often referred to as a "Baxandall" or feedback control). Such controls have the considerable virtue of permitting a moderate variation in response at high and low frequencies without serious effect on the levels of the frequencies in between. Some current preamplifiers (and receivers) still use the "hinged" control characteristic, which has a much greater effect on mid-frequencies and therefore (in my opinion) is less useful. The difference may not be important to you (if you make little or no use of tone controls), but if it is, you may have to delve into manufacturers' literature or product reviews to determine which type of control is used in any specific piece of audio equipment.

This brings us to the question: "Just what are tone controls for, anyway?" A full treatment of this controversial question would require more space than we have, but here are a few points for your consideration. Tone controls supposedly can be used to alter the essentially uniform frequency response of an amplifier to compensate for a lack of flatness in the response of some other part of the system. There are perhaps three areas that might call for such compensation, based on your individual notion of what sounds real. (I am assuming that simulation of some sort of reality is your goal.) The areas of potential compensation are the program sources (records, tapes, and broadcasts), the loudspeaker, and the listening-room acoustics.

In respect to the program material, if you like your music to sound "bright" and a particular recording is deficient in highs, you may wish to boost the highs with your tone controls.

Loudspeaker and room response are closely related—in fact, they are often inseparable. A common deficiency in loudspeakers (which can be aggravated by a fully fur-

nished or "dead" room) is a lack of sufficient output above 10,000 Hz. A Baxandall treble tone control can often help to correct a situation such as this but, depending on the degree of boost required, it may also affect the upper mid-range response.

Below 250 Hz, many rooms "lose" bass, probably because the walls are not rigid enough to contain the pressure wave created by a strong low-frequency signal. Rarely can the loss of low frequencies be compensated for satisfactorily with conventional tone controls without muddying the mid-bass. Some rooms are troubled with standing waves in that a narrow band of bass frequencies appears strongly or is missing in certain areas. Such problems are essentially uncorrectable by bass and treble controls. At best, conventional tone controls do rather a mediocre job of compensating for loudspeaker and room characteristics.

In the past two years, several companies have introduced much more flexible tone-control systems (perhaps more accurately termed "equalizers"). These are able to correct many conditions for which conventional tone controls are inadequate. They usually take the form of several individual boost and cut controls, each affecting a limited band of frequencies. The controls generally use vertically oriented

slider potentiometers that permit the user to determine at a glance the approximate shape of the response curve he has established. The first such system to come to our attention was one with five controls that JVC built into their receivers. Recently, Harman-Kardon's Citation Eleven preamplifier (reviewed this month) appeared with a similar five-control equalizer system. Metrotec has produced an add-on module with five similar controls, and Sonic Research is marketing a unit with four controls. All these are capable of much more effective control than is possible with the simple bass and treble tone controls in general use. In many cases, they are able to do a satisfac-

TESTED THIS MONTH

•
Advocate 101 Noise Reduction Unit
Wharfedale W25 Speaker System
H-K Citation Eleven Preamplifier
Lafayette LR-1500TA
AM/FM Receiver

(Continued on page 36)

The trend setter...



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tory job of compensating for broad humps or valleys in speaker or room response. They can frequently bring to life a low-distortion speaker with a response that is smooth but slopes off at the high or low end. And, properly adjusted, they can provide much more effective loudness compensation for low-level listening than the built-in facilities of amplifiers and receivers.

In a few current receivers a compromise between conventional controls and those of the equalizer is a three-band knob-operated control system—bass, mid-range, and highs. Although I have not yet used one of these, it could be expected to fall between the bass-treble control system and the five-band equalizer in effectiveness.

More elaborate (and costly) versions of the multi-band equalizer are made by Advent and Soundcraftsmen. Both of these have ten adjustments at octave intervals. Adjusting five controls to your taste is not too difficult, but when you are dealing with ten (actually twenty, since they are duplicated for each channel), some experimentation is required to realize the full potential of the devices. Probably the ultimate refinement of this technique is found in the Altec Acousta-Voicette and the Frazier Environmental

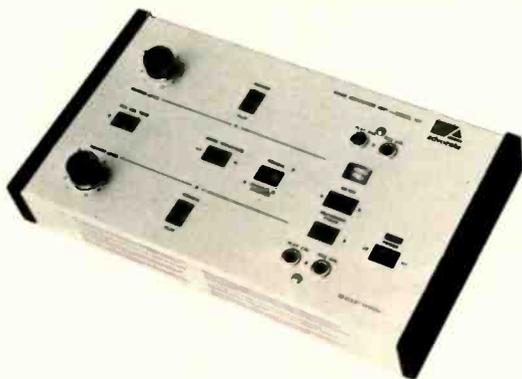
Equalizer, with twenty-four controls at $\frac{1}{3}$ -octave intervals for each channel. The $\frac{1}{3}$ -octave units can really smooth out the response of almost any speaker in any environment, but there is a question as to how necessary such precise equalization is under most circumstances. In any case, it takes a considerable investment in time and money to set up the $\frac{1}{3}$ -octave units properly.

Do you really need this sort of capability? It depends on how satisfied—or dissatisfied—you are with the sound of your present system. It may be more economical, and more satisfactory in the long run, to invest in better speakers than to attempt to equalize the response of low-cost speakers (they may have other deficiencies that cannot be corrected externally). But if you already have good speakers and can't get them to sound "right" in your room with conventional tone controls, one of the multi-band equalizers may be just what you need. And even if your speakers do sound "right," it might be worthwhile, if you can *borrow* a five-band equalizer, to check whether judicious boost (usually) of the very top and bottom frequencies doesn't make your speakers sound even "righter."

≈ EQUIPMENT TEST REPORTS ≈

By Hirsch-Houck Laboratories

ADVOCATE MODEL 101 DOLBY NOISE REDUCTION UNIT



● **THE Advocate Model 101 Noise Reduction Unit**, a product of the Advent Corporation, is a moderately priced (\$125) Dolby signal processor for use with any home tape recorder or cassette deck. It provides up to 10 dB of high-frequency noise (hiss) reduction in the record-playback process.

Schematically and functionally similar to Advent's Model 100 Noise Reduction Unit (see *STEREO REVIEW*, October, 1970), the Model 101 has two identical Dolby circuit boards that can be individually switched to either record or playback mode. Unlike the Model 100 (which has four Dolby circuits), the Model 101 cannot provide simultaneous stereo record-playback operation for monitoring a tape (on a three-head machine) as it is being made. This lack does not in any way impair its usefulness with cassette decks or tape machines that do not have separate playback heads. Since the Model 101 is designed primarily for recording from FM and discs and for playback of Dolbyized prerecorded cassettes, it does not have microphone inputs or mixing facilities.

To record from microphones it is necessary to use external preamplifiers or mixers.

The Advocate Model 101 is physically compact, measuring $12\frac{3}{4}$ x 7 inches and only $2\frac{1}{2}$ inches high, including knobs and feet. Simplified operating and calibration instructions are printed on the front edge of the unit, and a calibration tape and cassette are supplied with it. The single small meter can be switched to either channel for Dolby-level calibration, and a built-in oscillator provides a reference tone for recording on the tape.

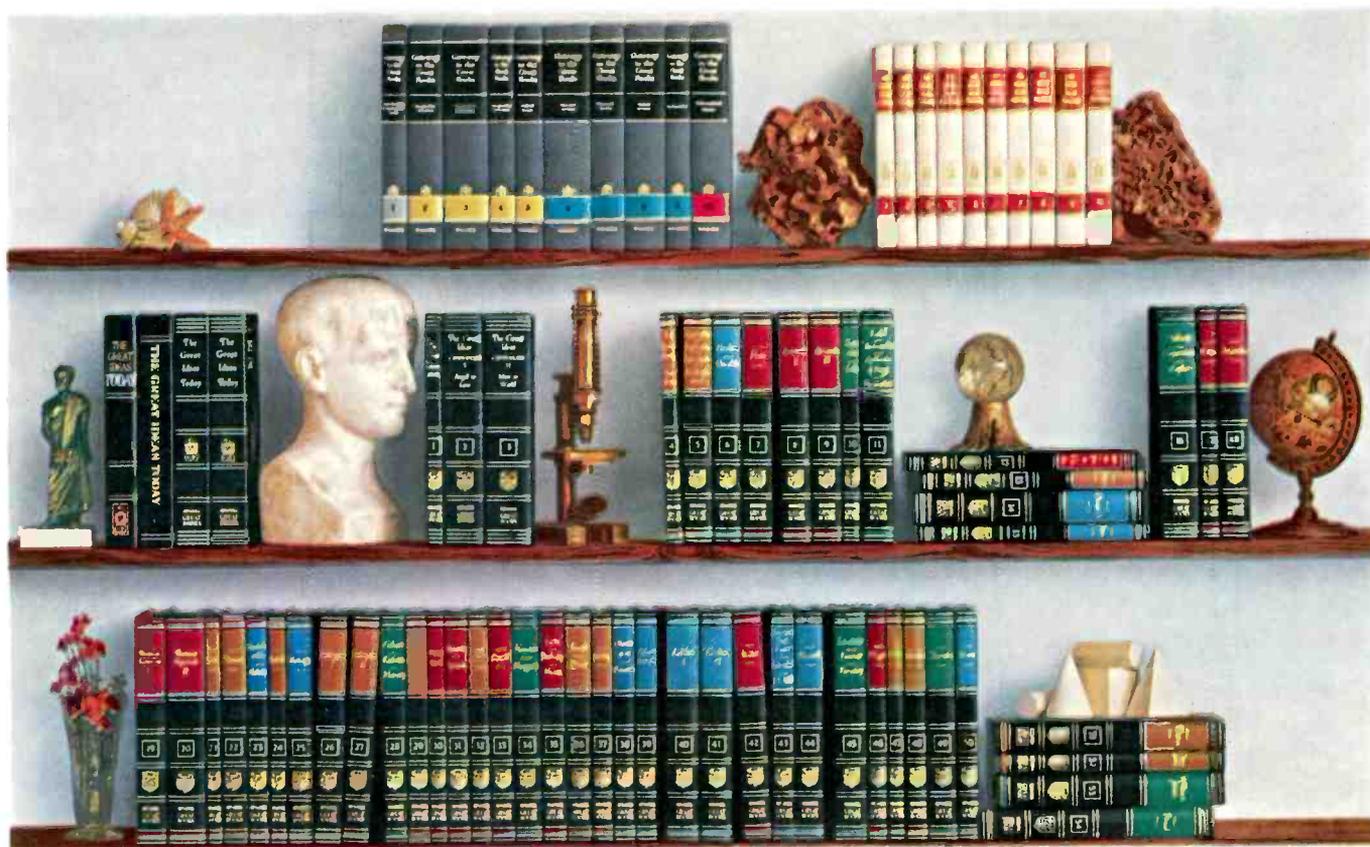
● **Test Results.** The frequency response of the Advocate Model 101 was flat within a fraction of a decibel from 20 to 15,000 Hz at the standard Dolby reference level (0 dB). Each circuit board includes a very sharp cut-off filter to reject any 19- or 38-kHz signals that might appear in the output of a stereo FM tuner and could interfere with the Dolby-circuit operation. The response at 19,000 Hz is down at least 40 dB from the 15,000-Hz level. Since the filter is used both in the recording and playback modes, its effect is cumulative, so that all frequencies above 15,000 Hz are totally removed with no effect on lower frequencies.

We measured the frequency response of the Model 101 separately in record and playback modes of operation at levels of 0 dB, -20 dB, and -40 dB. With a 600-Hz signal at a level of -40 dB, there was 3 dB of effective noise-reduction action (boost in record, cut in playback). The maximum effect of 10 dB occurred at 4,000 Hz and higher frequencies. With channel A set for recording and its output fed through channel B set for playback, the overall system response was flat within ± 0.5 dB from 20 to 15,000 Hz at any level down to -40 dB.

A playback signal at a 0-dB level produced 0.55 volt at the output of the Model 101. An input of 25 millivolts was needed for a 0-dB recording level. The individual recording-gain controls, which come before any electronic circuits,

(Continued on page 40)

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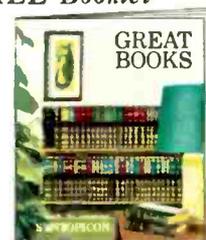
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permitted higher-level signals to be handled without risk of overdrive distortion. The output noise of the system was not measurable, being less than 100 microvolts, or 75 dB below reference level.

The IM distortion, measured through both sections of the unit set up in series, was 0.4 per cent at 0 dB, 0.15 per cent at -5 dB, and 0.08 per cent or less at levels of -10 dB and below. Harmonic distortion, at any frequency, was less than 0.02 per cent at 0 dB. In all respects, the performance of the Model 101 surpassed its specifications.

● *Comments.* The performance of the Advocate Model 101 was equivalent to that of the Advent Model 100, which we tested previously and which costs twice as much. It is worth repeating that the higher price of the Model 100 buys flexibility, not audible performance. The 10-dB reduction in tape-hiss level made it possible to record stereo FM broadcasts on a good-quality cassette deck with no significant degradation of signal-to-noise ratio. Depending on the capabilities of the recorder and tape used, the same benefit should be realized when taping from good stereo discs. In other words, the Model 101 cannot eliminate noise in the program source, but it can prevent the tape and recorder electronics from adding their own inherent noise to the recorded material.

The initial calibration of the Model 101 is simplified by a cardboard template that fits over the control panel and shows the correct switch positions for playback and record calibration. The process takes only a few minutes, and need

not be repeated unless the recorder's control settings are changed or a different type of tape is used.

When the Model 101 is used with a three-head tape deck it is possible to monitor the recorded signal from the deck's playback amplifiers. But since the monitored signal does not pass through a playback Dolby de-equalization circuit, it sounds quite bright. However, the monitoring function is helpful in checking what is going onto the tape, and gives some indication of the quality of the recording.

Another switch provides simultaneous recording and playback through the Dolby circuits on one channel when a three-head machine is used. This will probably be of little practical use to those who do most of their recording in stereo, but it does permit the user to compare the noise levels with the Dolby circuits switched in or out. This provides a most convincing demonstration and is worth trying just to convince yourself (if you have any doubts) of the unit's effectiveness.

A pair of Advocate 101 units could be used for simultaneous record-playback operation in stereo, but it would probably make more sense to use the Advent Model 100 for this purpose, since it includes microphone inputs and mixers and costs the same as two Model 101's. But I suspect that the Model 101 will be more than adequate for those users who do not do a great deal of live recording. In any case, it can be bought now and elaborated upon later without any fear of obsolescence.

For more information, circle 156 on reader service card

WHARFEDALE W25 SPEAKER SYSTEM



● *THE W25* is the smallest and least expensive model in Wharfedale's current line of speaker systems. It is a two-way system, with an 8-inch high-compliance acoustic-suspension woofer and a 2½-inch tweeter with a curvilinear paper cone. The 12-dB-per-octave crossover operates at about 1,500 Hz. There is a continuously variable high-frequency level control. The W25 is an 8-ohm system, suitable for use with amplifiers rated from 10 to 35 watts (music power) per channel. Its fully sealed oiled-walnut cabinet measures 15½ x 10 x 8 inches, and the complete system weighs only 13 pounds. Price: \$58.75.

● *Test Results.* With the high-frequency level control set at maximum, the frequency response of the W25, measured by our multiple microphone set-up, was exceptionally flat and smooth. After correction for microphone calibration

and for room response below 300 Hz, the final curve was within ±3.5 dB from 53 to 15,000 Hz.

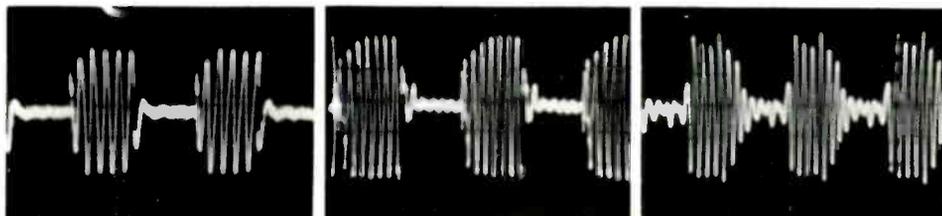
Its polar frequency response was fair, with appreciable beaming of frequencies above about 6,000 Hz. The high-frequency level control was able to cut off the tweeter completely, with most of its effect occurring above 2,000 Hz. Tone-burst response was quite good, with no ringing or spurious outputs at any frequency. At or below the crossover frequency, several cycles were required for the burst to reach its full amplitude, although the speaker seemed to shut off rapidly, with no "overhang." We have observed this effect on other speakers, but are not sure of its cause—or its audible significance, if any.

The low-frequency response was strong down to about 60 Hz, falling off rapidly at lower frequencies. We found the W25 to be 3 to 5 dB more efficient than other small acoustic-suspension speakers we have tested recently. This is fortunate, since its low-frequency distortion was quite low at a 1-watt drive level (reaching 5 per cent at 55 Hz), but increased appreciably at a 10-watt level. In a home installation, it should rarely be necessary to drive the W25 with much more than an average of 1 watt of power. This makes it especially suitable for use with low-cost receivers that have limited power-output capabilities.

The impedance of the system reached its minimum value of about 6 ohms between 150 and 200 Hz and had a broad maximum of about 20 ohms in the crossover region. The bass resonance was at 80 Hz, where the impedance rose to slightly over 30 ohms.

(Continued on page 44)

The creditable tone-burst performance of the Wharfedale W25 speaker system is illustrated by these three oscilloscope photos taken at (left to right) 80, 1,300, and 8,000 Hz.



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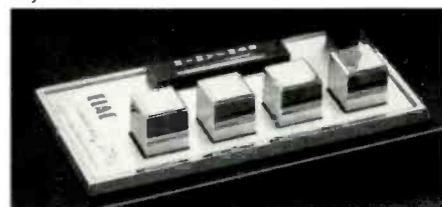


portant exclusive 50H features—Papst hysteresis synchronous motor; external stylus overhang adjustment with built-in gauge; massive, dynamically balanced turntable and cueing in both manual and automatic modes. To these features, the 770H has added several that are new, that never existed before, and that



will contribute to flawless play and greater enjoyment from your records. Such features include TRU/TRACK, an adjustable head that can be set so that the cartridge assumes the precise 15 degree vertical angle for any number of records when used automatically, or for a single record when used manually. There's a variable speed control with digital stroboscopic speed indicator. Not only can you adjust the speed of the 770H over a 6% range, but you can restore it to the precise originally selected speed (33 or 45 rpm) with the help of a built-in illuminated stroboscopic speed indicator. Digital readouts of the exact speed are always visible on the rim of the turntable.

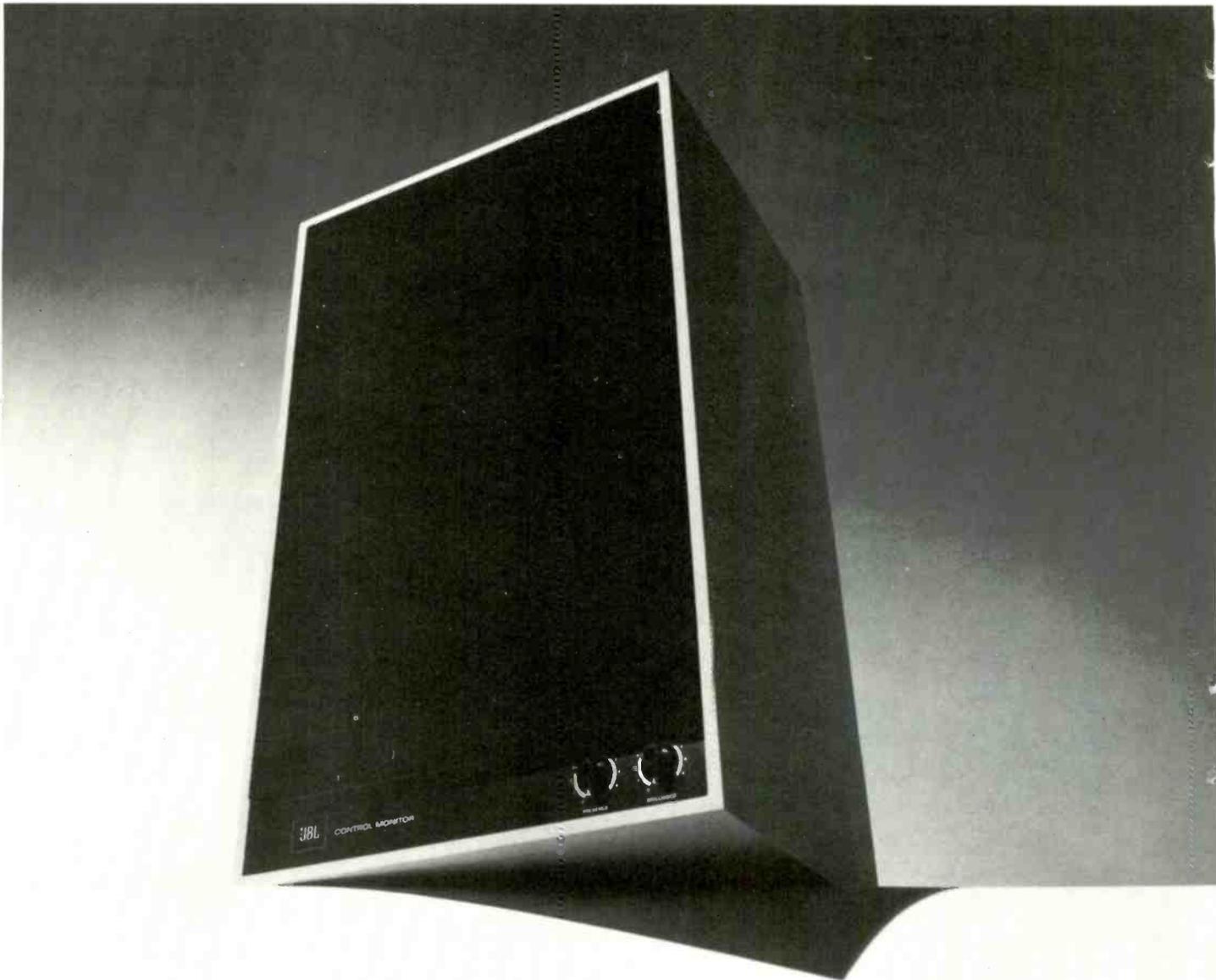
Another breakthrough is the built-in ionic elapsed time stylus wear indicator which keeps tabs, by the hour, of precisely how long your stylus has been in use. It even reminds you to check your stylus.



So, you see, the rewards of the 770H for the music lover more than compensate for the enthusiasm of our engineers. See it at selected audio specialists or write for full color brochure. Benjamin Electronic Sound Corporation, Farmingdale, New York 11735/a division of Instrument Systems Corp.

Miracord 770H





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The JBL 4310 is especially designed for mastering, control room installations, mix-down facilities, portable playback systems. It's full of good things like:

Wide range response. Full 90° dispersion for vertical or horizontal placement. Power handling capability, 50 watts program material.

Front panel controls for separate adjustment of presence and brilliance.

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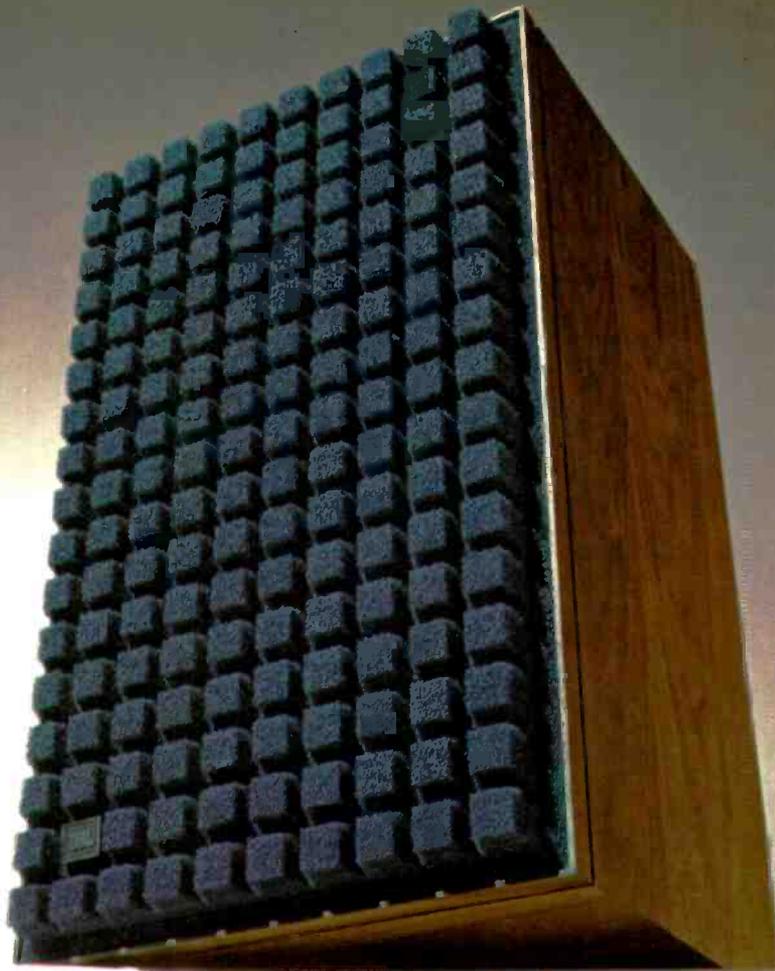
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● *Use Tests.* The simulated "live-vs.-recorded" listening test confirmed our response measurements. Somewhat to our surprise, in view of its low price, the Wharfedale W25 proved to be among the better speakers we have submitted to this test. Since the test is not intended to function below 200 Hz, the speaker was not penalized for its modest bass performance, and it was able to reproduce the "live" program almost flawlessly, at least within about 45 degrees of the speaker's forward axis. Further off axis, the system's high-frequency dispersion characteristic could be detected as a minor loss of the "edge" on string and percussion sounds. In our listening room, we found the best reproduction with the tweeter level set slightly below maximum.

With normal program material we were favorably impressed by the clarity and definition of the W25's sound, and by the ease with which it handled unreasonably high drive levels without harshness or breakup. It was this characteristic that attracted our attention when we first heard the W25 at the 1970 Consumer Electronics Show where, in a large and well padded room, it managed to sound like a speaker several times its size.

On the other hand, it is not a speaker for anyone addicted to heavy bass. Its sound is not at all thin, although by comparison with some speakers with exaggerated bass re-

The W25's front-mounted 8-inch woofer and 2½-inch cone tweeter are revealed when the metal-framed grille-cloth assembly is pulled away from its magnetic-strip fasteners. The woofer's long-throw cone assembly uses a neoprene edge suspension.



sponse it might seem so. It can put out a very audible 45 Hz, which is certainly impressive for such a small box, but does not take kindly to being "pushed" at such low frequencies. We believe that our live-vs.-recorded comparison places the Wharfedale W25 in its proper perspective—an exceptionally natural reproducer at what is close to the minimum price for a speaker system with true high-fidelity credentials.

For more information, circle 157 on reader service card

HARMAN-KARDON CITATION ELEVEN STEREO PREAMPLIFIER



● HARMAN-KARDON's Citation Eleven preamplifier, a companion to their Citation Twelve power amplifier, is a deluxe stereo control center with exceptional flexibility and impressive performance characteristics. The active circuits of the Citation Eleven are remarkably simple (only 13 transistors in all are used), and are mostly on five plug-in printed-circuit boards. Instead of the customary bass and treble tone controls, there are five vertical slider controls, each providing a ± 12 -dB range of adjustment in a selected portion of the audio spectrum. The control areas are centered at 60 Hz, 320 Hz, 1 kHz, 5 kHz, and 12 kHz. The nearly infinite variety of response curves offered by this equalizer permits a user with good listening judgment to correct many, if not most, of the frequency-response aberrations found in speakers, rooms, and program material. In addition, it can provide ideal loudness compensation for low-level listening.

The assortment of inputs and outputs of the Citation Eleven should meet the needs of the most elaborate home music system. These include two identical RIAA-equalized magnetic-phono inputs, a high-level tuner input, and three additional high-level (AUX) inputs. The duplicate pairs of

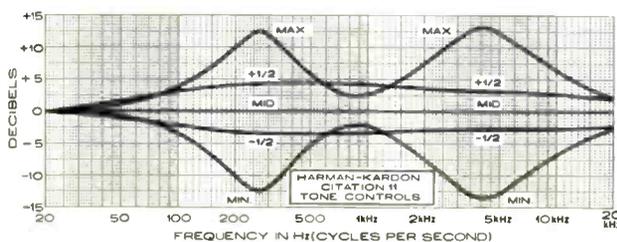
outputs can be used to drive two stereo power amplifiers, or one can be connected to the input of a tape recorder so that the equalizing circuits of the Citation Eleven can modify the program to be recorded. The usual tape-recorder outputs and monitoring inputs, unaffected by volume control or equalizer settings, are also provided—but in duplicate! This simplifies the connection of two tape recorders to the system for uninterrupted recording of long programs. Each set of tape-recorder outputs and inputs has its own front-panel pushbutton monitoring switch. Other pushbutton switches on the front panel control high- and low-cut filters, bypass the equalizer circuits, and switch the power to the preamplifier and three a.c. convenience outlets in the rear of the unit. A fourth unswitched a.c. outlet is also provided.

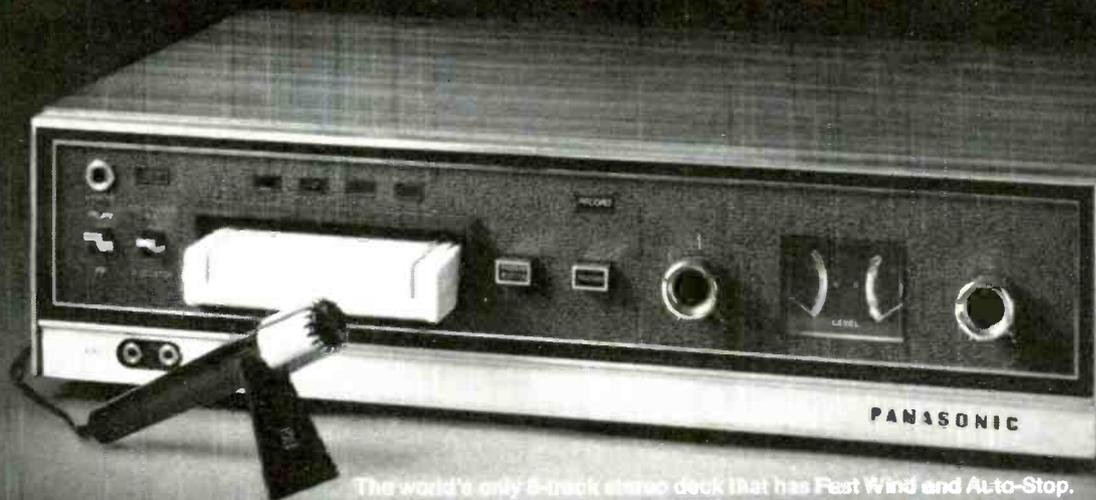
The usual volume and balance controls are on the front panel, as is a mode switch providing normal stereo, reversed-channel stereo, mono, or either channel input through both outputs. A special feature of the Citation Eleven is a speaker-selector switch—a control not usually found on separate preamplifiers. The speaker terminals of the power amplifier are connected to the Citation Eleven through a special cable, and two sets of speakers may then be connected to the Citation Eleven and controlled from its front panel. Either or both sets of speakers may be energized, or both may be shut off and the amplifier outputs switched to the two front-panel headphone jacks. The headphone jacks will accommodate stereo phones of any impedance and efficiency, since the jacks are driven by the output of the power amplifier.

The Citation Eleven measures approximately 16 x 4¼ x 12 inches and weighs 20 pounds. A factory-wired Citation Eleven sells for \$295 with a two-year warranty on parts and labor. There are no plans for a kit at present. A walnut enclosure is \$34.95 additional.

● *Laboratory Measurements.* The basic frequency response of the Citation Eleven was absolutely flat from 20 to 20,000 Hz; in fact, we could not detect any variation in output over this range. Over the span of 5 Hz to 125 kHz, the response was essentially within 1 dB: $+0.3$ dB at the low end and -0.8 dB at the high end. Within the audio range, the frequency response measured as flat with the equalizer controls set to their center positions as when the bypass switch was activated. Square-wave response tests confirmed

(Continued on page 46)





The world's only 8-track stereo deck that has Fast Wind and Auto-Stop.
The "Wellesley," Model RS-803US.

Tape up your stereo system.

If you got the jack, we've got the decks. That will turn your stereo system into a stereo tape recorder. One that records and plays 8-track cartridges. Or cassettes. Or both.

Our 8-track cartridge deck, Model RS-803US, is going to be a legend in its own time. Because it's the only one in the world with two special controls—Auto-Stop and Fast Wind. The Auto-Stop switch stops the tape at the end of the last track. So you can't accidentally over-record and turn Beethoven's First Symphony into Beethoven's

Lost Symphony. Fast Wind speeds you to the selection you want. Instead of wading you through the ones that you don't.

And that's only half the story. There's also our cassette deck, Model RS-256US. With a noise suppressor switch that makes tape sound sweeter than ever. (Cuts out the sour little hiss tape can pick up.) And Fast Forward and Rewind, automatic shut-off, and pause control. Plus simple pushbuttons that leave you more time to make like a sound engineer.

In fact, both these decks

have everything to get the finickiest tape connoisseur into cartridges and cassettes. Like twin VU meters, twin volume controls, twin whatever ought to be twin to give you great stereo recordings and playback. Plus AC bias to cancel out noise and distortion. AC erase. And jacks for optional single or twin mikes.

Go to your Panasonic dealer and see our 8-track deck, Model RS-803US and our cassette deck, Model RS-256US. They make it easy to tape up a stereo system. But choosing between them is something else again.

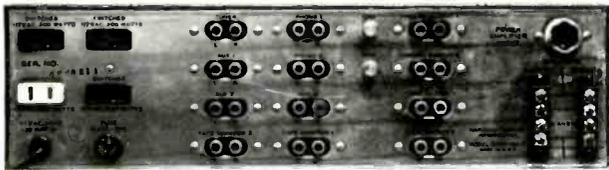


The stereo cassette deck that gives you professional sound quality. And easy operation. The "Bridgeport," Model RS-256US.

PANASONIC
just slightly ahead of our time.

200 Park Avenue, New York 10017. For your nearest Panasonic dealer, call 800 243-8000. In Conn., 800 842-0658. We pay for the call. Ask about Models RS-803US and RS-256US.

CIRCLE NO. 4 ON READER SERVICE CARD



The Citation Eleven's numerous inputs and outputs include speaker terminals (lower right) controlled by a front-panel switch.

Harman-Kardon's claim of 1 microsecond rise time for the preamplifier.

We plotted the response characteristics of the five equalizer controls. At their extreme settings, they provided the rated ± 12 dB range. Most of the variation occurred in the last half of the slider movement. At half-way settings, the response changes were only 2 to 4 dB—so gradual as to be barely detectable by ear. We found the five-band equalizer intriguing to use. As we noted earlier, its effectiveness is likely to be limited only by the ability and patience of the user. It can do anything that conventional tone controls can do, and much more because of its ability to "contour" the program material rather than just boost or cut its frequency extremes.

The high- and low-frequency filters had somewhat slow 6-dB-per-octave slopes, with their -3 dB points at 65 and 4,200 Hz. The filter characteristics could be sharpened significantly by simultaneously using the equalizer controls to shape the cutoff-slope characteristics. RIAA phono equalization was within $+1$, -0.5 dB of the ideal characteristic from 30 to 15,000 Hz (and actually well beyond these limits, but the RIAA specifies its characteristic only over this range).

The Citation Eleven is designed to deliver at least 6 volts into a 10,000-ohm power-amplifier load, and this it did with ease. The clipping level, in fact, was slightly over 10 volts into 10,000 ohms, and about 11.5 volts into a high-impedance termination. All our measurements were made with the rated minimum 10,000-ohm load.

The harmonic distortion at 6 volts output was about 0.03 per cent from 20 to 20,000 Hz. At -10 dB (1.9 volts) it was about 0.017 per cent over most of that range. At 1,000

Hz the distortion was below the noise level at low signal levels, but could be measured at 0.018 per cent at 3 volts output, 0.03 per cent at 6 volts, and 0.064 per cent at 10 volts—just below the clipping point. The IM distortion was 0.045 per cent at 0.1 volt output, 0.018 per cent at 1 volt, and 0.055 per cent at 3 volts. Considering that the strongest signal required by any power amplifier we know of is perhaps 2 volts, the Citation Eleven can be considered an essentially distortionless device.

The Citation Eleven was completely free of switching and turn-on noises. A time-delay circuit reduces the output level by about 20 dB when the preamp is first turned on. The gain increases smoothly to normal levels in about 15 to 20 seconds. This prevents turn-on transients from input sources from reaching the speakers. Crosstalk between channels was -63 dB at 1,000 Hz, and there was no detectable crosstalk between inputs.

At the high-level inputs, 75 millivolts (0.075 volt) was required for a 1-volt output, with a noise level 69 dB below 1 volt. The phono inputs developed a 1-volt output from 0.72 millivolt input, with an exceptional noise level of 66 dB below 1 volt. Phono overload occurred at 120 millivolts, which is 44.5 dB above the phono sensitivity. This is one of the best dynamic ranges we have ever measured for a phono-preamplifier section. As would be expected, noise was quite inaudible at all normal gain settings, and the phono section was virtually immune to overload.

● *Comments.* The Citation Eleven is unquestionably one of the best preamplifiers we have measured. It would take better ears—and instruments—than ours to find any unintentional signal modification in the output of the Citation Eleven. As a rigorous test of the Citation Eleven's "wire with gain" properties, we connected it up so that a signal could be led either around it or through it on the way to the power amplifier. Any response aberration introduced by the Eleven would then be audible during A-B comparisons. Perhaps needless to say, the Eleven left the signals (including white noise) completely unaffected in any way detectable by our ears. It is an ideal companion for any really good basic power amplifier. In combination with the Citation Twelve, it would be hard to beat.

For more information, circle 158 on reader service card

LAFAYETTE LR-1500TA AM/STEREO FM RECEIVER



● LAFAYETTE's Model LR-1500TA AM/stereo FM receiver is rated variously as 240 watts ± 1 dB, 190 watts IHF (1971 catalog), and as 50 watts per channel continuous output into 8-ohm loads (instruction manual). The FM sensitivity is consistently rated at 1.5 microvolts. It has the usual volume and tone controls (concentrically mounted and individually adjustable for the two channels), high- and low-cut filters, loudness compensation, FM muting, two sets of speaker outputs and a low-level center-channel output, and a highly flexible mode-selection system. A second tape-output jack, paralleling the tape-monitor jacks in the rear, is located on the front panel together with the headphone jack. An indicator lights when the tape-monitoring switch is in any of its three "on" positions (stereo, left, or right).

The LR-1500TA has what Lafayette calls an "Acritune" indicator that is illuminated only when an FM station is correctly tuned. This eliminates the need for a channel-center tuning meter, although the relative signal-strength meter is still useful for orienting a directional antenna. The LR-1500TA has a high-performance FM front end, with two FET's as a cascode r.f. amplifier and a third FET as a mixer—a combination that contributes to the receiver's excellent FM performance. A "Computer-Matic" amplifier-overload protection circuit instantly removes the drive signal when the output transistors might be damaged by overloads or short circuits. The Lafayette LR-1500TA measures $16\frac{3}{4} \times 5 \times 14\frac{1}{2}$ inches and weighs 35 pounds. It is supplied in a simulated wood-finish metal cabinet, and sells for \$299.95.

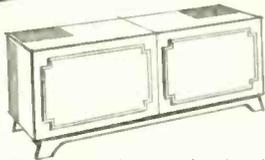
● *Test Results.* Since Lafayette's power rating is based on only one channel's being driven, our simultaneous operation of both channels yielded a slightly lower power output than specified. At the clipping point, the LR-1500TA delivered 44 watts per channel into 8 ohms, 62 watts into 4 ohms, and 27 watts into 16 ohms.

Harmonic distortion was very low at 1,000 Hz, typically measuring under 0.05 per cent up to 30 watts output. The IM distortion, which reached 0.275 per cent at 40 watts, was typically under 0.2 per cent at all levels above 0.1

(Continued on page 50)

Front view

Rear view with decorative panels removed.

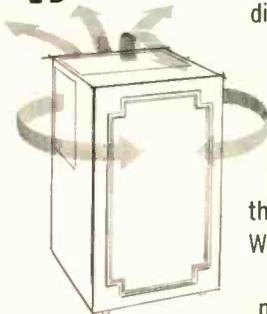


Two W80As on a single optional pedestal.

The W80A Variflex is different!

Unlike any other speaker system available today, two W80As can be placed anywhere in a room, any distance apart or from a wall . . . even together on an optional pedestal as a single-cabinet console . . . and still preserve stereo perception and original tonal balance no matter where in the room you are listening. Here's why:

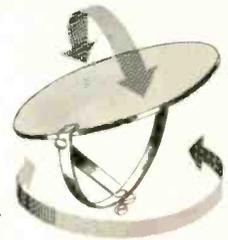
1.



The exclusive varioplanar disc inside the cabinet provides a discreet amount of direct frontal energy which is projected from the top of the cabinet; omnidirectional energy from the sides and rear of the cabinet; and reflected sound, mostly from the rear and top of the enclosure. The W80A is therefore not just an "omni" or just a "reflecting" a forward-projecting speaker . . . it is all three.

2.

Furthermore, the W80A is a "VARIFLEX", because the varioplanar disc is also adjustable. The disc is easily set just once while the system is being installed, without tools or special instruments. There are numerous possibilities, to meet virtually every decor or physical requirement.

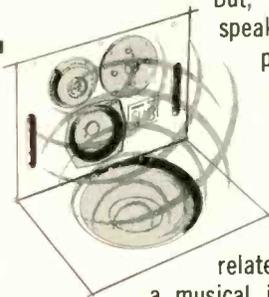


For example, setting the discs out-board widens the stereo sound, if you need to keep the two W80As close together.



Setting the discs toe-in prevents the hole-in-center problem, if the room requires placing the two W80As far apart.

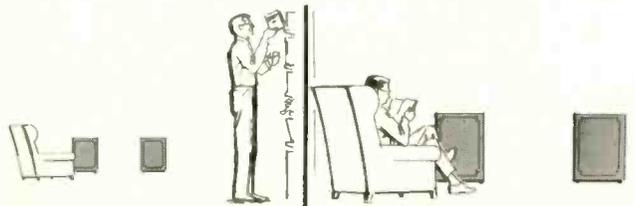
3.



But, unlike most other multi-speaker systems, the bass re-producer does not splatter its sound downward onto the floor, and the mid and treble speakers do not project in other directions. In the W80A, the fundamental tones and related harmonics, which give a musical instrument its identifying timbre and natural, realistic qualities, are reconstituted within a "mixing chamber" which contains the varioplanar disc, so that the sounds of musical instruments enter the room as a whole, retaining tonal balance and further abetting stereo perception.

4.

So startlingly effective is the combination of the mixing chamber and its adjustable varioplanar disc, that you can freely walk about the room, even sit directly in front of one speaker, and you'll always hear both stereo channels. The music, always stereo, will literally follow you!



The W80A VARIFLEX is a decorator's dream, and happily, practical in cost. At \$317.60 list each, it is more than a match for old fashioned speakers that are a lot bigger (the W80A is only 28" x 17 1/4" x 17" deep) and much more expensive.

For a complete catalog, write to Wharfedale Division, British Industries Co., Dept. HA-21 Westbury, N.Y. 11590.

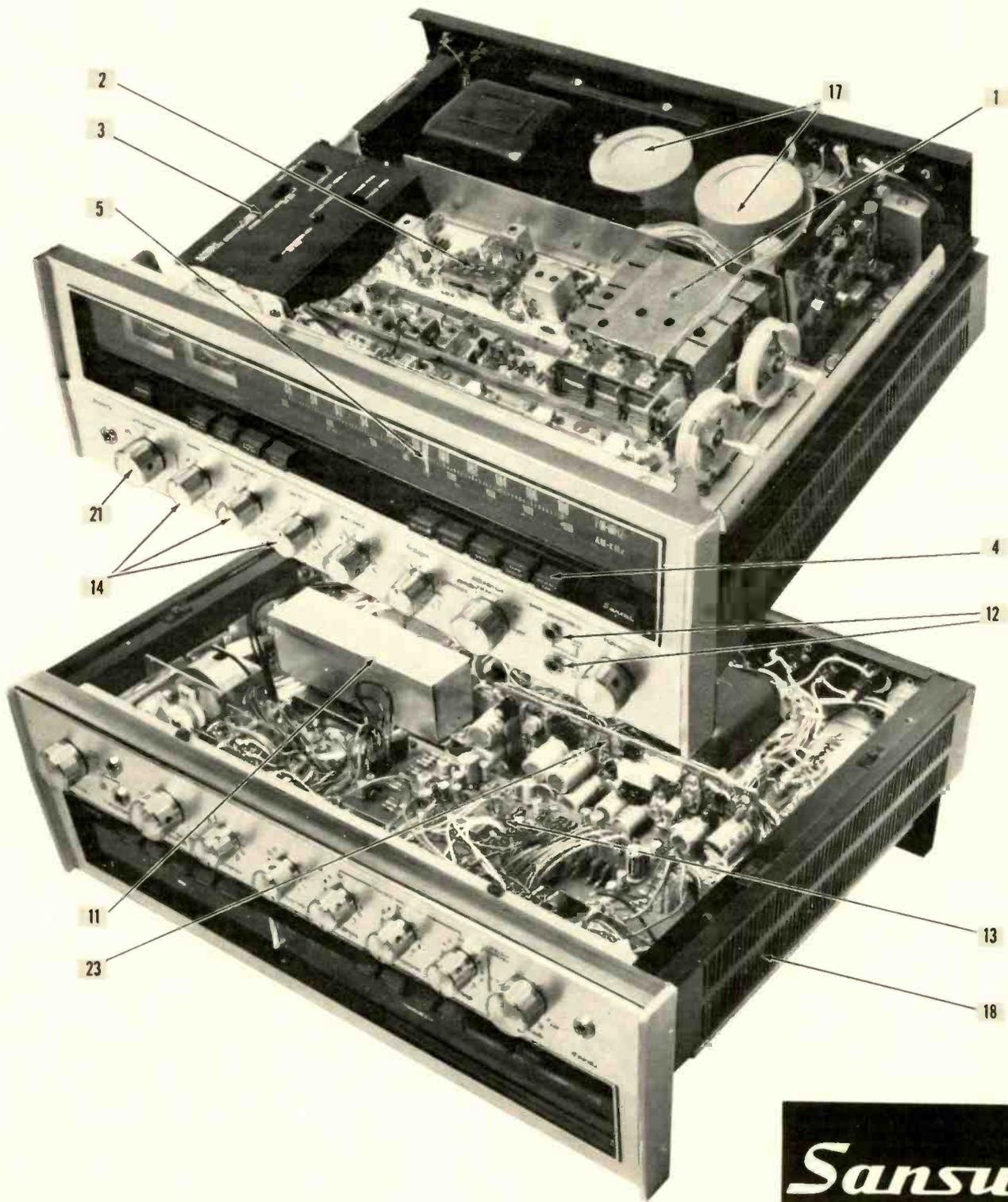
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VARIFLEX SPEAKER SYSTEM

THE GREAT

A NEW STANDARD OF EXCELLENCE

Some time ago, Sansui engineers were given a blank check. "Create the finest receiver in the world today," they were told. "Put in everything you ever wanted to see in your own equipment." And that's what they did. Today the Sansui EIGHT is a reality—the proudest achievement of a company renowned the world over as a leader in sound reproduction.

Take the features. Take the specs. Compare the Sansui EIGHT to anything you have ever seen or heard. Go to your franchised Sansui dealer today for a demonstration of the receiver that will become the standard of excellence by which others are judged. \$499.95.



Sansui[®]

STEREO REVIEW

SANSUI EIGHT:



1 Ultrasensitive FM Front End Two RF amplifiers and one mixer amplifier use three costly, low-noise, dual-gated metal-oxide silicon field-effect transistors (3 MOSFET's) and a 4-gang frequency-linear tuning capacitor. These combine to give the EIGHT its great edge in such areas as FM intermodulation distortion, sensitivity (1.7 microvolts IHF), signal-to-noise (better than 65 db) and image-frequency, IF and spurious-response rejection (all better than 100 db).

2 Three-IC IF Amplifier with Crystal/Block Filter A three-stage differential amplifier, executed with integrated circuits, is combined with a sharply selective crystal filter and a block filter to give steep-sided response. This helps keep distortion very low (FM harmonic distortion is less than 0.5%), improves capture ratio (1.5 db) and stereo separation (better than 35 db at 400 Hz) and minimizes phase shift.

3 Sharp-Cut Multiplex Carrier Filter A two-stage LC sharp-cutoff filter really keeps the subcarrier out of the audio circuits. Where some leaks through, as in most FM receivers, you get increased intermodulation distortion and interference with the bias oscillator of tape recorders, which then mars all off-the-air home recordings.

4 FM Muting Switch and Adjuster The switch cuts off all interstation hiss during tuning, if you wish. The level adjuster permits precise setting to cut off (or avoid cutting off) weak stations, as desired.

5 FM Linear-Scale Wide-Dial Design The linear scale is uniformly graduated in 250-kHz steps. The blackout design features a smoked glass through which the dial shows only when the tuner is in use. The illuminated dial pointer also blacks out during non-use of the tuner.



6 Large Tuning Meters For pinpoint accuracy, one meter indicates signal strength (on FM or AM) while the other indicates exact FM center channel for minimum distortion and noise.

7 Dual Impedance Antenna Terminals The usual 300-ohm balanced antenna input, plus a 75-ohm unbalanced input for the coaxial cables used in remote or noisy areas, or in master-antenna distribution systems.

8 FET AM Tuner Most receiver designs ignore AM capability. The EIGHT uses two FET's along with a 3-gang tuning capacitor for high sensitivity and selectivity. A high-impedance antenna circuit also helps reduce interstation interference.



9 Unique Pantograph Antenna A dual swivel-arm mount, exclusive with Sansui, lets you draw the large AM bar antenna away from the chassis and orient for best reception, or fold it into the back panel to protect it against mishandling.

10 Smooth-Tuning Dial Pointer A large fly-wheel plus a precision nylon gear permit accu-

rate, velvet-smooth tuning action and prevent slipping or jamming.

11 Three-Stage Equalizer Amplifier Emitter-to-emitter negative feedback is used in a three-stage amplifier realized with silicon transistors chosen for their low noise. The results: improved stability, excellent signal-to-noise ratio, negligible distortion, high stability and extremely large dynamic range—it will handle cartridges with very high and very low output levels.

12 Multi-Deck Tape Capability Two tape monitor circuits are brought out to a choice of pin-jack and 3-contact phone-type terminals on the front and rear panels. Play, record and monitor on either circuit. Or copy from one deck to the other via the Tape Monitor Switch.

13 Negative-Feedback Control Amplifier To minimize distortion, the tone-control circuit is driven by a two-stage circuit using both AC and DC negative feedback.

14 Triple Tone Controls Separate controls for bass, treble and midrange. And they're not the regular continuous controls. Each is an 11-position switch carefully calibrated in db steps of boost and cut for the same adjustment precision used in studio work.

15 Sharp-Cut High and Low Filters Both high- and low-frequency filters use special transistors in emitter-follower negative-feedback circuits to provide sharp cutoff (12 db/octave).

16 Direct-Coupled Power Amplifier A two-stage differential amplifier is directly coupled to a complementary Darlington amplifier that uses no output capacitors and is driven by two power supplies, positive and negative. Negative feedback is uniformly effective at all frequencies, beyond the upper limits of audibility and down into the DC range—and the damping factor holds up very steadily down into the extremely low frequencies. The result: drastic reduction of intermodulation distortion not only in the amplifier itself, but in any speaker system connected to it.

17 Jumbo Filter Capacitors Two enormous power-supply capacitors — 8000 microfarads each — contribute to the extraordinary specifications of the EIGHT: 200 watts of IHF music power, 80 watts continuous power per channel. Distortion factor of 0.3% at rated output. Power bandwidth of 10 to 40,000 Hz (at levels of normal use, way down to 5 Hz and up to 50,000 Hz, ± 1 db). Even when driven to maximum output, the EIGHT will deliver the cleanest, most distortionless sound you have ever heard.

18 King-Size Heat Sink No overheating transistors even with continuous drive to maximum output.

19 Total Protection Extra transistors are used in a sophisticated circuit especially for temperature compensation. A special stabilizing circuit polices the differential amplifier. A power-limiting circuit and six quick-acting fuses protect the power transistors against overcurrent. And a completely separate circuit, using a silicon-controlled rectifier (SCR), safeguards your speakers against any possible damage.

20 Separable Pre- and Power Amplifiers Not only can the preamp and power amplifier be electrically separated, but the option can be used simply by flicking a front-panel switch. Use them separately to connect electronic crossovers for speaker systems. Or separate them to use the preamp as a versatile control amplifier for tape recording or studio-type

work while the power amplifier acts as a line or main amplifier.

21 Three-System Multi-Mode Speaker Capability Connect up to three speaker systems and switch-select any one or two different combinations of two. A special mode switch for one of these outputs permits it to drive two monophonic speakers for monitoring, or it can be used for a center-channel output.

22 Stereo Balance Check Circuit Turn on the Balance Check Switch and the tuning meter becomes a zero-center balance meter for precise matching of right and left channels.

23 Independent Power-Supply Circuits There's one each for the output stage, driver, control amplifier, head amplifier and tuner, with the last four separately stabilized to eliminate power fluctuation. This isolation blocks the interaction between one section and another that degrades performance in most integrated receivers. The Sansui EIGHT thus performs like a combination of separate tuner, control amplifier and power amplifier.

24 Plug-In-Board Functional Construction Each functional section is on its own printed-circuit board that plugs into the main chassis. This simplifies service—that is, if you should ever need service.

25 Mode Switches Flick a switch to change from stereo to mono. Flick another to choose between normal and reverse stereo.

26 Two Phono Inputs Accommodate two phonographs at the same time, or choose either input for ideal match to one cartridge.

27 Separate Input Level Adjusters Back-panel controls for FM and AM permit matching to level of phono output so that all functions reproduce at the same level for a given setting of the volume control.



28 Quick-Connect Terminals Exclusive push-button, foolproof terminals grip connecting leads for antennas and speakers. No fumbling with screwdrivers and wire twisting. Just insert wire end and release.

29 Universal Supply-Voltage Adaptability A changeover socket for power-supply input voltage adjusts to eight different a-c supply-source levels, for use anywhere in the world.

30 Detachable AC Line Cord

31 Program Indicators Illuminated legends on a dark background indicate all selected functions except AM and FM. For the latter two, the tuning dial and pointer also light up.

32 FM Stereo Indicator Illuminated legend lets you know when the FM source is transmitting in stereo, even when you've selected FM mono.

33 Integral Walnut Cabinet No need for a separate cabinet. The EIGHT comes inside its own furniture-finished walnut cabinet. And it has legs that can be adjusted for a custom fit to the shelf or other furniture on which it is placed.

The Sansui Great EIGHT. The receiver for connoisseurs. Now on demonstration at your franchised Sansui dealer.

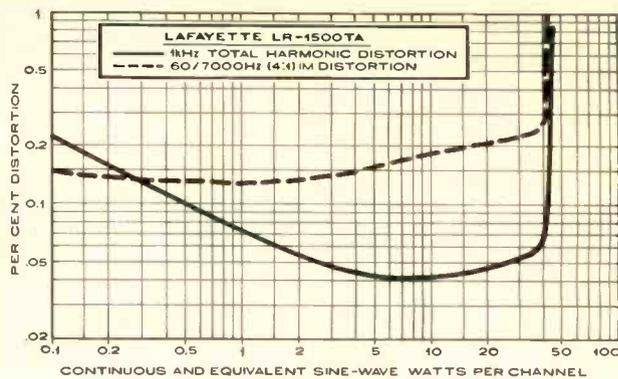
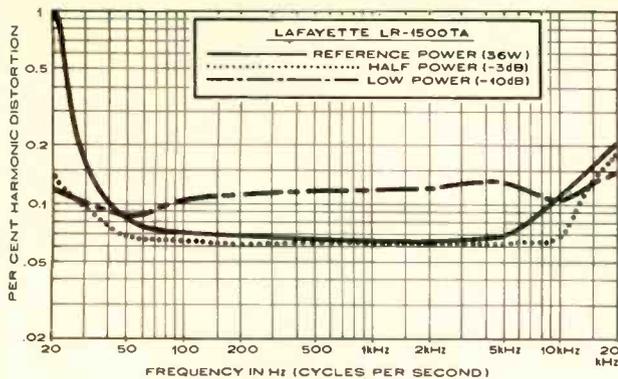
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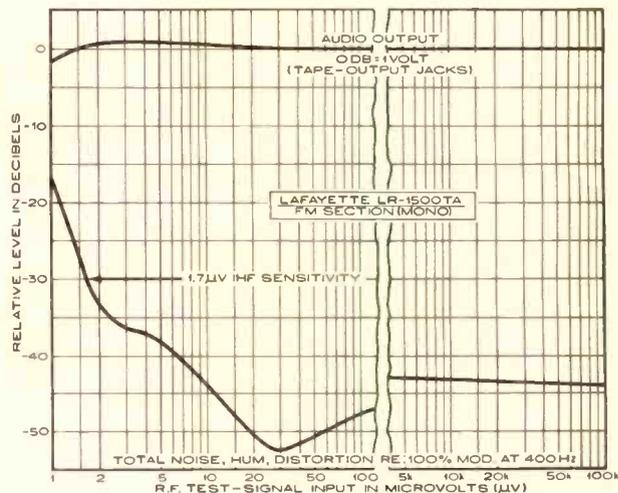
MARCH 1971

CIRCLE NO. 45 ON READER SERVICE CARD



watt. As with most of the lower-cost receivers, the distortion of the LR-1500TA at full power increased rapidly at the very low frequencies. We chose 36 watts per channel as a reference full-power output. At this level, the distortion was about 0.06 per cent over most of the audio frequency range, increasing to 0.2 per cent at 28 and 20,000 Hz. At 20 Hz, the distortion was about 1 per cent. At half power (18 watts per channel), the distortion was less than 0.2 per cent from 20 to 20,000 Hz. At one-tenth power (3.6 watts), the distortion was about 0.1 per cent throughout the audio band.

The tone controls had good characteristics, permitting moderate correction at the frequency extremes with negligible effect on middle frequencies. The audio scratch and rumble filters had a rather mild effect, with 6-dB-per-octave slopes beginning at 90 and 4,500 Hz. The loudness compensation boosted both low and high frequencies at low volume-control settings. RIAA phono equalization was within ± 0.75 dB over its range. The Computer-Matic protective circuit worked well, silencing the receiver instantly upon overload, and recovering about a second after the overload was removed.



The LR-1500TA has three selectable phono sensitivities—0.75, 1.65, and 4.6 millivolts for 10 watts output. Since the phono-overload reserve range at lowest sensitivity is about 185 millivolts, there is virtually no possibility of overloading the preamplifier with any modern phono cartridge. Hum and noise, on all inputs, were very low—75 to 77 dB below 10 watts.

We measured the IHF sensitivity of the FM tuner section as 1.7 microvolts. The FM distortion was between 0.3 and 0.7 per cent, depending on the signal level. FM frequency response was ± 0.5 dB from 30 to 7,500 Hz, and was down 3.5 dB at 15,000 Hz. Stereo separation was about 36 dB at middle frequencies, 23 dB at 30 Hz, and 21 dB at 10,000 Hz (somewhat better than the average of the tuners we have measured with our test setup).

● *Comments.* We found the performance of the LR-1500TA FM tuner to be excellent in all respects. Not only was it very sensitive, but its selectivity was quite up to dealing with our densely populated FM band. The FM muting circuit worked without annoying thumps and noise bursts, a common fault of many such circuits. The idea of the Acritune indicator is a good one, but if the discriminator circuit is not precisely aligned, the Acritune indicator will not light at exactly the channel-center point. We would therefore suggest comparing the maximum reading of the signal-strength meter with the Acritune indication when purchasing the receiver. The two conditions will coincide if alignment is correct. The AM tuner, which we did not test except by ear, sounded very good—in our estimation, well above the average in sound quality.

The Lafayette LR-1500TA is a lot of receiver for the money. It ranks among the best in FM performance, and its audio system can do justice to the vast majority of speaker systems we have used.

For more information, circle 159 on reader service card

STEREO REVIEW



IF YOU DO ANYTHING WITH 1/4" TAPE, YOU CAN DO IT BETTER WITH REVOX.

- Automated broadcast operations
- Scientific analysis
- On location mastering
- Tone or time changing
- Audio tape quality control
- Electronic music synthesis
- Noise analysis
- Film synchronization
- Radio telescoping
- Language laboratory
- Machine tool control
- Phonetic analysis
- Radio telemetry
- Industrial research
- Information retrieval
- Electrocardiography
- Making calibration tapes
- Tape mastering with SELFSYNC
- Data storage from digital computers

And that's a simple statement of fact.

From the moment it was introduced, the Revox A77 was hailed as a recording instrument of unique quality and outstanding performance. The magazines were unanimous in their praise. Stereo Review summed it all up by saying, "We have never seen a recorder that could match the performance of the Revox A77 in all respects, and very few that even come close."

So much for critical opinion.

Of equal significance, is the fact that the Revox A77 rapidly found its way into many professional recording studios.

But what really fascinates us, is that the A77 has been singled out to

perform some unusual and highly prestigious jobs in government and industry. The kinds of jobs that require a high order of accuracy and extreme reliability.

Take NATO (the North Atlantic Treaty Organization) for example. When they wanted a machine to standardize on, a machine that would lend itself to use in a wide variety of circumstances and most importantly, a machine that was simple to use, the logical choice was the Revox A77.

Or take the governmental agency that wanted an unfailingly reliable tape machine to register and record satellite bleeps. The choice? Revox.

Or the medical centers that use

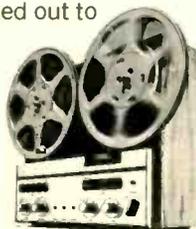
specially adapted A77's for electrocardiographic recording.

We could go on and on (see accompanying list), but by now you probably get the point.

No other 1/4" tape machine combines the multi-functioned practicability, unfailing reliability, and outstanding performance of a Revox.

If you have a special recording problem that involves the use of 1/4" tape, write to us. We'll be happy to help you with it.

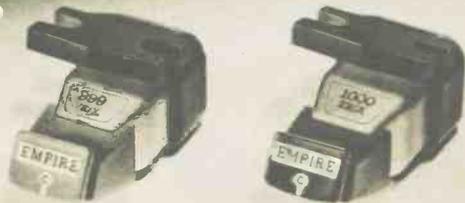
And if all you want is the best and most versatile recorder for home use, we'll be glad to tell you more about that too.



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DELIVERS
WHAT ALL
THE REST
ONLY PROMISE.**

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In Canada: Tri-Tel Associates, Ltd., Toronto, Canada

These long playing cartridges will outperform any long playing records you own.



Here are two exciting stereo cartridges that barely touch your records, yet track them like radar, at forces so low that your records will be good as new after years of use.

1000ZE/X "Measurement Standard" — Tracks as low as 0.1 gram in laboratory playback arms. List Price—\$99.95.

Each 1000ZE/X and 999VE/X cartridge is individually adjusted to have a flat frequency response within ± 1 dB from 20-20,000 Hz. Stereo separation is better than 35 dB at 1 K Hz and remains 25 dB or better all the way out to 20,000 Hz. Overall frequency response a phenomenal 4-40,000 Hz. There are no electrical or mechanical peaks and total

THD distort on at the standard 3.5 cm/sec groove velocity does not exceed .05% at any frequency within the full spectrum. Uses a .2 x .7 mil hand polished miniature diamond for exceptional low mass.

999VE/X "Professional" — Recommended tracking force $1/4$ to $1 1/4$ grams. List Price—\$79.95.

Write for your free copy of "1971 Guide to Sound Design." Empire Scientific Corp., 1055 Stewart Avenue, Garden City, N.Y. 11530.

EMPIRE



CIRCLE NO. 21 ON READER SERVICE CARD

The Great Russian Singer was a Master of German Song.

Alexander Kipnis could perform in almost any idiom. But he made his reputation singing German opera. And in the highly specialized field of German lieder. This 18-song collection shows the distinguished basso at his best: An international star very much at home in the music of a foreign nation.

On Columbia Records

ALEXANDER KIPNIS
GREAT PERFORMANCES OF WORKS BY
BRAHMS, HANDEL, SCHUBERT
SCHUMANN, RICHARD STRAUSS



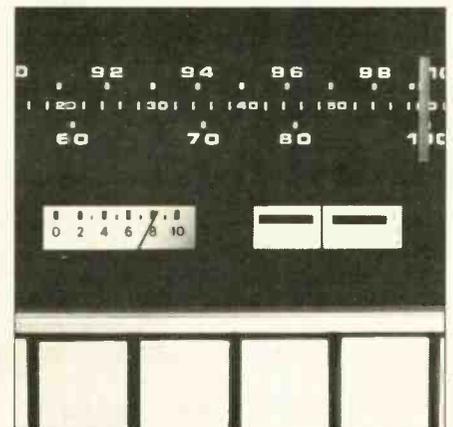
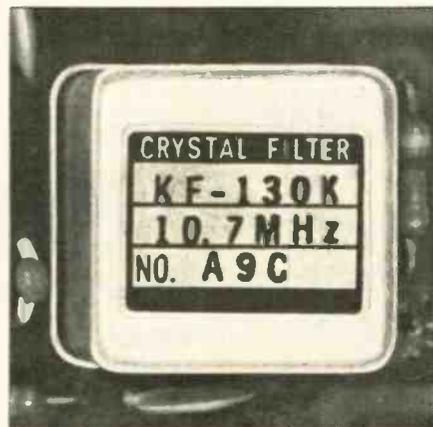
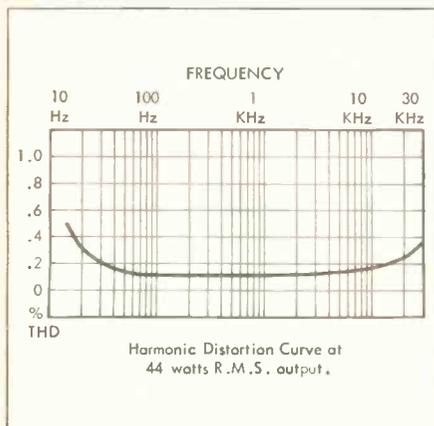
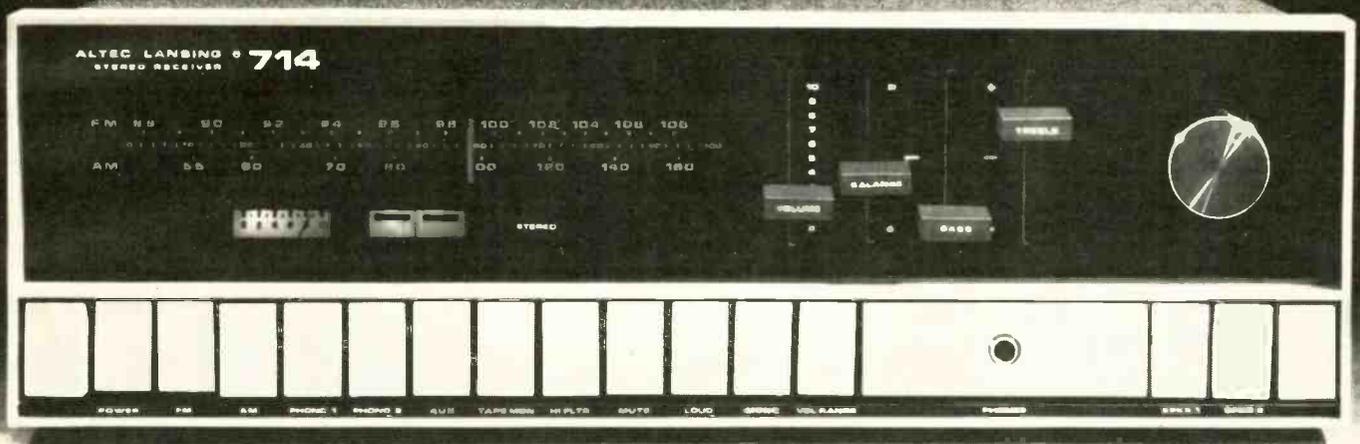
sy, in *The Golliwog's Cakewalk*, quotes Wagner's *Tristan* and comments on it with a musical titter. Bartók, in the *Interrupted Intermezzo* movement of his Concerto for Orchestra, gives similar treatment to a theme from Shostakovich's Symphony No. 7. Possibly the wittiest reference of all is made by Saint-Saëns in his *Carnival of the Animals*, in which the slow, solemn theme assigned to the tortoise turns out to be Offenbach's *Galop* from *Orpheus in the Underworld*, but played five times as slowly.

The circumstances of performance (or even the writing) of a piece of music can also be cause for humor. Certainly anyone who has heard the late Dennis Brain's performance of a movement from a Mozart Horn Concerto on the hosepipe (on one of the Hoffnung Festival records) knows that. What is called *Augenmusik* (music for the eyes) also has humorous possibilities, though obviously not in the hearing. Telemann's still unrecorded score for *Gulliver's Travels* has the Lilliputians' music written in one hundred-twenty-eighth notes and the music for the Brobdingnagians in breves.

THE highest point of musical humor, though, is that which depends upon nothing but the music itself. I have written before about the humor in Beethoven's violin sonatas. Haydn also was a great humorist, and with a little searching one can probably find points of musical wit in nearly all his works. A splendid example is the Symphony No. 60, titled "*Il Distratto*," because it was based on incidental music that Haydn wrote to a play of that name. Haydn's first bit of humor here is very sophisticated, basing itself on key relationships and the absence of what is expected. But it *can* be heard. Briefly, what happens is that, after the first movement has gone firmly into the key of the dominant (G Major, in this case), a new theme enters on the sub-dominant of that key. It is a theme that clings to one note, never getting more than a step away from it on either side. Obviously it is moving *some-where*. But no, it simply gets slower and quieter and slower and quieter and then just dies. Only after an instant of silence does the expected cadence finally appear.

The next joke is the appearance of a fifth movement (there are six altogether). The fourth movement has been a Presto, and totally appropriate as a symphonic finale. The very fact that something follows at all is both amusing and unexpected. A final joke comes about in the last movement when the violins (who have previously been told to tune their G strings down to F) are told to tune them back, while playing, to G. The sounds that result are anything but Haydnesque. But it is a good joke, a Haydn kind of joke, and I shudder even to think of a performance in which a conductor, through misplaced meticulousness, might miss it altogether.

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Britten's Young Person's Guide to the Orchestra

WRITING MUSIC for young people has always been a prominent part of the creative life of Benjamin Britten. In his nineteenth year he put together his *Simple Symphony*, made up of pieces he had composed during the previous half-dozen years for his own delectation and that of his school chums. Dating also from his prep-school years are the songs *Friday Afternoons* and others, and the *Spring Symphony* and *War Requiem* make use of a supplementary boys' chorus. Children also take part in the mystery play *Noye's Fludde*, and *Let's Make an Opera* is intended for school production.

Perhaps Britten's best-known work for young people is his orchestral piece, the Variations and Fugue on a Theme of Purcell, better known as *The Young Person's Guide to the Orchestra*. Britten completed the music on New Year's Day, 1946. A film of the work, which also contained a spoken narrative describing the instruments and their function in the orchestra, was shown for the first time about eleven months later at a Leicester Square movie house in London. In the meantime, Britten's musical score for the film had already begun an independent life of its own in the concert hall, Sir Malcolm Sargent having conducted it for the first time on October 15, 1946, at a concert of the Liverpool Philharmonic Orchestra. The same conductor and orchestra also made the first recording of the music, for English Columbia, shortly after the premiere.

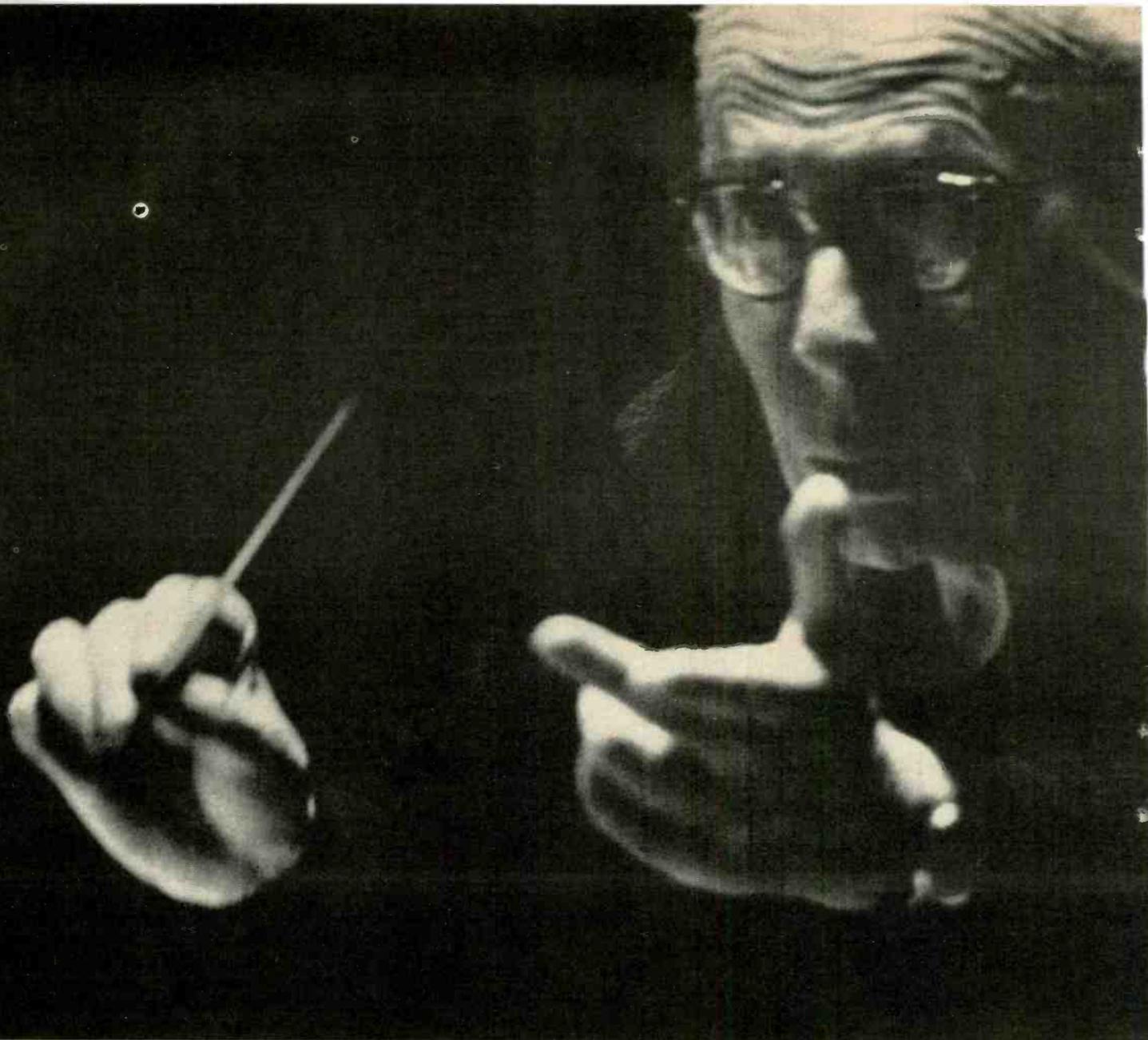
As the thematic basis of the work, Britten took the Rondeau from Henry Purcell's Incidental Music to *Abdelazer, or the Moor's Revenge*, a play first produced in London in 1677, and for which Purcell composed his music nearly twenty years later. Purcell's eight-bar theme is set first by Britten for the full orchestra, and then it is presented successively by the woodwinds, the brass, the strings, and the percussion. Afterwards, the theme is once again given to the full orchestra. There then follow thirteen variations, each one spotlighting the capabilities and characteristics of a different instrument or family of instruments in the orchestra. Especially noteworthy are the jaunty march of the bassoons (Variation IV), the polonaise of the first and second violins (Variation V), the whirlwind mobility of the double basses (Variation VIII), and the stunningly imaginative cadenza for the entire percussion section, with the timpani in the lead (Variation XIII). To cap the climax, Britten composed a brilliant fugue, with each of the

instruments or instrumental families entering in the same order in which their variations appeared. Finally, after the orchestra has been "put together" again, Britten once more introduces the basis of it all, Purcell's theme, this time triumphantly in the brass to bring the work to a resounding conclusion.

Nine different recordings of the work are listed in the current Schwann catalog, their number divided equally between those that present the score as a concert piece, without narration, and those that incorporate Eric Crozier's narration (or an adaptation of it) in fulfillment of the original intention. Interestingly, Britten himself, in his recently deleted recording (London CS 6398), omits the narration, surely in the belief that the music is quite capable of standing alone. There is no question that it can—and Britten's own performance is a virtuoso tour de force, full of fire and easy spontaneity, marvelously played by the London Symphony, and brilliantly recorded. I have no hesitation in recommending it as the outstanding one among those without narration. Though no longer in the catalog, this disc should not be hard to find.

BUT there will be those listeners who want to have the music with the narration. Here a choice among the available recordings is more difficult. Two of them—Leonard Bernstein's (Columbia MS 6368) and Hans Swarowsky's (Vox STPL 59280)—offer readings of the narrative by children, efforts at getting directly to young people through a contemporary, and it proves rather unsuccessful in these cases. The other two narrators are Sean Connery, with Antal Dorati and the Royal Philharmonic (London SPC 21007), and Hugh Downs, with Arthur Fiedler and the Boston Pops (RCA LSC 2596). Downs plays it very straight, with no attempt at any sort of characterization; Connery, on the other hand, invests his reading with a kind of stylization, even coloring his voice and its production to simulate some of the qualities of the various instruments as he describes them. Choice between the two attitudes is very much a personal matter. Both versions are also splendidly played and recorded.

The Britten performance is also available in a fine tape version (London L 80148), and the Connery-Dorati tape (London L 75007) is more clearly defined than the one by Bernstein (Columbia MQ 498).



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MR. STARK'S DREAM MACHINE

Tape Horizons editor Craig Stark designs the ideal tape recorder...and in the process tells us quite a bit about the present state of the art in this important component

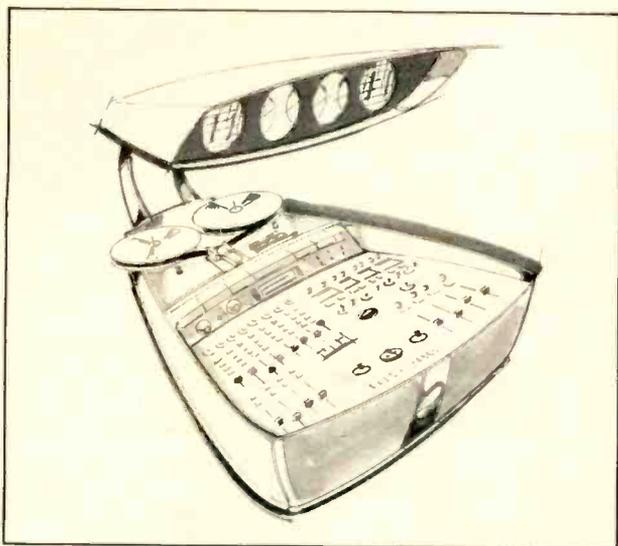
TO DREAM the impossible dream is usually to invite galling frustration, but once in a while one has the opportunity to bring one's fantasies into the light of day, to grant them recognition, if not realization, before returning them to their proper place in Never-Never Land. Such, at least, is the case with the Starksonics SR-1 recorder, which has attained its first (and undoubtedly its last) contact with the real world on this month's cover.

For years I've been complaining that, despite continued improvements, no audiophile recorder even comes close to including all the "state of the art" features I felt were both possible and desirable. Now, however, I've finally organized my thoughts on the subject and gotten them all down on paper, and I feel a lot better. As will quickly become evident, I refused to consider price as having anything to do with the design of my fantasy prototype, and I also felt free to incorporate a number of useful (but proprietary) professional exclusives. Science fiction, however, was ruled out at the start: everything specified—component parts and performance parameters—had to be realizable *now*. Since I am rather proud of the visionary result, bear with me while I describe its fascinating features and functions with the aid of the grid coordinates supplied with the artist's rendering on page 61.

Many of the basic features of the ideal audiophile recorder hardly required a second thought. Separate record and playback heads and electronics (permitting immediate comparison of the input signal with the actual re-

corded signal) were essential, along with multi-speed ($1\frac{7}{8}$, $3\frac{3}{4}$, $7\frac{1}{2}$, and 15 ips) capability. Separate motors for the capstan and each of the two reel turntables were also clearly necessary, together with pushbutton-controlled solenoid operation. Further, for purposes of live recording, the machine would have to accept $10\frac{1}{2}$ -inch reels and incorporate convenient editing facilities. And, of course, standard features such as a tape counter and automatic shut-off in case of tape break or run-out could be taken for granted. But many of the more distinctive features called for really basic rethinking.

Consider, for example, the normal mechanics of a good three-motor tape transport. The basic tasks it must perform are: (1) transport the tape from one reel to another at an exact and unvarying speed while maintaining intimate contact between the tape and the heads; (2) shuttle the tape in either direction at high speed, while holding it away from the heads to prevent wear; and (3) start and stop tape motion quickly, but without either stretching or spilling the tape. How are these goals to be achieved? Normally, in the two fast-winding modes, the tape is held away from the heads by tape lifters and the motor that drives the take-up reel is given full voltage. The other reel motor, however, is fed a reduced voltage, and since it is being dragged backwards against its normal direction of rotation, it contributes a certain amount of holdback tension. In play and record modes the tape is "pulled" by being pinched between a rotating metal cap-



DREAM MACHINE

stan and a rubber idler or pinch-roller. Holdback and take-up tensions on the tape are created by feeding a low voltage to both the supply and take-up reel motors, the holdback pull (necessary because there are no pressure pads) being used to keep the tape snugly against the heads. The capstan, with its speed-stabilizing flywheel, is usually driven (either via belt or a system of rubber idlers) by a "hysteresis-synchronous" motor—that is, one whose rotational speed is determined by the 60-Hz a.c. line.

What is wrong with this almost universal scheme? Well, in the first place, consider the holdback and take-up tape tensions. Theoretically, during play and record, the holdback drag of the supply-reel motor plus the friction of the tape against the heads should exactly equal the pull of the take-up reel motor. Under these conditions the capstan and pinch-roller assembly is called on only to "meter" the tape flow. Unfortunately, however, in the normal system I've described this ideal is realized at only one point during the transfer of the tape from one reel to the other, for the amount of pull and drag produced by the reel motors varies directly with the amount of tape on each reel. For the normal 7-inch reel this effective diameter varies by a ratio of about 3 to 1, and, to make matters worse, when the take-up reel pulls the hardest (at the beginning of a side), the supply reel drags the least (and *vice versa*). This leads to short-term speed variations that result in wow and flutter, and to long-term speed variations that cause pitch inaccuracy.

Again, with the normal system, tape speed during fast-forward and rewind operations varies considerably, creating differing tensions within the reel. This makes it undesirable to store tapes over a long period in a "rewound" state, lest they be permanently deformed.

To avoid these and other difficulties, the Starksonics SR-1 employs what is called "servo control" over the

voltage fed to the two reel motors. Simply put, this means that if one motor starts to pull too hard, an "error" signal is generated, amplified, and used to reduce the power going to that motor. Similarly, if the actual tape tension falls below optimum, the voltage to the motor in question is automatically increased. A growing number of professional transports are incorporating this feature, which can even maintain proper tape tension when reels of different sizes are used on the two hubs. The particular version I selected goes one step further than some, in that it operates during fast-wind modes as well as in play and record. This means that fast-wound tapes do not vary in speed or tension from one end of the reel to the other, and so can be safely stored over long periods. Judging that sixty seconds is a reasonable time for rewinding 1,200 feet of tape, the electronic motor controls are set to provide a constant fast speed (in either direction) of 240 ips, or 20 feet per second. As a further refinement, the tape guides are scored with a series of minute grooves that run in the direction of tape travel. These tend to "bleed off" any air-foil effect that might develop between the guide and the tape at such a high speed, so that the fast-wound tape forms as flat a "pack" as one run at normal speed.

PERHAPS the most unusual feature of the tape-drive system is its use of the "Isoloop" principle (see coordinates E2-E3 on the drawing at right) developed by the Mincom Division of the 3M Company for its professional machines. In normal recorders, the pinching of the tape between capstan and rubber pinch roller tends to isolate any irregularities in the take-up reel tension. But, being located to the right side of the head assembly, the capstan assembly can't neutralize variations (for example, from the tape brushing against a warped reel) on the supply side. Unfortunately, this is where most irregularities do occur during play and record, leading, as I have indicated, to wow and flutter.

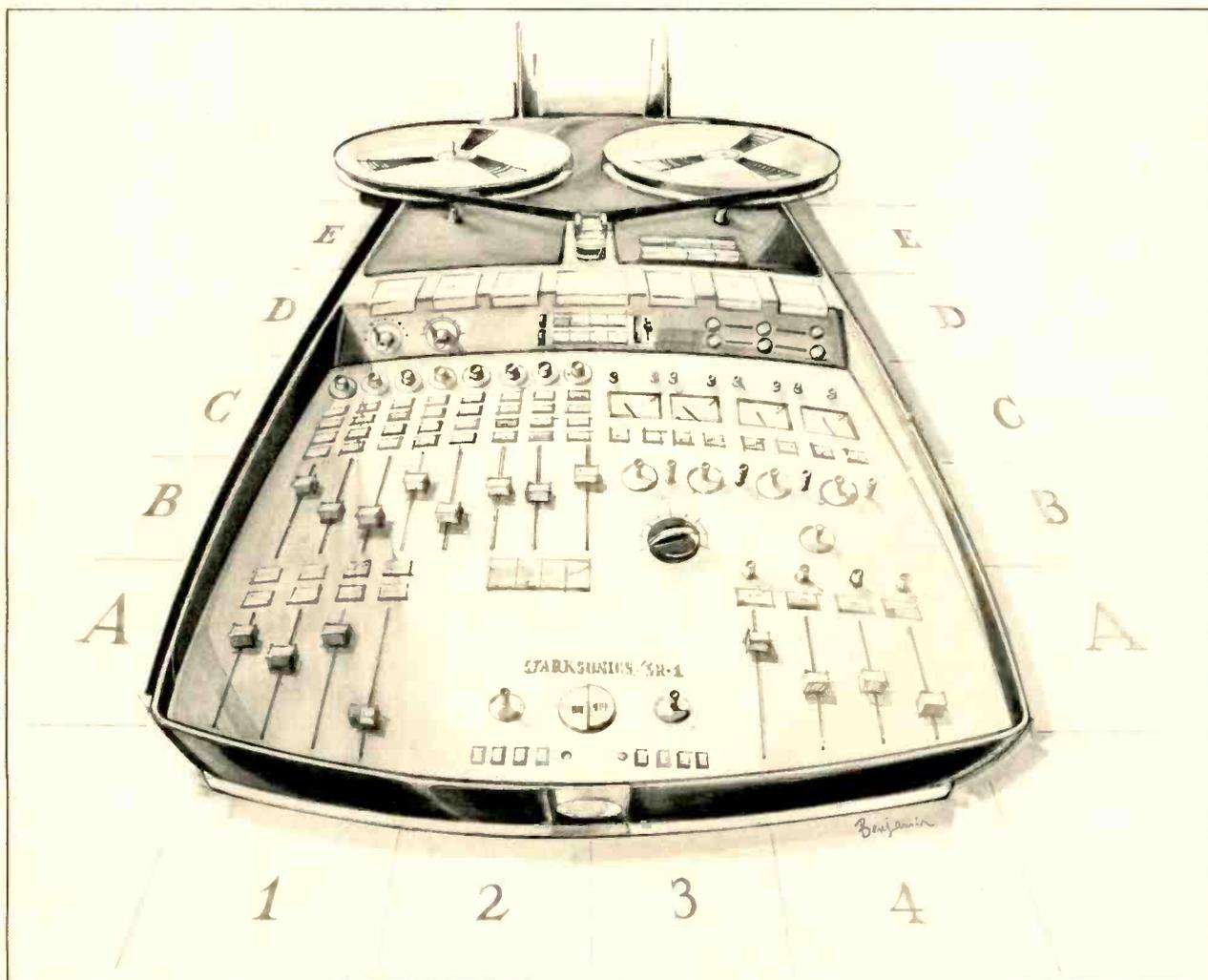
Suppose, however, that *two* pinch rollers were used, pushing the tape against the same rotating capstan, with one located where the tape enters the head area and the other at the exit leading to the take-up reel. This would effectively isolate the tape completely during the crucial period when it passes the heads themselves. Suppose, further, that the entrance pinch roller could be made to rotate just slightly slower than the exit pinch roller. This would create a constant differential tension on the tape while it was in the head area, thus holding it intimately against the heads. This is precisely what the Isoloop does, by utilizing a capstan that has been slightly "stepped" (providing, in effect, two diameters) and correspondingly stepped pinch rollers. The supply-side roller tries to force the tape against the inner-diameter steps of the capstan, and the take-up-side roller tries to drive it against the outer-diameter steps. Thus the tape is isolated from eccentricities of either reel and provided with an unvarying ten-

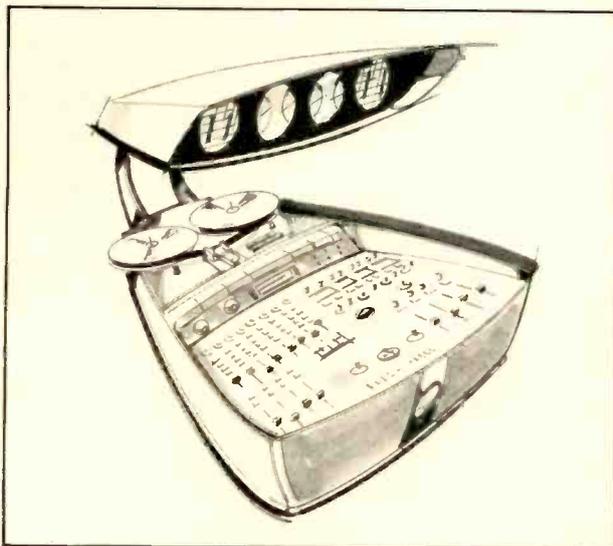
sion against the heads. Needless to say, the tension on the tape while it is within the head-area loop is not sufficient to deform any high-quality brand of tape.

I wanted the Starksonics SR-1 to be completely reversible, so the 3M design was modified to provide an arrangement whereby the two pinch rollers could be alternately raised and lowered slightly to engage either the inner or the outer steps of the capstan. The capstan motor itself also had to be reversible, of course, together with the tension-regulating servo mechanisms. Switching the latter called for nothing more sophisticated than a relay, but quick direction change by the capstan motor ruled out use of the usual high-inertia flywheel-loaded capstan. Instead, a low-inertia d.c. motor was selected to drive the capstan directly. Rather after the example set by Revox, motor speed is determined electronically and is self-correcting. As the capstan motor rotates, a toothed wheel on its underside generates a series of pulses that are detected by a special pickup head, amplified, and fed to a nulling circuit tuned to the correct frequency (for on-speed operation). Any difference between the generated frequency and the tuned frequency of the nulling circuit appears as

an error-correcting signal that causes more or less current to be fed to the motor. The speeds are changed electronically by switching of the null-circuit frequency. As an additional refinement, a vernier control is incorporated that can vary the null frequency slightly (about ± 2 per cent) to permit "tuning" a prerecorded tape to a fixed-pitch instrument such as an oboe for sound-on-sound applications. To make sure the null frequency is properly set for normal applications, the motor also turns a lightweight strobe disc, illuminated by a neon lamp and visible through a window in the tape transport panel.

At the bottom end of the tape-drive path, opposite the capstan assembly, is a rubber idler wheel that resembles an ordinary recorder's pinch roller. It rotates with tape travel in all modes, and during play-record, when the loop is closed at the top by the dual stepped pinch rollers at the capstan end, it shortens the length of unsupported tape on each side of the loop. This helps to reduce "scrape flutter," which arises because long, unsupported, and undamped lengths of moving tape tend to vibrate rather like a bowstring. In the SR-1, unsupported tape length is limited to the minimum needed to mount two heads and





DREAM MACHINE

tape lifters on each side of the loop.

The fact that the bottom-of-the-loop rubber idler is in intimate contact with the tape whenever it moves makes possible a unique tape-counter system. On the normal audiophile recorder, the counter actually registers only the number of rotations of the supply or take-up reel, and, as this varies with the amount of tape on the reel, the numbers bear no discernible relation either to tape footage or to actual playing time. Moreover, I have yet to find a tape counter accurate enough to locate exactly an editing marking or the beginning of a piece of music in the middle of a reel, since there is always a certain amount of slippage between the tape counter and its drive belt. So, rather than depend on mechanical drive, I decided to have the rubber idler on the SR-1 generate a series of pulses as it turns. These pulses, which correspond to the actual inches of tape passing through the loop, are then used to trigger an electronic digital tape counter calibrated directly in minutes and seconds for any one of the recorder's speeds. The four-digit counter appears between D2 and D3 on the drawing, and below it can be seen a second counter, whose function will be described presently.

When one splices together a number of portions of different live "takes" of a piece of music so as to produce an error-free performance, the only way to determine the playing time of this end result is to rewind it and play it through against a stop-watch. But with the SR-1, precisely because the digital-clock mechanism is operative whenever the tape is in motion, one can set the counter to zero and for reverse indication and thus time the final recording exactly during the high-speed rewind.

The clock counter has still another convenient function. Suppose the section one wishes to hear occurs sixteen minutes and thirty-seven seconds into a given side. One can simply set the second counter to this figure and push

the fast-forward button. When the tape reaches the desired spot, the recorder will come to a full stop, pause a moment, and then go directly into the play mode. This kind of automated control depends not only on the clock counter, of course, but also on the incorporation of a logic circuit somewhat similar to that used in the Crown 800 Series recorders. The solenoids which actuate the various functions are not directly operated by the seven large push-keys (they may be seen along the top of the panel in Section D), but are controlled instead by computer circuits that insure that no destructive commands will be obeyed. Thus, for example, if one is in fast-forward mode and presses the play button, the machine comes to a complete stop first and *then* goes into play. Again, pressing the rewind button has no effect when the transport is in its record mode. Pressing the STOP control (the central push-key at D2-D3) applies a voltage that tends to "freeze" the rotation of each of the reel motors in proportion to their rotational momentum, diminishing to zero when both reels are stopped, and leaving the tape limp in the guides. Similarly, a "start" command temporarily applies an extra voltage to the take-up motor, quickly diminishing to regular take-up force after the tape is in motion.

The editing facilities provided by most audiophile recorders have always been a source of considerable annoyance to me, so I resolved that my ideal tape deck would not be lacking in this respect. Together with many professional recordists, I have found the EDITall splicing block the most accurate splicing aid available, so one is mounted directly on the tape transport (E3-E4) in such a way that the reels do not have to be removed from the machine for editing. A special EDIT button (D4, bottom center) is included among the transport controls, and this (1) releases the reel-braking system so that the reels can be shuttled back and forth manually, (2) holds the tape against the heads so one can find the exact point at which to make the editing cut, and (3) overrides the automatic tape-break shut-off so it isn't accidentally actuated while the reels are being jockeyed manually.

Two additional editing conveniences are also included on the SR-1. First, when the exact spot for an editing cut has been determined, depressing a small button scribes a thin wax-pencil mark on the back of the tape, eliminating the bother of removing the head covers and trying to mark the tape against the playback head or an auxiliary post. Second, as it is frequently necessary after making the first editing mark to pass through a considerable amount of tape before reaching the section to be joined to the first part, a SPEW button is incorporated among the transport controls; this "plays" the material to be removed directly into a waste basket while leaving the take-up reel motionless. All these special controls are located beneath the push-key strip at D3 and D4.

Slightly warped reels are among the most universal of

the tape recordist's grievances. The "tic" made by a warped reel flange as it brushes the edge of the tape on each revolution not only creates an audible disturbance, but it tends to introduce speed irregularities and may even damage the tape physically as well. On high-quality transports the reel turntable height can almost always be adjusted, of course, but this is normally a cumbersome task. Often it involves removing the top cover of the deck, and in any case it requires the jimmying of an Allen-head wrench into hard-to-find set screws, and so can hardly be undertaken during the actual playing of a tape.

If I were willing to stop the deck in order to correct for a warped reel, the mechanical problems would be relatively minor. But to change turntable height while the tape is moving, even by so little as an eighth of an inch or so (reels warped inward more than this will brush the tape no matter what, since their flanges will come closer together than the width of the tape), calls for a novel approach.

The reel spindles, to which the turntables must be rigidly mounted, are actually extensions of the motor shafts, and must themselves remain absolutely perpendicular to the die-cast transport frame. But though the whole reel motor-turntable assembly is ordinarily bolted directly to the frame, on the Starksonics SR-1 it is mounted instead within a precision worm-gear rack and pinion drive. The turntables can then be raised and lowered by rotating the small knobs just below the reels on the tape transport without jeopardizing any of the needed rigidity of the reel-motor mounting.

THE ability to record and play tapes in the new four-channel-stereo format was clearly a necessary design objective for my ideal audiophile recorder. On the other hand, most tapes will continue to be made in the conventional two-channel quarter-track configuration for some time to come and, of course, I wanted to be able to record and play these back in either direction as well. As I have indicated, however, to minimize flutter and maximize tape-to-head contact, there are only four head-mounting places within the SR-1's tape loop. Moreover, to achieve absolutely top-quality results in making two-channel "master" recordings, one should always employ a half-track rather than a quarter-track format. Obviously, however, there simply isn't room in the SR-1 for all those heads at once. (The "normal" four-channel stereo head configuration for left-to-right tape flow is erase, record, play, record. This means that for recording in reverse, one must use virgin or bulk-erased tape—which is good practice for recording in *any* direction.)

Tape heads are changed in typical home decks only when they are worn out, for the process normally involves hours of precise adjustments. With professional recorders, on the other hand, one must routinely be able to change track formats in a matter of minutes. This capabil-

ity is achieved by aligning all the heads and guides for a given configuration on a highly rigid plate that is then screwed onto the transport as a module. This is the solution employed in the SR-1, whose different head-assembly plates require only three screws for removal, and contain plugs that automatically connect the heads to the proper section of the tape deck's electronics.

The four-channel electronics for the SR-1 are contained in a separate unit within the control panel beneath the transport. Dolby "B" noise reduction circuitry, which may well become a standard feature in audiophile equipment in coming years, is, of course, incorporated for all channels (see C3 and C4), but many of the facilities may, at first glance, seem rather complex and unconventional. Thus, in the area of B1 and B2 on the control panel is a series of slider-type controls (their scale markings read directly in decibels) for level adjustment of a total of eight different inputs. Each input has a small rotary switch that sets its sensitivity (gain), matching it either to a "line-level" source (such as an FM tuner or another recorder) or to any of four different microphone-output levels. Above each of the slider controls is a series of four independent push-on, push-off buttons. If none of these is depressed, that input is completely removed from all subsequent circuits. Depressing one button assigns the input in question to a particular channel. Pushing in buttons Nos. 1 and 3 of a single input will feed it simultaneously to both of the front two stereo channels, "centering" a soloist being picked up by that input's microphone. In this way, any of the eight inputs can be assigned to any, all, or none of the four channels, and all inputs can be mixed simultaneously in any combination. All push-buttons are of the type that light when on, and all inputs employ the very lowest noise circuitry available.

From the input controls one proceeds downward to the four master-record controls (A1), whose sliders are arranged so that one can fade down all channels smoothly and simultaneously with the fingers of one hand. Above each of these is the usual red record-interlock button for that channel, plus a second button marked SEL-SYNC. When this button is depressed, no recording (or erasure) on that channel can be made, and that channel's portion of the record head is temporarily switched into a playback section instead. This permits, though of course on a somewhat smaller scale, the kind of multi-track recording which is used today to make most rock records. Suppose, for example, that one wanted to record all four parts of a quartet by himself (I include the larger supposition that there is talent enough to play all the instruments). On a conventional three-head recorder one would start by recording the first part on track one. Because of the time delay between record and playback heads, however, adding the second part would mean putting on headphones and re-recording track one, together with the second part, on track two, for otherwise the two parts would not be

synchronized. By the time one got to the fourth part, on track four, track one would have been re-recorded three times, adding a certain amount of hiss, wow, flutter, and distortion each time! But, by temporarily using a portion of the record head for playback purposes over the headphones, all four tracks can be laid down, one at a time, without the re-recording of any of the existing channels. That's the advantage of using a Sel-Sync system.

Headphones, of course, are also used to monitor either the input or the output signals of the recorder, depending on whether the four centrally located piano-key switches (A2, top) are set to "source" or to "tape." Even here some refinements have been added. There are two front-panel stereo headphone jacks, fed by four low-wattage monitor amplifiers controlled simultaneously by separate clutched volume controls. A series of channel-select buttons grouped around the jacks will feed: (1) any selected channel to both ears of both sets of phones; (2) left- and right-front channels separately to both sets of phones; or (3), if all four channel-select buttons are simultaneously depressed, the two front channels to phone jack No. 1 and the rear channels to jack No. 2. For those occasions when one might want to play a tape on-location through speakers, the headphone monitor amplifiers will drive efficient or self-powered monitor speakers plugged into the phone jacks. The controls and jacks are all clustered around the on/off switch at A2 and A3.

Playback is normally accomplished through an external component system, however, and here the levels are controlled by four master playback sliders (A4). Above each of these is a muting pushbutton, lest one accidentally hear side two of a conventional quarter-track stereo tape backwards over quadrasonic components. For playback or mixdown of four-channel tapes into a two- or one-channel format, additional rotary switches are included that permit assigning any of the four playback channels to any of the four possible recorder outputs.

A number of recent high-quality decks have a switch that changes the record-bias level to suit either standard or "low-noise" tapes. For optimum results, however, different tape types and brands require not only a change of bias current, but an adjustment of record equalization and VU-meter calibration as well. Thanks to multipole relays and reduplicated sets of internal adjustment controls, all this can be accomplished by a single front-panel switch (B4, bottom) that instantly selects the optimum conditions for any of four different tape types: standard formula, low-noise, chromium dioxide (Crolyn), and the low-noise/high-output formulas.

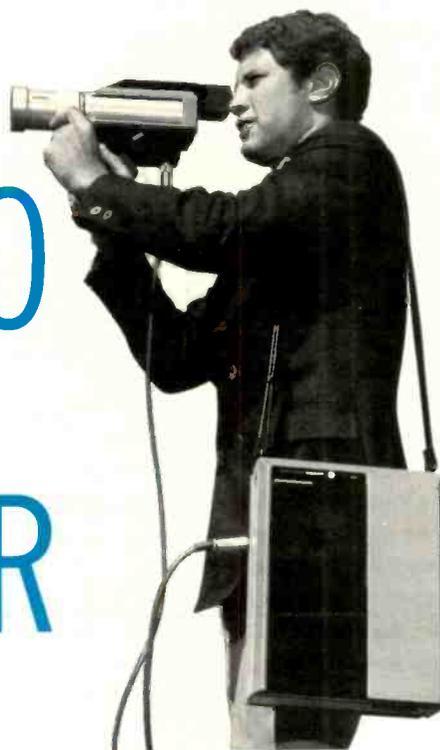
Obtaining extended frequency response has always been a problem in tape recording, although improvements in tapes, heads, and electronics have brought us to the point where even relatively slow speeds are often "flat" throughout the audible range. But though I'm not much interested in making tapes for bats, whales, or porpoises,

when I arrive on location for a live recording I do want to make certain that the jouncing of the machine in the car, together with possible uncertainties in the line voltage available, won't materially affect the delicate frequency-response adjustments I made on the recorder at home. For this purpose the SR-1 contains a built-in test-tone generator whose multiple switched frequencies, controlled by a single knob (B3, bottom), check overall response from 50 to 15,000 Hz (and provide the level-calibration signals for the Dolby circuits) on all channels.

THE *pièce de résistance* of the Starksonics SR-1, however, is its unique level-monitoring system. Mounted as a separate assembly slightly above eye level, this futuristic-looking strip of indicators gives an immediate reading of four switch-selected functions on each of the four channels: bias-current level (which is adjustable from the front panel through the small knobs at B3 and B4, top), record-input level, calibrated tape-playback level, and actual playback level (which depends, of course, on the settings of the playback controls). This indicator panel incorporates four standard professional VU meters, arranged so that channels one and three (the front channels in quadrasonic recording) read pointer-to-pointer, as do rear channels two and four. Since VU meters show only average signal levels and cannot accurately respond to instantaneous peak levels, however, two five-inch cathode-ray oscilloscopes have also been included. These are driven by logarithmic amplifiers so that the height and width of their graphic display is calibrated to be directly proportional to the decibel levels of the signals. By making the left channels deflect the scope beams vertically while the right channels spread the traces horizontally, one finds that properly recorded four-channel stereo creates two "scrambled-egg" patterns on the screen. The scopes display distortion-producing levels by squaring the traces at their edges, and a channel that is out of proper phase shows up by deflecting dominantly monophonic signal components diagonally from upper left to lower right instead of the correct upper right to lower left.

This description of the Starksonics SR-1 has concentrated on its more visible features and cannot, of course, enter into a listing of all the myriad internal adjustments which "tune" its performance to near perfection, nor the on-going solid-state developments that were themselves "impossible dreams" only a few years ago. Is the Starksonics SR-1 the "ideal audiophile recorder?" Certainly not if one defines "ideal" as the philosopher's inherently non-attainable goal or, contrariwise, if one takes "audiophile" to mean "inherently inferior to a professional." Improvements could be made, and additional features incorporated, but my dream machine is up to the state of the art, and it has everything I would like—now. But there's one little problem remaining: how to get it off the drawing board and into production.

Can you see a VIDEO CARTRIDGE PLAYER in your future?



An enormous competitive struggle has already been joined on the propaganda level, but it is not likely that the "new" home video machines will be commonplace for several years

By **ROGER FIELD**

WITH ALL the publicity and promotional fervor they can muster, manufacturers have for at least a year been announcing their latest, cheapest, clearest, cleanest, niftiest video-cartridge machines. And presumably, at some point, they will actually start making some. Their strategy is clear: in order to be in the running when their systems are actually ready, they have to announce not what they have, but what they *intend* to have in a year or two. For most manufacturers, 1972 is the target year to hit the marketplace; more likely, the consumer will start to see a reasonable choice on store shelves by late 1973. And by the end of the Seventies, some believe, producing video cartridges and the machines that play them will be a billion-dollar industry.

What is a video-cartridge system? In the most general terms, it is a player, perhaps about the size of a breadbox, that is connected to the antenna terminals of a TV set. When loaded with a video cartridge, perhaps about the size of a thick paperback book, it will play an hour or so of color or black-and-white sound movies on your TV screen.

Besides the interest of many manufacturers, a number of trends are converging that seem to make the advent of video cartridges inevitable. First, a substantial segment of the population is not served especially well by present television programming, which, for reasons of economics, must use the lowest-common-denominator approach to

ensure high viewer ratings. Purchasable, rentable, and free from all restrictions on content, cartridges can partition off a considerable number of TV viewers with special interests who don't or can't get what they want from programs broadcast over the air. Second, technologies for inexpensive color video cartridges are nearly here. Third, set manufacturers are hankering to give sales of color TV a shot in the arm, and widespread use of video cartridges can do just that by creating a need for one or more color sets in each household. Fourth, the kids who were raised on television will have a nicely packaged product that can be supplied by the schools for playback at home. And fifth, every husband knows well how much easier it is to pop a cartridge into a playback unit that sits on top of the family TV set than to set up a home-movie projector and its bulky viewing screen.

In fact, there are so many advantages to video cartridges that a lot of people may be tempted to rush out and buy the first units that hit the market. That would probably be a mistake, however. Some sixteen (mostly noncompatible) systems have been announced, new ones are still appearing, and everyone knows that there can't possibly be sufficient room in the market for all of them. In other words, wait for the shakeout.

Caution is certainly in order in other areas too. The enlightened purchase of a video cartridge system can be made only by evaluating a whole new set of factors that

have never entered into any previous purchase—not audio tape equipment, not cameras, not automobiles. The most critical of these factors is the incompatibility of the systems. In general, a given player can use only the cartridges made specifically for it, and no others. Thus the potential buyer must realize from the start two things no salesman will tell him: should he subsequently choose to switch to another system, he stands to lose not only the cash invested in his old player, but also the money invested in his library of cartridges, especially if he happens to have picked a system that goes the way of the Edsel. And once he has selected his player, he is locked into the programming supplied for it. This situation is mitigated somewhat by the fact that most of the units can record; nevertheless, it will really pay to look over the list of compatible program material when considering any player.

Another somewhat hidden factor in the choice of one system over another is tape longevity. Every manufacturer will undoubtedly declare that his cartridge can be played many times without appreciable deterioration. But how many? Video tapes are usually more "electrically fragile" (a picture dropout is more obtrusive than a sound dropout), and certainly cost more to program than audio tapes. And given the fact that video tapes have a close and high-speed relationship with the head and must follow an irregular tape path, they are potentially subject to a great deal of wear inside the player. Manufacturers are already boasting of life expectancies far in excess of that available from 16-mm movies. Time will tell.

Finally, in the matter of system selection, comes the necessary question of image quality. In much the same way as critical listening requires a trained ear, proper evaluation of image quality requires a critical eye. Aberrations in the picture can be subtle and easily disguised by judicious choice of the demonstration material.

In video playback (as in audio) there's a trade-off between the tape's speed and width on one hand, and reproduction quality on the other. The manufacturer's key challenge, no matter what kind of tape or film he uses, is to provide the longest playing time in the smallest cartridge at the lowest cost.

For example, some manufacturers have accomplished reductions in tape speed by recording only every other "frame." (A TV set normally shows sixty frames a second.) Upon playback, each frame is reproduced twice to fill in for its missing neighbor. However, image quality suffers; some resolution is lost in the process, and rapid motion on the screen tends to appear somewhat more jerky than in the ordinary TV broadcast picture. An easy way for a potential buyer to evaluate image quality is to watch program material that includes dance routines like those on television variety shows. Such material would give some idea of image resolution in long shots and closeups, make possible a reasonable estimate of color reproduction and naturalness of flesh tones, and permit

detection of jerkiness. For this reason, you will frequently find that demonstrations of new video systems contain unfamiliar movie footage of slow-moving scenes.

Another common ailment is a "fluttering" of the image. This can be quite annoying in sequences in which both the camera and subject are essentially stationary. A simple test to detect this flaw is to hold a pencil against the TV screen; any jiggling is readily apparent when observed against the shadow of the pencil. Even when not seen as a visible jiggling, such a defect can cause eyestrain with prolonged viewing.

LET'S examine some of the systems, their advantages and disadvantages. Broadly speaking, the systems fall into three basic categories determined by the material on which the sound and image are recorded: photographic film, magnetic tape, and unprepared (or uncoated) plastic stock. (In addition, one system that might be included in the last category substitutes for the cartridge tape a thin, flexible disc that whirls around on an air cushion at 1,500 rpm, playing the microscopic grooves of a 12-inch disc for perhaps fifteen minutes. See *STEREO REVIEW*, "The Amazing Video Disc," December 1970.) Systems have been demonstrated using each of the three basic recording materials.

Photographic film is used in the first cartridge system to be announced and demonstrated: CBS's EVR (for Electronic Video Recording). In EVR, video signals are "written" by an electron beam on a specially prepared black-and-white film stock. Approximately 9 mm wide, the film contains two parallel sets of tiny image frames and two magnetic stripes for sound, but no sprocket holes. Operating without the mechanical "gate" of traditional film projectors, the EVR player scans the film optically as it slides smoothly through the "reading" area. Used for monochrome reproduction, a 7-inch EVR cartridge plays either of the two adjacent channels for twenty-five minutes each. Color information can be encoded in the second row of frames, providing twenty-five minutes of color programming accompanied by stereophonic sound. EVR has several important advantages, not the least of which is the fact that the system is actually available. EVR copies can be made economically in small batches—dozens or hundreds. CBS claims the cartridges will outlast 16-mm film by a factor of about eight, and some have actually survived thousands of plays. Color reproduction on EVR stock is considerably cheaper than comparable programming on color film: current prices for EVR custom processing run around \$18 for twenty-five minutes of color (in quantities of two thousand), and that price is expected to fall somewhat when a silver-free "diaz" emulsion is substituted for the present "haloid" emulsion, which contains silver salts. The system also provides a convenient way to stop motion, whereby individual frames can be left on the screen indefinitely without damaging the film. This

feature enormously enhances the educational value of EVR, and permits each cartridge in a single-frame mode to accommodate the equivalent of the complete *Encyclopaedia Britannica* comfortably. There are, however, some disadvantages; dust on the tiny frames appears on the screen as annoying blemishes. The cost of EVR stock, although lower than color film, is not likely to fall as low as that of stock for other systems, which may ultimately prove to be cheaper when manufactured in extremely large quantities. And EVR cartridges are available only in pre-recorded form. Magnetic-tape cartridges, of course, will permit the user to record his own material either off-the-air or directly with a small TV camera, then erase and re-record on the same cartridge when and if he desires. Finally, an EVR player is fairly expensive—\$795 at present—though CBS and a number of manufacturers of other

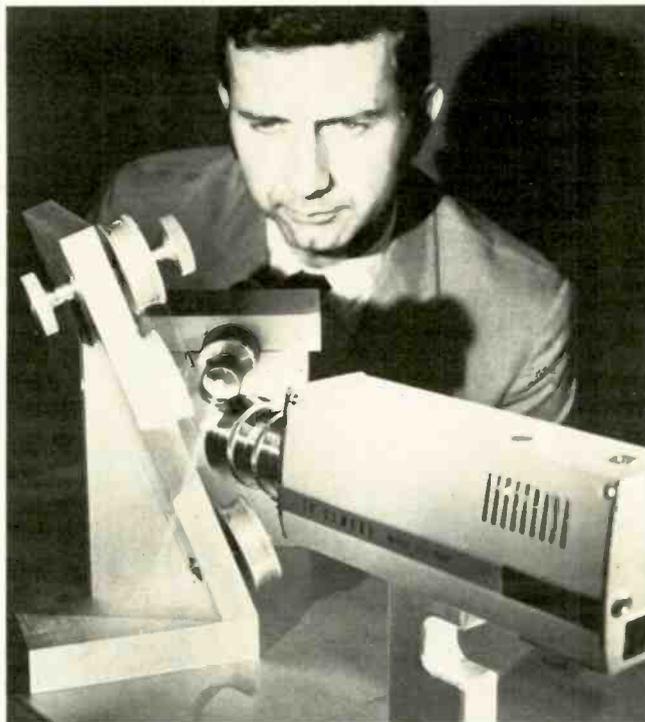
systems are projecting future prices of half that and less.

A more conventional film-based system has been developed independently by two companies—Sylvania, and a British firm, Vidicord. In both these systems ordinary Super-8 home-movie film can be displayed on the screen of a suitably equipped television set. Sylvania's unit plays color film, but the company has no marketing plans for the system at the present time. The Vidicord unit plays only black-and-white. The key advantage of both systems, of course, is the fact that many users already have films and movie cameras that could be used to shoot films for easy playback. The most serious disadvantage is the cost of color-film stock, which would virtually eliminate the likelihood of prerecorded films.

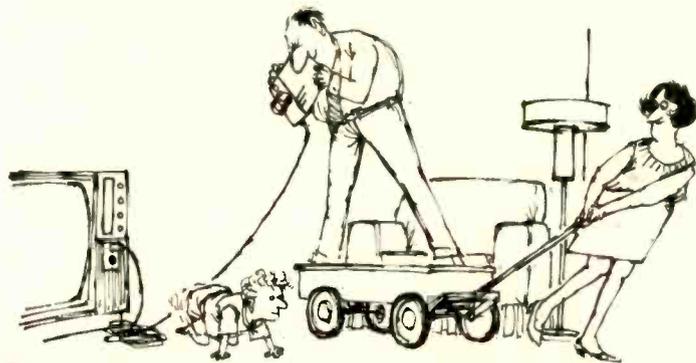
All the video cartridges using magnetic tape have the
(Continued on page 70)



The round EVR cartridge (shown above being loaded into the CBS player) contains special film meant for photo-electric scanning. SelectaVision, still under development by RCA, employs laser scanning of a holographic image embossed on a clear vinyl film.

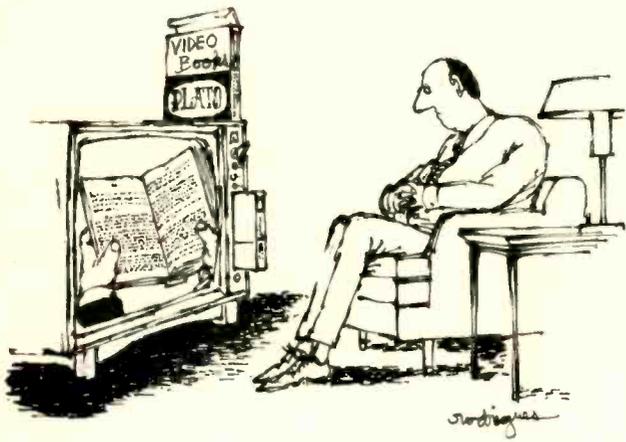


Two of the many competing magnetic-tape systems are the JVC (above) and the Ampex (left). Both units, like all the magnetic-tape systems, permit the user to record programs from a built-in or separate TV set or, alternatively, to record "live" with an accessory video camera. Prerecorded tapes will also be available.



RODRIGUES ON VIDEO





inherent advantage that they are suitable for home recording. Once a manufacturer designs a video tape player, it's not much more difficult or expensive to add TV and video-camera recording facilities to it. A number of manufacturers have announced inexpensive (about \$200) black-and-white vidicon cameras that plug into their cartridge recorder/players. Although most of these systems are designed to reproduce prerecorded color (and some with excellent results), the color cameras are for now prohibitively priced.

Magnetic systems have been announced by JVC, Sony, Philips, Avco, and Ampex, among others. Their advantages include the reusability of tape, the ability (with some units) to record TV programs off-the-air, the insensitivity of magnetic tape to dust, and the possibility of inter-system compatibility. On this last point, a number of manufacturers are gravitating toward either of two cartridges: a European design originated by Philips, or one pioneered by Sony. In January, Sony, Matsushita (Panasonic), and the Japan Victor Company (JVC) announced their intention to market standardized color video-tape cartridges and player-recorders. Further, these same companies are negotiating with Philips, Telefunken, and Grundig in Europe, as well as Toshiba, Sanyo, and Hitachi in Japan, to arrive at agreements that may lead to more extended and even universal compatibility, which is the real challenge. All the magnetic systems have possible incompatibilities between players made by different companies and even between different models made by the same manufacturer. Also, with most magnetic systems, tape-wear problems prevent a single frame from being played indefinitely and some may not permit display of a single frame at all. Generally, magnetic tape cartridges are bulkier than those of the other systems—some contain tape up to an inch in width.

The most unusual video cartridge system from a technological point of view is RCA's SelectaVision. This system uses a recently developed method of image reproduction known as holography. The tape is a plain, uncoated vinyl ribbon. The scene to be recorded is picked up using laser-beam scanning. The picture, in the form of holographic images, is pressed or embossed into the surface of the vinyl tape. Illuminated by the coherent light of a laser, hills and valleys embossed in the ribbon's surface recreate the original scene on the face of a small image-pickup tube like those commonly used in TV cameras. After proper decoding of the color signal, the tube's output is fed to the TV screen through the set's antenna terminals as in the other systems. Though SelectaVision could potentially offer the least expensive cartridges for large-scale distribution of prerecorded programming, the system is still in the laboratory stage and, in many respects, is substantially behind most of the others in development.

When it finally does arrive, SelectaVision will have advantages beyond the low cost of its plastic stock.

Holograms, by their very nature, are virtually impervious not only to dust, but to scratches as well. Unlike a photograph, which has a point-to-point correspondence to the photographed object, "information" about the appearance of a "holographed" object is distributed across the entire frame. So injuring or obscuring one small area has almost no effect on the recreated image. Conceivably, such images could survive on an almost infinite number of plays. In addition, editing could be performed surely and swiftly with transparent mending tape. (Magnetic systems generally require elaborate equipment to match frame-synchronizing signals at the splice.) And the cost of the player, currently targeted at \$400, could drop with time as savings made possible by the swiftly advancing technologies of lasers and vidicons are passed along to the consumer. In a sense, SelectaVision might do for video cartridges what the paperback did for book publishing, provided it reaches the marketplace before another system becomes too firmly entrenched.

ON the other hand, SelectaVision does have disadvantages besides the fact that it won't be here for a while. Recording equipment will probably never be available to the consumer, who will have to buy or rent every SelectaVision cartridge he plays. There is not much hope of coming up with a custom process for producing a single-copy cartridge on special order. And unlike the magnetic systems, SelectaVision offers no hope of intersystem compatibility. Finally, the question of adequate image quality lurks more seriously behind this system than others. RCA is applying brand new technology, one that has not so far been harnessed to provide images for any practical purpose. And, at the only demonstration of SelectaVision ever held, the black-and-white images were not bad—but color was simply awful. And since that early demonstration in September of 1969, RCA executives have declined repeated requests to allow the system to be seen by outsiders, saying only that much of the interference evident in the black-and-white demonstration has been cleared up and that color and sound techniques are being examined and evaluated.

To be sure, nobody now knows which system will be around by the time the expected billion-dollar market for home video cartridges comes flickering into view. About the only thing anyone can now state with any certainty is that by 1973, and possibly a little sooner, people will be dropping some type of cartridge into some sort of player to watch many different things. What is becoming clearer and clearer, however, with each succeeding announcement of yet another nifty video playback system, is that after the expected shakeout of the mid-Seventies a good many customers will be a little poorer for having invested in a system that quickly became obsolete. And some manufacturers are going to be a *lot* poorer for having done the very same thing.



A WHOLE NEW CLASSICAL BALLGAME

In a postscript to last month's examination of the "classical" crisis, a composer-critic suggests a possible alternative

By ERIC SALZMAN

THE crisis in classical music in this country is an aspect of the larger upheavals and changes taking place in American life. There *is* a cultural revolution in progress and music *is* a major part of it, but by and large it is rock that expresses the new aspirations; the classical tradition has come, alas, to be regarded as part of the Establishment.

Young people are impatient. They shuck off the weight of the "excess" cultural baggage of the past. They look inward and to the pop culture for their sources of musical and spiritual strength. The concert halls, the opera houses, the musical/educational institutions all seem remote from their lives and concerns. Yet, paradoxically, there has never been a generation more involved with music. Young people are not only the audience of tomorrow, they are the audience of today—but they are not listening to classical music.

The mass public has, of course, always been interested primarily in pop music. What is new is that rock, in all its new and sophisticated forms, has become the music of the "leaders" of a generation and more than a generation. Ten years ago, tastemakers among college students were listening to Vivaldi, Renaissance music, Bach, or late Beethoven. Today their counterparts listen to Hendrix or Zappa. Today's college students dig Dylan or the Airplane and even play and compose themselves. Yesterday's pop musicians came up out of the ghetto; today's rock stars are middle-class drop-outs.

Yet, in spite of all this, I do not believe that today's interest and involvement in rock music implies a put-down of classical music itself. On the contrary, what is being rejected is the intellectual music-appreciation mystique and the social snobbery and elitism that has surrounded too much of the production of classical music in this country. Unfortunately the baby is going out with the bath water.

The history and some of the present sponsorship

of classical music in the United States is not such as to inspire a great deal of confidence. The old story of classical music as a rich man's plaything, as an item of conspicuous consumption, as a quick means for the newly rich to get a little Old World class is not entirely over. Classical music has only too often appeared to be the province of glamorous foreigners, its composers equally foreign and suitably dead. Things have changed less than we like to believe. The picture at Lincoln Center today is little different from what it was one hundred years ago at the Academy of Music. We are still building temples and mausoleums of music rather than truly living culture centers. American artists and composers still do better abroad than at home. The repertoire and the institutions of classical music remain as remote as ever from today. The image of classical music is still that of the aristocratic "maestro" with 110 wage slaves, the opera house with its foreign-language mystique and ostentatious display of wealth, the ultra-formal ritual of the recital, the glorious cadenza and the high C, the music-appreciation racket with its pretensions to tell people what they *ought* to like, the masterpiece/museum approach with its "great" music and "great" artists now perpetuated by the record companies with their handful of repertoire works recorded over and over again by star performers.

Much of this goes against the native American grain and none of it has anything to do with a true community culture, classical or otherwise. Culture is not bricks and mortar, steel and glass; it is not imported high-price artists or conspicuous consumption. It is the natural expression of the life of a community and its people, manifested through its artists, its creators, its artisans.

It is exactly in this area that I believe that the people in charge of classical musical life in this country have missed the boat. Not very long ago there was a great deal of talk about a cultural explosion. Well,

there has been a cultural explosion, but it wasn't the one the critics had in mind. There has been a cultural revolution of astonishing dimensions, and it is one that goes right to the core of American values and life-styles. The alternate culture that has been developing from this is—both in its best and worst aspects—quite authentically American, and one of its most remarkable aspects has been the widening and deepening of pop music in the direction of becoming a true art form. And, most important, this art form has developed through the integral use of the electronic media.

Nevertheless, I do not believe that this movement is negative or exclusive in character. Classical, traditional, and contemporary Western as well as non-Western musics will, without the extreme necessity of pigeon-holing and pedantic labeling, continue to flow in parallel and intermingling streams. In the new electronic culture, classical music, both in its older and more contemporary forms, can continue to play a major and formative role.

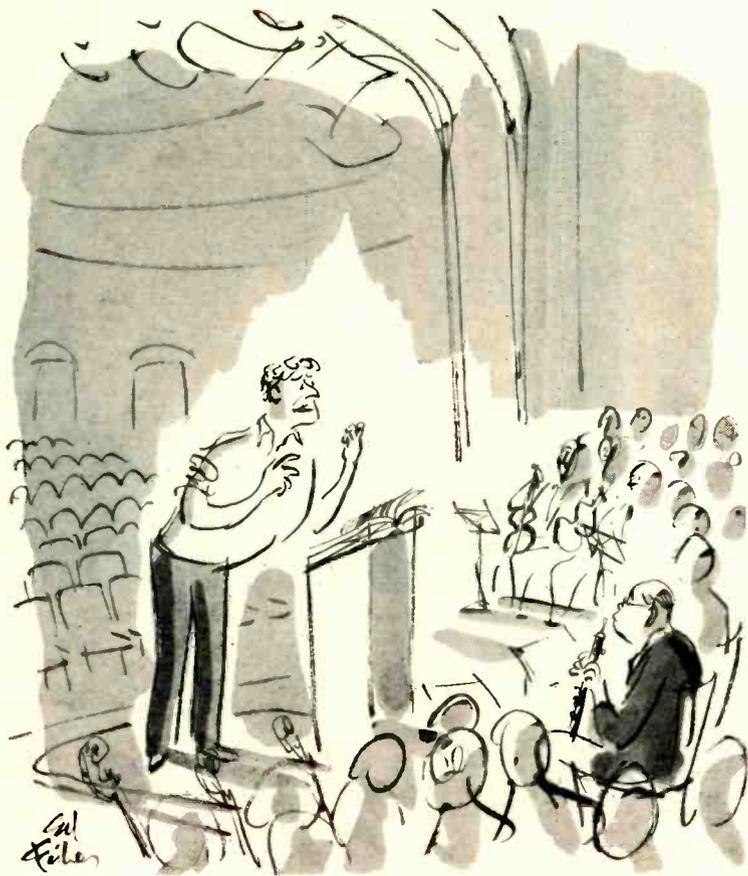
In 1968, WBAI-FM, the noncommercial, listener-supported Pacifica station in New York, decided to deal with just these questions by changing itself from a *re-producer* into a *producer* of musical culture. The idea was to turn the occasional "live" studio concert into a regular, large-scale, late-night, informal, music-making community event called The Free Music Store. Many kinds of music and music-making were involved, but the core of it was classical chamber music. Remarkably enough, large audiences of the young (and the not-so-young) came and still come together to listen to the best young (and not-so-young) artists performing. No one comes for any reason except to hear the music, and the level of concentration and involvement has been remarkable, on a plane of communication that must once have been common in classical music but today seems artificially restricted to pop. Some of the most remarkable artists come back again and again, giving up lucrative gigs to have the chance to say what they want to say musically and feel that they are communicating as well.

In short, where there are no barriers, classical music can become part of the "alternate culture." What has been rejected are the institutions, the apparatus, the mystique, not the music itself. A significant segment of the new audience (though perhaps not its teeny-bopper component) is more into music and sound and therefore more open to *any* valid and expressive kind of musical experience than the print-oriented generation that preceded it. Electronic technology has made their world into a "global village" and all kinds of messages are getting through. Indian music and electronic music already have a major

place in the new culture and so does multi-media and music theater, which are the areas of my own creative work. I have a traditional musical background, and although I often use pop elements in my work, I am generally considered to be a contemporary composer of "classical" music (whatever that means). I have, for a number of years, worked outside the traditional concert and operatic media. Indeed, this has hardly been a matter of choice since it is in the new culture alone that I have found an audience, involvement, feedback, support . . . in short, the essentials of a living culture.

PERHAPS, after all, it is in the nature of things that traditional modes and means will pass away. In spite of popular mythology, music has always been the least universal of all the arts and the first to die when the social conditions which gave it birth have passed away. The artificial prolongation of the whole "classical" tradition—after all, a very recent phase of Western music and over two thousand years more recent than classical art—was not altogether a healthy situation. But I do *not* believe that we should allow the best of our musical traditions to die; in fact, we have a better chance than any previous culture to preserve and renew the best of the past. Museums such as "The Metropolitan Museum of Opera" will help, but only if they are changed from the elite institutions they have become and evolve instead into institutions that can attract and reach young people. But it is media technology that offers us our best chance. All-classical radio stations may become rare, but I see no reason why European music of every period should not figure in the programming of our better stations along with the music of non-Western cultures and the best new music, of whatever category. Classical music should be played together with other kinds of music—sometimes as part of the same concert—without the cultural baggage of the categories and without apology. These juxtapositions, in themselves stimulating, have never failed to elicit response and involvement. And this situation is, in itself, producing feedback in pop music. I have never known a really good pop musician who didn't have the deepest respect and sometimes even love for classical music, and the involvement of the Beatles, Zappa, Pink Floyd, Mandrake Memorial, and many others with classical and contemporary techniques and sounds helps make those kinds of experiences known and relevant to a whole new generation.

Gimmicks like "concertos" for rock band and orchestra are of virtually no use at all. Taking the orchestra out of the concert hall and finding ways of making its music more available to the people is a far more important idea. Record companies could be



Ed Fisher © 1965 Saturday Review

"... Now, oboe, I want a squawk—a great, cosmic squawk against injustice, the tensions of modern life, man's inhumanity to man, estrangement. . . ."

leading the way, but of course they are not. Part of the trouble here can be traced back to the artificial expansion of the classical record business not very long ago, and part to the rigid categorization and short-sightedness within the companies themselves.

The statistic now usually quoted is that classical record sales have declined from twenty per cent to five or perhaps four per cent of the market. It is not made clear whether this represents an actual decline in the number of records sold or is merely a result of an expanding total market combined with the trend toward lower classical record prices. And these figures do not specify whether or not they include record-club sales (apart from the label-connected clubs such as Columbia), which have captured a significant part of the market. There are many questions and few answers.

In fact, the crisis of the classical record business is merely one aspect of the general over-expansion of the total record industry in a period of economic difficulty. The losses caused by senseless overproduction—on the pop as much as on the classical side—can only be recouped by quick killings, and only a big pop success can supply that. At the same time, the small- and medium-sized companies are being absorbed into huge corporate conglomerates which, by their very nature, are interested only in big, quick

profits. A bubble-gum industry geared to the quick, easy profit replaces independent, adventurous judgment and taste. The small profit margin is a thing of the past, and art has once more given way to business.

The category "classical" itself is a meaningless catch-all. Is new and relevant non-pop that grows out of and interacts with the new culture to be considered "classical" music at all? This is more than a technical problem. To the record rack jobber and distributor, my own *Nude Paper Sermon*, as well as Gregorian chant, Vivaldi, Schubert string quartets, Von Suppé Overtures, and Cliburn's Greatest Hits are all in the same category.

In records alone, of all the major media, there is no alternative—no underground, no educational or cultural outlet. Well, there it is, waiting to be born: Alternate Culture Records, creating new works for the medium and mixing early and classical, ethnic, contemporary and electronic with high quality folk/pop/rock and jazz. No hardening of the categories; the old labels and pigeonholes have become essentially meaningless. Just music for the ear and for the head, expressed in terms of the medium itself and produced, cooperatively and collaboratively, by the artists themselves by and for—as part of—the new culture. Is this a call to action? You bet it is!

How to use impedance, sensitivity, and frequency-response figures in

Solving the Tape Recorder-

SHOPPERS for high-quality home tape recorders occasionally find it puzzling, if not downright annoying, that most recorders priced above about \$300 do not come with microphones. It seems paradoxical that the more expensive a recorder is, the less likely it is to have microphones, but there is a good reason for this. A pair of microphones worthy of the recording capabilities of a machine in that price range and higher would add perhaps \$60 to \$100 to the price. And yet, having paid the extra money, the recorder owner might later discover that the characteristics of the microphones included are not suited to his specific recording needs. Thus, the new owner of a quality home or professional machine must choose his own microphones and related accessories.

Just as in selecting any other fairly complex tool, one must begin by learning the terminology and the criteria for making a choice. There are three types of microphones commonly used in sound recording: the *ribbon* and *dynamic (moving-coil)* microphones, the *capacitor (condenser)* microphones, and the *crystal* and *ceramic* microphones. (A brief description of their operating principles is given in the box on page 77.) Ceramic and crystal microphones are not generally used for high-quality recording because of the practical difficulties in using long cables with them, and also because of the high input impedances they require for good low-frequency response. Most of this discussion will therefore be concerned with

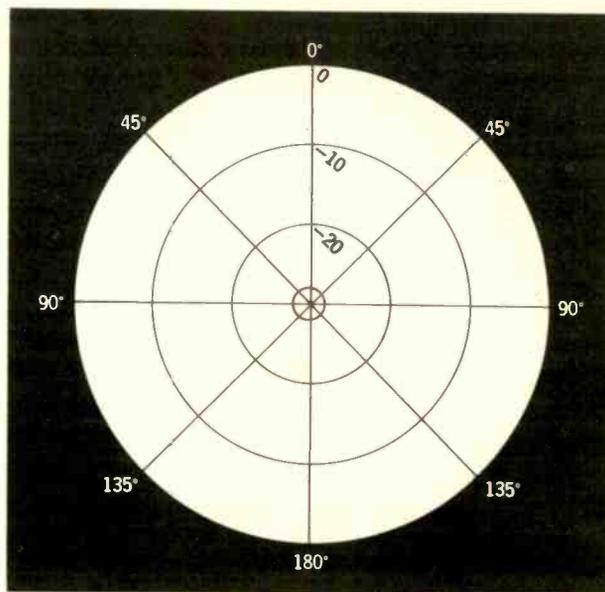


Fig. 1(a). Polar diagram of the ideal non-directional response of an omnidirectional microphone. The microphone, symbolized in the center, is equally sensitive to sounds from any direction.

the uses and characteristics of capacitor, dynamic, and ribbon microphones.

The capacitor microphone was for many years a rather rare breed; the best designs came from Europe, although one American design was used in broadcasting during the early 1930's. They have been among the most expensive microphones—several studio models have price tags of about \$400—but more recently much less expensive models have become available, some for as little as \$30. Capacitor microphones are known and loved for their exceptionally wide, flat frequency response and very low distortion at high sound levels. Most of them include some form of electronic circuitry built right into the microphone housing.

Dynamic microphones generally offer the best combination of low cost, high quality, ruggedness, and versatility. There is an enormous variety to choose from, at retail prices from under \$10 to over \$200. There are far fewer models of ribbon microphones, and they tend to be expensive (\$100 and up). Somewhat delicate, they are generally used indoors, where wind will not slap the ribbon around, causing rumbling noises and possible damage. They are capable of superb fidelity and are employed in many commercial recording studios. In its directional properties, the ribbon mike is a special case. It is inherently bi-directional when unmodified, but several models of the ribbon type are unidirectional (cardioid),

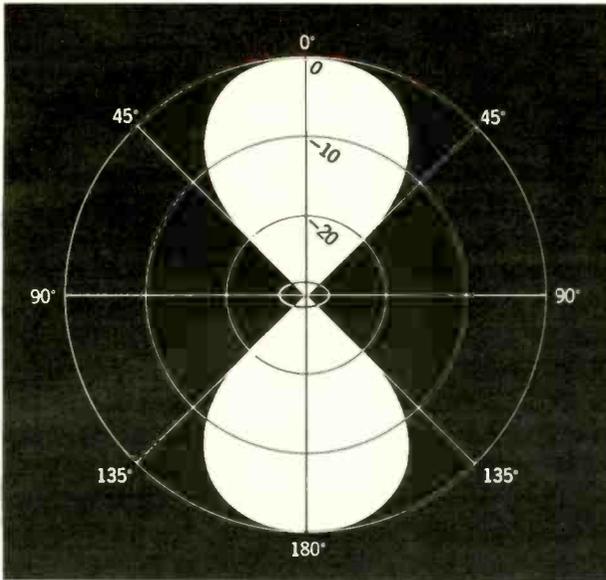


Fig. 1(b). A bidirectional microphone responds to sounds coming from directly in front or behind, but not from either side. The concentric circles are arbitrarily calibrated in output levels.

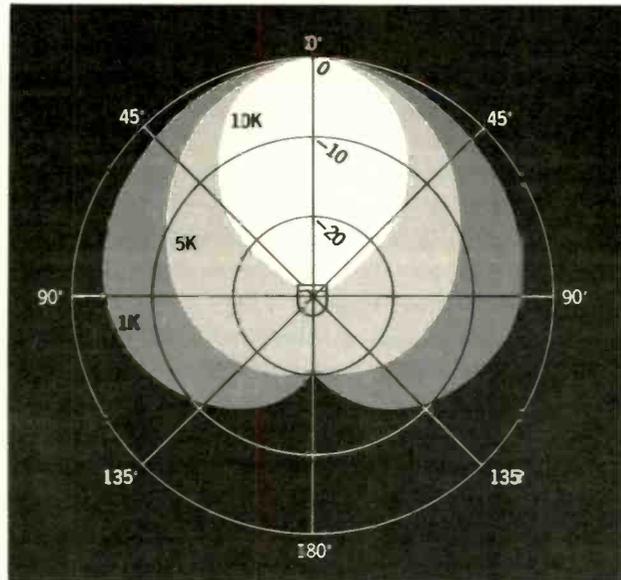


Fig. 1(c). A unidirectional (cardioid) microphone is intended to be aimed at the desired sound source. As with other types, its angle of acceptance narrows as the sound frequency increases.

Microphone Equation

By ROBERT SCHULEIN
Senior Development Engineer
Shure Brothers, Inc.

and at least one offers a choice of nine directional patterns, ranging from omnidirectional to cardioid.

The most important functional distinction among microphones has to do with their directional characteristics—their relative sensitivity to sound energy arriving from different directions (see Fig. 1). Microphones can be *omnidirectional* (or nondirectional), which means that they respond about equally well to sounds arriving from anywhere in the space around them. They can be *bidirectional*, responding most strongly to sound arriving from opposite directions along a particular axis, or they can be made *unidirectional*, responding most strongly to sound from a particular direction. Unidirectional types are usually called *cardioid* (from the Greek *kardia*, heart) microphones, named for the heart-shaped figure produced when their directional response is plotted on polar-coordinate graph paper as in Fig. 1. Often these microphones are simply rather loosely called “directional.”

Unidirectional microphones are often further grouped roughly according to the degree of discrimination they offer between sounds arriving from the front, sides, and back. Microphones that have a relatively narrower angle of acceptance than the basic cardioid are sometimes called *super-cardioids*. Specialized highly directional microphones with an exceptionally narrow pattern are sometimes spoken of as *hyper-cardioids*.

One thing that makes a microphone good—and expen-

sive—is the attention given to making its directional pattern uniform over as wide a frequency range as possible. But why do we need microphones with differing directional characteristics in the first place? The answer lies in the special conditions each recording session presents. When the recordist has complete control of the recording environment and can isolate it from unwanted and distracting sounds, an omnidirectional microphone serves as well as any, and is perhaps more convenient to position for good pickup of all the performers. But when a specific background sound (such as that of the audience) is undesirable, some form of directional microphone that can be set to respond to the performers only and not to background disturbances is necessary.

If the undesired sound originates at a 90-degree angle to the desired sound, a bidirectional microphone would be the logical choice. Such a microphone would work well between two sound sources facing each other: for example, two singers opposite each other, or people on both sides of a conference table. To cope with a situation where the undesired sound is at 180 degrees with respect to the desired sound, some form of unidirectional microphone is needed. The super-cardioid and hyper-cardioid characteristics offer an advantage over the cardioid in sound rejection up to about 130 or 140 degrees off axis, for they have a narrower angle of acceptance in the front. On the other hand, the cardioid provides better discrimi-

nation against sounds arriving directly from the rear, because of the fact that the super-cardioids do have some rear pickup. The cardioid's polar characteristic also offers another advantage in that the output level does not drop off as rapidly when the sound source is not directly in front of the microphone. This characteristic is desirable, for example, when miking a performer who keeps changing his position in relation to the microphone, or if you are trying to record a two-man interview by pointing the microphone back and forth.

When any directional microphone is used, it should be kept as far as possible from large sound-reflecting areas such as walls. This will prevent its picking up undesired sounds reflected toward its most sensitive axis. As an example, consider a singer with his back against a wall and facing an undesired source of sound—such as a noisy audience. Audience noise bounced from the wall would appear to the microphone to be coming from the same direction as the singer's voice. In general, the best way to minimize unwanted background noise is to mike the subject close. However, bringing a cardioid mike any closer than about 10 inches will often produce a boomy, breathy, over-intimate sound quality that is not always desirable. With a directional mike it should not be necessary to work closer than a foot or so at most.

In musical recordings, picking up a certain amount of room reverberation helps to make the sound quality more natural. With omnidirectional microphones, a closer microphone-to-source distance is required than with unidirectional microphones for the same reverberant pickup. The choice is a matter of personal preference and the microphone-distance restrictions for the particular recording situation. If you need to isolate, say, a voice and a piano from each other for maximum separation (by no means always a good idea), a pair of cardioid microphones would be the logical choice.

Besides considering the microphone's directional pattern, a prospective purchaser has to take into account the factors of *impedance*, *sensitivity*, and *frequency response*.

Impedance

Put simply, *impedance* is opposition to the flow of electric current, and all circuits and devices have some amount of it. Impedance differs from resistance in that it varies with frequency. The theory behind this statement need not concern the recordist, but it should be understood that (1) if the output signal of a microphone is to be recorded without excessive signal loss at any audio frequency (or all of them), the input impedance of the tape recorder's microphone preamplifier must match the requirements of the microphone, and (2) low-impedance input and output circuits tend to pick up less hum and other noise than high-impedance circuits.

Whenever a dynamic, ribbon, or capacitor microphone is connected to a tape recorder, a fraction of the signal

generated by the microphone is not delivered to the recorder. This occurs because the tape recorder has a certain input impedance (almost always purely resistive), and when signal currents flow from the microphone, there is a small voltage drop across the microphone's internal impedance. To minimize this loss, the input impedance of the tape recorder should be as high as possible, and preferably three or more times greater than the output impedance of the microphone. When ceramic or crystal microphones are connected, however, the situation is somewhat different. These behave like a voltage source in series with a relatively small capacitor. Connecting them to the resistive input impedance of an amplifier makes, in effect, a bass-rolloff network. In order to achieve usable low-frequency response, an input impedance of 1 megohm or more is often needed. Recorders with solid-state electronics seldom have input impedances that high.

Microphones other than the crystal and ceramic types can be grouped according to whether they are low-impedance or high-impedance. Almost all mikes costing more than about \$60 are low impedance. They cover a range from 50 to about 250 ohms (the values are nominal, and the exact figure is not important). These mikes (sometimes called "low-Z," Z being the mathematical symbol for impedance) are used all over the world for broadcasting, serious recording, and high-quality public-address work. This is not because the microphones are inherently better, but because low-impedance microphones can be used with cables that run for hundreds of feet without serious loss of high frequencies and without hum pickup.

Shielded microphone cable acts as a shunting capacitor across a microphone's input, and, depending on the cable length and microphone output impedance, noticeable high-frequency losses may therefore occur. Generally, if the output impedance of the microphone is low (600 ohms or less), several hundred feet of cable can be used with negligible high-frequency loss. On the other hand, if the output impedance of the microphone is high (20,000 ohms or more), cables should be limited to 15 or 20 feet in length, particularly when recording music.

To avoid electrical-noise pickup, it's important to choose the correct type of mike cable. A low-pitched hum is generally produced by electromagnetic induction from such devices as power transformers or power lines, whereas buzzes are electrostatic in nature and created by such things as fluorescent lamps or neon signs. The pickup of electromagnetic signals is generally not a problem with high-impedance microphones, and a good grade of microphone cable with a braided mesh shield will effectively eliminate electrostatic pickup. However, when long cable runs are necessary, low-impedance microphones are used to avoid high-frequency losses, and the amount of magnetic hum pickup compared to signal level consequently increases. To cope with this problem, balanced microphone lines are used. (A balanced line consists of a

shielded cable with *two* inner conductors, as opposed to an unbalanced line, which is the single-conductor shielded cable used for high-impedance microphones.) The hitch is that most home tape recorders, even the good ones, are not equipped to accept low-impedance mikes directly, but require the addition of a matching transformer at each mike input. The transformer serves two purposes: the first is to cancel out hum picked up by the microphone cable, and the second is to step up the output of the microphone. In general, therefore, one should use a short length of single-conductor shielded cable with high-impedance microphones, and a balanced line with low-impedance microphones. Those tape recorders that are designed for balanced low-impedance microphone lines have a built-in matching transformer that permits direct connection.

High-impedance dynamic microphones usually have ratings of 20,000 to 50,000 ohms, and can be plugged directly into the input of any recorder or amplifier not specifically equipped for low-impedance operation. With the gradual takeover of solid-state low-impedance input circuits, microphones have been redesigned for nominal impedances in the 1,000 to 10,000-ohm range. These neither-fish-nor-fowl mikes can only be called "medium" impedance. They are usually inexpensive (under \$30),

and can often be used successfully with high-impedance mike inputs while still permitting the user to run fairly long mike cables (up to 30 feet or so) without high-frequency loss or hum pickup. Their cables are never of the balanced type, but that need not be a disadvantage. This category seldom includes *very* high-quality mikes, though some are quite good.

Sensitivity

The *sensitivity* of a microphone refers to the electrical signal output across its terminals produced by a specified sound pressure at its diaphragm. The definition is simple enough, but unfortunately sensitivity specifications are rather confusing. At least **two** different references are in common use, and in addition the published figures for many microphones are incomplete and therefore valueless. A valid sensitivity specification must include: (1) the sound pressure used to "drive" the microphone, (2) the magnitude of the output voltage or power, and (3) the microphone's output impedance.

The unit of sound pressure used in microphone specifications is the *microbar*. One microbar is a sound pressure level of 74 dB above the threshold of hearing (0 dB), and approximates the average loudness of conversational

MICROPHONE OPERATING PRINCIPLES

FOUR types of microphones, shown in very simplified form above, are in common use. The first type (A) has a diaphragm mechanically coupled to a piezo-electric ceramic or crystal element, which when flexed or stressed generates a voltage. In response to sound pressure, the diaphragm movement produces the flexure and generates a voltage that varies in accordance with the variation in sound pressure (loudness) and frequency (pitch) of the impinging sound.

The operating principle of the most popular type of microphone—the dynamic or moving-coil shown at (B)—is fairly simple to describe. The action can be considered the converse of the way a loudspeaker operates. The microphone diaphragm, responding to the impinging sound waves, shuttles back and forth,

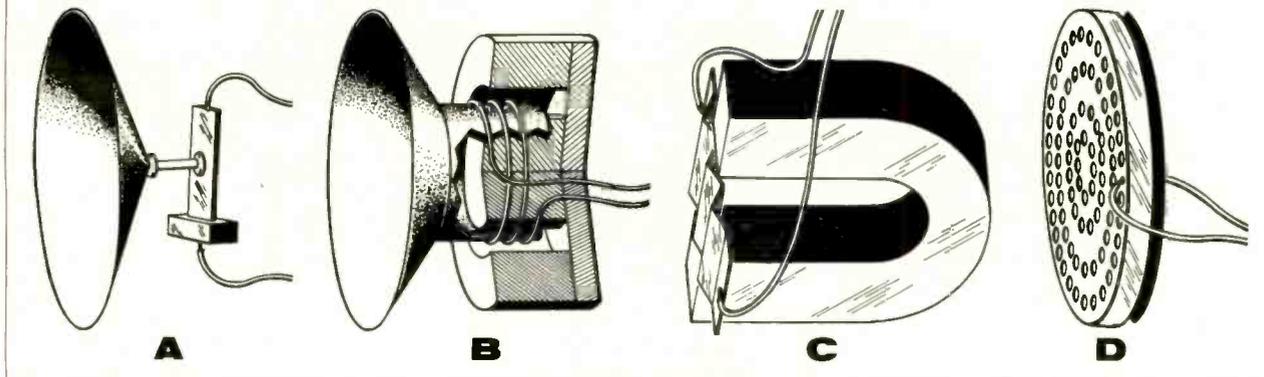
carrying with it a coil of fine wire. Since the wire coil is moving in the flux field of a ring magnet (shown in cutaway form), a current is induced in it that varies with the direction, speed, and amplitude of the diaphragm movement.

The ribbon microphone (C) operates on much the same principle, but here the wire (actually a corrugated foil ribbon) serves as both the diaphragm and part of the generating system as it moves within the flux field of the magnet.

The capacitor microphone (D), unlike the others, does not generate a voltage but modulates (varies) an externally supplied voltage. There is one fixed perforated plate and one plate free to vibrate with impinging sound waves. The two plates are connected across a direct-current bias supply of 60 volts or so.

Motion of the free plate, corresponding to the sound waves, varies the spacing between the plates and thus the electrical capacitance between them. The changing capacitance causes a variation in the biasing voltage. This variation is extracted and becomes the output signal.

Instead of a bias voltage, some newer capacitor mikes use "electret" plates, which are materials that have a permanent electrostatic charge. Some capacitor microphones use the varying capacitor to "wobble" the frequency of an r.f. oscillator built into the microphone housing. This frequency-modulated signal is then demodulated to produce audio—all within the microphone itself. One last point: The older term for a capacitor is a "condenser," and such microphones are sometimes called condenser mikes.



speech at a distance of about one foot. A typical microphone-sensitivity specification might thus appear: -58 dB re 1 volt/1 microbar, output impedance = 30,000 ohms resistive. This is a so-called open-circuit voltage specification, which is the most convenient to relate to specific amplifier and tape-recorder input needs. But since tape-recorder specifications rarely quote microphone-input requirements in a way that is directly translatable into microphone-sensitivity figures, you would probably be wise to consult the manufacturer of your tape recorder before you make your final decision. It is helpful to know, however, that the average high-impedance microphone has an open-circuit voltage sensitivity in the neighborhood of -60 dB re 1 volt/1 microbar for a 20,000-ohm resistive output impedance, whereas a typical low-impedance microphone has a -80 dB sensitivity for a 200-ohm output impedance. This means that the open-circuit voltage sensitivity of high-impedance microphones is about ten times greater than that of low-impedance microphones. (Note that the less sensitive the microphone, the larger the *negative* decibel number: for example, -65 dB is *less* sensitive than -60 dB.)

The sensitivity of a microphone has no relationship to its sound quality. But it may determine the microphone's suitability for use with a particular recorder. Ultimately, the *dynamic range* of a recording system (the range of loudest to softest sounds it can handle) is limited at the upper end by objectionable distortion, and at the lower end by the tape and electronic noise in the system. If the sensitivity of a microphone is too low (that is, if it is relatively inefficient in converting acoustic energy to electrical energy), the tape machine's recording-level control will have to be turned up further, perhaps, than desirable, allowing hiss or hum from the microphone preamplifier to become audible. If the sensitivity of the microphone is

too high, the microphone preamplifier of the recorder can be overloaded on loud or closely miked sounds. (This is a frequent problem in the recording of rock musicians.) Such overload can't be reduced by turning down the recording-level control, because the control is in the circuit *after* the microphone-preamplifier portion of the machine. The only answer is an external attenuator wired directly into the microphone cable. Though attenuators are available that provide from 10 to 15 dB of signal reduction, it is best to avoid the problem altogether by querying your tape recorder's manufacturer on what input levels are necessary for low- or high-impedance hookup, and what levels can be tolerated. As a matter of fact, you might ask him for a list of recommended microphones. Even if you don't choose one from among those brands on the list, the characteristics of the makes that the manufacturer finds suitable will be a good practical guide to the requirements of your machine.

Frequency Response

In a sense, *frequency response* is the most straightforward of all microphone-performance considerations, provided impedance matching and cables have been properly attended to. For making recordings of voice and music, a uniform frequency response from 100 to 10,000 Hz \pm 2 dB is generally desirable, with usable (down no more than 10 dB) response to 40 and 15,000 Hz. A falling response below 100 Hz is often helpful in minimizing the pickup of low-frequency room noise produced by air-conditioning equipment or heavy truck traffic. Many microphones have a response rise of 3 to 5 dB in the area of 7,000 Hz that adds "presence" to voice and music. To compensate for an increase in low-frequency response due to close miking, a number of microphones have a voice/music switch to introduce a low-frequency rolloff.

How much should you pay for a microphone? Excellent recordings can be made with mikes in the \$25 to \$75 price range. As the price increases beyond that range, the quality improvements become smaller and smaller. But high-quality recordings depend upon more factors than just the price of the microphone. Recording techniques, appropriate accessories, and the condition of the recorder play an equal role in obtaining good results.

There are three areas of microphone performance that, when overlooked, can lead to a poor recording. These are "pop" or "explosive breath sound" sensitivity, wind sensitivity, and mechanical-vibration sensitivity. Although most manufacturers design their microphones so as to minimize these effects, it is often necessary to use accessories for additional protection. Pop and wind sensitivity can be significantly reduced by foam add-on pop and wind screens. Floor vibration problems can be minimized

by use of isolation microphone stands or isolation microphone-to-stand adapters. Very often simply supporting the microphone on a vibration-free surface with an appropriate microphone stand or suspending it elastically from a boom or a light fixture will eliminate a major problem. Several manufacturers offer low-frequency rolloff filters that can be inserted directly into the microphone line to reduce wind or vibration pickup further.

Monitoring devices, such as recording-level meters and headphones, are also very important for getting the most from a particular microphone. If your tape recorder provides playback-head monitoring, use it. While recording, avoid making rapid changes in recording level. It is better to suffer through one or two distorted peaks than a rapid level change. Finally, experiment until you are so familiar with your recording equipment's limitations and capabilities that operating it becomes second nature.

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



CLASSICAL

THE SZELL LEGACY: A SUPERB *EGMONT*

London presents a memorable reading of Beethoven's incidental music to Goethe's drama

THE late George Szell could not have reared a more splendid monument to his musical and personal ideals than what he accomplished, toward the close of his career, in his recording for London Records of Beethoven's incidental music to Goethe's drama *Egmont*. The play is historically based, being on one level the story of the Spanish occupation of the Netherlands, and, on another, that of the personal confrontation between the Flemish Count of Egmont, a martyr to freedom, and the Spanish tyrant, the Duke of Alba. There is also a love-interest sub-plot involving Egmont's mistress Klärchen, but for all the pathos of her music (*Die Trommel gerühret!* and *Freudvoll und Leidvoll*) and the poignancy of her suicide, it is the libertarian element of the play that brought out the best in Beethoven—the celebrated overture and the shattering concluding passages of the music that accompanies Egmont's last speeches. The culminating "Victory Symphony" corresponds to that episode in the historical Egmont tale in which the Duke of Alba is said to have attempted to drown out, with raucous military music, the Flemish patriot's final words before his execution.

The recorded performance of the *Egmont* music with the Vienna Philharmonic Orchestra is done "all-of-a-piece," with continuous narration (drawn from the revised text by the Austrian poet Franz Grillparzer) connecting the various episodes of the drama, and ending with Goethe's own text for the final speeches. Klausjuergen Wussow is superb both as narrator (from an intimate left-channel

stereo position) and in the role of the protagonist (from a center-channel dungeon). It is more than a curious coincidence that Beethoven completed his only opera, *Fidelio*, also on the theme of freedom and tyranny, shortly before he undertook *Egmont*, and given conductor George Szell's long and worldwide experience in opera, it is hardly surprising that he should have understood and interpreted this highly dramatic play-with-music in an operatic fashion. He builds his performance into a unified whole from the overture to the bursting climax of the military snare drums that accompany Egmont's ringing final statement: "These people are driven by the empty word of their ruler, not by their own spirit. Protect your homes. And to save those that are most dear to you, be ready to follow my example, and to fall with joy!" Strong

sentiments indeed, and Szell does perfect justice to the strong music that accompanies them.

Soprano Pilar Lorengar excellently conveys the essence of Klärchen's charming naïveté in her two songs, and these indirect expressions of Beethoven's libertarian (though hardly Women's Lib!) sympathies are heightened and intensified through their treatment by Szell and the musicians of the Vienna Philharmonic—personal statements, whereas those of Egmont are political.

Though there are three other versions of the complete *Egmont* music currently catalogued (Karajan for DGG, Klemperer for Angel, and Van Remoortel for Turnabout), most listeners have probably not gotten beyond the Overture (of which ninety-four



GEORGE SZELL
He built his own monuments

performances were logged by American orchestras during the 1968-1969 season). This passionately inspired performance by George Szell and the Vienna Philharmonic is a perfect opportunity to remedy such a lapse. It is, moreover, an opportunity that has been brought to an even higher perfection by the dazzling contribution (most particularly in the final passages) of London's engineering staff.

David Hall

BEETHOVEN: *Egmont—Complete Incidental Music, Op. 84: Overture; Die Trommel; Entr'acte I; Entr'acte II; Freudvoll und Leidvoll; Entr'acte III; Entr'acte IV; Death of Klärchen; Melodrama; Victory Symphony.* Pilar Lorengar (soprano); Klausjuergen Wussow (narrator); Vienna Philharmonic Orchestra, George Szell cond. LONDON CS 6675 \$5.98.

A CONTEMPORARY VIEW OF JONAH AND THE WHALE

An impressive example of a mixed musico-dramatic genre successfully escapes the usual categories

JOHAN TAVENER is a young English composer who almost bears the name of an illustrious Tudor predecessor (John Taverner, 1495-1545). At any rate, his work *The Whale*, a (very) dramatic cantata or oratorio more or less along the lines of the Penderecki *Passion*, has just received a very impressive recording under the rather surprising auspices of Apple Records.

The subject of the piece is Biblical—Jonah and the whale—and the sung texts are in Latin. It has nothing to do with the recently celebrated recording of *real* whale songs; it just seems as though these perhaps shortly-to-be-extinct mammals are on people's minds. Nor does its appearance on the Apple label indicate any connection with popular music—in fact, it escapes most conventional categories. Tavener, like any good composer of any period or style, uses exactly what he needs to say what he wants to say. *The Whale* is thus a curious but quite successful combination of various kinds of solo and choral singing and speaking as well as a huge array of orchestral and instrumental forces. Yet, in spite of very disparate "stylistic" elements, the work is quite simple and unified in character, and this accounts for no small part of its considerable impact. A highly dramatic and telling chiaroscuro is made out of contrasting layers of timbre and color laid down with great skill and imagination. Three giant, overwhelming static passages form the dramatic/sonorous nodes of the work—indeed, the apocalyptic character of these sections seems to surpass the theme itself or, at any



Deutsche Grammophon

PILAR LORENGAR: Excellent as *Egmont's Klärchen*

rate, to transform it into something cosmic. *The Whale* is an impressive example of the mixed dramatic genre, one that is rapidly becoming a major come-together form for contemporary musical expressions of practically every kind.

The performance and recording are excellent (marred only by an excess of disc noise which is most noticeable during the softer passages). The appearance of this work on the Apple label is actually a reminder that the Beatles founded the company as an "alternate culture" outlet for new ideas and expressions that lie outside the boundaries of such categorizations as pop/classical/avant-garde. Unfortunately, these idealistic aims have been realized only on a very limited scale. Certainly some kind of alternate (probably non-profit) label is desperately needed; recording remains the only field where some kind of effective alternate media outlet does not really exist. Perhaps Apple will begin to serve that function as originally intended—certainly such an outlet is needed here as well as in England. Anyway, more power to Apples and to Whales.

Eric Salzman

JOHN TAVENER: *The Whale.* Anna Reynolds (mezzo-soprano); Raimund Herinx (baritone); Alvar Lidell (speaker); John Tavener (organ and Hammond organ); London Sinfonietta and Chorus, David Atherton cond. APPLE SMAS 3369 \$4.98.

DYLAN'S "NEW MORNING": HIS LATEST AND BEST

For all practical purposes, a flawless album and a real "self portrait" as well

"It isn't that good—it can't be," I kept muttering to myself as I listened to Bob Dylan's latest album "New Morning" and thought about the frantic early reports I'd had on it. But the fifth time I heard it, the chemistry—or something—started working, and I bumped up against the first outcropping of what has since become a mountainous conviction: this is the best album I've heard in I don't know how many years.

You can, if you like, pen me up with those wild men who are already saying that *Sign on the Window* is the best song Dylan ever wrote, but I found his poignant interpretation of it *even better*, and the grapevine hadn't alerted me to that. Such a delicate emotional balance he has to maintain! Singing this song right, I should think, must be more challenging than acting a difficult role, for the meaning transcends words, and is more suited to some

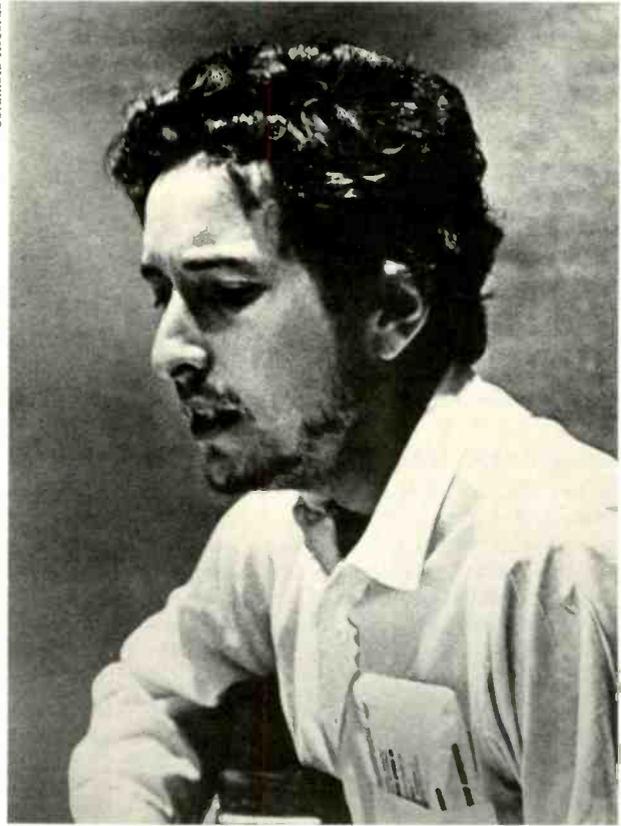


JONAH 2. Verse 10. ^{2V.p.136.}

*And the LORD spake unto y
fish and it vomited out Jonah
upon the dry land.*

Culver Pictures

Columbia Records



BOB DYLAN: *an anthem that transcends words*

subtle nuance or gesture of the dance. The song will serve well as the new anthem for Dylan's people and their main preoccupation, their music. It points toward open country and toward family instead of community. Its lyrics—down at about the fourth or fifth level—can also be construed to say that the most graceful way of growing older is to become gentler. And boy, could we all use a little more of *that!*

The album has sent hard-rock diehards into spasms of delight, but it isn't a rock album. It isn't like any previous Dylan album either, though it can be said that it is less like "Highway 61 Revisited" than "John Wesley Harding." Dylan, no doubt with major help from Al Kooper, uses what suits him best, including himself at the piano. The arrangements are exemplary, and the vocal backing by Hilda Harris, Albertine Robinson, and Maeretha Stewart is almost ghostly. And you're always getting bonuses. In a parody of a nightclub act (*If Dogs Run Free*), for example, you gradually realize that, joke or no joke, Kooper is doing some major-league jazz free-lancing on the piano and Dylan's words, again, mean something on other levels. Musicians always seem to do their best behind Dylan, probably because he doesn't make them practice too much.

Time Passes Slowly, as Judy Collins immediately realized (it's on her equally new album "Whales and Night-

ingales"), is another major Dylan song, although it may easily be overlooked. *Day of the Locusts*, which is like some of his old rock pieces, has already attracted considerable attention. *Went to See the Gypsy* was the only weak song I could find, and even it, I confess, does have its moments.

This is, for all practical purposes, an album without a flaw. And don't be lulled into thinking everyone is overrating it because practically anything would look good next to a bomb like "Self Portrait." You'll find, once you have it, that it's pretty easy to listen to without comparing to any other Dylan album. In many ways, this is Bob Dylan's *real* self portrait.

Noel Coppage

BOB DYLAN: *New Morning*. Bob Dylan (vocals, acoustic and electric guitars, organ, piano); Al Kooper (organ, piano, guitar, French horn); David Bromberg (dobro, electric guitar); Harvey Brooks (electric bass); Ron Cornelius (electric guitar); Charlie Daniels (bass); Buzzy Felton (guitar); Russ Kunkel and Billy Mundi (drums); Hilda Harris, Albertine Robinson, Maeretha Stewart (background vocals). *If Not for You; Day of the Locusts; Time Passes Slowly; Went to See the Gypsy; Winterlude; If Dogs Run Free; New Morning; Sign on the Window; One More Weekend; The Man in Me; Three Angels; Father of Night*. COLUMBIA KC 30290 \$5.98, ©CR 30290 \$6.98, ©CA 30290 \$6.98, ©CT 30290 \$6.98.

THE ARTISTRY OF CHARLES AZNAVOUR

Monument Records' new English-language release
"A Man's Life" is an album to savor and enjoy

ALREADY an international recording star of several years' standing, Charles Aznavour has come through with his best album to date—the new Monument release "A Man's Life," a collection of some of his best recent songs sung in English. Two of the songs, indeed, are close to being masterpieces, and the rest maintain a consistently high level of artistry both in composition and in performance.

It Will Be My Day (Je m'voyais déjà) is surely one of the finest songs Aznavour has ever written, and he performs it with the coolly passionate skill of a Piaf (he was one of many who wrote songs for her). The story of a third-rate cabaret performer who dreams each night of the "big break" and of "trying to find a gimmick that will lift me from darkness," all the while sensing with wry bitterness that he will never make it, it is based on a true incident in Aznavour's life. He wandered by chance into a small Belgian cafe one night where an entertainer recog-



CHARLES AZNAVOUR: Hier encore with an American colleague

nized him and played his entire show directly to him in hopes of being "discovered" by the great Charles Aznavour. The result: a strangely moving song that has in it all the jaunty hopelessness of every two-bit, Pal Joey vaudevillian who ever lived.

The theme of regret is expanded, but more gently, in the hypnotically lovely *Yesterday, When I Was Young (Hier encore)*, a song that has already had considerable success in a recording by a rather well-known American artist. In Aznavour's interpretation, however, it unfolds without a trace of self pity or vain regret, an evocation of youth too quickly gone and pleasures too soon forgotten.

These two songs are the high points of the album, but there is a great deal more to savor and enjoy. The English lyrics, provided in the main by Bob Morrison, are acutely sensitive to the inflections of the originals and seem to me to be some of the best song translations I have heard in some time. As for Aznavour's communicative capability in them, that, as the French would have it, goes without saying.

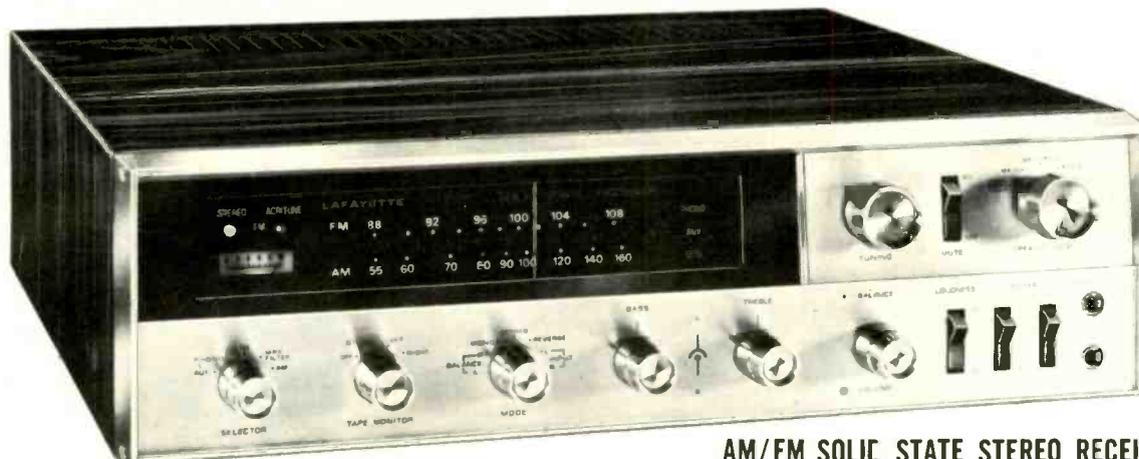
Peter Reilly

CHARLES AZNAVOUR: *A Man's Life*. Charles Aznavour (vocals); orchestra and choral accompaniment, Claude Denjean arr. and cond. *To My Daughter; Sunday's Not My Day; The Palace of Our Illusions; I Will Give to You; The Wine of Youth; Life Is Sad; It Will Be My Day; The Town; If I Had a Piano; The Day We've Waited For; Yesterday, When I Was Young; The Road to Eternity*. MONUMENT SLP 18141 \$4.98.

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ASHFORTH: *The Unquiet Heart* (see DEL TREDICI)

RECORDING OF SPECIAL MERIT

BARTÓK: *Violin Concerto No. 2; Rhapsody No. 1 for Violin and Orchestra*. Henryk Szeryng (violin); Concertgebouw Orchestra, Bernard Haitink cond. PHILIPS 6500 021 \$4.98.

Performance: Excellent
Recording: Excellent

Bartók's Second Violin Concerto (the one most of us think of as *the* Bartók Violin Concerto) has always seemed to me one of the supreme twentieth-century achievements in this genre, equalled only by the Berg Violin Concerto and, perhaps, the Stravinsky. The two Rhapsodies for Violin and Orchestra are less ambitious works; both the aim and the outcome of the music comprise much folk-rhythm playfulness and a general sense of delight in melody and color.

Henryk Szeryng gives both the works recorded here absolutely stunning performances. The Concerto is approached with cognizance of the exceptionally broad range of meanings it contains—introspective, philosophical, assertive, moody, raucously ebullient—and all are expressed not only with completeness, but with ease. Szeryng's violin sound is richly beautiful, and his technical equipment admits no difficulty anywhere, even in the most demanding passage-work. Bernard Haitink, with the Concertgebouw Orchestra, gives not only support, but full and understanding collaboration. The two interpreters (and the orchestra) do an equally fine job with the Rhapsody, which turns out to be a splendid companion-piece for the Concerto. The recorded sound is beautiful.

L.T.

BATSTONE: *A Mother Goose Primer* (see DEL TREDICI)

BEETHOVEN: *The Creatures of Prometheus, Op. 43*. Berlin Symphony Orchestra, Hans-Hubert Schönzeler cond. TURNABOUT TV S 34371 \$2.98.

BEETHOVEN: *The Creatures of Prometheus, Op. 43*. Cleveland Orchestra, Louis Lane cond. COLUMBIA M 30082 \$5.98.

BEETHOVEN: *The Creatures of Prometheus, Op. 43*. Menuhin Festival Orchestra, Yehudi Menuhin cond. ANGEL S 36641 \$5.98.

Performances: Angel best
Recordings: Columbia clearest

The Creatures of Prometheus is, without a doubt, one of Beethoven's major works, so

Capitol



YEHUDI MENUHIN

Leads a grand, impressive Prometheus

perhaps its simultaneous triple appearance on discs is less surprising than its previous neglect. The score was written for a ballet by the celebrated Salvatore Vigano and was produced for the first time at the Hofburgtheater in Vienna in 1801-1802—and not very much anywhere else after that. Thematically and musically, the work connects Beethoven very closely with that late phase of neo-Classicism that is sometimes called "Empire." Prometheus sounds like a good Beethovenian heaven-storming subject, but in fact it is treated here within the confines of the kind of Classicism that produced the sculptures of Canova, the paintings of David, and the architecture and stage sets of Schinkel.

Little or nothing seems to remain of the original choreography, and the work long ago disappeared from the theater. It is best known today for its Overture as well as for the fact that it uses the *Contradanse* theme that was lat-

er to achieve greater fame in the finale of the "Eroica" Symphony.

The musical problems of this score derive from its fragmented construction in a series of shorter movements connected largely by the alternation of light and shade. Even more than in Beethoven's other music, a sense of style and great care with proportions—tempos, dynamics, phrasing, general distribution of musical shapes and energies—is essential. Without this the music seems trivial, and indeed that is the impression given by the Turnabout recording. On the other hand, Menuhin and the English musicians have such a firm grasp of the dynamics of this music that one is led to the opposite conviction—that this is an important and impressive work of Beethoven! The excellent Cleveland Orchestra under Louis Lane does a creditable job, and I actually prefer the brighter and crisper playing and recording. But I am in no doubt whatever about which of these recordings to recommend. Menuhin is not as grandiose or as conventionally Beethovenian as Lane and the Clevelanders; yet in the end, the greater restraint and care, the sense of contrast and timing, and the perfect relationship of all the parts produce the grander and more impressive result. The physical quality of the Angel review copy was far superior to that of the other two.

E.S.

BEETHOVEN: *Egmont—Complete Incidental Music* (see Best of the Month, page 79)

RECORDING OF SPECIAL MERIT

BEETHOVEN: *Piano Trios (complete)*. Wilhelm Kempff (piano), Henryk Szeryng (violin), Pierre Fournier (cello); Karl Leister (clarinet, in Op. 11). *Piano Quartets, WoO 36: No. 1, in E-flat Major; No. 2, in D Major; No. 3, in C Major*. Christoph Eschenbach (piano), Norbert Brainin (violin), Peter Schidlöf (viola), Martin Lovett (cello). DEUTSCHE GRAMMOPHON 2720 016 six discs \$35.88.

Performance: Beautiful
Recording: Splendid

BEETHOVEN: *Piano Trios (complete)*. Daniel Barenboim (piano), Pinchas Zukerman (violin), Jacqueline du Pré (cello); Gervase de Peyer (clarinet, in Op. 11). ANGEL SE 3771 five discs \$29.90.

Performance: Good but not great
Recording: Good—a bit raw

One of the real pleasures of the Beethoven bicentennial year was the bumper-crop of new issues of the composer's complete piano trios. It seems only yesterday that I marveled at the Istomin-Stern-Rose Trio's five-record Columbia set. Now, here come two more. One is a real spellbinder from Deutsche Grammophon

Explanation of symbols:

- Ⓜ = reel-to-reel tape
- ④ = four-track cartridge
- Ⓢ = eight-track cartridge
- ⓐ = cassette

Monophonic recordings are indicated by the symbol Ⓜ; all others are stereo.

which includes three of the piano quartets and the clarinet-piano-cello version of the Opus 11 trio. (The Columbia set has Isaac Stern in the violin-piano-cello version of the work. Both options, of course, are authentic.) The other newest release of the piano trios is on the Angel label. Like the Deutsche Grammophon recording, it presents the clarinet version of Opus 11.

There's really no contest between the two latest releases. On the Deutsche Grammophon set, Wilhelm Kempff, Henryk Szeryng, and Pierre Fournier give performances that are absolutely the last word in subtlety, polish, and profound musicianship. That's what anyone would expect from these three extraordinary musicians, and that's what they produce. Karl Leister, who plays clarinet in Opus 11, is every bit their equal. I have not heard such suave clarinet playing in many a day. And, not surprisingly, when Christoph Eschenbach and members of the Amadeus Quartet are heard in the three piano quartets, the quality of performance, both technically and musically, is as beautiful as that in the trios. As between this album and the earlier Columbia release by the Istomin-Stern-Rose Trio, I would find it almost impossible to stake out a preference. Both groups merit superlatives. There are times (the *Largo con espressione* movement of the Opus 1, No. 2, trio is one of numerous examples) when the American ensemble plays with a kind of sensuousness that I find particularly appealing. But, then, the Kempff-Szeryng-Fournier group has its own species of expressiveness, and any preference for one or the other group will have to be subjective.

The Zukerman-Barenboim-du Pré trio, on the other hand, although it has youthful zest and three fine techniques to recommend it, displays nothing comparable to either of the other two when it comes to matters of interpretive security or depth of musical perception. Barenboim, as usual, projects a kind of gauche dynamism. But, as almost everybody knows, there's a lot more to artistry than this. It consistently takes me aback that a young pianist with so great a gift for the sheer muscular mechanics of playing would be satisfied to proceed with such intellectual carelessness, so little genuine introspection, in his recorded performances. I don't mean to imply that these are "bad" performances, or that Barenboim (because I've been speaking of him) tries to be the whole show in the trios. Zukerman and du Pré are right there too, and what subtlety or elegance of spirit there is in these interpretations is often their contribution. Barenboim also does nice things. But, cheek by jowl with a handsomely executed passage, he will allow something to take place that sounds coarse, spur-of-the-moment, or ineptly willful. There are even a couple of instances where his interpretive approach is unwittingly funny.

I can't say that the recorded sound of the Angel album helps particularly. It exaggerates Barenboim's vices and masks some of his virtues (the strings are treated more generously). He does produce a healthy and rather handsome piano sound. On these recordings, however, the impact of hammer on strings is too often aggressively audible, and this is hardly a feature to cherish.

Both sets include the Fourteen Variations in E-flat, Op. 44, and the Variations on "Ich der Schneider Kakadu," Op. 121a, both of them for trio. The DGG set, though it includes three piano quartets, does not have the later one in E-flat, Op. 16, better known as a quintet for piano and winds. And Angel offers an addi-

tional "Trio in E-flat," an allegretto movement (3' 18" total playing time), which is not in the DGG set. L.T.

BEETHOVEN: *Symphony No. 5, in C Minor, Op. 67; Meeresstille und glückliche Fahrt, Op. 112.* John Alldis Choir (in *Meeresstille*); New Philharmonia Orchestra, Pierre Boulez cond. COLUMBIA M 30085 \$5.98.

Performance: Misconceived
Recording: Excellent

The absolute validity of Beethoven's metronome markings has been called into question with some justification, since the machine he used seems to have been unreliable. But his figures do give results that are of value for interpreters in establishing the *relative* speeds of movements within a given work. His principal



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indications in the Fifth Symphony range from 108 half notes per minute in the first movement to 84 in the finale, and Pierre Boulez's idea of playing the whole symphony at the same speed leaves me baffled and completely unconvinced. His chosen pulse is a dismally plodding 72, and he begins to move a fraction faster only in the finale, which thus becomes a quicker movement than the scherzo instead of a slower one. (I think it safe to assume that the "half note-96" marking given in printed editions of the third movement is a mistake for "dotted half note-96," which appears correctly when the scherzo music returns in the course of the finale.)

Not surprisingly, the result of Boulez's bizarre interpretation is tedium, and it is accentuated by his general lack of sympathy for this kind of music. When line is paramount, Boulez is a great conductor, but music that depends on the deployment of dynamic mass seems to leave him bored and, consequently, boring. The only value I can find in the performance is educational. It obliquely illuminates one of

Furtwängler's finest qualities. The quickening of pace when Boulez comes to the subsidiary theme of the first movement is exactly the sort of thing that Furtwängler used to manage imperceptibly, but when Boulez does it, you can almost hear the gears changing. (Incidentally, the corresponding place in the recapitulation speeds up by a quite different amount, for no apparent structural or expressive reason, and the first variation in the slow movement likewise accelerates without evident motive.)

The other eccentricity of the interpretation is Boulez's decision to insert a repeat of the scherzo and trio. He is reported in the liner notes to have said: "I have a pupil who has written a 200-page thesis on this very point, and he has really proved conclusively to me that it was just carelessness on Beethoven's part that the repeat marks got left out. I think the balance of the work is improved, too, in practice."

This is fair enough. But we are left to guess what the evidence may be. And we are left to assume also that it was "just carelessness on Beethoven's part" to put *in* a repeat in the finale (and furthermore compose two first-time bars to accommodate it) since, incomprehensibly under the circumstances, Boulez has decided to omit this repeat, which is unquestionably authentic.

The recording is excellent, and the orchestral playing is always expert. Understandably, however, in the absence of inspiring leadership, it is rarely more than expert, and the same dutiful competence marks the performance of the filler, Beethoven's imaginative little setting for chorus and orchestra of Goethe's "BeCALMED SEA" and "Prosperous Voyage" poems. A perfect example occurs in the first poem, where Beethoven uses a sudden loud, sustained high note to evoke distance at the word "Weite." In the right hands, it can make a thrilling effect. With Boulez, it is merely a sudden loud, sustained high note. B.J.

RECORDING OF SPECIAL MERIT

BERIO: *Sequenza VI; Chemins II; Chemins III.* Walter Trampler (viola); Juilliard Ensemble; London Symphony Orchestra, Luciano Berio cond. RCA LSC 3168 \$5.98.

Performance: Superb
Recording: Exceptional

Sequenza VI is a piece for solo viola, *Chemins II* for viola and chamber orchestra, *Chemins III* for viola, chamber orchestra, and large orchestra. Each succeeding work "contains" the music of the preceding ones. Berio describes the relationship as like the layers of an onion, but the effect is more like laying a series of color transparencies one over the other. The textures, even of the pulsating viola solo, are thick, and by the time the full orchestra is introduced, a heavy impasto of instrumental timbre expresses the musical sense of the work. Only a moment or two of dramatic focus and a certain thinning out toward the end convey any sense of motion or arrival. As always in Berio's work, there is a sense of the multiplicity of meaning in any event—of strands, paths, *chemins*, weaving, unweaving, interweaving. Yet all this activity takes place in a whole that is remarkably static and, except for certain energy releases, highly contained. These pieces are like a closed energy system—extraterrestrial or subatomic—with a nuclear center (viewed first), orbiting planetary system (seen-heard next), and, finally, a surrounding galaxy.

(Continued on page 88)

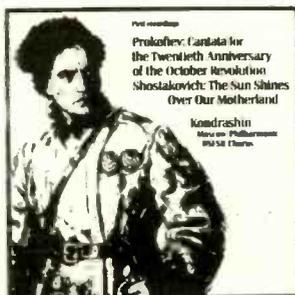
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Two monumental cantatas. Edward Greenfield writes in *The Manchester Guardian*: "In 1937, Prokofiev wrote a celebratory Cantata for the Twentieth Anniversary of the October Revolution. Now, at last, a recording has appeared, and after hearing it with mounting excitement half a dozen times, I am prepared to think it the most vivid choral work ever to have come out of Soviet Russia." With it, a worthy companion piece by Shostakovich.



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A new cellist to hear. Rostropovich taught her. Piatigorsky and Stokowski praised her. She has won the five major European competitions: Vienna, Moscow, Prague, the Tchaikovsky, and the Munich sonata duet. In her first album, Natalia Gutman plays Boccherini, Vivaldi, and Tartini, justifying all the praise, underscoring all the superlatives.



And a pianist not to be missed. Aleksei Nasedkin, Miss Gutman's winning partner in Munich, began his competition successes at 16 at the 1959 World Youth Festival in Vienna. In 1962, he won the Second International Tchaikovsky Competition. His first album, an all-Schubert program, demonstrates eloquently why he captured first prize in the 1967 Schubert Contest. Clearly, he is an artist to watch.



Attention for a neglected romantic. In 1953, Alfred Frankenstein lamented the neglect of Vasily Kalinnikov's works, especially his Second Symphony. This impressive reading by the USSR Symphony under Yevgeny Svetlanov pays full tribute to the composer's joyous melodism. *High Fidelity* warned, "Pass it up at your own incalculable loss!"



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EMPIRE

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Trampler, perhaps the most remarkable violist active today, is superb. The Juilliard Ensemble, which Berio helped to found and whose activities have mostly been devoted to his works, is first-class, as is the London Symphony under the composer's direction. The layering principle is purely a performance, not an electronic, principle and is accomplished directly through the recording process itself and not with any additional tape manipulation. The fact that it is so well managed is an achievement not only of the performers, but of the traditional classical recording techniques. E.S.

BERLIOZ: *Les Nuits d'été, Op. 7; La Belle voyageuse, Op. 2, No. 4; Le Chasseur danois, Op. 19, No. 6; La Captive, Op. 12; Le Jeune pâtre breton, Op. 13, No. 4; Zaïde, Op. 19, No. 1.* Sheila Armstrong (soprano); Josephine Veasey (mezzo-soprano); Frank Patterson (tenor); John Shirley-Quirk (bass); London Symphony Orchestra, Colin Davis cond. PHILIPS 6500 009 \$5.98.

Performance: Very good

Recording: Excellent

This latest release in the Colin Davis Berlioz cycle usefully assembles on one disc all of the composer's songs for solo voice and orchestra. All of the true songs, that is—it does not include the cantata (or lyric scene) *La Mort de Cléopâtre*, which Davis has already recorded for Oiseau-Lyre, or the early scena *Herminie*.

Unlike previous versions of the beautiful *Nuits d'été* cycle, this one splits the songs up among four singers. The first and fifth songs, *Villanelle* and *Au Cimetière*, are given to the tenor. The second, *Le Spectre de la rose*, is sung by the mezzo, the third, *Sur les lagunes*, by the bass, and *Absence* and *L'Île inconnue* are allotted to the soprano. The procedure takes Berlioz's accommodatingly loose specification of voices to its logical conclusion, and in theory offers the opportunity to heighten the expressive character of the music by matching each song with the singer best suited to it.

In practice, the idea here works best in the second and third songs. The contrast between the rapt *Spectre de la rose*, with Josephine Veasey in splendid voice, and the strong masculinity of John Shirley-Quirk's *Sur les lagunes* is more effectively marked than in any of the single-singer performances. The other songs, however, are not so impressively cast. Frank Patterson does not possess the ability to shade his tone in response to the text, and though his *Villanelle* is elegantly sung, he sounds strained in the profound *Au Cimetière*, which challenges *Le Spectre* as the most vividly inspired music in the set. Sheila Armstrong manages her two songs competently, but without ever approaching the heights she scaled in Sir Adrian Boult's recording of the Vaughan Williams *Sea Symphony*, and her French is a shade unidiomatic. Indeed, there is a slightly uncomfortable feel to all the singers' accents—even Veasey, in a momentary lapse of concentration, allows a slack, English-sounding vowel to disfigure the second syllable of the word "paradis" at its first appearance.

Despite its many good qualities and the interest of its format, then, I do not feel that this new *Nuits* can be regarded as the equal of the superb performance recorded by Régine Crespin and Ernest Ansermet. And much as I admire Colin Davis, the orchestral contribution reinforces that judgment. Davis is always sensitive and his choice of tempos is meticulously apt. But the orchestral playing lacks the final

(Continued on page 90)

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degree of precision that we have come to expect in his remarkable Berlioz series, and in this particular work he does not quite match the infinitely refined intensity with which Ansermet supported Crespín on London 25821.

Still, this well-engineered Philips record is worth having, especially for the rarities on side two. They range from the naïve but harmless high spirits of *Le Chasseur danois* and *Zaïde* (a bolero, complete with castanets, that must be one of the earliest offspring begotten on a French composer by the perennial fascination of Spain) to the pastoral nostalgia of *Le Jeune père breton*, with its atmospheric horn *obbligato*, and the grandeur of the Victor Hugo setting, *La Captive*, which is oddly prophetic of Ravel's *Shéhérazade*. On this side the music is mostly less demanding than *Les Nuits d'été*, and the performances are all that they should be.

B.J.

BIZET: *Carmen* (highlights). Marilyn Horne (mezzo-soprano), Carmen; Michele Molese (tenor), Don José; Maria Pellegrini (soprano), Frasquita; Gwyneth Griffiths (soprano), Mercedes; others; Royal Philharmonic Orchestra and Chorus, Henry Lewis cond. LONDON SPC 21055 \$5.98.

Performance: Loud

Recording: Ultra-stereoeistic

Marilyn Horne's voice is voluptuous and at times, as in the *Seguidilla*, used with true virtuosity in these excerpts. But very often, alas, it becomes a vehicle for superficial effects. London's famous Phase 4 recording technique makes ensemble details emerge with a transparency that is not only unrealistic but downright hazardous in a scene like the quintet, for the reputations of the five singers involved in the present enterprise cannot afford such intimate revelations. In sum, this is an unsuitable performance, conducted with excessive permissiveness and characterized by untidy vocal manners, particularly damaging lapses of intonation. Intended as a showcase, it will no doubt attract Marilyn Horne's many admirers. I, too, am one, but in this instance I pass.

G.J.

BRIDGE: *Sonata for Cello and Piano* (see SCHUBERT: *Sonata*)

RECORDING OF SPECIAL MERIT

DEBUSSY: *Pelléas et Mélisande*. George Shirley (tenor), Pelléas; Elisabeth Soederstroem (soprano), Mélisande; Donald McIntyre (baritone), Golaud; David Ward (bass), Arkel; Yvonne Minton (mezzo-soprano), Geneviève; Anthony Britten (boy soprano), Yniold; Dennis Wicks (bass), Doctor. Royal Opera Chorus, and Orchestra of the Royal Opera House Covent Garden, Pierre Boulez cond. COLUMBIA M3 30119 three discs \$17.98.

Performance: Good

Recording: Excellent

Pelléas et Mélisande is a unique and, apparently, perpetually problematic opera. It has a sound, mystique, and aura all its own, and this world of oblique assertions, evasive conversations, and subtle allusions defies conventional theatrical treatment. On records, though, the opera has fared well, and this is not really surprising. Far from being confusing, the action is minimal and easy to follow, the cast is small, conflicts and confrontations are intimate, and the listener's imagination can work unrestricted. Although the present catalog lists only the two Ansermet versions on London and Rich-

mond, the opera has had a distinguished career on records in such authoritative hands as those of Roger Desormière, Jean Fournet, and André Cluytens.

As one might have expected, Pierre Boulez, a man of volcanic energies and fiery opinions, was not likely to come up with a tradition-bound approach. And he has some contemptuous words about certain earlier views of this opera, in which "... the characters are emasculated, the dramatic situations find themselves unprimed. . . . It seems demoralizing to me that this so-called tradition of bloodlessness should pass for the acme of the *esprit français* in music! . . . For want of firm definition, the music will tend to sink into a contourless monotony. . . ." One is tempted to quote at some length from the accompanying essay of M. Boulez, a fascinating thinker and a penetrating if at times too expansive writer.

But he does give firm definition to his reading, and a great deal more. There is nothing

Columbia



PIERRE BOULEZ

A great reading of Debussy's Pelléas

fragile about his treatment: the sonorities are firm and strong, the score's violent moments are driven home with a Wagnerian directness. However poetic the relationship of the lovers may have been as conceived by Maeterlinck, the Debussy of Pierre Boulez endows it with a passionate, tragedy-haunted aura. No details are obscured, balances with the singers are nearly always ideal, and there is a surging forward motion about the music that is absolutely compelling. I am not ready to relegate Ansermet, whose more sensuous sound is closer to my preferred way of hearing Debussy, to the ranks of the conductors who, in M. Boulez's view, so grossly misrepresented the *esprit français*, as a matter of fact, I am not really certain that he had Ansermet in mind when he wrote his indictment. But I am ready to call the Boulez view a great and utterly convincing treatment of the opera.

The recording is built around the singers who participated in the hugely successful Covent Garden performance under Boulez in late 1969. This is very important, for while the singers had the benefit of the conductor's strong convictions and musical intellect, he could not, unfortunately, endow them with the idiomatic assurance of French enunciation that a native would have—and this is an element without which this quintessentially Gallic work can never be a total success.

The singers, nonetheless, form a fine ensemble, and none among them is a major stylistic offender. Elisabeth Soederstroem is a sensitive, believable Mélisande, an ideal choice for this particular approach to the character: touching without being wholly ethereal. George Shirley does not suggest a very youthful Pelléas, but he acts intelligently with his voice, and the role seems just right for his baritone tenor sound. The Golaud of Donald McIntyre is dramatically impressive, though lacking the vocal suavity I have admired in such previous interpreters as Gérard Souzay and Michel Roux. Yvonne Minton is a fine Geneviève, David Ward a somewhat bland but satisfactory Arkel. I realize the logic involved in giving the role of Yniold to a boy soprano, but I found the effect grating.

Producer Paul Myers and the Columbia engineers have created technically sumptuous sonics, and the accompanying book is lavish.

G.J.

RECORDING OF SPECIAL MERIT

DEL TREDICI: *Night Conjure-Verse*. Benita Valente (soprano); Mary Burgess (mezzo-soprano); players from the Marlboro Festival, David Del Tredici cond. **BATSTONE:** *A Mother Goose Primer*. **ASHFORTH:** *The Unquiet Heart*. Bethany Beardslee (soprano); Victoria Bond (soprano, in *Mother Goose*); U.C.L.A. Chamber Ensemble, John Dare cond. COMPOSERS RECORDINGS, INC. CRI SD 243 \$5.95.

Performance: Splendid

Recording: Splendid

Composers Recordings has added here another fine issue to its increasingly sturdy catalog. This one presents three relatively young American composers in song cycles that show them off to splendid advantage. David Del Tredici's *Night Conjure-Verse* puts two James Joyce poems into an almost mesmeric atmosphere, where everything seems to be an echo or fragmented reflection of everything else. The texture is complex and full of color, with two sopranos soaring and chortling through an instrumental environment as dense as a rain-forest.

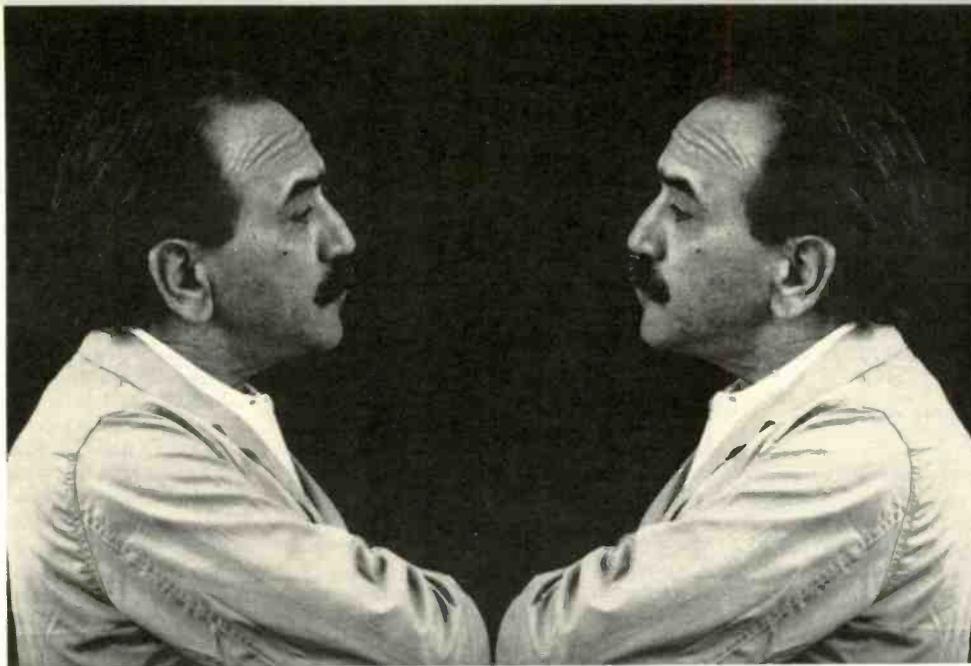
Philip Batstone's *A Mother Goose Primer* is a less fluent work, though there is no mistaking the talent that is coping with the rigidities of a self-imposed system. The composer writes that the work "is strictly serial with regard to both pitches and rhythms." The rather playful texts (written by the composer) are sung by Bethany Beardslee in her familiarly virtuosic "post-Webern" manner, with zooming disjunct melody as the norm. One senses in the music that the serial method is reigning supreme, and that its exigencies are being served. Even so, there are stretches in this work where the composer's genuinely communicative musicality surmounts the hurdles.

The vocal lines for Alden Ashforth's *The Unquiet Heart*, set to Kenneth Rexroth translations of ancient Japanese poems, are as angular as Mr. Batstone's. His instrumental accompaniment, however, seems of a different conception. It is coloristic, in keeping with the Oriental origin of the texts, and he creates some lovely sounds indeed. Again, Bethany Beardslee's remarkable voice and technical abilities serve the music extremely well. And I should not neglect to mention that the singers in the Del Tredici work are equally skillful, and beautiful to hear.

L.T.

(Continued on page 92)

STEREO REVIEW



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RECORDING OF SPECIAL MERIT

DONIZETTI: *Lucia di Lammermoor*. Beverly Sills (soprano), Lucia; Carlo Bergonzi (tenor), Edgardo; Piero Cappuccilli (baritone), Enrico; Justino Diaz (bass), Raimondo; Patricia Kern (mezzo-soprano), Alisa; Keith Erwen (tenor), Normanno; Adolf Dallapozza (tenor), Arturo. Ambrosian Opera Chorus; London Symphony Orchestra, Thomas Schippers cond. ABC/AUDIO TREASURY ATS 20006/3 three discs \$17.94.

Performance: Extremely well sung
Recording: Excellent

Only my strong reservations about Thomas Schipper's conducting prevent me from calling this new album the best *Lucia di Lammermoor* ever to be recorded. And even with those reservations it seems to me to be the most desirable of the available versions, all things considered. For one thing, it is *complete*, and if there was ever an opera damaged and humiliated by the so-called "standard cuts," it is *Lucia*. I hasten to point out that London OSA 1327 is also complete, and it too is well sung. The Lucia there is Joan Sutherland, and it is clear in my mind that listeners' preference will be determined by their devotion to one diva or the other. In the present instance, I find myself unequivocally in Beverly Sills' corner.

On stage, both ladies are brilliant and, when in top form, quite overwhelming. On records, Sills' characterization comes across as the more moving, more human, more completely realized of the two. She is not quite as dazzling a vocal technician as Sutherland, whose access to the top of the register is effortless, and whose embellishments are more secure. For though Sills' technique is formidable by any standard, there are times when she cannot bring off the hazardous challenges without compromising tonal purity. (The final cadenza in "*Regnava nel silenzio*" is one example, the difficult trill-cum-*portamento* in "*Spargi d'amaro pianto*" is another.) Still, she offers stupendous singing, and, particularly when compared with the blandness and relentless melancholia of the Sutherland Lucia, an exciting and meaningful character study. The highlights—for those interested in specifics—are her lovely voicing of "*Verranno a te sull'aure*" in her first duet with Edgardo, the plaintively beautiful "*Soffriva nel pianto*," the tragedy of her "*La mia condanna ho scritto*" in the wedding scene, and the Mad Scene from start to finish, but particularly the section "*Alfin son tua*." Sills does not try to dominate the Sextet, and her restrained contribution here makes sense in the dramatic context. On the whole, her work offers a good representation of what she does with the role on stage. And that, for anyone who has seen her, is probably unforgettable.

What I have to say about Carlo Bergonzi's Edgardo is fairly brief: I cannot imagine this music presented with stronger conviction, with more exquisite taste, with more artistic phrasing, and with more secure musicianship. I hope he will be given an opportunity to record the final scene with another conductor some day. Meantime, *bravissimo!* Piero Cappuccilli is a strong Ashton, not a sensuous-voiced singer but an intelligent and dramatically aware one who knows how to color his voice without overdramatization. Justino Diaz sings artistically, but his timbre is too light, and casting him as the elderly Bidebent is rather off the mark. The Alisa, Normanno, and Arturo are adequate or better.

The strong reservations I have about Mr.

Schippers' conducting are, I am afraid, very strong indeed. Mainly, they relate to his tempo choices. In Raimondo's scene ("*Ah, cedi, cedi*") the music is overstated in dynamics, and Diaz is allowed to sing in too jaunty a manner. The succeeding festive music is quite frantic. The tempo chosen for the Sextet is good, and the *Vivace*, which follows, is quite exciting. For all of Beverly Sills' marvelous singing, however, the Mad Scene does not have the proper flow, and "*Spargi d'amaro pianto*" is much too slow. And how can one explain the poorly balanced horns and bassoons that introduce this section or, for that matter, the equally ill-balanced brasses in the four measures leading into the tenor's "*Fra poco a me ricovero*"? The tenor's final scene, in fact, suffers most from the conducting: the pace is lethargic, and the composer's markings "*ravvivando il tempo*" are ignored.

To close on a positive note: the album contains outstanding annotative material by Wil-

ABC



BEVERLY SILLS
Stupendous singing as Lucia

liam Ashbrook and lovely illustrations. The recorded sound is also outstanding. G.J.

HAYDN, J.: *Mass No. 7, in C Major* ("*In Tempore Belli*"). **HAYDN, M.: *Ave Regina***. April Cantelo (soprano); Helen Watts (contralto); Robert Tear (tenor); Barry McDaniel (baritone); Choir of St. John's College, Cambridge, and Academy of St. Martin-in-the-Fields, George Guest cond. ARGO ZRG 634 \$5.95.

Performance: Refined
Recording: Spacious

This disc marks completion by Argo of its series of the six great Masses composed by Haydn during the years following his London triumphs. To know these Masses is not only to experience some of Haydn's most beautiful large-scale works, but also to become aware of the roots of Beethoven's two Masses—in particular, the *Missa Solemnis*, the *Agnus Dei* of which takes as its dramatic point of departure the trumpets-and-drums of Haydn's Mass "*In Time of War*" heard here.

Regrettably for Argo, its version of this Mass has four other fine recordings with which to contend, the best being the Angel version conducted by David Willcocks and the DGG by Rafael Kubelik. Conductor George Guest

has a fine body of singers and players at his disposal. The team of soloists is an especially well-matched one, and save for slight unsteadiness of production in the early part of the soprano solo in the *Kyrie*, the work in this department seems flawless. What I miss is impassioned utterance and a sense of rhythmic urgency in the opening of the *Gloria* and in the more dramatic sections of the *Credo* and *Agnus Dei*. Here Kubelik for me excels by a considerable margin. I also find his recorded sound more effectively contained than is the case with this Argo disc, in which the acoustic diffusion is such as to soften further the impact of the more assertive portions of the score.

Michael Haydn's a *cappella* motet, which fills out the disc, is a lovely piece of writing in classic liturgical style, sung here in flawless fashion to wholly beautiful effect. D.H.

KAGEL: *Hallelujah*. SCHNEBEL: *Für Stimmen* (. . . *missa est*). Schola Cantorum Stuttgart. DEUTSCHE GRAMMOPHON 137010 \$5.98.

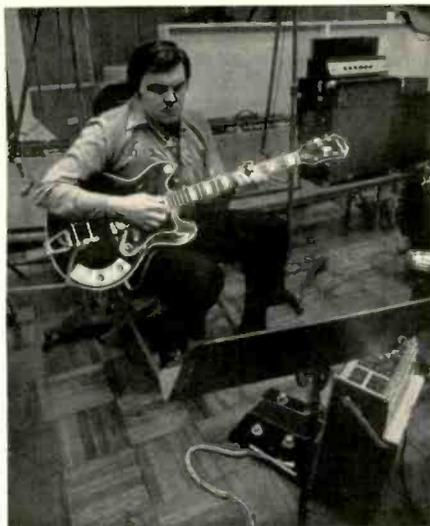
Performance: Excellent
Recording: Excellent

The obvious thing to say about these two vocal pieces is that they are both black masses—antiritual rituals, anti-songs of anti-praise. The connection with liturgy is explicit in the Schnebel title, in the fragments of multi-lingual prayer that bob up everywhere, even in the use of recorded animal sounds, barks, grunts, bellows, and neighs, mixed in with hardly less animalistic human sounds. *Für Stimmen* is beyond song, beyond speech, into an "unnatural" jungle of vocal noise that is horrifying to contemplate. It sounds "primitive" but this is deceptive. There is nothing primeval or basic or natural or radical root-like about this. Vocal expression, once meaningful, is now beyond the capacity to mean, beyond even ritual or the possibility of redemption.

The Kagel, similar in some ways, is not so close to the abyss. It is a brilliant mix of the vocal activities of sixteen voices—singing, speaking, blowing on organ pipes, and making various vocal noises. I would imagine that the big ensemble clusters are composed, the solo sounds at least in part improvised, and the whole laid down on a multi-track and mixed by the composer. Thus the version is shaped for the medium, and, through the use of changing perspectives, achieves coherent recorded form. The effect is like that of passing through an edifice in which some mysterious ceremony is taking place: there are people everywhere chanting and invoking, sometimes together, most often in a desperate individuality and aloneness. The quality is much like that of the Fellini *Satyricon*; one could imagine this cheerless song of praise as the score for that film.

Need one add that the performance and production are up to the very best standard of DGG's excellent avant-garde series? The Kagel side had a few pops and clicks that may represent a pressing fault. E.S.

MACHAUT: *La Messe de Nostre Dame*. Friedrich Melzer and Ernst Haefliger (tenors); Jakob Stämpfli and Kurt Widmer (basses); Instrumental soloists; Members of the Schola Cantorum Basiliensis, August Wenzinger cond. ***Nine Secular Works: De petit po*** (*ballade*); ***Doulz viaire gracieus*** (*rondeau*); ***Donnez, signeurs*** (*ballade*); ***De routes flours*** (*ballade*); ***Rose, lis, printemps*** (*rondeau*); ***Mes esperis se combat*** (*ballade*); ***Dame, vostre doulz*** (*Continued on page 94*)



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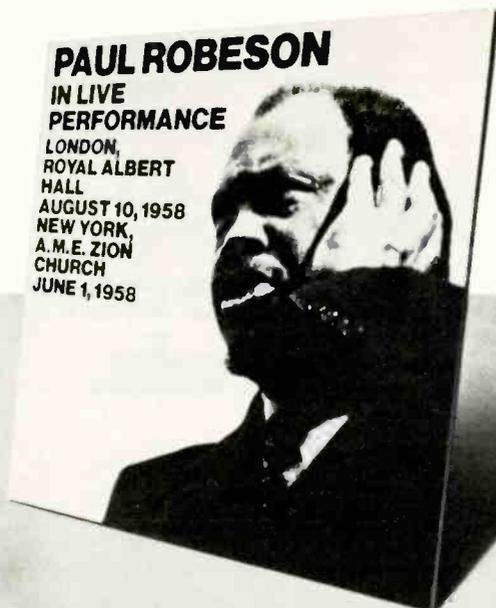
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viaire (*virelai*); *Dame, comment* (*ballade*); *Quant je ne voy ma dame* (*rondeau*). Ernst Haefliger (tenor); Rudolf Scheidegger (organ, solo in *De toutes flours*); René Zosso (hurdy-gurdy); instrumental soloists of the Schola Cantorum Basiliensis, August Wenzinger dir. DEUTSCHE GRAMMOPHON ARCHIVE 2533054 \$5.98.

RECORDING OF SPECIAL MERIT

MACHAUT: *La Messe de Nostre Dame*. John Caldwell (organ); Purcell Choir, instrumental ensemble. Grayston Burgess cond. *Seven Secular Works:* *Foy porter* (*virelai*); *Quant ma dame* (*rondeau*); *Nuls ne doit avoir merveille* (*lai*); *Tant doucement* (*rondeau*); *Tres douce dame* (*ballade*); *Douce dame jolie* (*virelai*); *Amour me fait desirer* (*ballade*). Grayston Burgess (countertenor); Ian Partridge, John Buttrey, and Nigel Rogers (tenors); Geoffrey Shaw (baritone); instrumental soloists. L'OISEAU-LYRE SOL 310 \$5.95.

Performance: Burgess Mass ideal

Recording: Both excellent

The Mass duplicated on these discs is Guillaume de Machaut's most famous composition, one that is said to be the earliest complete setting of the Mass by a single composer. Though it was once conjectured that the work was composed for the coronation of Charles V (1364), it was probably written a good twenty years earlier for the Saturday votive Mass of the Virgin Mary in the Marian Chapel at the Cathedral of Reims. There has been no lack of good recordings of this medieval masterpiece: two that still are available are performances by the Deller Consort on Vanguard BG 5045, a singularly spiky interpretation that makes the most of the jagged rhythmic interchanges between the voices, and by the London Ambrosian Singers under John McCarthy, who adds to Machaut's setting of the Ordinary of the Mass the Gregorian Proper for the Feast of the Assumption.

Of the two newer versions, Wenzinger's is scholarly (all the recordings are) in the use of instruments, and he quite properly utilizes a very small group of singers and players. Overall, it is a very lyrical interpretation, one that minimizes the jagged quality. It is also rather unvaried in tempo and mood, and, quite frankly, very dull. One would not guess that this Mass is an extraordinarily exciting work from this stagnant rendition. In contrast, the recording by Grayston Burgess and an equally small group of performers is quite a revelation; it seems to be the best compromise between the music's obvious lyrical elements and the rapid-fire rhythmic interchanges. One stylistic point in the Burgess version is worth mentioning: solo organ elaborations are interspersed among the sections of the *Kyrie* (these are taken from a late-fourteenth-century manuscript), something not done in any other recording. It works extremely well, and the performance, considering this addition and numerous other factors, is a marvelous achievement.

The second side of both these discs is devoted to Machaut as poet and composer of secular songs. The Archive set (which contains a fair number of pieces recorded elsewhere, *viz.*, New York Pro Musica on Decca 79431, but not duplicated by the L'Oiseau-Lyre selection) is very sensitively sung to a variety of accompanying instruments (including what may be the first recording of a hurdy-gurdy) by Ernst Haefliger. Vocally less refined but more correct-sounding (in terms of expression as well as

(Continued on page 96)

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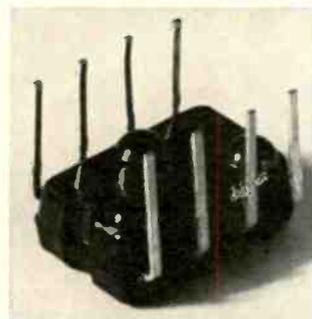
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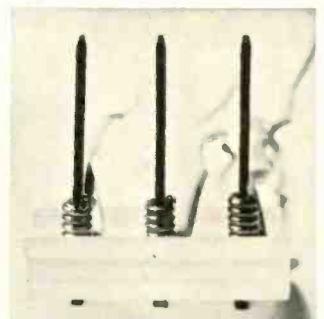
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medieval French pronunciation) is the L'Oiseau-Lyre group. These feature several singers, again with a variety of instruments accompanying. All are done most intelligently and with a good feeling for the courtliness of the texts. The sonic reproduction on both discs is first-class, and texts and translations are supplied by both firms. I.K.

MENDELSSOHN: *Elijah, Op. 70.* Tom Krause (baritone); Jane Marsh (soprano); Shirley Verrett (contralto); Richard Lewis (tenor); David Hunt (boy soprano); Singing City Choirs and Columbus Boychoir; Philadelphia Orchestra, Eugene Ormandy cond. RCA LSC 6190 three discs \$17.94.

Performance: Sumptuous
Recording: Good

Mendelssohn's *Elijah* is for me the quintessence of Victorian oratorio, but despite its many fine moments—in particular Elijah's nobly despairing aria, "It is enough"—the Establishment piety becomes a bit much, as George London implies in his candid and illuminating program notes for this album. Still, this is a performance to reckon with. Save for less than perfectly controlled vibrato on the part of soprano Jane Marsh, this *Elijah* is distinguished by superior solo singing. Krause is a superbly authoritative Elijah, the very essence of the wrathful prophet in the early pages and a movingly tragic and transcendent figure in the later ones. Shirley Verrett's full-bodied yet flexible contralto may not efface memories of Matzenauer or Marian Anderson in "O rest in the Lord," but she is magnificent in the Jezebel episodes. In fact, it is here that Ormandy, his choral forces, and his orchestra have their finest moments, conveying with utmost vividness the lynching atmosphere of the situation.

There is ample impact and tonal body to the orchestral and choral performance as a whole; but I would have liked a bit more acoustic space in the recorded sound to relieve the textural density and bottom-heaviness of the bigger choral episodes. The Philips German-language performance I had on hand was rather too diffuse in this area. It would appear that a final choice of an up-to-date stereo version of *Elijah* would lie between this one and the Angel album, which I did not have on hand for comparison. D.H.

RECORDING OF SPECIAL MERIT

MENOTTI: *The Old Maid and the Thief.* Judith Blegen (soprano), Laetitia; Margaret Baker (soprano), Miss Pinkerton; Anna Reynolds (mezzo-soprano), Miss Todd; John Reardon (baritone), Bob. Orchestra of the Teatro Verdi di Trieste, Jorge Mester cond. MERCURY SR 90521 \$5.98.

Performance: Very good
Recording: Very good

The Old Maid and the Thief was Gian Carlo Menotti's second opera, commissioned for radio and first performed by the National Broadcasting Company in 1939. The composer was twenty-eight and his knowledge of the English language still rather limited, yet he was courageous enough to create his own English libretto for this opera. The libretto is reproduced with this album and, except for some contrived turns of phrase, it is a clever and very effective achievement. (The version heard here varies slightly from the printed one, suggesting that Menotti has made minor revisions, all to the work's advantage.) In his candid notes accom-

panying the recording, Menotti states somewhat nostalgically that "what seemed so easy then has become unbearably difficult." *The Old Maid and the Thief* is the natural, spontaneous expression of a young man being himself, a work of which its composer—now older, wiser, and considerably richer—is still evidently quite fond.

And he has every reason to be. His Americanization notwithstanding, Menotti has never strayed far from his heritage. Musically, *The Old Maid and the Thief* grew out of the Puccini of *Gianni Schicchi*, and the light, sophisticated, but still very Italian idiom of Wolf-Ferrari. It is about recognizable human beings who are effectively characterized in music. It is about foibles and frustrations that are not dissected but exposed and wittily commented upon. The orchestration is clear and effective, comic situations are cannily underlined, and the vocal lines are placed in the singers' effective ranges. For the past thirty years, Menotti has remained faithful to these principles, and his work has often been dismissed by those who either deny the importance of such skills in opera or are incapable of mastering them.

The Old Maid and the Thief is light entertainment. It is not a masterpiece, and perhaps it is not even a significant milestone. I don't believe that it has ever been the mission of Menotti to compose milestones. This youthful work, like its successors *The Medium*, *The Consul*, and *The Last Savage*, are the works of a very talented, stage-wise man who goes his own way. And more power to him. In the present recording, he has the support of the gifted Jorge Mester, who seems to understand Menotti's aims completely, and four very fine singers. They deserve every praise, and so does Mercury for its smooth and natural-sounding production. G.J.

PENDERECKI: *Psalms of David; Anaklasis for Strings and Percussion; Sonata for Cello and Orchestra; Fluorescences for Orchestra; Stabat Mater.* Siegfried Palm (cello); Philharmonic Orchestra of Poznan; Warsaw Philharmonic Orchestra and Chorus, Andrzej Markowski cond. MACE MXX 9090 \$2.50.

Performance: Authentic
Recording: Good

When I recently made the statement that Krzysztof Penderecki was closer to Carl Orff than to any other composer, I did not know the early *Psalms of David*, a work for chorus and percussion that derives, if not from Orff himself, then from Orff's own sources: Stravinsky's *Les Noces*, *Oedipus Rex*, and especially *Symphony of Psalms*. From the big block sounds and repeated notes of the *Psalms* to the cluster and percussion textures of *Anaklasis* and *Fluorescences* (1960 and 1961, the same period as his famous *Threnody for the Victims of Hiroshima*) is not perhaps such a major step as might first appear. These are, in my opinion, Penderecki's best works, large-scale pieces composed in densities and colors with considerable variety and imagination. The *Sonata for Cello and Orchestra*, written in 1964 for the very excellent Siegfried Palm, seems to me a little pretentious and lacking in substance, especially in a recording, where we lose the visual effect of Palm slapping, rapping, stroking, and swiping the cello; these unusual sounds are not even heard as cello noises but simply merge into the general orchestral texture. The *Stabat Mater*, written at about the same time for triple chorus a *cappella*, is in part a return
(Continued on page 98)

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to the early Stravinsky/Orff style now adapted to the new "avant-garde" cluster-babble-texture techniques; all of this is developed at length in the *St. Luke Passion*, into which the *Stabat Mater* was incorporated.

These recordings come from the Polish National Recording Company. Markowski, one of Europe's leading interpreters of new music, was one of Penderecki's earliest exponents and does an excellent job with the varied forces. The recording is of good quality; I thought only that the cello might have been brought more to the foreground. The U.S. production by Mace is poorly annotated, lacks texts for the Psalms, and spells Markowski's name wrong.

E. S.

PRAETORIUS: Polychoral Motets: Puer natus in Bethlehem; Vom Himmel hoch, da komm ich her; Omnis mundus jocundetur; Als der gütige Gott. Soloists, instrumentalists, Westphalian Choral Ensemble, Wilhelm Ehmann cond. NONESUCH H 71242 \$2.98.

Performance: Festive and involved
Recording: Okay—some constriction

These large-scale motets on Christmas texts by Michael Praetorius were published in 1619 as part of the composer's *Polyhymnia caduceatrix et panegyrica*, a fifteen-volume set of vocal concertos. Those familiar with the Christmas anthology on DGG Archive 198316 and the collection on Nonesuch 71232, which contain similar material (although those selections, not duplicated here, are generally of shorter duration), will know that this music is extraordinarily festive and not to be restricted to Christmas listening. The scoring is for solo voices, several choruses, and a colorful array of supporting instruments. The music is based on Lutheran chorales, with texts that are sung in German, Latin, or a combination. It is refreshing repertoire that often attains considerable grandeur in its polychoral effects. The performances by Wilhelm Ehmann and his forces are ideally sensitive to the texts and the underlying sentiment, as well as being wonderfully stirring. Ehmann always manages to bring a sense of total spiritual involvement to whatever music he directs (his Bach and Schütz are equally good examples), and this fine disc is no exception. It is highly recommended.

The sonic reproduction, though not always free of constriction, is otherwise quite good; stereo separation is well managed, an essential in these often complex works. Texts and translations are provided.

I.K.

SCHNEBEL: Für stimmen (. . . missa est)— (see KAGEL)

SCHUBERT: Sonata, in A Minor, for Arpeggione and Piano. **BRIDGE: Sonata for Cello and Piano.** Mstislav Rostropovich (cello); Benjamin Britten (piano). LONDON CS 6649 \$5.98.

Performance: Bridge splendid, Schubert wayward
Recording: Excellent, well balanced

Against all expectation, I enjoyed the Bridge side of this record much more than the Schubert. The English composer Frank Bridge (1879-1941) is best known as one of Britten's teachers, celebrated in the early set of variations that first brought the younger man into international prominence, and I suppose I had always thought of him as just another of the minor woolly Romantics who flourished in England at the turn of the century. But this Cello

Sonata reveals a musical mind with a good deal of distinction.

Completed in 1917, it is said to be less advanced in idiom than Bridge's last works. Yet, though the tone is late-Romantic and the harmonic language occasionally borders on the overripe, the intricately fashioned two-movement structure displays a sense of formal logic no less powerful and at the same time considerably less obvious than his more famous pupil's tends to be. The instrumental writing is orthodox but eloquent, and Rostropovich joins Britten in a performance whose passionate commitment is evidence of the sincerity behind this well-deserved act of homage.

The performance of the Schubert "Arpeggione" on the other side is passionate, too, but in a less legitimate way. The modest lyrical charm of this work is disastrously overweighted by the players' portentous and disruptive changes of tempo. One simple cadential bar near the end of the first-movement exposition is slowed down so drastically that it becomes, in effect, two bars of the old tempo, and the coda of the same movement is dragged out to the proportions of a slow introduction in reverse. What makes matters worse is that the partners have not fully coordinated their approach: the cello's first phrase is one of the very few that Rostropovich plays quite straightforwardly, yet at the start of the work Britten gives the same phrase with lavish rubato. The contrast is both unsettling in itself and misleading in the expectations it arouses, for later on it is Rostropovich who does most of the stretching and squeezing.

Both works are recorded with exciting immediacy and admirable balance, and the disc is well worth anyone's investigation for the sake of the Bridge. I have yet to hear a really satisfactory performance of the Schubert on the cello (Feuermann's reading on Seraphim is as disconcertingly brisk as Rostropovich's is wayward). Perhaps Telefunken could be persuaded to treat the piece to one of their valuable resuscitations of old instruments. Failing that, a double-bass performance by Gary Karr (whom I once heard play the sonata marvelously in London) would be welcome.

B.J.

RECORDING OF SPECIAL MERIT

SHOSTAKOVICH: Symphony No. 14. Margarita Miroshnikova (soprano), Yevgeny Vladimirov (bass); Moscow Chamber Orchestra, Rudolf Barshai cond. MELODIYA/ANGEL SR 40147 \$5.98, © 4XS 40147 \$6.98.

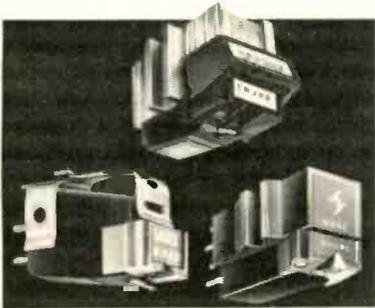
Performance: Excellent
Recording: Good

This is one of Shostakovich's strongest and most deeply felt works. The Russian composer's music is often close to the tradition of Mahler, and this work, a symphonic song cycle on the subject of death, is a striking example. Of course, the shade of Moussorgsky is also in the background; after all, a brooding obsession with death is very Russian. The texts are a surprisingly diverse collection: Lorca, Apollinaire, Rilke, and Küchelbecker—the last, in spite of his name, a Russian poet of the nineteenth century who died in exile in Siberia. The work has many unusual features. Besides being a song cycle in the guise of a symphony, it has striking scoring for strings and percussion. It was written for the very excellent Moscow ensemble and dedicated to Benjamin Britten. There are moments of bitterness and irony, Shostakovich at his most savage. But the overall mood is of

(Continued on page 100)



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intense, unbearable melancholy. The mournful beauty of much of this is undeniable but the final impression is of fearful terror and gloom. This may well be Shostakovich's greatest work; perhaps indeed it tells us something about the horror and despair of the age in which we live. But it's all much too pessimistic for me; contrary to my usual practice, I couldn't even bring myself to listen to it more than once. I find this music close, not to my own image of death, but to some nightmare from which there is no escape. Unlike what usually passes for modern music—which can have a sort of crazy healthiness or is often at least cathartic—this work is at the edge of the dark night of the soul. The singing is a little on the beefy-wobbly side; the orchestra is superb. Russian (in transliteration) and English texts. *E.S.*

STRAUSS, R.: *Sinfonia Domestica*, Op. 53. Los Angeles Philharmonic Orchestra, Zubin Mehta cond. LONDON CS 6663 \$5.98.

Performance: Brilliant
Recording: Superb

Much has been made of the fact that Richard Strauss' 1902-3 *Sinfonia Domestica* amounts to a macrocosmic depiction of a microcosmic life situation (is it an innocent child or a small dinosaur that Strauss intended to picture thrashing around in the bath?). But, for me, the best way to enjoy the piece is to chuck all thoughts of pictorialism and take it as a superbly crafted, if somewhat overloaded, demonstration of thematic elaboration involving every device of metamorphosis and polyphony, and above all as a fabulous conductor's showpiece.

Fritz Reiner's 1957 recording with the Chicago Symphony, currently available on RCA's budget-priced Victrola label, and George Szell's short-lived 1964 Columbia issue with the Cleveland Orchestra were superb expositions by Richard Strauss specialists. This new version by Zubin Mehta belongs in their company, and has the benefit of the same sumptuous, yet finely detailed recorded sound that distinguished Mehta's blockbuster recording of *Also sprach Zarathustra*. I recommend this one for all-out Strauss fans and sound buffs.

D.H.

TAVENER: *The Whale* (see Best of the Month, page 80)

VILLA-LOBOS: *Twelve Etudes for Guitar*. Turbio Santos (guitar). MUSICAL HERITAGE SOCIETY MHS 1056 \$2.50 (plus 60¢ handling charge, available from the Musical Heritage Society, 1991 Broadway, New York, N.Y. 10023).

Performance: Splendid
Recording: Splendid

Andrés Segovia, to whom these twelve predominantly didactic Études were dedicated, has described them as being equal in quality to works by Chopin and Scarlatti. That's pushing enthusiasm a little far. Insofar as guitar technique is concerned, I'm sure they are cannily constructed. Musically, however, they are modest, despite their frequent attractiveness. Only in the Étude No. 11 (E Minor) did Villa-Lobos achieve a degree of memorable pungency in expression. Unfortunately, in this piece, as in so much of his music, the figure of Debussy looms large in the background.

The Brazilian guitarist Turbio Santos is excellent. His tone is beautiful and his musicianship refined, and he seems to have technique

(Continued on page 104)

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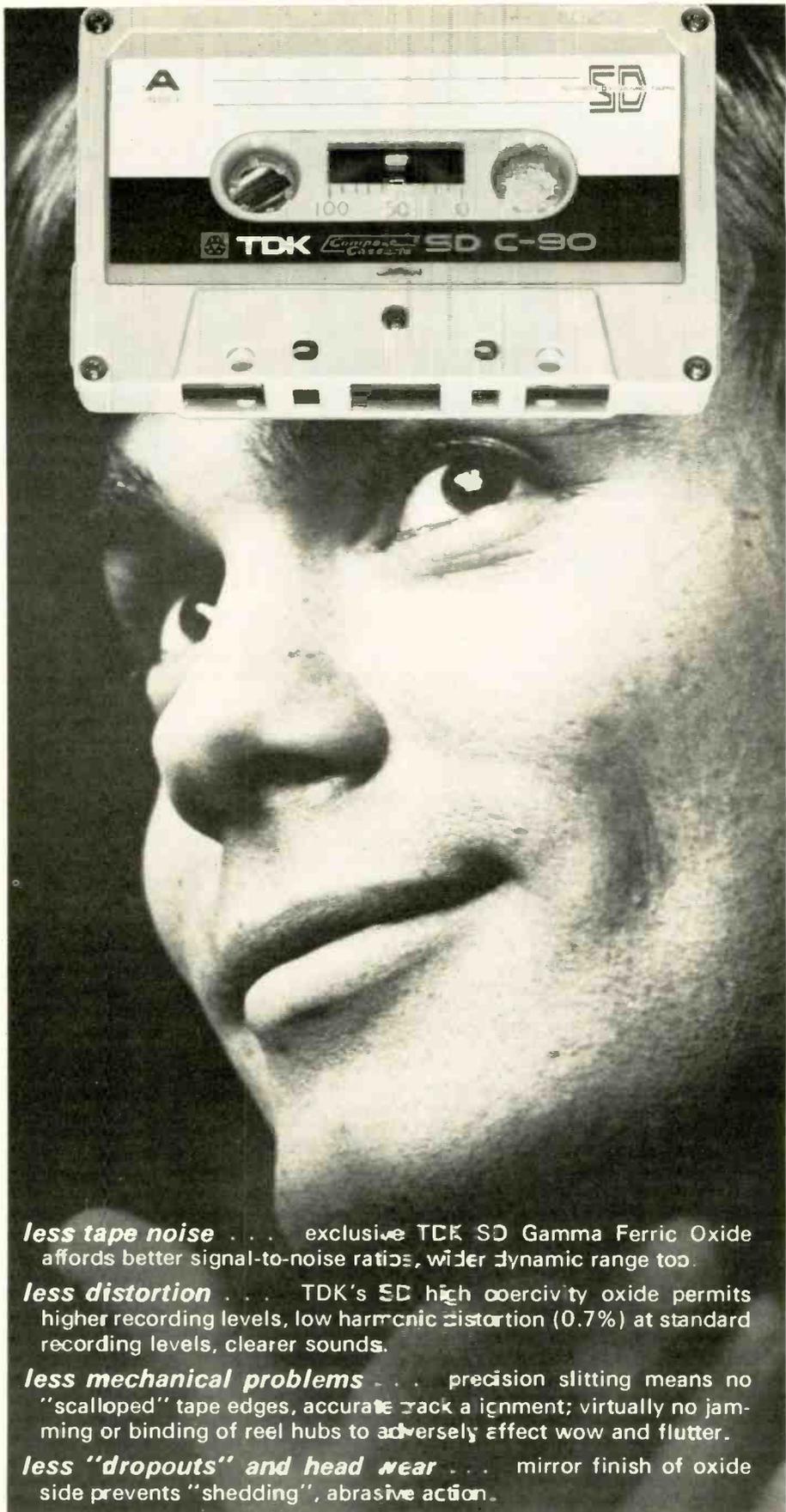
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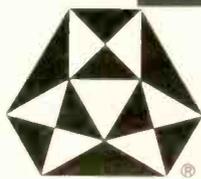


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By IGOR KIPNIS

ONE hears a lot about the school of Romantic piano-playing these days, in discussions of either the repertoire of an earlier era or of the kind of playing that prevailed then. Although there are a great many recorded examples of what piano playing was like in the Twenties and Thirties, some great examples—Percy Grainger, for one—have never been transferred onto commercial LP's from the 78-rpm originals, and others that were available at one time have long since been deleted. There is a whole series of discs taken from piano rolls; a few of them can be called reliable, but others give a distorted picture of what some of these legendary pianists were like. So the problem is that although specialists talk about these older performers and their unique style of playing, the listening public has to make do with a selection of discs too limited to give it a truly accurate picture.

RCA has now put us all in its debt by issuing three invaluable discs devoted to just three keyboard titans, Josef Hofmann, Josef Lhevinne, and Sergei Rachmaninoff. Given the different approaches of the performers, these discs show as clearly as any records I know just what the early twentieth-century piano style was all about. Perhaps the most fascinating of the three records—though because of the interpretive peculiarities of the performer it is also certain to be the most controversial—is the Hofmann all-Chopin collection. (Well, *almost* all-Chopin—it includes one of Mendelssohn's *Songs Without Words*.) Half of the album is devoted to Hofmann's "experimental" (I believe he preferred piano rolls to discs) recordings made for Victor in 1935 and never before issued. They include the first movement of the B Minor Sonata (it is a pity he didn't complete the work), the D-flat Nocturne, the A-flat Waltz, the Chopin-Liszt *Maiden's Wish* (a beautifully delicate performance), and the "Military" Polonaise. This last is typical of Hofmann. Above all, there is an aristocratic style, an elegance and an exquisite sense of dynamics—at one moment purest gossamer, the next instant thundering, but never with a hint

of a hard or an ugly sound to the tone.

Hofmann's more quixotic side can be heard in the remainder of the program, which is taken from a "live" recital at the Philadelphia Academy of Music in 1938. The *Andante Spianato* and *Grande Polonaise* is superb here. And even in the over-fast—dare one call it insensitive?—*Berceuse*, I must admire the man's ability to shape phrases, the timing of his rubatos, and his utter spontaneity. To be sure, the recorded sound is anything but good, even for the dates involved. Considering what can happen when engineers attempt to remove noise, I am glad it has been left in, but I would almost rather have heard the applause after each selection on side two than the clipped endings we get here. Still, this is a fascinating selection, probably the best examples of Hofmann's art we will ever be given a chance to hear.

Once available on Camden CAL 265 (and briefly on a private Juilliard School of Music issue), the Josef Lhevinne recordings were originally made between 1928 and 1936. Together with the Mozart Two-Piano Sonata (LM 2824, evidently now deleted), they represent all of this performer's recording for RCA (there were, of course, quite a few piano rolls and some 78's made for a company called Disc). The present reissue is the finest example of Lhevinne's playing we possess, notwithstanding an almost equally satisfying selection of piano rolls on Argo DA-41. There is, first of all, one side of stupendously played Chopin, in which the A Minor ("Winter Wind"), B Minor ("Octave"), and E-flat Major Etudes, plus the tumultuous B-flat Minor sixteenth Prelude, are set forth with such technical perfection and such absolute bravura that they would alone entitle Lhevinne to immortality. But there is more: probably the most musical account of the Schumann Toccata ever recorded, a wonderful bit of ensemble work with his wife, Rosina, in Ravel's two-piano arrangement of Debussy's *Fêtes*, and the Lhevinne encore speciality *par excellence*, the Schulz-Evler transcription of the *Blue Danube*, with its fistfuls of scales and arpeggios. Such panache in playing is irresist-

ible. The transfers are quite good, a little warmer and more brilliant-sounding than my old copy of the Camden.

The final record is a stunning program of Chopin played in his quite inimitable way by Sergei Rachmaninoff. Pianists of this era did not always hew to the letter of the score in dynamics, phrasing, or even notes and rhythms. For an example, try Rachmaninoff's "Minute" Waltz, one of the earlier recordings here (they date from 1920 to 1930, seven of the pieces on side two being acoustics). For that matter, an equally good example of Rachmaninoff's "own" concept of dynamics is the celebrated "Funeral March" from the B-flat Minor Sonata, in which the pianist chills one's blood with his cortege-like effect, advancing, then receding into the distance.

THIS same Sonata is, of course, one of the landmarks of Rachmaninoff's recorded repertoire, and it is good to have it available again (a previous Camden issue coupled it with the pianist's Schumann *Carnaval*). The two new items, the Waltzes Opus 34, No. 3, and Opus 70, No. 1, dating from 1920 and 1921, respectively, were approved for release by the performer but not heretofore issued commercially; they are pleasant but not monumental additions to the catalog. The recorded sound, again, is faded, but sonics are a small thing next to the artistry, style, and manner of projection to be heard on these recordings.

JOSEF HOFMANN: *Recital*. Nine works by Chopin, one by Mendelssohn. Josef Hofmann (piano). RCA VICTROLA Ⓜ VIC 1550 \$2.98.

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THE RECORD LOVERHATER



Edward Tatnall Canby, Author and Critic

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all over the place. The recording treats him graciously indeed. L.T.

COLLECTIONS

THE BLACK COMPOSER IN AMERICA. Ulysses Kay: *A Short Overture*. George Walker: *Passacaglia*. William Grant Still: *Songs of Separation*. William Dawson: *Out in the Fields*. William Fischer: *A Quiet Movement*. Arthur Cunningham: *Lullabye for a Jazz Baby*. Stephen Chambers: *Shapes for Orchestra*. Cynthia Bedford (mezzo-soprano); Oakland Youth Orchestra, Robert Hughes cond. DESTO DC 7107 \$5.98.

NATALIE HINDERAS: Plays Music by Black Composers. R. Nathaniel Dett: *In the Bottoms*. Thomas H. Kerr Jr.: *Easter Monday Swagger*. George Walker: *Sonata No. 1*. Arthur Cunningham: *Engrams*. William Grant Still: *Three Visions*. John W. Work: *Scuppernong*. Stephen A. Chambers: *Sound-Gone*. Hale Smith: *Evocation*. Olly Wilson: *Piano Piece for Piano and Electronic Sounds*. Natalie Hinderas (piano). DESTO DC 7102/3 two discs \$11.96.

Performances: Hinderas excellent, orchestra fair

Recordings: Hinderas okay, orchestra fair

Although there has been a certain amount of attention paid to the plight of the black artist in America, the black composer really has it even worse. First of all, he suffers along with his colleagues from the general national disinterest in the creative side of musical art. On top of that he is the victim of our limitless talent for type-casting and pigeon-holing. What's your major? I know a remarkable black musician who happens, among other things, to be an excellent French horn player, but he can't get gigs because no one will believe that a black man can be a great French horn player. French horn? Man, you must mean the saxophone.

Similarly, black music is supposed to consist of spirituals or jazz or pop/soul. Sonatas? Orchestral music? Remember Howard Swanson's *Short Symphony*, which won every conceivable prize? Fat lot of good it did him. Black composers sometimes win prizes; what they don't get are chances to have their music performed, recorded, and listened to.

Well, these two albums are a brave if somewhat limited attempt to deal with a bad situation. Miss Hinderas' double album is full of fascinating things—the picturesque, Gottschalk-like pieces of Nathaniel Dett, and the contemporary works on the second disc, notably those of Steve Chambers and Olly Wilson. And all of it is extremely well performed. The orchestral record is equally strong on the contemporary side, notably the highly evocative pieces of William Fischer and Chambers.

Shortcomings? Well, the musical quality is uneven—an inevitable result of survey and sampler projects. The Oakland Youth Orchestra, although surprisingly adept at some difficult things, is not quite up to all of the challenges of this music. The recording and presentation is only fair to good. But then it is not Lincoln Center, the Philadelphia Orchestra, or Columbia Records that has undertaken this project but Oakland, Mr. Hughes, and Desto.

Is there anything that unites these very diverse musical personalities? Is there a black American "classical" music or one coming into being? At least the music must be available; it must be possible to deal with it on its own

terms. Black composers and musicians, along with other aware creative musicians in this country, have at last come to the realization that it is futile to keep expecting the cultural walls to come tumbling down to admit them; culture is them and what they do—in their own communities and in the larger community of those who are really willing to listen for the authentic creative voices of our time. E.S.

GIUSEPPE DE LUCA: In Opera and Song. Diaz: *Benvenuto Cellini: De l'art splendeur immortelle*. Verdi: *Don Carlos: Dio, che nell'alma infonde* (with Giovanni Martinelli, tenor); *Per me giunto; O Carlo, ascolta. Il Trovatore: Il balen*. Rossini: *William Tell: Resta immobile*. Donizetti: *La Favorita: A tanto amor*. Bellini: *I Puritani: Ah, per sempre*. Tosti: *Voi dormite, signora*. Gretchaninov: *Lullaby*. Denza: *Occhi di fata*. De Leva: *Canta il mare*. Giuseppe de Luca (baritone); orchestral accompaniments. OASI-537 \$5.00 (available in

Roy Round



HELEN WATTS
A gifted song recitalist

some shops, or from OASI, 1231 60th Street, Brooklyn, N.Y. 11219).

Performance: Superb
Recording: Fair

Giuseppe de Luca (1876-1950) made his debut in 1897 and sang professionally to the end of his days on earth. His was one of the most spectacular careers in singing history, but the producer of this record rightfully designates the years covered here (1919-1925) as "his golden period." These recordings, made during the artist's first decade at the Metropolitan Opera, should long ago have been made available by RCA. Collectors who have waited in vain for their release by the logical source are now indebted to this "private" label for an outstanding collection.

De Luca's voice was not exceptional in range and volume. That his records are beautiful, almost without exception, is because he knew all there was to know about singing. Within a compressed dynamic range he was able to make such fine gradations that the distance between his *pianissimo* and his *fortissimo* seemed enormous. There was, above all, a distinct individuality to his sound, the mark of a great singer, and those who will be discovering that caressing timbre for the first time through this recording will find it a thrilling experience. He

was called by some "il *signore del fraseggio*," and indeed his phrasing was filled with poetry and eloquent lyricism. There was no need for him to resort to the vocal histrionics which characterized the work of his more dramatic and dynamic colleague, Titta Ruffo. De Luca worked with subtler but no less effective tools. As for his mastery of the *bel canto* style, the Rossini, Bellini, and Donizetti arias on this record reveal an effortless flow of beautiful tone, a deliberately paced cantilena seemingly untroubled by breathing, and the kind of singing that seems to rejoice in its own beauty. The recital begins with a beautiful and virtually unknown aria from a forgotten opera by an unknown composer (Eugène Diaz). It is sung in flawless French with spellbinding art. The last four selections on the disc are ordinary songs raised to extraordinary heights by the singer's artistry.

I hope that this record will be bought by many singers, because its educational value (to say nothing of its capacity to give pleasure) is exceptional. Technically, the reproduction is variable, at times (*I Puritani*) surprisingly forward, at times less so. There is an unfortunate flutter on "*O Carlo, ascolta*" . . . but you'll forget all about such things within moments after De Luca begins to sing. G.J.

FANTASIA: see "Walt Disney's *Fantasia*," page 120

HELEN WATTS: Song Recital. Brahms: *An eine Aeolsharfe; Nachtigallen schwingen; O wüsst' ich doch den Weg zurück; Es liebt sich so lieblich im Lenze; Sapphische Ode; Treue Liebe*. Schumann; *Four Songs of Mignon: Kennst du das Land; Nur wer die Sehnsucht kennt; Heiss mich nicht reden; So lasst mich scheinen*. Mahler: *Rheinlegendchen; Wo die schönen Trompeten blasen; Des Antonius von Padua Fischpredigt*. Helen Watts (contralto); Irwin Gage (piano). TELEFUNKEN SAT 22515 \$5.95.

Performance: Good
Recording: Good

Helen Watts' imaginative program here nicely sets off her artistic gifts. She deserves the highest praise for bypassing some obvious—and perhaps sure-fire—Schumann songs in favor of the unfamiliar Mignon settings. The latter are well known to specialists, but how often do they turn up in performance? (Almost never before on records, to my recollection!) They date from that unhappy composer's final years, and their tormented mood comes, perhaps, from his own inner being. As songs they are rambling, fragmented, and not altogether successful, yet they are provocative in their near-operatic intensity and their harmonic adventurousness.

The Brahms group includes some great songs (*Sapphische Ode, An eine Aeolsharfe, O wüsst' ich doch*) and also a discovery: *Es liebt sich so lieblich*, one of Brahms' rarely heard Heine settings. All three Mahler songs are gems. Here is where Miss Watt's artistry is most impressive. She uses her warm, velvety voice with great sensitivity and with an uncommon range of dynamic shadings. The results are best when she sings at soft or medium volume; *forte* passages bring a certain tremulous quality, though never to a disturbing degree. This is a laudable release, the transcript of an actual concert before the most disciplined and attentive audience imaginable. Irwin Gage's accompaniments are unexciting but thoroughly capable. G.J.

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By ROBERT S. CLARK



SCHUBERT'S MASS IN G

FOR a hundred years or so, it has been our habit to think of musical works as resulting from the interaction of two forces, the prevailing musical language (or one of the several prevailing languages) and the mind of the individual composer. We isolate the ways in which the work we are examining partakes of the style of its time, and, relating the work to others by the same composer, we locate characteristic signs of his individual hand. We are accustomed to thinking of the latter as the thing that matters most about the work, the thing that gives it its capacity for survival. But by doing so we sometimes underestimate the extent to which the vitality of a stylistic tradition contributes to the achievement of even the least conventional composer.

Perhaps Franz Schubert's modest Mass No. 2, in G Major, for four-part chorus, strings, and organ (D. 167), is a slender peg to hang the point on. But surely it is as much the fruit of a fecund style as of an individual talent. We can understand better just how the Mass in G came to be what it is by looking into the tradition of Austrian Roman Catholic liturgical music than we can by examining the more celebrated music of Schubert. The Mass in G might be called a largely anonymous work, not because the music lacks character, but rather because its character is conferred by tradition much more than by an individual musical mind. And by the end of 1815, the year the Mass in G was composed, Schubert's individuality was certainly making itself felt: he had already written the Second and Third Symphonies and the songs *Gretchen am Spinnrade*, *Rastlose Liebe*, and *Erkönig*, to take a few examples. There is scant sign in the Mass of the composer of these works. Yet it has quality and felicity.

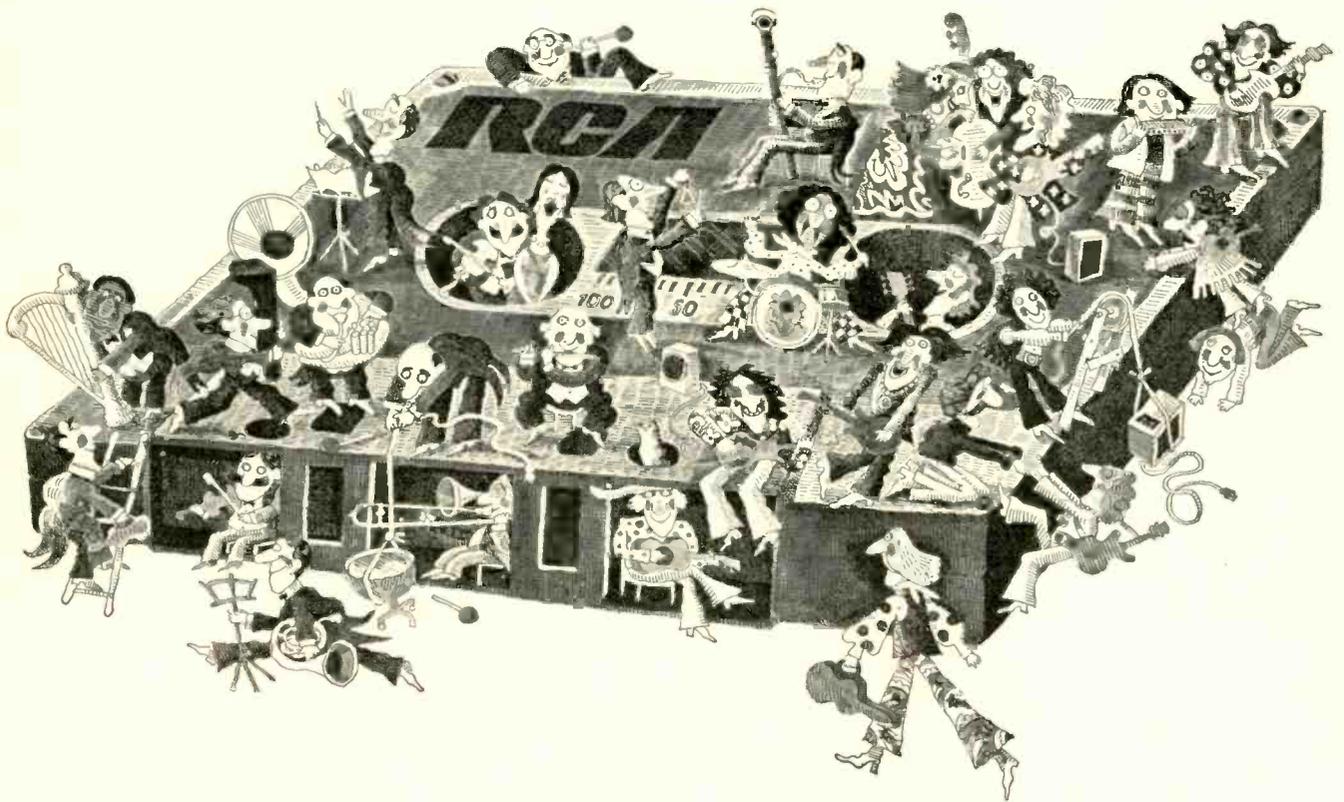
The Mass in G is a *missa brevis*; that is, the six sung portions of the liturgy are

each treated as unified movements, without subdivisions and broad changes of tempo. The opening *Kyrie* is gently exploring, but never supplicating; the *Gloria* is a vigorous *Allegro maestoso*, with soprano and bass solos on the words *Domine Deus* (both here and in the succeeding *Credo*, some phrases of the liturgical text are omitted, probably through carelessness). The *Credo* is a flowing movement, the metrical regularity of which seems to imply unshakable faith. The brief *Sanctus* and the *Benedictus*—the latter given, as was customary, to solo voices, in this case a trio of soprano, bass, and tenor—both conclude with the same spirited *fugato* on the words "*Osanna in excelsis*." The final *Agnus dei*, with its curving melodic strains for soprano and bass and its touching choral reiterations of "*Miserere nobis*," hints—perhaps the only time in the work—of the composer who was to write so many great lieder.

THE Schwann catalog still lists the Robert Shaw Chorale's performance of this lovely piece (RCA LM 1784). The singers and players are fine, but Shaw's tempos are sluggish, and the heaves and swells everywhere will not be confused with real expressivity by anyone but the insensitive. This is doubly unfortunate, because this monophonic recording actually has advantages over the only stereo recording, a good performance by the Freiburg School of Music Chorus and Orchestra led by Herbert Froitzheim (Decca 710091). Here the soloists are too far forward, and the chorus sounds a mile away; seldom is there a sense of choral blending. Worst of all, when the soloists sing together in the *Benedictus*, the tenor's voice gets lost completely somewhere between the channels. But the disc offers, on the whole, a decent representation of a work I urge you to investigate.

STEREO REVIEW

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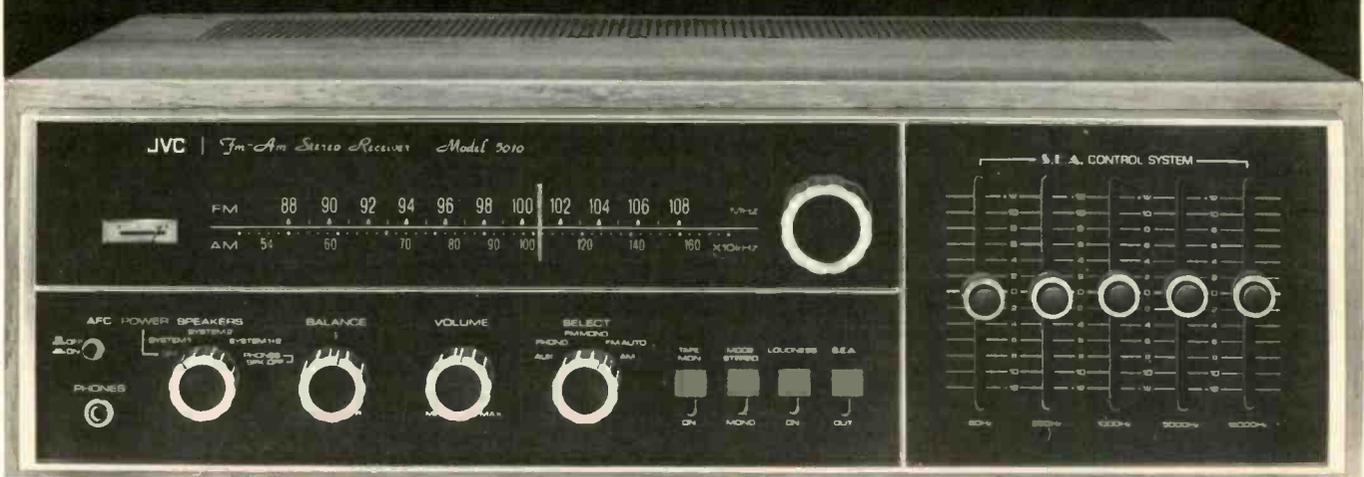
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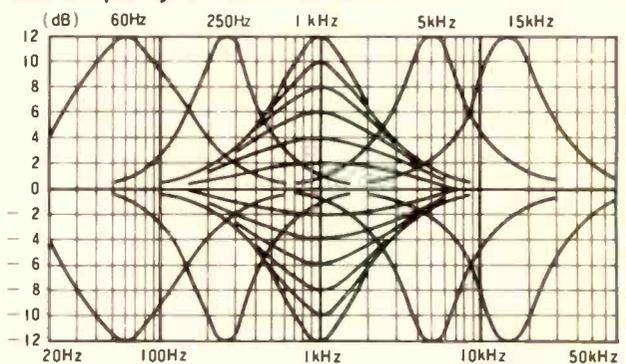
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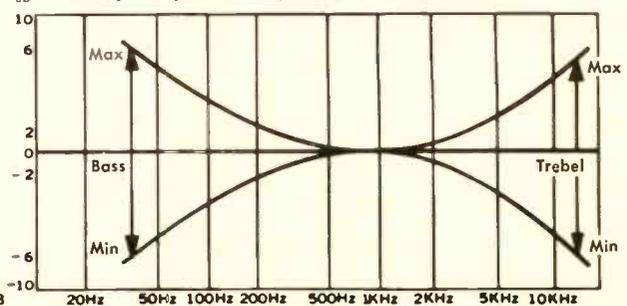
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ENTERTAINMENT

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Reviewed by NOEL COPPAGE • DON HECKMAN • PAUL KRESH
REX REED • PETER REILLY

THE ALLMAN BROTHERS BAND: *Idlewild South*. The Allman Brothers Band (vocals and instrumentals). *Revival*; *Don't Keep Me Wonderin'*; *Midnight Rider*; *In Memory of Elizabeth Reed*; and three others. ATCO SD 33 342 \$4.98, © M 8342 \$6.95, © M 5342 \$6.95.

Performance: Groovy
Recording: Very good

Hey, this one is an unexpected pleasure! The Allmans (Duane on guitar and Greg on keyboards and vocals) have been best known before now as crackerjack studio players, but they have assembled a marvelously adept and entertaining little band. The immediate reference point is Booker T's super M.G.s, and the Allman Brothers achieve a similarly well-integrated mix of jazz, country, rock, and blues elements, with a special emphasis upon the curiously compatible qualities of country music and rock. (Interestingly, however, at times Duane Allman—or is it guitarist Dicky Betts?—sounds remarkably similar to jazz guitarist Gabor Szabo.) The vocals—especially Berry Oakley's on the Willie Dixon classic, *Hoochie Coochie Man*—are less appealing than the instrumental stuff, but even given that small carp, the Allman group should not be missed. Solid musical professionalism is not that easy to come by these days. *D.H.*

WALTER BRENNAN: *Yesterday, When I was Young*. Walter Brennan (vocals); with the Hugh Jarrett Singers. *Gator Man*; *Time*; *Ruby*, *Don't Take Your Love to Town*; *One Man Band*; *Sub-Division Land*; *Cotton Picker*; and six others. LONDON PS 577 \$4.98.

Performance: Embarrassing
Recording: Terrible

Yes, there *is* a Walter Brennan, and he's got guts. It takes nerve to put out an album of songs for the Silent Majority when you've got a voice like Walter Brennan, but Ol' Gramps recognizes no limitations. So here it is, called "Yesterday, When I Was Young," named after the Aznavour song about an aging French boulevardier remembering better days. Now yesterday, when Walter Brennan was young, must have been about the time of the Boer War. I don't see the connection between Mr. Brennan's sense of recall and that of Aznavour, but

then I don't understand much of anything about this disc, especially the reason why it was recorded in the first place.

Most of it has to be heard to be believed. Mr. Brennan either stands too close to the mike or the recording engineers on this album went into shock when they heard him sing and forgot what they were doing, because it is the worst technical disaster of the year. Most of it is muffled and distorted: Mr. Brennan sounds like he is being played on a cassette through a car radio while the rhythm section sounds "live." The songs are so bad they're laughable.

Elektra



JUDY COLLINS
An island of sanity and taste

At one point, when Brennan talks ("Mary always loved roses, so I put some on her grave today; Button your sweater, darlin', you may catch cold, I could swear I almost heard her say") while a rotten chorus whines "We were so happy, my family and me, 'cause we had each other, and land just as far as you could see" in the background, someone at my house laughed aloud, and I don't think it was intended to be funny. At times, the whole thing begins to sound alarmingly like a sick joke. At other times, it clumps along like a bunch of rejects from old Roy Rogers-Dale Evans movies, with a tone-deaf group of Rhythmaires called the Hugh Jarrett Singers oo-ooing behind the beat the way the Sons of the Pioneers used to trail along behind the rear end of Roy's horse Trigger.

The last song on this interminable collection of simple-mindedness is called *This is the Last Song I'm Ever Gonna Sing*. I've called every-

one to see if Walter Brennan is a man of his word, but nobody seems to know him. *R.R.*

RECORDING OF SPECIAL MERIT

JUDY COLLINS: *Whales & Nightingales*. Judy Collins (vocals, guitar); various accompaniments, various arrs.; orchestra, Joshua Rifkin cond. *Song for David*; *Sons of*; *The Patriot Game*; *Prothalamium*; *Oh, Had I a Golden Thread*; *Gene's Song*; *Farewell to Tarwathie*; *Time Passes Slowly*; *Marieke*; *Nightingale I and II*; *Simple Gifts*; *Amazing Grace*. ELEKTRA EKS 75010 \$4.98, © L 5010 \$7.95.

Performance: Beautiful
Recording: Excellent

I hope eighty million people acquire this recording; I know at least that many who *need* it. Judy Collins has remained an island of sanity and taste in the midst of our swirling and stirring, and this is an extremely sane and tasteful recording. It is also gentle. Judy has mellowed through the years, and the voice recorded here is much more at peace than the one back on "Maid of Constant Sorrow." But it is still unmistakably Judy Collins'.

Now, about the whales (before we get to the nightingales). For the old song *Farewell to Tarwathie* (yes, it's about whaling), Judy is backed by the eerie voices of the New York Zoological Society's whale sounds as preserved by Dr. Roger Payne. Bizarre? In no way. No instrument could come close to those whales at sketching in the mood for such a song. There are two *Nightingales*, the first one by Judy Collins, not particularly memorable, and the second a classical (!) Judy Collins-Joshua Rifkin reworking of the song's melody, a good, old-fashioned orchestral go (Beethoven's "Pastoral" comes to mind) at variations on a theme by Judy Collins.

Simple Gifts, starting with an amateurishly played recorder solo, sums up much of this album's appeal, and Judy's arrangement of *Amazing Grace* is—well, she's singing and this wall of mostly male choral voices builds up behind her, something like the way the Yale Glee Club used to sound, only more so, and as Judy's pure soprano soars upward, the chorus builds, solid and wide, like a mountain chain behind a gleaming white obelisk. When I first heard it, an absurd (worse: dated) phrase involuntarily passed my lips. It was, Oh, wow.

N.C.

SAM COOKE: *This Is Sam Cooke*. Sam Cooke (vocals); various accompaniments. *Frankie and Johnny*; *You Send Me*; *Sad Mood*; *Summertime*; *Chain Gang*; *Only Sixteen*; *Love Will Find a Way*; *Bring It on Home to Me*; *Twistin' the Night Away*; *Wonderful World*; (Continued on next page)

Explanation of symbols:

- Ⓜ = reel-to-reel tape
- ⓐ = four-track cartridge
- ⓑ = eight-track cartridge
- ⓒ = cassette

Monophonic recordings are indicated by the symbol Ⓜ; all others are stereo.

Cupid; and nine others. RCA VPS 6027 (e) two discs \$5.98.

Performance: Still silky
Recording: Excellent reprocessing

To be at the tag end of the Silent Generation meant to sit in a place called the Goal Post when you didn't have a class, and drink coffee, discuss Faulkner or automobiles, or both, and listen to the juke box: Sam Cooke and *You Send Me*, something by Johnny Mathis, Sam Cooke and *I Love You for Sentimental Reasons*, something by Fats Domino, Sam Cooke and *Everybody Loves the Cha Cha Cha*. Sam Cooke, the first Mr. Soul, the golden-voiced forerunner of Stevie Wonder and Marvin Gaye, seemed to make at least one record a week in those days, most of them reflecting the depth of our own awareness, as in the one

about what a catastrophe it was to discover, having arrived at *The Hop*, that the girl couldn't do the cha cha cha. Still, they were better than most other records being made then, and it's nice to hear his voice again.

This, of course, is a reissue of part of Cooke's late-Fifties and early-Sixties work. He died (of gunshot wounds) about 1964, but he was past his peak by then; the audience had drifted away with the coming of the Beatles in 1963. Cooke's influence remained strong, however, and his gospel-oriented approach to pop was to be taken up, lucratively, by a few more, and many less, gifted singers years later. He knew next to nothing about music academically, but he was born with the ability to deliver it, and polished that knack in his father's Baptist church. When these songs were recorded, Cooke could and did adapt to the rhythm

and feel a song needed just about as easily as anyone in the business.

Rhythm-and-blues made him possible, but he was not very far into what passed, in those days, for soul. He was extremely popular with white audiences—not that he was watered-down r-&b, as some white idols were then, but he was naturally smooth and easy to adjust to—he was pop. It was easy to be impatient with him, partly for that reason; he always gave the audience what it wanted, and it wanted such tripe as *You Send Me*. He was sometimes glib with such junk. But he did have a voice, sparkling and weaving and dancing in front of you, and you can still hear that, too. With the exception of Aretha, I still haven't heard a modern Motown Marvel do anything that Sam Cooke hadn't done before.

N. C.

RONNIE DYSON: *Why Can't I Touch You?* Ronnie Dyson (vocals); orchestra. *Band of Gold; I Don't Wanna Cry; Fever; Emmie; She's Gone; Make It with You;* and five others. COLUMBIA C 30223 \$4.98, © COL CA30223 \$6.95, © COL CT30223 \$6.98.

Performance: Reconstituted soul
Recording: Fussy

Ronnie Dyson's style is hugely mournful, his delivery has a weird touch of "uplift" about it, and his sound makes me think of not very expensive mayonnaise. *Bridge Over Troubled Water*, in his rendition, almost made me want to cry, for several reasons. *Do What Your Heart Tells You to Do* is the only track where the gloom lifts all the way through, and I enjoyed it.

The album suffers from overproduction—probably only natural given a producer whose liner notes introducing Dyson start out like this: "If Ronnie ever unleashes all his God-given talent..."

P.R.

HAMMER. Hammer (vocals and instrumentals). *Something Easy; Hot and Cold; Tuane; You May Never Wake Up; Hangover Horns; Charity Taylor; Sad Song, Happy Song; Sweet Sunday Morning; Pains and Tears; Death to a King.* SAN FRANCISCO SD 203 \$4.98.

Performance: Good
Recording: Very good

Several of the rock groups formed lately have had weak and overworked lead singers. Hammer has a strong one, John De Roberts, and doesn't use him all that much, apparently being more interested in experimenting with forms and rhythms. I think it records too many experiments; its attempts at jazz-rock may be fun for the musicians, but, notably in *Tuane* and *Sweet Sunday Morning*, they're too dull and repetitive for the audience. The group is a little too imitative for its own good, too. Granted, it takes versatility to sound now like the original Yardbirds, now like Brian Auger, and now like the Band, but if there were a great demand for that sort of thing in rock, Frank Gorshin would get into it. On the other hand, the work on *Hot and Cold* and *Charity Taylor* shows Hammer with something approaching its own identity, synthesized from psychedelia, jazz, blues, and Memphis, and *Pains and Tears* amounts to a haunting and impressive piano solo by Norman Landsberg, who wrote it. And the lead singer De Roberts, I say again, is good whenever he sings. A little growth is needed. The direction is vague, but the talent is real enough.

N. C.

(Continued on page 112)

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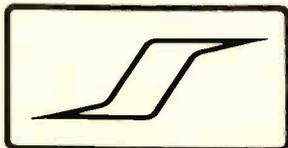
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HEINTJE: "Mama". Heintje (vocals); instrumental and choral accompaniment. *Mama; I'm Your Little Boy; Little Children, Little Sorrows; When High from the Sky Gleaming Down; The Happiest Day; Two Little Stars;* and five others. MGM SE 4739 \$4.98.

Performance: Cyclamatic
Recording: Good

Mr. Mike Curb, the President of MGM Records, is quite enthused about his latest discovery, a Dutch lad named Heintje who specializes in songs about motherhood and, at fourteen, "has become a firmly established legend . . . awarded twenty-seven gold discs internationally, from New Zealand to his native Holland." Heintje (his last name seems to be some kind of show-business secret) sings his songs in a piping, plangent voice and an accent I assume to be Dutch ("You're da bast Mamma in da whole vurld") and is certainly an odd phenomenon in these irreverent times. He not only understands, with choral and orchestral assistance, such painful matters as *A Mother's Tears* but has so much love in his heart there is even a generous amount left over for grandma (*In Grandma's Rocking Chair*) and for the sorrows of little children (*Little Children, Little Sorrows*). I presume he is available for weddings and bar mitzvahs, although Mr. Curb's adoring liner notes don't specify. A worthy gift for Mother's Day if you can hold out that long.

P.K.

JOHN HURLEY: *Sings About People.* John Hurley (vocals); instrumental accompaniment. *Sweet Pain; Back in the Days of Love; Love of the Common People; Grandview Baptist Church; Lovin' Place; Fellow Man; Bring Us a Better Day;* and three others. RCA LSP 4355 \$4.98.

Performance: Warm
Recording: Good

If you can imagine Harry Nilsson sounding like Joe Cocker and singing Randy Newman's songs, and could imagine that Randy Newman had been born and reared in Georgia, you might have an idea of the sound of this recording. John Hurley has synthesized several rather obvious influences into yet another distinctive style for pop music to accommodate. Sometimes-glittering arrangements, songs with gospel-pop lines in both melody and lyrics, and a modified blues-shouter singing style are the main characteristics heard here. The songs have a big beat; the arrangements (by Hurley, Ron Wilkins, and Rick Jarrard) are paradoxical—for example, both a dobro and steel guitar are used, sometimes on the same songs. Wilkins' piano comes to you directly from the Mount Pleasant Baptist Church at times; at other times it is quite sophisticated, and at still other times it is electric.

Jerry Scheff, who plays bass, is tremendous. You've probably heard—or will hear—of Buddy Emmons, the steel player, for he's exceptional, too, and James Burton, the lead guitarist, plays the dobro (when he plays it) with spartan economy and considerable intelligence as well.

Hurley's singing? I wouldn't walk twenty miles to hear it, but it's okay. He and Wilkins wrote all the songs (*Love of the Common People's* simple merits have been noted before; *Grandview Baptist Church, Makes You Beautiful,* and *Land of Milk and Honey* deserve your support, too), and it seems likely that if they continue to write and arrange music like this, practically anyone's voice will do.

N.C.

JACK JONES: *In Person at the Sands, Las Vegas.* Jack Jones (vocals); orchestra, Joe Kloess cond. *I Had a Dream; Get Together; Wives and Lovers; Spinning Wheel; Something; Games People Play;* and nine others. RCA LSP 4413 \$4.98, © P8S 1621 \$6.95.

Performance: Affordable
Recording: "Live at the Sands"

I don't know about you, but I'd rather be dead at the Ritz than live at the Las Vegas Sands. It has become something of a show-biz tradition to make albums there, though, and if there is one thing Jack Jones is, it's traditional. No matter how "mod" Jones gets in dress and haircut—and lately he looks like an expensive Madison-Avenue weekend hippie—he remains, in performance and manner, one of those California healthy-nice kids of the early Sixties—you know, the ones that thought hash was made of corned beef with a fried egg on top. He hasn't changed much, and he is still running down his old hits like *Lollipops and Roses* and *Wives and Lovers* in his pleasant and noncommittal voice. A nice enough album, and Jones comes through as an ingratiating performer, albeit so square as to be cubic.

P.R.

RECORDING OF SPECIAL MERIT

LOTTE LENYA: *The Lotte Lenya Album.* Lotte Lenya (vocals); instrumental accompaniment. *Moritat; Barbara Song; Pirate Jenny; Havana Song; Alabama Song; Wie man sich bettet; Bibao Song; Surabaya Jonny; Was die Herren Matrosen sagen—Tango; Vom ertrunkenen Mädchen; Lied der Fennimore; Cäsars Tod; September Song; It Never Was You; Saga of Jenny; Foolish Heart; Speak Low; Sing Me Not a Ballad; Lonely House; A Boy like You; Green-up Time; Trouble Man; Stay Well; Lost in the Stars.* COLUMBIA® MG 30087 two discs \$6.98.

Performance: Vintage Weill
Recording: Excellent mono

It may be the throb in her husky voice, the little catch of suppressed self-pity she has shared with emotional performers like Piaf. It may be the disillusionment that is so quietly stated, tacitly acknowledging the intelligence and wordliness of her listeners, as if to say, "You know what I mean, my dears, there's no need to labor the point for you." Or it may just be that she was Kurt Weill's wife and understands better than anyone living what he wanted to have happen with his songs. Whatever it is, hearing Lotte Lenya is always a privilege, and the re-release of these two discs, up to now available separately, is a welcome move on Columbia's part.

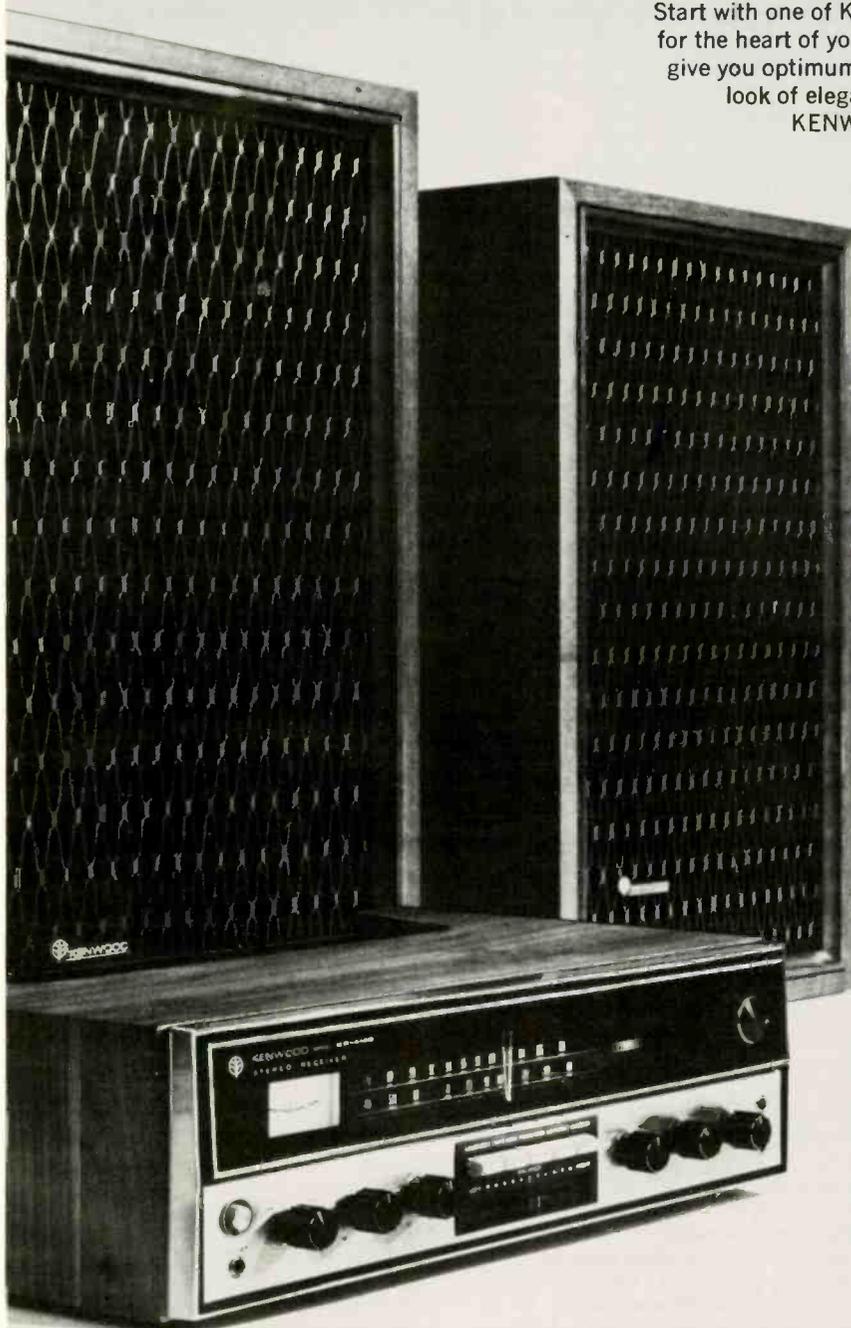
How did Lenya ever learn to capture and hold an audience the way she does? Perhaps it was her pre-World War I circus days, when she walked a tightrope, for vocally she is still at it, balancing between the urgency of Weill's melodies and the detachment Bertolt Brecht sought in his lyrics. The first of the two records is made up of Berlin theater songs; the lyrics of all but a pair of numbers on the program are by Brecht. Here is the *Moritat* and *Pirate Jenny* from *The Threepenny Opera*—the latter a play-stopping moment Miss Lenya has been thrilling us with for years. Here are songs from *Mahagonny*—little scenes, really, complete with chorus and passages sung by other characters—to remind us what a first-rate satirical score Weill wrote for that troubling work. Here as well are three of the most raffishly

(Continued on page 114)

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haunting numbers from *Happy End*, *The Ballad of the Drowned Girl*, a blood-freezing stanza from the *Berlin Requiem*; and two ironical episodes from *Der Silbersee*, to texts by Georg Kaiser.

The Berlin songs were recorded in Hamburg in 1955, with Roger Bean conducting the orchestra, and were previously issued as ML 5056. Two years later, Miss Lenya recorded the American theater songs with Maurice Levine conducting, and these were released as KL 5229. I have heard the second disc many times, but never do get over the singer's versatility, as she gives herself to the widely different moods of *September Song*, *Saga of Jenny*, *Speak Low*, and that infinitely moving existentialist's prayer, *Lost in the Stars*. The shows from which she sings selections include *Knickerbocker Holiday*, *Lady in the Dark*, *One Touch of Venus*, *The Firebrand of Florence*, *Love Life*, *Lost in the Stars*, and Weill's intermittently effective attempt at an American opera, *Street Scene*. It is a less bleak, less Brechtian, more hedonistic and perhaps a tamer Weill one hears in this later music, but always the songs are plainly the product of genius, and it is Miss Lenya's genius to bring to every phrase exactly the right projection of its quality. On this level, she is inimitable. Both discs are mono, but sound perfectly wonderful—better than many a hasty stereo job getting rushed to market today. There are also texts for the Berlin songs with better-than-average translations, but a number of typos—missing lines, that sort of thing. Whatever happened to quality control? P.K.

LIZA MINNELLI: *New Feelin'*. Liza Minnelli (vocals); Rex Kramer arr. *I Wonder Where My Easy Rider's Gone*; *Love for Sale*; *The Man I Love*; *Stormy Weather*; *Come Rain or Come Shine*; *Lazy Bones*; *Can't Help Lovin' That Man of Mine*; *God Bless the Child*; and two others. A&M SP 4272 \$4.98, © 4272 \$6.98, © 4272 \$6.98.

Performance: At odds with the charts
Recording: Good

Because of my disappointment, I intend to say as little as possible about Liza Minnelli's new album, because my chief feeling is one of sadness. Like all the other talented and sensitive and tasteful artists who are being neglected by the undemanding, brain-washed, rock-polluted young record buyers these days, Liza is anxious to "make the charts" with a "big one," as the phrase-makers at *Billboard* would say. So she is singing trash. I hope the affliction is temporary, because if this sort of thing keeps up, she might alienate the people who already love her without gaining new laurels from the fickle "now" kids.

The problem here, it seems, is a disconcerting variety of rock styles that encompasses gospel, blues, soft-and-hard-core rock, and downright shouting. The shameless affectations Liza is forced into, torturing her voice and instincts and material into the dissonant shapes this approach to singing requires, are not only false in themselves but are at war with each other. To make things worse, Liza sings wonderful songs by Cole Porter, George Gershwin, Jerome Kern, Billie Holiday, Johnny Mercer, and Harold Arlen that are so diametrically opposed to the rock beats forced upon them that they only call our attention to the general muddle.

An atrocious piece of garbage called *I Wonder Where My Easy Rider's Gone* is beneath discussion, but even though some money-hungry hacks have obviously gotten to Liza and

said "If you want to sell, you've got to get with it, you've got to be *revelant!*", you can't keep a good girl down for long. She sings it, trying to stifle her embarrassment, but then she goes right into *Love for Sale*, *Stormy Weather*, *The Man I Love*, *How Long Has This Been Goin' On*, etc., etc. Forget it. The rock treatment massacres the material and Liza's voice and nothing works at all. The arranger of all this madness is Rex Kramer. He should be forced to write on the blackboard three thousand times "Please forgive us, Messrs. Kern, Gershwin, Arlen, Porter, Mercer, Carmichael and Hammerstein, for we know not what we do." It won't help, but it's a beginning. R. R.

WILLIE NELSON: *My Own Peculiar Way*. Willie Nelson (vocals); orchestra, Bergen White, arr. and cond. *I Walk Alone*; *That's All*; *I Let My Mind Wander*; *Natural to Be Gone*; *The Message*; *Love Has a Mind of Its Own*; and six others. RCA LSP 4111 \$4.98.

Performance: Struggling
Recording: Good



LOTTE LENYA
Mastery of musical moods

According to Bob Baker, program director of radio station WHOO in Nashville, "If ever there comes a time when you want to describe Willie Nelson to a friend—a friend who, perhaps, is not as lucky as you and I, who isn't as familiar with Willie Nelson—the talent, the person—tell it like I tell it—tell it like it is, like Willie is: an emotion, an experience, a fleeting moment in your yesterdays, a dream, hope or desire in your tomorrow. This is Willie Nelson!"

Bravo. I'll do that, if I ever hear Willie Nelson, because no one fitting that description was present when this abominable heap of mush was recorded. The man on this record has a range from middle C to F-sharp and a tremolo that would put Eartha Kitt out of commission. The backing, with a syrupy chorus of hillbillies going whoo-oo-oo, went out of style with Dale Evans. And the songs! Except for John Hartford's wonderful *Natural to Be Gone*, which has been done better by everyone who has ever attempted it, and which is murdered here, the songs are vile and stupid. One example, *The Message* ("I'm writing you this note to say I'm sorry, That's spelled S-O-R-You ever comin' home?; Can you find it in your heart, dear,

STEREO REVIEW

to forgive me, That's spelled F-O-How I miss you since you've gone"), has to be heard to be believed. So does Willie Nelson. R.R.

THE NEW YORK ROCK ENSEMBLE: *Roll Over.* The New York Rock Ensemble (vocals and instrumentals). *Running Down The Highway; Gravedigger; Law and Order; Fields of Joy; The King Is Dead;* and five others. COLUMBIA C 30033 \$4.98.

Performance: New image
Recording: Very good

The New York Rock Ensemble (note the omission of "& Roll" from the name and the cutely significant title of the record) is hot on the trail of a new image. Since I was never a fan of their peculiar *mélange* of poorly played classical fragments and tepid rock, any change has to be for the better. And it is. Most of the self-conscious classical quotations are gone, thank God, and the group has somehow managed to find a believable rock groove. Perhaps more important, they have begun to uncover a range of material within the rock style, without having to resort to the obvious solutions that their various conservatory backgrounds provide them.

I'd say they're about half-way down the path. Not completely past their old image, not yet comfortably into their new one, the NYRE can be labeled a group with promise. Considering that their appeal once was limited to the New York City Beautiful People's idea of rock, they've already come a long way. Keep moving, guys. D.H.

MICHAEL PARKS: *Blue.* Michael Parks (vocals); instrumental accompaniment. *Sally; Lonely and Blue; No One to Cry to; Born to Lose; I Come to the Garden;* and five others. MGM SE 4717 \$4.98, © M 84717 \$6.95, © M 54717 \$6.95.

Performance: For fans
Recording: Expert

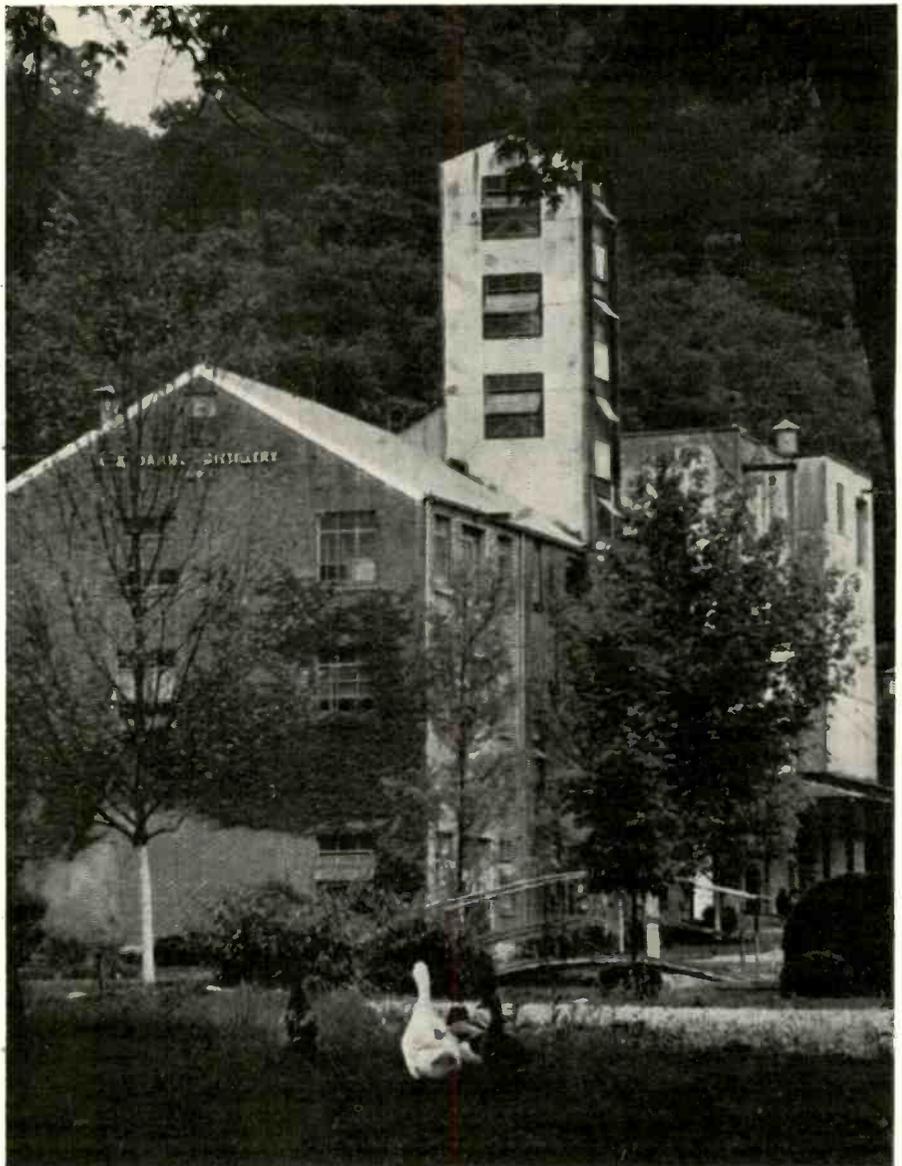
Michael Parks made his screen debut as Adam, in the buff, in John Huston's garish version of *The Bible*. He followed that with a series of not too successful films and then a moderately successful TV series titled *Then Came Bronson*. All of his publicity characterizes him a loner and a rebel, which, in Hollywood, usually means any actor who refuses a second lead in a Debbie Reynolds picture. Of late Parks has had some success on records, but on the basis of "Blue" I can't see why. If ever there seemed to be a manufactured hippie, Parks is it. James Hendricks, who produced and arranged here, has done an admirable job, but he can't cover up the hollowness of Parks' persona.

One side of the album was recorded in Nashville, and these four tracks seem to have a little more honesty about them than the remainder, which were recorded in Hollywood. The trouble is that I don't believe a word that Parks sings, nor in any emotion he tries to convey. Everything has been tailored to show him off well here, but to me he is pure plastic. P.R.

SYMPHONIC METAMORPHOSIS. Symphonic Metamorphosis (vocals and instrumentals). *Reach Out; Good Things; I Can See Your Face; Little Lisa;* and four others. LONDON PS 573 \$4.98.

Performance: Brassy dull
Recording: Very good

(Continued on next page)



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Can eight "distinguished performers of classical music with the Detroit Symphony Orchestra" find happiness in rock music? But perhaps I should say "commercial success" instead of "happiness".

They call it "Fusion Rock." I'd call it Blood, Sweat and Tears Revisited for perhaps the eighty-ninth time, and at this point who really cares any more? Sure, these guys play brilliantly; how else could they have won their auditions for the Detroit Symphony? Sure, I'm impressed by the fact that the lead singer is thirty-seven years old and gives a pretty convincing imitation of a twenty-three-year-old blues/rock singer; he may sound like six other performers who come to mind, but he's good.

But I'm *not* impressed by those cute little quotations from "classical" pieces that the arrangers have stuck in at the end of almost every phrase. The photos of you in your classy tuxedos would have been enough, fellows. And I'm not particularly impressed by the material or by the rhythmic stiffness of some of the playing. It may seem, to a well-schooled musician, that reproducing the content and the style of rock music is the easiest thing in the world. It isn't, and the failure of groups like Symphonic Metamorphosis should only underline our respect for the gifts of young rock musicians—even if they are unschooled. D.H.

THUNDERCLAP NEWMAN: Hollywood Dream. Thunderclap Newman (vocals and instrumentals). *Hollywood #1; The Reason; Open the Door, Homer; Look Around; Accidents; Wild Country; When I Think; The Old Cornmill; I Don't Know; Something in the Air;* and two others. TRACK SD 8264 \$4.98, © ATC M-88264 \$6.95, © ATC M-58264 \$6.95.

Performance: Tommy was here
 Recording: Good

Pete Townshend, leader of the Who, produced this one, and I think he produced it a bit too close to specifications. (I can envision a conversation that goes, "Thunderclap Newman sounds like the Who." "I give up, who?" "The Who," etc.) The group's guitar work, by Jimmy McCulloch, is excellent but sounds a lot like that of Pete Townshend, especially the acoustic stuff he did in the rock opera *Tommy*. Thunderclap's lead vocalist and songwriter, Speedy Keen, sounds a lot like Roger Daltry of the Who and his songs seem deeply indebted to earlier work by Townshend.

The Reason, Accidents, Wild Country, and *Something in the Air* could be identified as new lyrics fitted to pieces culled from *Tommy* and a lot of people would never question it. Many of Keen's songs sound something alike, too.

And yet Thunderclap escapes being an out-and-out carbon copy of the Who, because it has Andy Newman, instrumentalist de luxe, who plays a lot of non-Who instruments: soprano sax, oboe, tin whistle, glockenspiel, bass sax, kazoo, Bengali flute, etc. And usually he plays two or more on the same cut by means of overdubs—three soprano saxophones in harmony plus oboe plus piano in *Open the Door, Homer*, for example. And I don't mind the similarity of the melodies, for the album has a theme to it, and they are fine melodies—*Something in the Air* ("The revolution's here") is the outstanding piece.

I think that if Thunderclap Newman can build on Andy's versatility and establish its own identity without becoming bizarre it will be all right. N.C.

VICTORIA: *Secret of the Bloom.* Victoria (vocals); various musicians. *Tule's Blues; Out in the County; Time Has a Funny Way; Secret of the Bloom; New Country Song; FAWN; Helplessly Hoping; A Famous Myth.* SAN FRANCISCO SD 201 \$4.98.

Performance: Somewhat cloying
 Recording: Very good

Victoria looks and sounds a little like Joan Baez, but her fairly clean soprano voice doesn't convey emotion with the subtlety that Joan's does, and Joan doesn't seem to be stuck in a single mood as Victoria is. Victoria's album is one hang-dog experience after another—nothing really heart-rending, you understand, just a string of wistful notes and commentary, often in the lyrics and always in her voice, which seems to have a veneer of something sweet and sticky. The record starts modestly with *Tule's Blues* and trails off after that. *Tule's Blues*, by W. W. Zevon, is a nice little song, but no blockbuster. The low point is Victoria's strained interpretation of Steve Still's *Helplessly Hoping*. Victoria also writes (her publisher is called Puppy Lust Music, for what that's worth), and three of her songs are included. They're somewhat like the Zevon song, and those of Jeffrey Comanor, two of which are also included. The arrangements, restrained for the number of instrumentalists listed in the credits, also have a slightly melancholy cast about them. If this were rock music, we could coin a new term: Clinging Vine Rock. N.C.

WEINSTEIN & STROLL: *Cook Me Up Your Taste.* Bobby Weinstein and Jon Stroll (vocals); instrumental accompaniment. *Cook Me Up Your Taste; The Cat Was a Junkie; Le Joing; Goodnight Sweet Dreams; You Can't Go Back There Anymore; Movie Star Song; Won Long Dae; Sweet Cream Ladies; Looking at Life;* and three others. CHIPS ST 624 \$4.98.

Performance: Overproduced
 Recording: Good

This record is probably close to what we have in store for us during the next several months, as soloists and duets proliferate and good new rock groups become rarer than Democrats named Taft. As vocalists, Weinstein and Stroll are no threat to Simon and Garfunkel, but neither is their singing entirely unpleasant. And they seem to typify a major trend: arrangements are becoming pretty much alike across the land. The instruments are well played, but there are too many of them. They are innocuous, in and of themselves, but they get in the way of everything else.

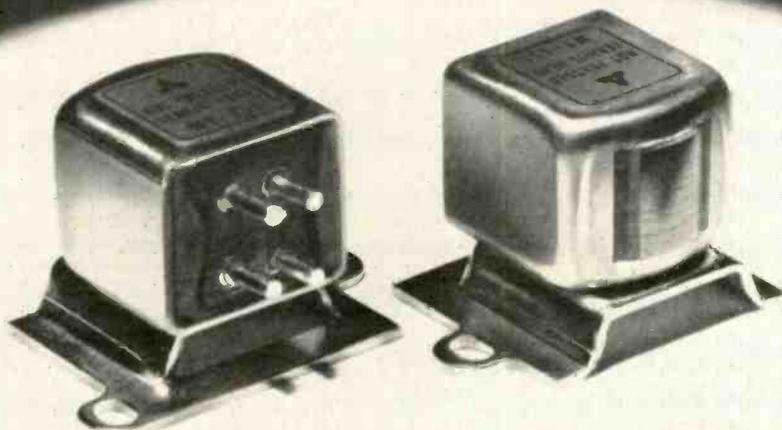
Weinstein and Stroll write some undistinguished songs, too, with conservative melodies and lyrics sometimes amounting to common hogwash ("How do you like your banana? Overripe/Roll out your player piano-Outasight"). *Roll It Down the Hill*, which approaches rock, was the only song I liked very much. I'm sure these guys don't disdain vitality but, thanks largely to those arrangements, they don't display much of it here. N.C.

NEIL YOUNG: *After the Gold Rush.* Neil Young (vocals and guitar); orchestra. *Tell Me Why; After the Gold Rush; Oh, Lonesome Me; Birds; I Believe in You;* and six others. REPRISE 6383 \$4.98, © B 6383 \$6.95, © M 86383 \$6.95, © M 56383 \$6.95.

Performance: Unfocussed
 Recording: Good

(Continued on page 118)

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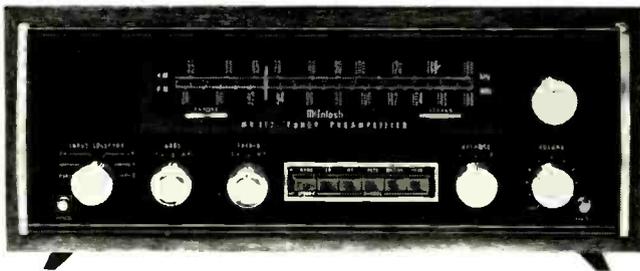
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These songs were "inspired by the Dean Stockwell-Herb Berman screenplay *After the Gold Rush*." I have no idea who Mr. Berman is, but Dean Stockwell is the former child star whom I best remember in a grandiose Technicolor version of *Kim*. I hope that the screenplay is better than this album, which is pretty amateurish in every respect. Neil Young's guitar playing is excellent, but the songs that he writes and his vocals are both awfully ragged. For instance, he chooses to sing the title song in a weird falsetto which sounds like Tiny Tim being harassed by a mouse. Young's best job is on Don Gibson's *Oh, Lonesome Me*, a straight-on c&w song he sounds as if he understands. That is something that cannot be said of his performances of much of his own material!

P.R.

RECORDING OF SPECIAL MERIT

FRANK ZAPPA: *Chunga's Revenge*. Frank Zappa (vocals, guitar, harpsichord, drums); Ian Underwood (organ, piano, alto and tenor sax, guitar); Aynsley Dunbar (drums); Jeff Simmons (bass); various other musicians. *Transylvania Boogie; Road Ladies; Twenty Small Cigars; The Nancy & Mary Music; Tell Me You Love Me; Would You Go All the Way; Chunga's Revenge; The Clap; Rudy Wants to Buy Yez a Drink; Sharleena.* REPRISE/BIZARRE 2030 \$5.98, © M 82030 \$6.95, © M 52030 \$5.95.

Performance: Mostly marvelous
Recording: Excellent

"A Gypsy mutant industrial vacuum cleaner dances about a mysterious night time camp fire. Festoons. Dozens of imported castanets, clutched by the horrible suction of its heavy duty hose, waving with marginal erotic abandon in the midnight autumn air." So goes a mess of prose the lovely Frank Zappa turned out for the front cover of this album. Open it up and there's the scene pictured in full color, and more. Put it on and there are Zappa and Ian Underwood and Aynsley Dunbar laying into it like you thought nobody could do any more.

The combination of Zappa compositions and Zappa arrangements (Zapprrangements?) provides a steady progression of unexpected sounds. Almost all of the first side is extremely good acid rock, with Zappa's guitar hurtling through the air at you. Side two has more vocals (they're used in Zappa's *200 Motels*, the "classical" portion of which was previewed with Zubin Mehta many months ago in a concert in Los Angeles—symphonic musicians burping on cue and all that), and so there's plenty of Zappa's unique kind of humor, especially in *Sharleena* and *Tell Me You Love Me*. On the latter, a hilariously over-sexed piece, Zappa out-Doors the Doors. He also has fun without words, putting a wah-wah pedal on an electric sax for Underwood, who makes a long, not too friendly joke about wah-wah pedals. The song *Road Ladies*, which is not comedy, shows Zappa's gifts as a rock writer.

If you really allow the sounds on this album into your mind, they can leave it in quite a respectable shambles. Feed your head. N.C.

COLLECTIONS

RECORDING OF SPECIAL MERIT

AN ANTHOLOGY OF CIRCUS MUSIC (A Tribute to Merle Evans). Hicks: "A Trib-
(Continued on page 120)

STEREO REVIEW

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ute to Merle Evans' Fanfare; Duple: *The Circus King March; Battle of the Winds March; Wizard of the West*. King: *Woody Van's March; The Caravan Club March; Forest City Commandery March; New Madison Square Garden March; The Huntress; Sells-Floto Triumphant March*. Withrow: *Trombonium*. Jewell: *March to Mecca; High and Mighty; Radio Waves March; Supreme Triumph; Battle Royal March*. English: *Neel's Fashion Plate March*. Huffer: *The Thunderbolt Galop*. Vandercook: *March Olevine*. Barnhouse: *Among the Roses Waltz; Palm Garden Rag; Idaho March; Battle of Shiloh March*. Twenty other selections. Members of NEC Wind Ensemble, Merle Evans narrator and cond. GOLDEN CREST NEW ENGLAND CONSERVATORY SERIES © NEC 501 five discs \$25.00.

Performance: Bang-up circus survey
Recording: Excellent

Merle Evans spent fifty years of his life under the big top conducting the band for the Ringling Brothers-Barnum and Bailey Circus. It all started on March 29, 1919, when he took the podium in New York's Madison Square Garden and led the music for the grand opening. Before that, he had led bands on Mississippi show boats, for minstrel shows, and for Buffalo Bill's Wild West Show. Such a fellow must have quite a story to tell, and he tells it with gusto on one of the five records that make up this fascinating album. Mr. Evans, whose home town of Columbus, Kansas, displays a huge billboard that reads "Home of Merle Evans the Bandmaster," was the guest of honor one June day in 1970 at a breakfast in Delavan, Wisconsin, part of a celebration for the centennial of the P.T. Barnum Circus. He began reminiscing, and, as luck would have it, a tape recorder was spinning while he told of the circus and circus music from Oom to Pah.

In a bucolic voice like a speeded-up Harry Truman's, Mr. Evans talks shop, but what shop! His account of circus life holds material for a wide-screen movie, bristling with dangers, suspense, conflict, exhausting work, and above all, humor. He tells what it was like to lead rain-drenched street parades through town after town, and make music for lions, tigers, elephants, clowns, and temperamental trapeze artists day after day and night after night, in a job that nearly killed him but that he never stopped loving, even when he had to rehearse the Stravinsky *Circus Polka*—a three-minute work for which the composer received \$1500, but which took the band nine hours to learn. The remainder of the album is made up of circus music performed and recorded superbly by members of the New England Conservatory Wind Ensemble. Here are marches by K. L. King, Fred Jewell, C. L. Barnhouse, Arthur Pryor, and Mr. Evans himself, most of them written especially for the circus. Under his vigorous direction, these booming blasts evoke the grand walkarounds, animal acts, three-ring rigmoroles, and hell-raising hullabaloo of the circus. Then there are the trombone "smears" that bring on the clowns, the waltzes that serve to soothe the nerves of trapeze artists and high-wire-walkers, and the galops jogged to life with enough vigor to give courage to a cowardly rope-climber. Perhaps that's what the function of circus music is—to give courage to the performers of those terrifying feats up there and to us who sit gaping in horrified suspense below. It's all brilliantly played here, and the sides go far faster than you'd expect. A booklet full of facts and photographs and a brief history of the subject are included. P.K.

120



THEATER • FILMS

WALT DISNEY'S *FANTASIA*. Original-soundtrack recording. Bach: *Toccatina and Fugue in D Minor*; Tchaikovsky: *The Nutcracker Suite*; Dukas: *The Sorcerer's Apprentice*; Stravinsky: *Rite of Spring*; Beethoven: *Symphony No. 6 in F Major, Op. 68 (Pastoral)*; Ponchielli: *Dance of the Hours*; Mousorgsky: *Night on Bald Mountain*; Schubert: *Ave Maria*. Philadelphia Orchestra, Leopold Stokowski cond. DISNEYLAND WDX 101 three discs \$10.98.

Performance: Exaggerated
Recording: Primitive

Many of us who were around when Walt Dis-

Walt Disney Productions



Mickey Mouse as *The Sorcerer's Apprentice*

ney's film *Fantasia* was released in 1941 can still recall vividly the excitement of that occasion. After several years of flamboyant promotion, the wedding of the animated cartoon with classical music was celebrated in New York at a downtown theater that seemed to be wired for sound everywhere—even under your seat, for this was the first time a movie was to be projected with stereophonic playback. In keeping with the hallowed nature of the event, Mr. Deems Taylor, America's official musical commentator and celebrated go-between in bringing the classics to the populus, came on in a prologue to introduce the soundtrack, which itself made a shy and momentary on-screen appearance. The Philadelphia Orchestra then started playing Leopold Stokowski's transcription of Bach's *Toccatina and Fugue in D Minor*, a scary red glow haloed the conductor's white mane, and we launched into a series of violin-bow patterns and abstract figurations in glowing colors since labelled "psychedelic," while the music came at us from all directions. Comet-shapes, cloud-masses, and ripples flashed across the screen, culminating in a gigantic set of what looked like organ pipes, and the whole episode left susceptible youngsters like myself

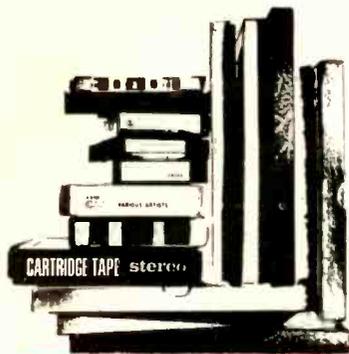
limp with wonder and admiration. But this was only the beginning of what Disney had in store for us. Before the movie was over, we were to cavort among fairies, fireflies, and flowers in a botanical version of Tchaikovsky's *Nutcracker Suite* that seemed to have sprung full-blown from the brow of F. W. Woolworth himself; watch Mickey Mouse star in *The Sorcerer's Apprentice* as the foolish magician's assistant who steals the formula to make a broomstick fetch water for him but can't find the antidote to keep it from flooding the premises; witness the whole of the Earth's evolution from the day of creation to the death of the dinosaur, to the accompaniment of passages from Stravinsky's *Rite of Spring*; follow a full cast of cov Greek cartoon gods, centaurs, centaurettes, and fauns in a Hellenic interpretation of Beethoven's "Pastoral" Symphony; see ostriches and hippos lampoon ballet in Ponchielli's *The Dance of the Hours*; descend to the depths of hell in an ultra-diabolical rendition of Mousorgsky's *Night on Bald Mountain* and join a procession of candlebearing nuns filing under the Gothic vaults of interlaced tree-branches to the tune of Schubert's *Ave Maria*, sung by one million voices.

In another book called *The Musical Film*, Douglas McVay says of *Fantasia* that even its finest scenes "finally fail to change our view that the classics should be heard and not seen." The reissue of the original soundtrack album wrapped in a full-color poster containing images from the film, along with a book illustrating and describing the various episodes, affords an opportunity to test McVay's assertion. Personally, I longed to see the movie again as I listened. Stokowski, whose career has been dedicated to meeting the public halfway, went so far down the steps of taste to accommodate himself to Disney's pictorial needs! In the case of *Rite of Spring*, he actually rearranged the musical sections, dropped the dissonant *Dance of Death* entirely, and managed to blend his instruments in ways to make the percussive rhythms and deliberate barbaric cacophonies of the piece sound conventionally sonorous to untutored eardrums. Exaggerations and distortions abound elsewhere in the music used, too. The album, first issued in 1957, has not been remastered, and the stereophonic sound, recorded originally on photographic film and painstakingly distributed among a number of tracks, comes over not only as dated on the two-track records, but eerily hollow, as though being played back in a vast, echoing, empty auditorium. A disclaimer at the beginning of the illustrated booklet comes right out and says that "this by no means represents modern stereophonic recording, and no such claim is made." Yet I couldn't help suspecting that the original soundtrack (or tracks) of *Fantasia* were somewhat less primitive in quality than these records. And the surfaces in my review copy compounded the unpleasantness with a further roughness of their own.

Still, the album is a fascinating souvenir of a lovable landmark event in movie history, which influenced both the use of music in films and the way it was recorded through the years right down to the present. And there must be countless music-lovers like myself whose serious interest in the subject Mr. Stokowski helped bring about when he journeyed to Hollywood in 1938 to record what at first was to be simply one short subject—*The Sorcerer's Apprentice*—but grew and grew like the giant in the fairy tale until it turned into *Fantasia*.

P.K.

STEREO REVIEW



STEREO TAPE

Reviewed by NOEL COPPAGE • DAVID HALL • PAUL KRESH

RECORDING OF SPECIAL MERIT

BARTÓK: *Piano Concerto No. 2; Four Pieces for Orchestra*. Alexis Weissenberg (piano); Philadelphia Orchestra, Eugene Ormandy cond. RCA © RK 1156 \$6.95, © R8S 1156 \$6.95.

Performance: The two sides of Bartók
Recording: Excellent
Playing Time: 51'16"

Twenty-six years ago Béla Bartók died in New York. The neglect of his music in his lifetime suddenly gave way to a vogue for it, and then, like most such swings in the pendulum of musical fashion, a reaction of indifference set in. So much Bartók was being played in the late Forties and early Fifties that some of us developed a real allergy to those Hungarian rhythms and the austere, dry texture of the Bartók orchestra—the very vocabulary, so to speak, of his musical idiom. After a period of relief, coming fresh on these compositions now, one is likely to be dazzled all over again. Mr. Weissenberg provides a strong, astringent performance of the high-powered, headlong *Allegro*, the brooding, nocturnal *Adagio*, and the fireworks of the finale, in which certain staccato passages and instrumental arabesques remind one at once of the *Music for Strings, Percussion, and Celeste*.

The *Four Pieces for Orchestra* are even more of a revelation, for this is a Bartók in the thrall of the Impressionists. The score, written in 1912, is rich in sudden turns and surprises, in exotic and spectacular effects, in an opulence it was perhaps unfortunate that its composer felt it necessary later to forego. He did not write another piece after these for eleven years, and, when he composed again, he was no longer the same Bartók. RCA is to be congratulated for adding to its repertoire on cassettes at least a few albums like this one which are not warhorses with a built-in guarantee of big sales. The performances are splendid, and the sound—the best I have heard on these little tapes from RCA—hisses to itself only very gently and inconspicuously. P.K.

RECORDING OF SPECIAL MERIT

BERG: *Violin Concerto*. György Garay (violin); Leipzig Radio Orchestra, Herbert Kegel cond. **SZYMANOWSKI:** *Violin Concerto No. 1, Op. 35*. Wanda Wilkomirska (violin); Warsaw Philharmonic Orchestra, Witold Rowicki cond. HELIODOR © 3312012 \$4.98.

Performance: Both good
Recording: Both good
Playing Time: 49'15"

Alban Berg's *Violin Concerto*, composed as an MARCH 1971

elegy "To the Memory of an Angel"—eighteen-year-old Manon Gropius—turned out to be an elegy for Berg himself. It is probably the only serial orchestral work of the Vienna three (Schoenberg, Berg, Webern) to have gained acceptance, as of 1970, in the international standard performing repertoire. That it has had more than half a dozen recordings thus far (a Menuhin-Boulez disc still awaits American release) simply underscores the situation.

The measure of Berg's creative genius is in the deep poignancy of this *Violin Concerto*, and in the manner in which he achieved a su-

Booney & Hawkes



BÉLA BARTÓK

A cassette-full of his best works

perly viable synthesis of serial texture with touches of Austrian folksong and a concluding Bach chorale tune—all in a wholly satisfying amalgam of form and expressive substance.

György Garay does not bring to his reading of the *Concerto* either the fierce intensity of Isaac Stern or the uncompromising architectural sense of Arthur Grumiaux (whose reading is available on a Philips cassette coupled with the Stravinsky *Violin Concerto*). Garay's approach is essentially lyrical, and, in the turbulent portions of the second movement, even gentle in comparison with other recorded performances. The exacting orchestral part is excellently played under Herbert Kegel's baton, with effective attention given to the complex inner voices and rhythms of the score. The warm and spacious ambiance of the recorded sound is such as to enhance the lyrical qualities of the performance as a whole.

Emotionally intense as the Berg *Violin Con-*

certo is, it seems positively chaste alongside the gorgeous sounds and superheated lyricism of Szymanowski's *Violin Concerto No. 1*, composed in 1917. Had Szymanowski come to Tatra mountain folksong early in his career rather than in the last fifteen years of his life, he might have become the Bartók of Poland. As it was, he died in his middle fifties in 1937, having realized the potential of the folk-classic synthesis in only a handful of fine works—the piano mazurkas, the Kurpian Songs, the *Harnasie* ballet, the *Symphonie Concertante* for Piano and Orchestra, and the *Second Violin Concerto*. Prior to this period, Szymanowski's music was a brilliant personal synthesis of all he had experienced in the work of Wagner, Richard Strauss, Scriabin, Debussy, and Ravel. The whole thing comes to a magnificent, eruptive boil in the *Violin Concerto No. 1*. The concerto begins almost austere, but soon flowers into a series of uninterrupted excursions and developments. Following a final climax, replete with blazing trumpets and clanging percussion, the music simply fades out.

Wanda Wilkomirska's musical and violinistic temperament matches the music superbly at every turn. The "lady violinist" designation simply does not apply here—she has not only passion and temperament to burn, but limitless virtuosity and strength as well. Witold Rowicki and the Warsaw Philharmonic provide a magnificent tonal tapestry into which Mme. Wilkomirska weaves her tone, now lambent, now white-hot. The recorded sound is splendid and tape hiss is at a reasonable minimum. D.H.

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RECORDING OF SPECIAL MERIT

MONTSERRAT CABALLÉ/SHIRLEY VERRETT: *Opera Duets*. Rossini: *Semiramide: Act I: Serbami ognor; Alle più calde immagini*. Donizetti: *Anna Bolena: Act II: Dio, che mi vedi; Sul suo capo aggravi un Dio*. Offenbach: *Tales of Hoffmann: Act II: Barcarolle*. Bellini: *Norma: Act III: Mira, o Norma*. Verdi: *Aida: Act II: Silenzio! Aida verso noi s'avanza*. Puccini: *Madama Butterfly: Act II: Flower Duet*. Montserrat Caballé (soprano); Shirley Verrett (mezzo-soprano); Ambrosian Opera Chorus; New Philharmonia Orchestra, Anton Guadagno cond. RCA © RK 1145 \$6.95, © R8S 1145 \$6.95.

Performance: Sumptuous
Recording: Likewise
Playing Time: 48'22"

This is an imaginatively chosen program, gorgeously sung and beautifully recorded. There are old favorites, such as the Puccini and Offenbach (the latter done complete with cho-

rus), as well as the great *Norma* duet, the *Aida*-Amneris confrontation (rather infrequently recorded separate from complete versions of the opera), plus two relatively unfamiliar items—an extraordinarily beautiful excerpt from Rossini's *Semiramide* and a highly dramatic episode from Donizetti's *Anna Bolena*. These two items, together with the *Aida* scene, are the high points of this package. Caballé and Verrett sing together like a veritable pair of angels, and there is superb emoting in the Donizetti and Verdi.

I am no Italian opera buff, but I did thoroughly enjoy this program, principally because of the glorious sounds produced by Mmes. Caballé and Verrett, as well as the very fine stereo recording, with its effective depth and localization illusion. I missed an Italian-English text insert, however. D.H.

ENTERTAINMENT

MANOS HADJIDAKIS: *Lilacs Out of the Dead Land*. Unidentified instrumental group, Manos Hadjidakis cond. *The Song of the Old Sailor; Gentle Children; One Evening; Stroll; Persistence; When the Fires Are Lit*; and six others. P. I. © MCPI 110 \$6.95.

Performance: Gentle and innocuous
Recording: Excellent
Playing Time: 54' 23"

The title of this program of popular Greek instrumental music comes from the second line of T. S. Eliot's *Waste Land*: "April is the cruellest month/Breeding lilacs out of the dead land . . ." Mr. Hadjidakis, one of Greece's most successful composers, has rescued these "lilacs"—traditional bouzouki melodies he recalls from his youth—from what he considers the waste land of contemporary Greek popular music, so cheapened by a travel-poster concept of the Greek personality and Greek music. He apparently hopes that his settings of them will prevent them from being forgotten. These are gentle melodies, none very different from any of the others, with impressionistic titles such as *The Old Street*, *The Child's Room*, and *When the Fires Are Lit*. They are played here by an unidentified, subdued group who create an ambiance of sound more likely to furnish a pleasant background for other activities than a musical experience for the attentive. The cassette, an import available through Peters International, is beautifully recorded, but comes with no notes or explanatory information of any kind. P.K.

RECORDING OF SPECIAL MERIT

THE JAGGERZ: *We Went to Different Schools Together*. The Jaggerz (vocals and instrumentals). *At My Window; Things Gotta Get Better; Carousel; Don't Make My Sky Cry; That's My World*; and five others. KAMA SUTRA ® X 2017 (3¼) \$5.95.

Performance: Alive, alive-o
Recording: Very good
Playing Time: 40'13"

The Jaggerz come on rather strong at the start, but only a few feet of tape have sped by before you can recognize a group who really know what they're doing, with a genuine musical sense as well as the showmanship to know how to start a number, where to build it, and when to stop. They also sustain a mood artfully—the carefree merry-go-round gaiety of *Carousel*, the loneliness of *That's My World*, the easy good feeling of the Beatles' old *With a Little*

Help from My Friends. All this would be enough to earn our gratitude, but the Jaggerz have other virtues as well—the skill, for example, to break up their set pieces with instrumental interludes and dazzling displays of percussion; the imagination to use stereo for more than adding to the general decibel level; and the humor to put over a ballad like *The Rapper* with a light touch. Even when they resort to sound effects, as in the thunderstorm at the end of *Don't Make My Sky Cry*, they don't overdo it—you never get the feeling they're just showing off. A high-spirited, talented bunch. P.K.

1966 COUNTRY & WESTERN AWARD WINNERS. Loretta Lynn, Bill Anderson, Johnny Wright, Jan Howard, Wilma Burgess, Kitty Wells, Jimmy Newman, Bill Phillips, Wilburn Brothers (vocals); various accompaniments. *You Ain't Woman Enough; I Love You Drops; Hello Vietnam; Evil on Your Mind*;



THE YOUNGBLOODS:

Banana, Joe Bauer, and Jesse Colin Young
Persuasive, infectious, and dapper

Don't Touch Me; It's All Over; Artificial Rose; Dear Uncle Sam; Baby; The Home You're Tearin' Down; Put It Off Until Tomorrow; Someone Before Me. DECCA © 4837 \$6.95.

Performance: 1966! ?
Recording: Good
Playing Time: 34'45"

I was listening to country music a lot in 1966 and I could have sworn it wasn't this bad. Of course there are all kinds of awards nowadays, with pigs, boys, and dogs being variously elected Homecoming Queen on campuses across the nation, so I couldn't swear that these maudlin melodies aren't deserving of being called award winners. Decca doesn't list the awards on the cassette box, at any rate, apparently having sapped its corporate nerve by putting "1966" on the cover.

As anthologies go, this one is typically lousy, indicating more than anything else some of the deeper ruts in which c-&-w labors. We have the viewpoint of the losing third of the eternal triangle (*You Ain't Woman Enough*, *The Home You're Tearin' Down*, etc.), the perpetuation of the myth that Southern womanhood finds sex dirty (*Don't Touch Me*), and one more of those redneck songs about war, *Hello Vietnam*. The c-&-w sense of humor, which often saves it in real life, is totally absent here,

and when c-&-w takes itself so seriously that Loretta Lynn's melodramatics win three of its awards, that's where I get off. N. C.

DIANA ROSS. Diana Ross (vocals); instrumental accompaniment. *Reach Out and Touch; Now That There's You; You're All I Need to Get By; Ain't No Mountain High Enough; Something on My Mind; Keep an Eye; Dark Side of the World*; and four others. MOTOWN ® M7011 (7½) \$5.95.

Performance: Plastic soul
Recording: Good
Playing Time: 38'42"

One of the mechanics-oriented magazines has an "inventions wanted" column for which I might propose that someone should invent a slide rule or other device that will enable us to tell the difference between Diana Ross minus the Supremes and the Supremes minus Diana Ross. So far as I can see, not much has changed; both entities keep shoveling hits off the Motown conveyor into the grab-anything hands of twelve-year-olds. Here Diana is backed by some girl singers, or perhaps overdubs of her own voice, that even sound like the Supremes (even as the Diana Ross replacement in the Supremes sounds like Diana).

It is difficult to be objective about Diana because she persists in singing such artificial pap (even the publicity attending the break with the Supremes is cut to the formula). In fact, she has a voice similar to, and in one or two ways superior to, that of Dionne Warwick. But (I keep coming back to this) she's going to have to do some great things in the future to obtain forgiveness for such a dog as *Ain't No Mountain High Enough*. The other songs included here, though not that corny, are Top Forty marshmallows all. The package reinforces the feeling that Diana's career is still aimed at merchandising, not necessarily at making music. N.C.

RECORDING OF SPECIAL MERIT

THE YOUNGBLOODS: *The Best of the Youngbloods*. The Youngbloods (vocals and instrumentals). *Darkness, Darkness; Sunlight; Grizzly Bear; Euphoria; The Wine Song*; and four others. RCA © PK 1617 \$6.95, ® P8S 1617 \$6.95.

Performance: Persuasive soul
Recording: Very good
Playing Time: 30'40"

The Youngbloods are masters at whipping up a mood with an almost physical projection of sensation. Their opening number, the somber *Darkness, Darkness*, blazes palpably into *Sunlight* with a skill their imitators might do well to ponder. When they chant *Quicksand*, the melancholy tone is so pervasive and convincing you can feel yourself sinking with them into the mud. Then they start noodling around with *Euphoria*, a spirited tune, and you can practically hallucinate Jelly Roll Morton leading a band down a New Orleans street, or one of those frenetic numbers that light up the stage in *Purlie*. And when they sing *Get Together*, you just want to get right up and join in. They are not only a persuasive, infectious group but a singularly dapper and civilized one. Their *Wine Song* is a case in point—rollicking to a certain rowdy limit but never beyond it; you're their guests and they never clobber you into wanting to leave. There's not a lemon in this whole collection, and the sound, as cassettes go, is exceptionally good. P.K.

STEREO REVIEW

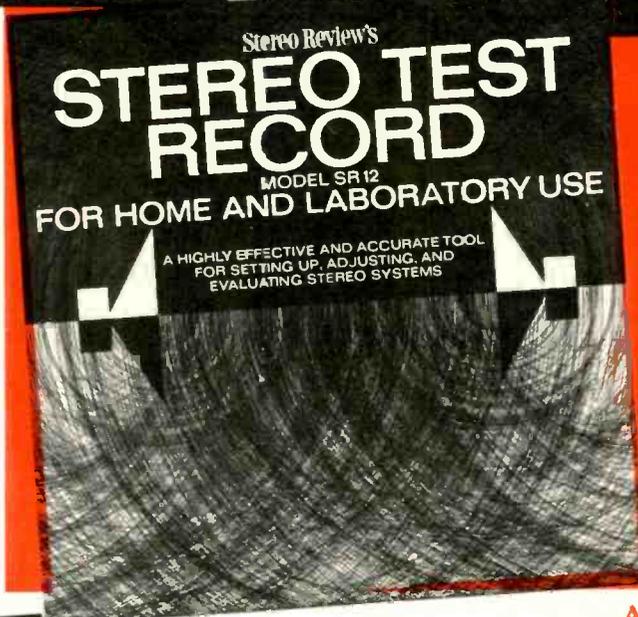
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TAPE HORIZONS

By CRAIG STARK



KEEPING AN EAR ON NOISE

LAST MONTH, in beginning to explore the nature and limits of the hiss that so often plagues our recordings, I indicated that the microphone preamplifier is sometimes the major offender. It's important to begin at this point, since not even the justly-famed Dolby noise reducing process can clean up the hiss that arises in the mike-input stage. "Equivalent input noise" ratings are almost never stated except by manufacturers of professional equipment, since such figures might be hard for the home recordist to evaluate. But a simple experiment can tell you much about your mike inputs' capabilities.

Take a plug similar to the one that's on the end of your mike cable and wire across its terminals a 1/2-watt resistor (with its leads cut as short as possible) of approximately the same value as the recommended microphone impedance. This is your dummy input load. Now, with the machine set to "source" (not "tape monitor"), turn up the microphone-input gain control for the channel into which the plug is inserted. At a certain point, the hiss level will become obtrusive. Mark this knob setting on the panel of your recorder, and then check the other channel in the same way. When recording, you know that if the gain settings can be kept below the marked points you won't be troubled by hiss. Your next step is to make some test recordings to evaluate the situation. If the record-level meters can hit 0 VU or beyond with the gain control set below the hiss point, and the microphones picking up signals of average loudness, then you are home free. If they can't, it may mean that your mike-input stages are defective, the microphones are of the wrong impedance, or the microphone output level is simply too low for the amount of gain available from your mike-input stages. A good test for a defective mike preamplifier is to compare the noise levels in the two channels of your recorder. If one is substantially noisier than the other, a visit to the repair shop will be of help. Or the solution may lie in getting an external preamplifier or mixer that can be plugged into the recorder's AUX or LINE inputs. More sensitive microphones, such as capacitor (more often called "condenser") types, might also be an answer, but before making such an investment, check with the recorder manufacturer to be certain that such mikes' high output level won't overload your input preamp ahead of the record-level controls, causing distortion.

"Tape hiss" is the name we give to the noise we hear on our recordings, though the tape itself is actually only one contributing factor. For a quick, rough check of the relative quietness of a number of tapes, splice together short lengths of each (twenty seconds will do) and play them back recorded (1) with the record-level controls at zero and (2) with a constant input signal such as FM interstation noise. The tape section that yields the loudest and most accurate FM-noise reproduction plus the lowest hiss on test (1) will probably give you the best results with your machine as presently adjusted.

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