SPECIAL TAPE RECORDER ISSUE
A Beginner's Guide to Tape-recording Terminology
Cassette Recorders * How to Select the Right Tape
S - 15, $49.95 Scott's bookshelf speaker system is specially designed to provide superb sound in a limited space.
Components: 6" woofer, 3" tweeter; Frequency range, 50-20,000 Hz; Impedance, 8 Ohms; Power handling capacity, 28 Watts; Amplifier power requirements, Min. 7 Watts; Enclosure, air suspension; Controls, tweeter level; Cabinet style, contemporary hand-rubbed oiled walnut; Connectors, binding post and phono jack; Dimensions, 16" x 10" x 6½".

S - 10, $79.95 Scott's deluxe compact speakers give you extended range performance in a "place-anywhere" size.
Components: 10" woofer, 5" dual-cone midrange and tweeter; Frequency range, 40-20,000 Hz; Impedance, 8 Ohms; Power handling capacity, 50 Watts; Amplifier power requirements, Min. 7 Watts; Enclosure, air suspension; Controls, midrange/tweeter level; Cabinet style, contemporary hand-rubbed oiled walnut; Connectors, binding post and phono jack; Dimensions, 23" x 11¾" x 9".

S - 15, $119.50 Scott introduces the S-15, a compact 3-way system... the best value in the medium price range.
Components: 10" woofer, 4½" midrange, 3" tweeter; Frequency range, 35-20,000 Hz; Impedance, 8 Ohms; Power handling capacity, 60 Watts; Amplifier power requirements, Min. 7 Watts; Enclosures, air suspension; Controls, midrange/tweeter level; Cabinet style, contemporary hand-rubbed oiled walnut; Connectors, binding post and phono jack; Dimensions, 23½" x 11¾" x 9".

S - 11, $149.95 Great reviews mark the Scott S-11 3-way system as the audio professional's top choice. Components: 12" woofer, 5" midrange, 2½" tweeter; Frequency range, 35-20,000 Hz; Impedance, 8 Ohms; Power handling capacity, 60 Watts; Amplifier power requirements, Min. 10 Watts; Enclosure, air suspension; Controls, midrange/tweeter level; Cabinet style, contemporary hand-rubbed oiled walnut; Connectors, binding post; Dimensions, 24" x 14½" x 10¾".

S - 12, $274.95 This is Scott's best, the luxurious S-12, with removable grille cloth easily switched to match any decor.
Components: 15" woofer, 5¼" midrange, 2½" tweeter; Frequency range, 30-20,000 Hz; Impedance, 8 Ohms; Power handling capacity, 80 Watts; Amplifier power requirements, Min. 10 Watts; Enclosure, air suspension; Controls, midranges/tweeter level; Cabinet style, classic hand-rubbed oiled walnut; Connectors, binding post; Dimensions, 27" x 21" x 16".
Listen carefully. Chances are, your speakers are adding their own distorting coloration to the music. Maybe it's a boomy bass, or an overemphasis on treble. Most speakers do it, and some are designed to do it. You may not even mind the effect. But is this really the absolutely faithful reproduction you paid for?

If you enjoy adding emphasis to selected parts of the music, that's your prerogative. But don't let your speakers do it for you! There are tone controls on your receiver or amplifier that do the job much more predictably and pleasingly.

The best speaker is still the one with absolutely even response; with no coloration of the highs or the lows. This is the kind of speaker that Scott makes.

Scott engineers design every component part of Scott speaker systems. It's far more difficult than using ready-made components, but Scott won't accept the bias built into "off-the-shelf" parts. Scott's Controlled Impedance speakers are designed specially for use with today's solid-state equipment. Custom-designed woofers, tweeters, midranges, and cross-over circuitry are carefully matched in solid, air-tight enclosures. And each individual speaker system must survive the scrutiny of both electronic instruments and trained ears before it's allowed to leave the Scott factory.

As a result, Scott speaker systems are completely honest; what goes into them is what comes out of them. They won't cover up for a poor receiver or turntable. Neither will they distort the perfection of a good component system.

And that's what Scott believes great speakers are all about.
If you could look through your speakers, what would you see?
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Insert the most critical, most sensitive cartridge in the Garrard SL 95 and be assured it will travel the intricacies convolutions of the grooves easily and flawlessly. The advanced, ultra-low mass gyroscopically gimbaled tonearm system has just three controls, to balance it exactly to the weight of the cartridge, adjust it precisely to the recommended stylus force, and counteract the natural skating tendency, providing perfect tracking, distortion-free reproduction.

The SL 95 gives your records a perfect ride, too. The synchronous Synchro-Lab Motor™, matched kinetically to the oversized, balanced turntable, guarantees absolutely constant speed, unwavering pitch, freedom from rumble. Simplified cueing and pause control, and the exclusive safety record platen, protect your records both in manual and automatic play, making the SL 95 Automatic Transcription Turntable the ultimate in performance and dependability. Price: $129.50, less base and cartridge. Other Garrard models as low as $37.50. For a complimentary Comparator Glide to all models, write Garrard, Dept. AC-1, Westbury, N.Y. 11590.

cartridge
New cartridge clip guarantees safe, convenient mounting, in perfect alignment. Tone-arm and "shell" are of rigid, resonance-free, one piece construction.

counterweight
Sliding counterweight is infinitely adjustable, makes precise dynamic balancing practical; locks into place, isolated in rubber from the arm.

skating force
Patented anti-skating control, of spring-free sliding weight design, has 1/2 gram calibration to nullify side pressure on stylus and groove walls.

stylus pressure
Top-reading stylus pressure gauge sets tracking force precisely with audible/visible click stops at 1/4 gram intervals.
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I was reminded recently, in one of those out-of-the-blue past reminis-
cences, of a youthful escapade in which I had let go a little too clear: a small boy standing by the
to time, just what it was you threw in the river.

Karachi Box. And if you find letting go a little difficult, you can always tape
that are not actively working for the cause of music, and start your own
three hundred discs). Look over your own collection, pull out the records
record library among readers of this magazine has now reached well over
so. From my seat in this musical aerie I have been privileged to spy many
Karachi Box have volunteered much in the way of musical argument that
is instructive to me—I have even snatched back a disc or two whose value
pace nicely with my changing tastes and limited space, and browsers in my
home to. For me, the system is perfect: nothing seems to go to waste (some-
was emptied just as rapidly from the other by friends, relatives, and casual
dealers ? More legwork, and such dealers are notoriously choosy about what
permanently unplayed, on some other dusty shelf. Sell them to second-hand
it is likely to lead to legal complications. Donate the records to schools and
other institutions? Too much legwork, and they are just as likely to end up,
permanently unplayed, on some other dusty shelf. Sell them to second-hand
dealers? More legwork, and such dealers are notoriously choosy about what
they will buy. And so I have found an elegantly simple, efficient, and hu-
mene solution: I have revived the institution of the Karachi Box. The
Karachi Box was invented a number of years ago by a reviewer friend. He
had another friend, in government service in India, whose turntable
minor center of Western musical culture there, and he had pledged to keep
it turning with periodic shipments of records from his overflowing collection.
But the Karachi Box never got to India. Filled almost daily from one end
with recordings the reviewer no longer needed in his extensive library, it
was emptied just as rapidly from the other by friends, relatives, and casual
callers who always found in it a disc or two they could guarantee a good
home to. For me, the system is perfect: nothing seems to go to waste (some-
where there's a home for every cat), my record collection is now keeping

 Granted, no one needs that many records, but there they are—and I still
haven't learned to shun record shops. Rather than find myself living one
day soon in a warehouse, I resolved that Something Must Be Done. There
is a river handy, but I know now that although that watery solution is
efficient, it is also wasteful, and further (remembering Alice's Restaurant),

Editorially
By William Anderson

ON DISPOSING OF OLD RECORDS

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Karachi Box. And if you find letting go a little difficult, you can always tape
that are not actively working for the cause of music, and start your own
three hundred discs). Look over your own collection, pull out the records
that are not actively working for the cause of music, and start your own
Karachi Box. And if you find letting go a little difficult, you can always tape
your giveaways first. That way you won't have to wonder, as I do from time
to time, just what it was you threw in the river.
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TWIN-PACK Counts As Only ONE Selection!

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Percy Faith: House For Rent, House For Rent, etc.

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Address

City State Zip

☐ Please send information on 8-track cartridge tapes.

Send me these 5 TAPES

(fill in numbers below)

SEND ME THESE 5 TAPES

(APO, FPO addressee: write for special offer)

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MARCH 1968

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CIRCLE NO. 40 ON READER SERVICE CARD

LETTERS TO THE EDITOR

Templeton Strong
- You have deserved high commendation, true applause, and love— for Irving Lowens' better than excellent study of Edward MacDowell in your December issue. Many compliments to the author.

Mention of Templeton Strong in Mr. Lowens' study reminded me of my long friendship with that American composer and his many kindnesses to me, especially when I was a refugee in Geneva, Switzerland, in 1939, waiting for permission to return to my home in Paris. Strong always spoke of MacDowell with unbounded admiration and affection.

Though he never complained about it, I had a suspicion that Templeton Strong felt his music was neglected. In March 1936 he wrote me, "My compositions are of a long past age—obsolete, and I doubt if the modern public would care for them, hence I have virtually retired from the arena." In a letter of November 12, 1939, in which he told me he was planning to attend one of my lectures, he wrote, "In order to hear at least a few fragments of what you say [Strong was hard of hearing], I will try to find a seat fairly near you—this I can do without indiscretion as I am utterly unknown to the Anglo-American Colony—which is an excellent condition." Apparently he did not realize how truly the Anglo-American Colony in Geneva, and the Swiss, admired and respected him.

IRVING SCHWEIKER
Appleton, Wis.

Correction
- Everyone gets a little excited when he has a new addition to his family. In the case of University Sound, this new addition took the form of the Studio Pro 120, a brand-new FM stereo receiver. The first product reviews that came out were so good that I'm afraid

(Continued on page 10)

EDWARD MACDOWELL AND TEMPLETON STRONG

Record Players
- George Martinson, in his article "Record Players, Turntables, and Tone Arms" (January), states that changer tripping/cycling mechanisms "can be actuated reliably even at extremely low (1 gram or less) tracking forces." I wish to point out that no tracking force is required to trip the Seeburg Audio-mation. A magnetic reed switch is actuated by the tone arm as it disturbs a magnetic field. There is no physical force involved in tripping.

Additionally, Martinson says "no record changer currently on the market will turn over records." This should not be taken to mean that no automatic changer will play both sides of a record album, The Seeburg doesn't turn records over to play both sides, but it does play both sides. It stores them in the magazine vertically—up to fifty albums. I believe most authorities say the best way to store records is vertically. This the Seeburg does—for storage and for playing.

FRANK LIEBING, JR.
Advertising & Sales Promotion Manager
Seeburg Sales Corp.
Chicago, Ill.

DOBIE SIMPSON

Correction
- Dobie Simpson's line "You get a little excited when he has a new addition to his family. In the case of University Sound, this new addition took the form of the Studio Pro 120, a brand-new FM stereo receiver" should have read: "Everyone gets a little excited when he has a new addition to his family. In the case of University Sound, this new addition took the form of the Studio Pro 120, a brand-new FM stereo receiver. The first product reviews that came out were so good that I'm afraid

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(Continued on page 10)
HOW TO BUY ALL YOUR RECORDS AT LESS THAN DISCOUNT STORE PRICES!

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CITADEL MEMBERS GET A FREE SUBSCRIPTION TO "INSIDE MUSIC," THE NEWSLETTER THAT TAKES YOU BEHIND THE SCENES OF THE RECORDING INDUSTRY! AND A FREE SUBSCRIPTION TO THE "CITADEL RECORD" GUIDE! Your "Inside Music," newsletters keep you posted on GOLD MEDAL awards, tell you what's going on in the industry, help you to pick-out the best recordings. Each issue familiarizes you with the nominees, you will be sent the particular record to play and to evaluate without obligation to buy. And, since once a record is played by the Longines Symphonette Society, has been selected to help nominate and select the recordings and artist to receive the GOLD MEDAL AWARDS of merit.

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BEETHOVEN SYMPHONY No.8 EUGENIE ORMANDY Philadelphia Orchestra

BRAHMS PIANO CONCERTO No. 3 BEETHOVEN SYMPHONY No. 9

PROKOFIEV Piano Concerto No. 4 LEONARD BERNSTEIN New York Philharmonic

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GEORGE WELL, piano

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RICHARD EILEEN

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ISAAC STERN, viol,

NATIAVAN ON MT SCOPUS

NEW YORK PIRIKARIACINIC

PHILIPPE ENTFIEMONT

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Sidle

Carmen

Favorites

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BEETHOVEN

LEONARD BERNSTEIN

A GOLDEN TREASURY OF

MOZART

PIANO AND VIOLIN

GEORGE SELZ, piano

RAFEL ORMANDY, piano

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5389

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MARCH 1968
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excitement dulled our copyreading ability.

The University advertisement that appeared on page 121 in the February issue of HiFi/Stereo Review contains some errors I would like to correct: In the first column of copy the quotation on deviation should have read: "deviation never exceeded 0.2 dB, the 'curves' appeared as a straight line!" The quote on the FM stereo indicator light in the second column should have read: "includes a positive-acting FM Stereo indicator light (which, during all tests, instrument and listening, was never triggered by interstation noise or any other non-stereo interference)."

I would appreciate your publishing these corrections; we guarantee, in the future, to try to make our proofreading as good as the quality of our receiver.

STANLEY G. NEUFELD
Vice President, Sales
University Sound
Oklahoma City, Okla.

More on the Second-Rate

Although I have been a subscriber to HiFi/Stereo Review for seven years, I have never been moved to write you—all a letter. However, after reading James Goodfriend's "Going on Record" column in the December issue, I felt that I had to write and add my voice. I have been trying to explain this very same idea to my "I-only-listen-to-certified-masterpieces" friends for a long time.

Good grief! Sometimes I am too tired to listen to a masterpiece actively (there really is no other way to listen to one), and I merely want to be entertained with some fun music. Mr. Goodfriend mentioned a few of my cherished favorites, fun composers and otherwise: namely, Chausson, Delius, Léhar, and Bruch—poor, maligned Bruch. To this list I would add Mendelssohn, Saint-Saëns, Offenbach (forever!), Hummel—well, I could go on and on, bringing in the Kitsch School, the Schmaltz School, the Treacle School, and the Sturm and Drang School.

To the points very effectively set out in Mr. Goodfriend's article I would add this one: it is absolutely impossible to judge the quality of second-rate music from unsympathetic and/or second-rate performances. In order for a good second-rate piece of music to make its full effect, or sometimes to make any effect at all, it usually needs more care in performance than genuine, certified masterpieces, most of which seem to be able to make their effect under almost any circumstances within reason. Some day I am going to pursue these thoughts in my own mind in an effort to understand, if possible, precisely why this is so, but today I am too busy listening to Offenbach.

And I am going to bust in the mouth the next critic who refers to Saint-Saëns' "Organ" Symphony as non-music, or makes similar stupid remarks about one of his piano concertos.

TOM DOURIAN
Washington, D.C.

I really enjoyed James Goodfriend's essay "In Praise of the Second Rate"; however, I am inclined to differ with him a bit—although it probably is a matter of semantics. Mr. Goodfriend stated: "There is a vast amount of second-rate music I would not give up easily." I don't think he really means this—in these words, anyway.

(Continued on page 12)
The Monster that Devoured Brahms
OR WHY EMPIRE DEVELOPED THE LONG PLAYING CARTRIDGE

Don’t be misled by bland and innocent looks.
Unless your high-performance tone-arm is equipped with a new Empire 999VE cartridge, you’re odds-on to be harboring a Monster—a harmless-looking record-eater that’s devouring Brahms, pulverizing Poulenc, chewing up Tchaikovsky, murdering Mozart and devastating Debussy every time you play a record. Figure it out for yourself. If a vinyl record can wear down a diamond stylus, what do you think the diamond is doing to the record each time they come into contact? With most cartridges, the cumulative consequence of playback is musical mayhem.

Why? Wear!
But the 999VE is something else. Thousand-play tests prove that the 999VE doesn’t damage, distort or devour your records...doesn’t strip away highs, swallow up lows, muddy the midrange—even after 1,000 playbacks of the same record!

So if you’d like your Brahms—and Bach and blues and ballads—to stay bright and ‘live’ and new-sounding just about forever, replace your Monster with the long-playing cartridge: the one that plays every record perfectly, and keeps it perfect, for at least 1,000 plays.
In fact, indefinitely.

THE EMPIRE 999VE
The Long-Playing Cartridge at $74.95

EMPIRE Complete technical specifications on request from Empire Scientific Corp., 845 Stewart Ave., Garden City, N.Y., 11530

MARCH 1968
Now you can take advantage of this extra power and signal quality. You'll get even greater sound along with the convenience of a cassette machine. And with a cassette machine you don't have to thread the tape at all. Just snap in the cassette and you're ready to record or playback—for up to 90 minutes.

This offer lasts from now until March 15. So, see your Norelco dealer right away.

Limited offer: Buy a Norelco portable tape recorder get a $12.95 extension speaker for $3.95

When you buy the Carry-Corder® '150' or the Norelco '175', mail the warranty card for either machine, with a check or money order, to North American Philips Company, Inc., Dept. T, 3010 Review Ave., Long Island City, New York 11101, and we'll send you the extension speaker direct. Just plug it in. And you'll see that we build more sound into our portables than a portable-sized speaker can do justice to.

The enjoyment of music is largely a subjective thing. What may be first-rate music to one person may be second-rate to another, and vice versa. I think that both Mr. Goodfriend and I are actually looking for the first-rate music which may have been written by an otherwise second-rate composer. There is a lot of gold to be found among the also-rans of the general repertoire.

Jay Howard
Birmingham, Mich.

Mahler

Eric Salzman's review, "Mahler, Bernstein, and the Romantic Tradition" (December), was one of the most informative I have encountered in your magazine. For once a critic has finally discerned the true nature of the Adagio of Mahler's Ninth. Whereas other critics and record-jacket annotators have described the Adagio as the "heavenly and serene end of the Symphony" (by now a cliché), Mr. Salzman faces the reality of that unsettled, fortissimo dissonance which produces the quietly resigned coda, and which, under Bernstein's sensitive direction, reveals the nature not only of the Adagio, but of the entire Symphony.

Paul V. Zukas
Bethel, Conn.

I find it hard to believe that Mr. Salzman has been "crying-lo, these many years— for a decent stereo [recording of Mahler's] Ninth," since he gave short shrift to Walter's recording on the Columbia label and failed to mention Barbirolli's performance on the Angel label in his Mahler-Bernstein Christmas-gift promotion (December). Allow me to quote Martin Bookspan's "Basic Repertoire" column in this magazine (February 1966): "[Walter's] recording of the Mahler Ninth Symphony. . . . is surely one of the glories of recorded music. . . . Another vitally compelling (stereo) recording of the score is the one by Sir John Barbirolli and the Berlin Philharmonic Orchestra. . . . Generally Barbirolli's reading is even more passionate than Walter's. . . .

Could it be that Mr. Salzman substituted a bit of hero-worshiping—the hero being Gustav Bernstein—for his research?

H. C. Stevens
Akron, Ohio

Mr. Salzman replies: "I did overlook the Barbirolli version, which came out while I was in Europe and which I had not had a chance to hear prior to writing my review. Having finally caught up with Barbirolli, I don't think I have to revise my view substantially. I recognize the qualities in the recording that led to Mr. Bookspan's enthusiastic review, but I feel that both the Bernstein and the Kubelik are superior. Walter's Ninth, made at the end of his life with a pick-up orchestra of Los Angeles studio musicians, is a touching document of the late conductor's devotion to his mentor, but it has many limitations.

'And while I'm on the subject, I would like to clear up a remark in the review which seemed to come to imply that Bruno Walter was or could be vulgar. My point was just the opposite: that Walter was a sophisticated, gentle, and refined man and that, for this very reason, the so-called 'vulgarieties' in Mahler actually emerged sounding (Continued on page 14)
If our new SC740 is just another compact, then the Ferrari is just another car.

We're not knocking the good old family sedan. Or, for that matter, compacts. We're in the compact business. And we think they're pretty terrific.

But the new SC740 is something else. It has all of the convenience of a compact. But it's designed within performance parameters usually reserved for only the most sophisticated component equipment.

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The SC740 uses the very latest advances in solid state devices and technology. Its MOSFET front end and newly designed integrated microcircuits let you hear stations you probably didn't even know were on the dial.

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For more information, write Harman-Kardon, Inc., Box HFSR-3, 55 Ames Court, Plainview, N.Y. 11803.

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more vulgar than they do in a Bernstein performance, in which these elements are more integrated, more naturally expressed in a wider context.

"All in all, I'll stand by what I said in the review. After being described so often in these columns as an iconoclast, it is rather refreshing to be called a hero-worshipper for a change!"

**This 'n' That**

- What a pleasure to read HiFi/Stereo Review once again! I am a student composer on scholarship in Germany, and must express some opinions about the excellent October issue. It was very nice to see an article on Erik Satie. Turning to the Letters Column, Mr. Barrett, in my opinion, has missed the boat if he thinks "psychedelic sound" has no implications outside the dance hall—some of it, at least, seems to be quite seriously meant. The Beatles, for example, have evidently thought very carefully about what they want to say, and say it quite subtly. Peter Reilly, who reviewed "Sgt. Pepper" in the same issue, seems also not to have looked quite carefully enough: A Day in the Life seems to me, rather than "urging people to turn on," to be altogether against "turning on," in whatever form. It is carefully placed after the Sgt. Pepper Reprise chorus, setting it apart from the other songs, LSD lyrics and all. We then see a man who "made the grade" and "blew his mind out" in a car, unable to control sensory perception. Drugs equal death.

**Peter Moncur**

Cologne, West Germany

**International Piano Library**

- Martin Bookspan's statement that "the Chopin F Minor Concerto has been remarkably well served by the artists who have recorded it" is one with which I wholeheartedly agree. However, in his appraisal of available recorded versions ("The Basic Répertoire, December), he neglected to mention one recording which perhaps outshines all others. Though not generally available in record stores, International Piano Library's recording (501) of the Chopin F Minor Concerto with Josef Hofmann is available to all who wish it as a gift for becoming members of International Piano Library. The recording, made from a live performance in the mid-1930's, has been described as "a pearl beyond price" (Irvig Kolodlin in Saturday Review), "incredibly beautiful" (Howard Klein in the New York Times), and "elegant, incredibly fluent, extremely improvisational, and quite unorthodox by contemporary standards... for piano fanciers this is without question a recording to own" by HiFi/Stereo Review's own Igor Kipnis.

This recording and others of a like nature are available from the International Piano Library at the address below.

Gregor Boosey, Vice President
International Piano Library
215 West 91 Street
New York, N. Y. 10024

Mr. Bookspan replies: "I refer reader Bevlo to one of the statements of principle at the beginning of this month's Basic Répertoire installment. The monthly listings in the Schwebn catalog serve as my index to the general availability of any given recording. Since the International Piano Library's account of the Chopin F Minor Concerto by Josef Hofmann is not listed by Schwebn (and quite rightly not, since its availability is tied to a private subscription plan), I did not consider it in my December evaluation of recordings of the music."

**Our Man Flanagan**

- I have just finished reading William Flanagan's review of the four Brahms symphonies of George Szell and the Third of Erich Leinsdorf (November). In the spacious column he devotes to these works, he manages to say nothing about the music or its performance. He is satisfied merely to give his general impressions, which, heaven knows, could be the result of a heavy dinner.

In the only real reference to the recordings themselves that isn't subjective, Mr. Flanagan points out that Szell "bolts" through the first movement of Brahms' Third three minutes faster than Leinsdorf—too fast for Mr. Flanagan. A freshman music major could tell him that Leinsdorf does the repeat and Szell doesn't. Voi! Three minutes, or close to it.

Robert A. Ward
Cleveland, Ohio

- William Flanagan's review of the tape of Sibelius' Fifth and Seventh Symphonies conducted by Lorin Maazel (November) is a model of how not to review standard works. There is no need at this date to spend over

(Continued on page 16)
One-finger exercise for the music lover

Audio magazine captured the true spirit of the Elac/Miracord 50H in its September 1967 review: "...an outstanding performer...its automatic features make it a pleasure to use." What was Audio talking about?

The 50H has four pushbuttons: a "stop" reject button and three operating ones, each programmed for another record size. The gentlest touch is all that's needed to put the 50H into automatic play: single records, once over or continuously, or stacks of up to 10 in automatic sequence. Or you can ignore the buttons, and play single records manually by simply placing the arm on the record. That's how easy it is to operate the 50H and enjoy the many performance qualities it has to offer.

Other features of the 50H include: Papst hysterisis motor; leadscrew adjustment of stylus overhang; cueing facilities; anti-skate compensation and direct-dialing stylus force adjustment to as low as ½ gram.

At $149.50 less cartridge and base, the Miracord 50H is probably the most expensive in the field. It is also the finest. See it at your high fidelity dealer or write for descriptive literature: Benjamin Electronic Sound Corp., Farmingdale, New York 11735

Miracord
the light touch
Mr. Flanagan replies: "Since both letters are really about the same thing—objectivity in music criticism—my reply seems indicated. First, an interesting fact: in my seven years of reviewing for this magazine, I have only recently been regularly assigned recorded performances of standard repertoire works. When these recordings began to arrive, I was alarmed. How to approach them? For better or worse, my interest in music has never centered on how a given artist interprets the music so much as it has on the music itself—an unsurprising bent for a composer, I think. Again, for better or worse, over the years I've paid scant attention to many standard works that I had been required to analyze to the bone as a student, seeking instead fresh musical experiences—from the Supremes to Stockhausen.

"The answer to my new reviewing problem came instinctively: since for years I had neither thought about nor listened much to the four Brahms symphonies, for example, it struck me that I would be hearing them like new works, and that I would write about them as such. It appears that the resultant jostling of masses has upset their guardians.

"Specifically, I might point out to Mr. Ward that since my review contains the phrases 'I don't hear the range of contrast in dynamics that I think a conductor has found exactly the right' and 'the Fourth is a little, a bit, heavily weighted accentually,' among others, his claim that I said 'nothing... about the performance' raises questions about the subjectivity of his reaction to life itself. Mr. Ward also claims to have caught me out in an error of fact, I could either admit it or deny it with some plausibility; neither would invalidate my primary point. One of Webster's definitions of the verb 'to bolt' is 'spring away suddenly.' This definition might legitimately encompass Szell's obviatiion of the movement through omission of a repeat. On the other hand, I might simply hope that, as a working musician who was a 'freshman music major' some twenty years ago, I have come to realize the futility of returning to what I regard as worth forgetting.

"In my comments on Sibelius, I attempted to explain my criticism of Maxxel's 'eccentricities of tempo' by relating them to a specific description of what I believe to be the shortcomings of the music. Even so, does Mr. Simons think he would find my reviews of Sibelius more reliable if I disquised my feelings about the music? By what authority does he call for the suppression of such feelings? Given that the critic is educated in his field, and I think I can provide the credentials, I am unwilling to yield in my position that, in fairness to the reader, the performer, and even the composer, a candid admission of likes, dislikes—call them prejudices if you will—and special viewpoints is the only honorable approach to journalistic criticism of the arts. The complex problems of living alter a man's viewpoint from day to day and year to year. The act object remains relatively unchanged, 'Objective' evaluation of it, then, just has to be a dangerous myth.'

The Beatles, Seriously

In your November issue I read Henry Pleasants' article "Taking the Beatles Seriously," and I've also read the editorial in the Times of London that Mr. Pleasants mentions. In the editorial I was somewhat shocked by a statement that the Beatles' song "She's Leaving Home" in the album was superior to some of the best songs of Schubert. I wonder if it is possible to quote an article concerning the Beatles and Schubert in which a song of each would be discussed in structural detail and in contrast to one another?

Daniel J. Beasley
Fall River, Mass.
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Circle 145 on reader service card

- **Lafayette**'s new LR-99 is a solid-state 30-watt AM/FM stereo receiver. Operating controls include: power on-off, tuning, volume, balance, bass, and treble. The LR-99 has a five-position input selector, rocker switches for loudness compensation, speaker selection (main or remote), stereo noise filter, and stereo/mono selection. A switch-controlled stereo-search circuit signals with a tone when a stereo FM broadcast is tuned in. Stereo inputs are provided for auxiliary and phono cartridge (magnetic, crystal, or ceramic).

Amplifier specifications include a power output of 30 watts (15 watts music power per channel with 8-ohm speaker loads) and a response of 20 to 20,000 Hz ±2 db at a 1-watt output. Harmonic distortion at 1-watt output is 0.5 per cent; hum and noise at the low-level input (phono) is -50 db. The tuner section's FM sensitivity is 3 microvolts (IHF), capture ratio is 3.5 db, and stereo separation is 32 db. Size in a walnut-grained metal case is 4½ x 10 13/4 inches. Price: $119.95.

Circle 146 on reader service card

- **Knight-Kit**'s a.c.-operated solid-state sine/square-wave generator kit, Model KG-688, will be of interest to serious audiophiles and experimenters. Silicon semiconductors are used throughout. Sine-wave frequencies are available from 20 Hz to 20 MHz in five ranges. Square-wave frequencies are from 20 Hz to 200 kHz in four ranges. The unit features a 6-to-1 ratio vernier drive and a detachable line cord. Six slide switches provide up to 41 db attenuation of the sine-wave output in 1-db steps. Specifications of the sine-wave section include an adjustable output of 0 to 7.5 volts into loads of 10,000 ohms or more and 0 to 6.5 volts into 600 ohms; less than 0.25 per cent distortion across the audio range; output level flat within ±1 db up to 1 MHz, ±2 db to 2 MHz; and a frequency accuracy of ±3 per cent between 100 Hz and 1 MHz. Square-wave specifications include an output of 0 to 10 volts (peak-to-peak) into high-impedance loads, and a rise time of less than 0.1 microsecond at 20 kHz. Overall dimensions are 7 ¼ x 7 ½ x 10 1/4 inches. Price: $75.

Circle 147 on reader service card

- **M. H. Rhodes** is producing an extension cord with a built-in timer that will switch off up to three electrical devices automatically after any period from 15 minutes to 4 hours. The 6-foot extension cord is rated at 10 amps, 125-volts a.c., and can be used as a conventional extension by setting the timing knob to its manual position. The timer is encased in ivory-colored plastic, and the entire unit is covered by a one-year guarantee. Its dimensions are 2 ½ x 4 ½ x 1 inches. Price: $7.95.

Circle 148 on reader service card

- **Robins Industries** Model TM-88 is a lightweight, hand-held bulk tape eraser that reduces tape noise below normal erase-head levels. Tapes are erased by depressing a momentary contact switch in the unit's handle and moving it in a circular motion over each side of the reel. Weight is 2 pounds, 4 ounces and tapes up to ½-inch wide can be erased. The unit draws 4 amps and has a duty cycle of 1 minute on, 5 minutes off. List price: $17.50.

Circle 149 on reader service card

- **Concord Electronics** has introduced a solid-state, eight-track stereo tape-cartridge playback deck, the Model CP-250, for use with home audio systems. The deck plays each pair of stereo tracks in sequence automatically, or can be switched to the next pair by pushing a program-selector button. Individual program lights indicate which tracks are playing. The deck measures 9 ½ x 4 ½ x 9 ¼ inches. It can be operated in either a vertical or horizontal position. Price: under $100.

Circle 150 on reader service card

- **Automatic Radio**'s Model VSC-6767 is an eight-track stereo tape-cartridge player intended for custom mounting in the dashboard of late-model Volkswagens. AM and FM plug-in cartridges are available that permit use of the player as a radio. The player has a built-in solid-state 8-watt amplifier with frequency response of 50 to 15,000 Hz, and

(Continued on page 22)
Like many other speakers, the XP-66 costs about $120.

Unlike the others, it's a Fisher.

If you lined up all the existing 120-dollar speakers and tried to pick out the XP-66 on the basis of appearance, you'd never do it. It's roughly the same size and weight as half a dozen other bookshelf speakersystems.

But knowing Fisher, you might expect we wouldn't enter the 120-dollar speaker race without a superior product.

The XP-66, priced at $119.95, is our entry. Unlike most of the other speakers in the price group, it's a 3-way, not a 2-way system.

The audible spectrum is divided so each speaker handles exactly those frequencies for which it was designed. No more, no less.

So the big woofer (12 inches) handles the lows, from 30 to 400 Hz. A butyl-impregnated surround accounts for the fine low-end transient response.

A separately enclosed 6-inch midrange driver reproduces the frequencies from 400 to 1,000 Hz.

And a wide-dispersion tweeter, highly damped and of low mass, provides that clean high-end and quick transient response the audiophile has despaired of finding in a $120 speaker.

So go into any hi-fi store and listen to the speakers in the 120-dollar range. And in the unlikely event that you don't like the Fisher XP-66 best of all, consider the possibility that your ear is at fault.

(For more information, plus a free copy of The Fisher Handbook 1968, an authoritative 80-page guide to hi-fi and stereo, use the coupon on page 19.)
controls include separation, tone, and volume. Channels switch automatically at the end of each track, or they can be switched by depressing the channel-selector knob. Wow and flutter are less than 0.3 per cent. The unit comes with two high-efficiency, ceramic-magnet 5-inch speakers that have chrome grills for mounting in the car's doors. Suggested retail price: $89.95.

Circle 151 on reader service card

**Superex**'s newest stereo headphone, the Model ST-PRO-B, has a co-axially mounted woofer-tweeter combination interconnected by a crossover network. The dynamic-woofer/ceramic-tweeter combination has a frequency response of 18 to 22,000 Hz. The ear pads are vinyl, filled with urethane foam, and are removable. Standard impedance of the ST-PRO-B is 8 to 16 ohms, but 600, 2,000, and 15,000-ohm models are available. Price: $50.

Circle 152 on reader service card

**Allied Radio** has introduced its Model 919 automatic turntable for use with moderately priced music systems. The four-speed player (16⅔, 33⅓, 45, and 78 rpm) incorporates a four-pole motor, a pop filter, and a muting switch. The low-mass tubular tone arm has adjustable stylus pressure, anti-skating, and a pause and cueing control. The 919 can be set for continuous repeat play or manual operation with automatic shut-off at the end of the record. Its size is 13⅜ x 11⅞ inches. Price, with choice of an Empire, Pickering, or Shure cartridge, is $49.96. A wood base and a dust cover are optional at $4.95 each.

Circle 153 on reader service card

**Concord's** new Model 510-D stereo tape deck is intended for use with any high-fidelity system. Both a sound-on-sound switch and the microphone input jacks are located on the front panel. The deck has a seven-inch reel capacity and has three speeds (1⅜, 3⅝, and 7½ ips). The Model 510-D has solid-state preamplifiers, a four-digit tape counter, record-level meters, and a cue/edit control position. It can be used either vertically or horizontally. Specifications include a frequency response of 30 to 18,000 Hz ±3 db, and wow and flutter below 0.017 per cent at 1⅝ ips. At 3⅞ ips, frequency response is 40 to 10,000 Hz ±4 db, and wow and flutter are less than 0.022 per cent. The signal-to-noise ratio is better than 55 db. In its teak enclosure, the deck measures 11⅜ x 13⅝ x 5⅜ inches. Price: under $160.

Circle 154 on reader service card

**Lafayette** has announced the introduction of its top-of-the-line Model LR-1500T solid-state AM/stereo FM receiver. The 175-watt unit uses four integrated circuits (IC's) and two field-effect transistors (FET's) and has a power bandwidth of 25 to 35,000 Hz. FM sensitivity is 1.5 microvolts IHF. Among the receiver's features are front- and rear-panel tape-output jacks, automatic stereo FM switching, adjustable interstation-noise muting, variable AEC, illuminated slide-rule dial and signal-strength meter, front-panel headphone jacks, center-channel output, built-in AM and FM antennas, and a stereo indicator light. In addition to mode, selector, and tuning controls, there are concentric bass, treble, and volume/balance controls. Three rocker switches offer loudness compensation and high- and low-frequency filters, and there is a five-position speaker-selector switch.

Other specifications include: under 1 per cent harmonic distortion at rated power output, a capture ratio of 1.25 db, a signal-to-noise ratio of 68 db, and stereo separation of 40 db at 400 Hz. The silicon output transistors are protected against overload by an automatic, fuseless circuit. The Model LR-1500T measures 16 x 5 x 14⅞ inches and comes in a metal case. Price: $279.95.

Circle 155 on reader service card

**Toujay's** Pedestal cabinet, built of walnut on a swivel base, is designed to accommodate (and conceal) both components and records. The cabinet (front and rear views shown) comes with a pull-out drawer for a turntable, an adjustable shelf, and a record-storage section with a pair of record dividers. An optional pull-out tray (also on slides) for a tape recorder is available. The cabinet can house a receiver, a turntable, and more than one hundred records. Its overall dimensions are 40 x 20 x 20 inches, and internal depth is 18 inches. Price: $229.

Circle 156 on reader service card
High fidelity equipment has certainly come a long way from its bulky beginnings. Ever since the development of the transistor, manufacturers have vied with one another to perfect the compact hi-fi system. We at Fisher are no exception. (We're the ones who invented the FM-stereo receiver.) And after years of research, we're proud to announce the improvement of a component other manufacturers seem to have neglected: the turntable base.

The Fisher 110-S is, essentially, a turntable with a magnetic cartridge and a walnut base. It comes with a pair of 2-way speaker systems and costs $449.95. But built into the base is a sensitive AM/FM-stereo receiver with plenty of power.* The FM-tuner section, with 3 IC's and an FET front end, has 2.0 microvolts sensitivity. It pulls in the weakest signals and makes them sound strong and clear. The AM tuner's performance is virtually indistinguishable from FM-mono.

The amplifier, with 35 watts music power (IHF), drives a pair of acoustic suspension speaker systems at full volume without distortion. And the control panel has enough knobs and switches to please even the most sophisticated audiophile. Specifications like these would be remarkable, even in one of our finest separate receivers. But for a turntable base, they're really phenomenal!

(For more information, plus a free copy of The Fisher Handbook 1968, an authoritative 80-page guide to hi-fi and stereo, mail the coupon on page 19.)

*The Fisher 105-S, identical to above but with FM only, costs $429.95. Both the 105 and the 110 are also available less speakers.
Audio Systems Are Better than Ever

According to old advertisements, audio has always been better than ever. They were saying so even in the days before components, when everything came in the one big box called a console. (See A.)

Yet some people couldn’t see it. Or maybe they saw it all right but couldn’t hear it. In any event they stopped buying consoles and started buying public address equipment instead: Ugly stuff that looked as if it belonged in a gym—which it did.

Soon, however, the bulkhead connectors and battleship gray enamel of public address equipment began to give way to homier touches, and the rest is history. The Component Industry was born.

Now, twenty years later, advertisements speak in terms of integrated circuits and field-effect transistors instead of “nice tone”, but the message is the same: Everything is Better than Ever.

Is there a lesson in all this? Let’s see:

1) How do you feel about today’s better-than-ever equipment?

2) The latest components (see B) are certainly different from consoles. For that matter they are different from last year’s components. But do you think all the differences are important ones?

If not, name some changes that you consider trivial. (Also, any important ones you can
3) A carefully selected component system will sound better than an old console. It can sound better than another component system, up to a point. But selected how?—by considering the manufacturers' reputations, reading all their specifications, listening, or paying more money?

4) Finally, since we've mentioned paying more, what are your thoughts on Price vs. Sound Quality, or the Cost-of-Hearing Index? Eh?

Please send your answers to us at the address below. If they are among the fifty the judges take a fancy to, we will send you a Component Bag (see above) measuring 20" x 28" overall, in Cerulean and Old Brick on Plain, and suitable for putting things in. Also, we may use your answers in these pages later on.

Having any KLH equipment (such as our Models Five, Six, Nine, Twelve, Seventeen or Twenty-Two Loudspeakers, Model Eighteen Tuner, Model Twenty-Seven Receiver, Models Eleven, Twenty or Twenty-Four three-piece systems), or indeed even wanting any, will not affect the decision of the judges one way or the other. However, if you do want some, don't hold back; ask and we'll send you all about it, including who sells it in your neighborhood.
In the league of nimble-fingered tape-handlers there exists a recurrent problem. It has been demonstrated time and again that anyone can ruin a valuable tape by accidentally breaking a tape. It is actually impossible to accidentally break a tape.

Call your CROWN dealer NOW!外

Computer Logic Control brings you rapid error-free tape handling. It is actually impossible to accidentally break a tape. Call your CROWN dealer NOW!

MOST PERFECT REPRODUCTION
- Performance as yet unequalled
- Four years proven Solid State circuitry
- Extremely low noise electronics

FINEST TAPE HANDLING
- Computer smooth operation
- True straight line threading
- Patented Electro-Magnetic brakes never need adjusting

By LARRY KLEIN

HiFi Q&A

Revolutionary Squeak

Q. There is a small noise in my tape recorder that is starting to drive me crazy. When I play the record, mode, the tape entering the take-up reel rubs on the reel edge and produces a once-per-revolution squeak. Do you have any suggestions on how to get rid of the noise?

A. I assume that you have tried other take-up reels and that we may therefore discount the possibility that a severely warped reel is causing the trouble. It may be that the tape guide that feeds the tape onto the take-up reel is out of adjustment and is feeding the tape into the reel either slightly too high or too low. A small variation from the correct feed path combined with the slight warpage common to tape reels may produce the rubbing. You can check vertical alignment of the head and guide by playing back a prerecorded tape and checking the cross-talk (interference) between the tracks. If the tape-guide adjustment is not at fault and the rubbing is taking place on the top edge of the reel, the simplest cure for your problem is to place a thin fiber washer on the take-up reel platform to raise the reel to the height required to eliminate the rubbing. But before trying this, check the interval mounting of the clutch and hub assembly of the take-up reel. You may find that the bolts have loosened, with the result that either the entire take-up reel assembly has dropped slightly or that the tension of the drive belt is tilting the assembly.

Maintenance Procedures

Q. I recently purchased a high-quality reconditioned tape recorder. Are there any standard procedures I should follow to keep it in good operating condition?

A. Aside from the maintenance procedures that may be required for your particular machine, five steps are generally advised: (1) Clean the heads regularly with a cotton swab dipped in alcohol (or the manufacturer's recommended head cleaner), since even the best tapes leave deposits of oxide on the head surfaces. This deposit, if permitted to accumulate, will cause loss of high-frequency response. Also clean the capstan pressure roller, tape guides, and all other parts that may contact the tape. This will prevent tape slippage, which will be heard on your recordings as flutter or wow. (2) Demagnetize the heads before every important recording session. (3) Lubricate the machine regularly, but only if, where, and when the manufacturer suggests. (4) Test the tubes (assuming your recorder is not transistorized) at least once a year, paying special attention to the bias-oscillator and rectifier tubes. (5) On rare occasions, it may also be worthwhile to clean the clutches, idle wheels, and other parts of the drive system with alcohol.

At all times, follow the instructions in the manufacturer's service manual. If service information is not available from the manufacturer, it may be possible to obtain data on your machine from Howard W. Sims & Co., 4300 W. 62 St., Indianapolis, Indiana 46268.

Prerecorded Silence

Q. It has been my experience, confirmed by several of your tape reviewers, that on some of the new prerecorded tapes there is a silence of several minutes before the first selection starts. What is the reason for this? Why doesn't the manufacturer put the blank tape, if needed, at the end of the first side?

A. Obviously, if the material recorded on the second pair of stereo tracks has a greater playing time than the material on the first two tracks, there has to be a length of blank tape at the beginning of the end of the first side. Manufacturers of prerecorded tape place the blank sections at the beginning of the reel so that machines with automatic reversal can switch tracks at the end of the first side with minimum interruption of the music.

When playing a tape for the first time it is probably a good idea to set your tape index counter to zero and jot down on the tape box the index number at which the music actually begins. On subsequent plays you can minimize the dead time by fast forwarding the tape to its approximate starting point.

Direct Head Connection

Q. If I connect the playback head of my tape recorder directly to the tape-head input of my amplifier, will I achieve better results than when the (Continued on page 29)
What if he wants to borrow a cup of scotch?

Ask him if he wants to take it with him or drink it here. If he says “here”, keep your cool. Break out the White Horse. Now, White Horse is one Scotch no straight-shooter will argue about: either he likes it or he loves it. In fact, if he flips for it, you have found yourself a genuine Good Guy. Because, whether in cups or Good Gay glasses—

The Good Guys are always on the White Horse.
If your first tape deck measures up to this one, you're going to enjoy it a lot more.

The TEAC A-4010S: Four heads, 4 track, 2 channel. 7" maximum reel size. Tape speeds 7½ and 3⅞ ips (±0.5%). Dual speed hysteresis synchronous motor for capstan drive, 2 eddy current outer-rotor motors for reel drive. **Wow and flutter:** 7½ ips: 0.12%; 3⅞ ips: 0.15%. **Frequency response:** 7½ ips: 30 to 20,000 Hz (±2 dB 50 to 15,000 Hz); 3⅞ ips: 40 to 12,000 Hz (±3 dB 50 to 7,500 Hz).

**Signal to noise ratio:** 50 dB. **Crosstalk:** 50 dB channel to channel at 1,000 Hz. 40 dB between adjacent tracks at 100 Hz. **Input:** (microphone): 10,000 ohms, 0.25 mV minimum. (line): 100,000 ohms, 0.14 V minimum. **Output:** 1 volt for load impedance 100,000 ohms or more. And these features, too: Automatic reverse for four hours of uninterrupted music on a single tape, symmetrical control system (fast-winding in both directions, playback and stop by a soft-touch push button system), TEAC-built hyperbolic type heads, four solid-state amplifiers, tape tension control switch, automatic shut off, 100 KHz bias frequency, and independent LINE and MIC input controls to permit mixing signals from two recording sources. If your first tape deck measures up to these specifications, it's a TEAC. **See your TEAC dealer for a demonstration today.**
head is connected to the playback pre-amplifiers in the tape recorder?

LEO WINTER
Chicago, Ill.

It’s unlikely. In general, to achieve optimum results from a playback (or record) head, the associated electronic circuits have to be closely matched to the specific electrical characteristics of the heads. Of course, if the recorder is badly designed electronically or out of adjustment, then an external playback preamplifier may improve results.

High-Frequency Incompatibility

I trade tapes of music with a friend and have run into a frequency-response problem. Whenever I record a disc or FM program and play it back on my machine it sounds fine. However, when played back on my friend’s machine, the tape lacks highs. To make things more complicated, we both have the same model recorder, and his tapes don’t sound right on my machine either. Does this mean that either or both of our machines are defective?

ROBERT COHEN
Chicago, Illinois

The fault is probably due to an incorrect azimuth adjustment of the record-playback head on one of the machines. If one of the record-playback heads is tilted off the correct 90-degree angle, the high-frequency response recorded on the tape will not be reproduced by the other machine unless the second machine’s head is also tilted in the same direction and to the same degree. To determine which machine has the off-azimuth head, use a standard test tape, or play back a commercial prerecorded tape of known quality on both machines. The recorder that best reproduces the highs is the one with the correct adjustment. You can improve the other machine by adjusting the head azimuth for the best reproduction of highs from a prerecorded or test tape, but all tapes previously made on the machine will then lack high-frequency response.

Duplication Degradation

I have a collection of two-track stereo tapes that I would like to convert to four-track stereo tapes by re-recording them on a four-track machine. Will there be much degradation caused by the duplication process?

R. M. WELCH
Binghamton, N. Y.

The amount of degradation to be expected will depend entirely on the caliber of the machines used to play back and re-record the tape. Although you can expect to lose at least 3 db in signal-to-noise ratio, little degradation will be audible if the noise level of both machines is reasonably low.

In our opinion, we have never heard better sound reproduction from any speaker of any size or price

Our side-by-side comparison with a full range electrostatic speaker, proved to our satisfaction that the two could not be told apart

The Rectilinear III ranks as one of the most natural sounding speakers I have ever used in my home

JULIAN D. HIRSCH, HIRSCH-HOUCK LABORATORIES
Equipment Test Reports, Hi Fi/Stereo Review, Dec. 1967

The Rectilinear III —
4-Way Speaker System $279.

Frequency Response:
±4db from 22 to 18,500 Hz
Minimum Watt. Requirements:
20 Watts R.M.S.
Speaker Capability:
Up to 100 Watts R.M.S.
Impedance: 8 ohms
Dimensions:
35" H x 18" W x 12" D
Weight: 65 lbs.
Cabinetry: Hand Rubbed Walnut
Available at select franchised dealers

Dealers! Write to Mr. Martin Gersten
for full franchise details.
Many tape-recorder specifications are similar to the amplifier and speaker specifications (such as frequency response, distortion, and so forth) discussed earlier in this series. Mechanical factors describing speed constancy also enter into the picture, notably wow and flutter, which have already been dealt with in connection with phonograph turntables.

Unfortunately, these familiar expressions are usually handled more loosely for tape recorders than for other components. Frequency response, for example, is too often specified without a qualifying "plus-and-minus" number showing the decibel deviation from flat response. Such disregard for the essential matter of uniformity in frequency response sometimes leads to puzzlement and absurdities, such as when cheap recorders sport more impressive response figures than expensive, conservatively rated machines. If a manufacturer states the deviation at all, that fact alone lends a certain trustworthiness to his claims.

A statement of frequency response in tape recorders is usually based on the entire record-playback cycle. Occasionally, one finds that the frequency-response figures given refer to playback only. This describes the machine's playback frequency performance on prerecorded tapes, and, in general, if a recorder does well when playing tapes, it should do at least as well in the record mode.

The signal-to-noise ratio, an important factor in tape recorders, should also be read warily. The figure expresses the difference in decibels between the noise imparted by the recorder to the tape and the loudness of a recorded test tone. Although the National Association of Broadcasters has established a standard reference level for this tone, audio tape-recorder manufacturers do not all observe this standard. Some use a much higher reference-signal level (with up to 5 per cent distortion), which yields a seemingly better signal-to-noise ratio. Again, the end result of such practices is that some inferior machines appear—on paper—to outperform their betters.

Under such anarchic conditions, unless the NAB standard is used, no direct comparison of noise figures is possible. In the absence of standards, the buyer's best bet is, if possible, to compare tape recorders by listening tests in a quiet environment. For example, check for the amount of hiss added to a tape recording of a disc, compared with the original disc sound. Of course, the machine should be hooked up to a wide-range audio system and high-quality tape should be used.

Similarly, distortion figures given for tape recorders are largely meaningless because of inadequately stated measurement standards. Even if the manufacturer notes that his distortion measurements are taken at "maximum" recording level (and "maximum" has no standard definition itself), other vital factors are not considered, such as the kind of tape used. Again, careful listening tests can help supply missing performance information.

Fortunately, the specifications referring to constancy of tape speed are more straightforward and can be directly compared. Expressed as a percentage, wow and flutter should not exceed 0.2 per cent at 7½ ips in a high-quality recorder.
SONIC-SPECTRUM+ is a technological advancement by Liberty Stereo-Tape that represents a major breakthrough in recorded sound on 4 track and 8 track cartridge tapes! New duplication techniques, exclusive to Liberty, and a superior new tape, have resulted in a dynamic new sound with a range and quality never before attainable on pre-recorded cartridge tape!

The newly designed SONIC-SPECTRUM+ cartridge itself is engineered to more precise tolerances than ever before possible, resulting in a much smoother operation of the tape. Each cartridge has its own dust cap, assuring optimum playing quality for an extended period. Newly designed finger grips on both sides of the cartridge makes it easier to get it in and out of the player and specially designed ridges permit easier, non-spill stacking of cartridges.

THESE GREAT LIBERTY ARTISTS, and many more, are waiting to entertain you on the new SONIC-SPECTRUM+ 4 track and 8 track cartridges:

- FELIX SLATKIN "SOFT AND SWINGIN'" 4797/8797
- RAVI SHANKAR "RAVI SHANKAR AT THE MONTEREY POP FESTIVAL" 4798/8798
- VIKKI CARR "IT MUST BE HIM" 4796/8796
- STANLEY TURRENTINE "ROUGH 'N TUMBLE" 4799/8799
- THE VENTURES "THE VENTURES IN SPACE" 4800/8800
- THE JOHNNY MANN SINGERS "A MAN AND A WOMAN" 4801/8801
- GARY LEWIS "LISTEN" 4802/8802
- MEL CARTER "BE MY LOVE" 4803/8803

Visit your Liberty Stereo-Tape dealer soon—ask him to demonstrate the precision made, all new SONIC SPECTRUM+ cartridges...and discover for yourself the fantastic new world of SONIC SPECTRUM+ sound! Available on both 4 track and 8 track cartridges.

A product of LIBERTY STEREO-TAPE, 6920 Sunset Blvd., Los Angeles, Calif. 90028

CIRCLE NO. 53 ON READER SERVICE CARD
sound security when you invest in...
your dividends begin immediately

bold two-year warranty on both parts and labor
KENWOOD quality begins with its advanced engineering and circuitry. It continues with the scrutiny of every single part used by KENWOOD. Next, experienced technicians painstakingly hand-assemble every KENWOOD component. Finally, each receiver is carefully inspected and thoroughly tested — before it is placed on the market. That’s why KENWOOD can offer you an unconditional two-year warranty on both parts and labor.

incredibly selective tuner
Superior $\mu$V FM sensitivity begins with KENWOOD’s (FET) Field-Effect Transistor front-end, coupled to four-gang tuning condensers for 66 dB image rejection and 80 dB cross-modulation rejection. To insure the ultimate in selectivity, KENWOOD provides five IF stages with four limiters.

TKS-40—SOLID STATE STEREO MUSIC SYSTEM • $249.95
(A COMBINATION OF TK-40 AM/FM • 30 WATTS • AUTOMATIC STEREO RECEIVER WITH S-40 SPEAKERS)
KENWOOD TK-88

silicon transistor amplifiers
Frequency response to well beyond the range of human hearing is found in the TK-88. The frequency response is from 20 to 50,000 Hz. For exceptionally clear, true sound, IM distortion is barely measureable.

automatic switching systems
The TK-88 provides you with completely automatic FM stereo-FM mono mode silent switching circuits; a light indicates FM stereo broadcasts. Another automatic circuit provides interstation muting—noise and "hash" between stations is suppressed while tuning. Still another special circuit employs four diodes in a time-division multiplex-decoder to give you 38 dB or better stereo separation. Naturally, there is an illuminated AM/FM tuning meter and signal strength indicator.

many convenience features
Once you install a KENWOOD receiver, you'll never have to touch another cable. A tape monitor switch is provided for direct tape monitoring without changing cable connections.

KENWOOD also gives you four sets of output speaker terminals (for two sets of stereo speakers) with a front-panel speaker selector switch, plus a center-channel low-level output, plus a front-panel stereo headphone jack. KENWOOD gives you unmatched flexibility with five pairs of input terminals (with a corresponding five-position front-panel selector switch, of course).

exclusive circuit protection
All KENWOOD receivers feature the blow-out free exclusive automatic circuit protection (U.S. Patent) to protect the critical, expensive power transistors.

request a demonstration
Hear for yourself what KENWOOD's remarkable specifications really mean when translated into sound! Ask your dealer for a demonstration of the KENWOOD TK-88 and other superb KENWOOD receivers. Invest in KENWOOD for Sound Security...you'll appreciate KENWOOD's many extra dividends.

the sound approach to quality

KENWOOD

TK-88—SOLID STATE • 90 WATTS • FET • AM/FM AUTOMATIC STEREO RECEIVER • $289.95

TK-55—SOLID STATE • 60 WATTS • FET • FM AUTOMATIC STEREO RECEIVER • $199.95

TK-66—SOLID STATE • 60 WATTS • FET • AM/FM AUTOMATIC STEREO RECEIVER • $239.95

TK-140—SOLID STATE • 130 WATTS • FET • AM/FM AUTOMATIC STEREO RECEIVER • $339.95

SUPREME 1 • 165 WATT 3-CHANNEL STEREO AMPLIFIER WITH ELECTRONIC CROSSOVER NETWORK • $695.00

3700 South Broadway Place, Los Angeles, Calif. 90007
69-41 Calamus Avenue, Woodside, New York 11377
Exclusive Canadian Distributor — Perfect Mfg. & Supplies Corp. Ltd.

MARCH 1968

CIRCLE NO. 49 ON READER SERVICE CARD
superb (soo-purb), adj. 1. Possessing or exhibiting nobility of birth, mien, position or character. 2. Of supreme excellence, goodness, value or beauty of the highest quality.

You might feel "Superb" too strong a word to use in describing an FM/stereo receiver. But then you haven't heard the Studio Pro 120. It was born rich in a 30-year tradition of excellence. It is equal or superior to receivers costing up to $600, yet it is priced at only $379.50**. Its performance specifications have been certified by Nationwide Consumer Testing Institute, Inc., a subsidiary of United States Testing Company, Inc. — to give you proof positive that it will perform exactly as we say it will. Is superb too strong a word to use in describing the Studio Pro 120? Listen to it and we think you'll agree "Superb" is the word. Your franchised University dealer is waiting to show it to you.

**Manufacturer's suggested resale price.
ELECTRONIC-CROSSOVER SYSTEMS: If anyone thinks that today's audio enthusiast is faced with a bewildering choice of components, let him consider the plight of his counterpart in the early 1950's. In those days components were just separate pieces that could be assembled in a nearly infinite number of combinations. The all-in-one receiver, as we know it, was still in the future, and it was customary to use a separate tuner, preamplifier, and power amplifier (mono, of course). And frequently the power amplifier itself was in two parts: power-supply components on one chassis, and driver tubes, output tubes, and output transformer on the other.

Few packaged speaker systems existed. It was the heyday of the "do-it-yourself" movement, and most of us bought separate woofers, mid-ranges, and tweeters (often of different manufacture) and mounted them in home-built enclosures. The bass-reflex, with numerous variations in structure; the rear-loaded corner "horn" (not really a horn, but many of us liked to consider it as such—a real horn, then as now, was a very expensive prestige item); and later the miniaturized "Helmholtz-resonator" all had their proponents.

Two-, three-, and four-way speaker systems require some means of channeling different frequencies of the incoming audio signal to the appropriate driver. It was (and still is) customary to use inductance-capacitance (L-C) crossover networks which, in a three-way crossover, serve simply as low-pass, band-pass, and high-pass filters between the amplifier output and the different drivers in the speaker system. In modern, factory-assembled speaker systems the crossover network is concealed within the enclosure. We tend to forget its existence, but it is a basic part of every speaker system and has much to do with its final performance.

Crossover-network design considerations are often the limiting factor in speaker performance. For example, it is accepted that large woofers should operate only at the lowest frequencies for optimum performance. However, a crossover network with, say, a 100-Hz crossover frequency is bulky and expensive. The large inductors required for such a low frequency would absorb a significant amount of power and their resistance might impair speaker damping. Also, the required paper-dielectric capacitors in the range of hundreds of microfarads are inordinately expensive. It is therefore customary, even in expensive speaker systems, to operate the woofer up to 750 Hz or even beyond 1,000 Hz, in spite of the difficulties it may encounter performing at the higher audio frequencies.

One inconvenient (and costly) solution to the problem would be to use separate amplifiers to feed each driver within a speaker system with the frequency separation accomplished electronically between the preamplifier and the power amplifiers. Although the two or three amplifiers needed (one for each frequency band in the system) would be far more expensive than one, each could have a smaller power rating than the single amplifier to be replaced. One of the advantages claimed for this system has been the reduction of intermodulation distortion in the amplifiers, owing to the fact that the low and high frequencies are handled by separate amplifiers. While true, this is hardly the most significant of the advantages that might be realized by a multi-amplifier system.

Much more important is the fact that the crossover characteristics could be established without the limitations imposed by an L-C network between the amplifier and speaker. The crossover frequencies could be made arbitrarily low, or adjustable, with negligible increase in expense or complexity. Speaker damping would be as good as the amplifier(s) would allow. The compromises and uncertainties in the frequency and transient response of an L-C network connected to a speaker load could be virtually eliminated by an electronic-crossover system.

In the old mono days there were numerous "home-brew" electronic-crossover systems, and at least four American manufacturers produced commercial units. These met with only moderate acceptance, perhaps because the arrival of stereo made multi-channel amplifier systems hopelessly unwieldy and expensive: a stereo pair of three-way speaker systems would require the equivalent of two preamplifiers, two electronic-crossover units, and six power amplifiers. Understandably, the economics...
of the situation sounded the death knell of the electronic crossover.

But not quite! Transistor amplifiers, compact and cool, and lacking the bulky and expensive output transformer, have changed the thinking of some designers. In the last year, several commercial multi-amplifier, electronic-crossover systems have been announced, all from Japanese manufacturers. One, by Hitachi, is very large and expensive, and as far as I know is not presently marketed in this country. Sony offers the TA-4300, a three-way electronic crossover device, which has four selectable 18-db-per-octave low-frequency crossovers from 150 to 600 Hz, and four 12-db-per-octave crossovers from 3,000 to 6,500 Hz. It requires two external stereo power amplifiers plus an integrated control amplifier, all of which are in the Sony product line.

Kenwood has gone all the way with their Supreme 1, a single-chassis, integrated six-channel amplifier and crossover system. Crossovers are at 400 Hz or 800 Hz, and at 2,500 Hz or 5,000 Hz, all at 12 db per octave. Each low-frequency amplifier is capable of 33 watts (continuous power), the mid-range amplifiers deliver 23 watts, and the high-frequency amplifiers are rated at 15 watts. The Kenwood Supreme 1 has a full complement of tone controls, filters, and selectable inputs, and is about the size of a typical stereo receiver. It sells in the $700 bracket, not unreasonable in view of its complexity.

One difficulty with multi-channel setups is the need for separate access to each driver in the speaker systems. Few commercial speaker systems permit this without breaking the cabinet seal and voiding the warranty, and the technique in most cases can be best applied to home-built speaker systems. However, Sony (and Hitachi) have suitable speaker systems available. Still, it seems to me that anyone who tries a multi-channel amplifier system will wish to experiment with his own choice of speakers.

A somewhat different approach has been used by Pioneer in their Model IS-80, which combines a two-way crossover, a three-way speaker system, and two 45-watt amplifiers in one enclosure. The system retails for $375, and is one solution to the problem of finding speakers suitable for use with electronic crossovers. A separate component preamplifier is used, and two IS-80's are required for stereo.

The big question is—is it all worth it? The investment is sure to be large for any of these systems. Years ago, I experimented briefly with a mono electronic-crossover system, and did not find any significant improvement. However, at the recent New York High Fidelity Show, I heard a convincing A-B demonstration by C-M Laboratories, in which their amplifiers drove a pair of large Bozak speaker systems. A single switch replaced the built-in Bozak crossover networks with a multi-amplifier system. The improvement was clearly audible, in the form of a greater "liveness" and clarity to the sound.

The law of diminishing returns clearly applies in the case of electronic crossovers. A slight, but definite improvement in sound can be achieved by a rather large increase in system cost. For the purist it may well be worthwhile. I suspect that continuing technological improvements will eventually lower the cost of a multi-channel stereo amplifier to the point where a reappraisal of the situation may be in order.

~ EQUIPMENT TEST REPORTS ~

By Hirsch-Houck Laboratories

ACOUSTIC RESEARCH STEREO AMPLIFIER

In sharp contrast to those companies that undertake a complete revision of their product line every year, Acoustic Research has released only a handful of products in its thirteen-year life span. But each AR product has nonetheless excelled in its field because of a combination of imaginative design, competent engineering, and a dedication to simplicity as a cardinal virtue.

From past acquaintance with the AR design philosophy, we can deduce what must have been some of the design goals for the new AR amplifier. First, it must be simple. Gadgetry and frills have never been part of AR thinking (consider their turntable, with a simple on-off slide switch as its only control). It must be reliable and foolproof (a two-year guarantee, covering parts, labor, and transportation both ways leaves no room for failure-prone design or sloppy quality control). The amplifier must be powerful (AR speakers thrive on power levels that would destroy many other systems). Furthermore, the amplifier must deliver its optimum performance with 4-ohm loads (the impedance of the AR-3 and AR-3A speakers), yet not compromise its performance at higher load impedances. In addition, it should have the usual virtues of low distortion and noise, plus complete stability. It should be free of pops and clicks when it is turned on or off or when its controls are operated. Finally, it should be priced low enough to be a clear bargain in the market place.

The AR amplifier is all of these things—and more. It is an all-silicon, solid-state integrated amplifier measuring (in the optional wooden cabinet) 15 1/2 inches wide by 4 1/2 inches high by 10 inches deep. Its rated continuous-power output per channel is 60 watts (with both channels driven) into 4 ohms, 50 watts into 8 ohms, and 30 watts into 16 ohms. Its IM distortion is rated at less than 0.25 per cent from 20 to 20,000 Hz at any power up to rated maximums.

The input selector switch has three positions: PHONO, TUNER, and TAPE (high level). There is a tape-monitor switch for use with recorders having three-head monitoring facilities. The tone controls (concentric, with slip clutches for individual channel adjustment) have excellent characteristics. They are designed to supply loudness compensa-

(Continued on page 38)
new problem-solving receivers
from Sherwood!

Model S-7800 140-Watt All-Silicon FM-AM Stereo Receiver. Features: Synchronous FM limiter/detector, field-effect transistors in RF and Mixer stages, separate monophonic speaker terminals, DC coupled All-Silicon power amplifiers, instant overload protection, main and/or remote speaker switching, 140 watts @ 4 ohms. Front panel controls: Source selection, Bass, Treble, Balance, Loudness, Stereo/Mono, Tuning, Pre-Amp Sensitivity, and Hush Level. Rocker-action switches for Tape Monitor, Hi Filter, Main Speakers, Remote Speakers.

Custom mount chassis . . . . . $419.50

Model S-8600 80-Watt All-Silicon FM Stereo Receiver. Features: Synchronous FM limiter/detector, field-effect transistors in RF and Mixer stages, separate monophonic speaker terminals, DC coupled All-Silicon power amplifiers, main and/or remote speaker switching, 80 watts @ 4 ohms. Front panel controls: Bass, Treble, Loudness, Stereo/Mono, Tuning, and Hush Level. Rocker-action switches for Tape Monitor, Phono/Tuner, Main Speakers, and Remote Speakers. Rear-panel preamp sensitivity control.

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SYNCHRO-PHASE FM LIMITER/DETECTOR-Silicon monolithic microcircuits are used in Sherwood's symmetrical-differential limiters for improved noise rejection and reception under difficult multipath signal conditions.

Specifications:
0.15% distortion @ 100% modulation.
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55 db AM rejection.

FIELD-EFFECT TRANSISTOR CIRCUITRY - In urban strong-signal locations, the reception of distant weaker FM stations is not disturbed by interference of spurious images of stronger, local stations.

Specifications:
-95 db crossmodulation rejection.
1.8 µV (IHF) FM sensitivity.

SEPARATE MONO SPEAKER TERMINALS - Independent of main and remote stereo speaker terminals, they offer new convenience in installations requiring powered monophonic center-channel or extension speakers.

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Electronic Laboratories, Inc., 4300 North California Avenue, Chicago, Illinois 60618

MARCH 1968

CIRCLE NO. 73 ON READER SERVICE CARD
A DECADE OR SO AGO, with the introduction of the acoustic suspension speaker, many audio hobbyists revised their long-held belief that low-bass response was possible only from a very large and heavy speaker system. Since that time, many small speaker systems have been marketed, and although they are usually referred to as "bookshelf" units (and can, indeed, be supported by oversized, reinforced shelves), their dimensions more nearly resemble an atlas than an ordinary book. In more recent years, a number of true bookshelf-size systems have been developed, with varying degrees of sonic success.

The Fisher XP-55 is an excellent example of an inexpensive speaker system that can be placed on an ordinary shelf, yet whose sound should satisfy all but the most critical listeners. Its walnut cabinet measures 20 inches wide by 10 inches high by 9 inches deep, and its 20-pound weight is not likely to overtax any shelf capable of supporting books that would occupy the equivalent space.

The XP-55 is a two-way, 8-ohm system with a power-handling capacity of 30 watts. It contains an 8-inch woofer, crossing over at 1,000 Hz to a 2½-inch cone tweeter with a hemispherical dome bonded to its voice coil. A 12-db-per-octave inductance-capacitance crossover network is built into the system. Despite their small cone diameters, the drivers of the XP-55 are of massive construction; the woofer has a 1¼-inch diameter voice coil and a 3-pound magnet, and the tweeter has a 7/8-inch voice coil and an 8-ounce magnet.

Our tests of the Fisher XP-55 produced some interesting results. The frequency-response curve (averaged from ten microphones spotted throughout the room), though not flat, was notably smooth. It fell off at a 6-dB-per-octave rate below a few hundred hertz, was very flat between 800 and 2,000 Hz, and then rolled off about 0.46 per cent above 20,000 Hz. At lower powers, distortion was even less. At 1,000 Hz, the harmonic distortion with an 8-ohm load was about 0.17 per cent under 1 watt, less than 0.12 per cent in the 10- to 60-watt region, and 0.54 per cent at 70 watts (remember, the rated power at 8 ohms is 50 watts). IM distortion was of very low proportions. Into 4-ohm loads, the AR amplifier delivered a staggering 110 watts per channel at the clipping point (about 0.5 per cent distortion). Hum and noise, referred to 10 watts, were —72 db on the tuner input and —58 db on the phone input, both well below published ratings. RIAA equalization was within 1 db over its range.

The amplifier runs slightly warm in normal use, and must be ventilated. It never faltered during our severe full-power measurements, although it became uncomfortably warm to the touch. Two features found on many contemporary amplifiers are absent from the AR amplifier. There is no stereo headphone jack, and no internal switching for remote speaker systems. No doubt AR engineers considered these to be in the "gadget" category. In any event, they are easily added externally if desired.

Now that we have tested the AR amplifier in our laboratory and listened to it at length in our homes, the message is clear: the AR amplifier is an excellent unit—in fact, it ranks among the very best available. Perhaps its most remarkable feature is its price—$225—which is less than any comparable rated amplifier and is actually less than some of the better kit-type amplifiers. The optional walnut cabinet is $15.

For more information, circle 157 on reader service card.
SPEAKERS ARE CHOSEN FOR CRITICAL PROFESSIONAL USE—BUT THEY WERE DESIGNED FOR THE HOME.

Professional

Studio at WTFM in New York, one of the world's pioneer radio stations in FM stereo. AR-3 speakers monitor the audio quality throughout WTFM's studios and control rooms, as they do at many other broadcast stations. WTFM cannot afford to use speakers that provide false information.

Domestic

Library in the home of Virgil Thomson, distinguished American composer and dean of music critics. The speakers over the bookcases are AR-3's, chosen for their non-electronic, musical sound. Reflection in the mirror is Mr. Thomson watching the photographer.

AR speakers are $51 to $250. A catalog of AR products—speakers, turntables, and the AR amplifier—will be sent free on request.

ACOUSTIC RESEARCH, INC., 24 Thorndike Street, Cambridge, Massachusetts 02141
CIRCLE NO. 2 ON READER SERVICE CARD
cal-stylus cartridge. The XP-55 was unusually low, rising from 2 per cent at 60 Hz to 7 per cent at 40 Hz and 10 per cent at 20 Hz, with a 1-watt drive level. There was no tendency for the speaker to break up or generate harmonics at very low frequencies; the output simply fell off smoothly. The tone-burst response of the Fisher XP-55 was outstanding. There were no frequencies which "rang" or produced spurious outputs, and the overall transient response was as good as we have ever measured on a loudspeaker.

It came as no surprise, therefore, to find that the Fisher XP-55 was a highly listenable speaker system. With flat tone-control settings, it had a strong sense of projection associated with the comparatively elevated response in the 800- to 2,000-Hz range, but it in no way manifested the screechy "presence" characteristic that would have resulted from increased output one or two octaves higher in frequency. The highs, when compared with those of a much more expensive, wide-range speaker system, were slightly muted. Application of treble boost easily restored the missing sparkle without any stridency or unnatural coloration.

Strangely, we did not feel a lack of bass, perhaps because one does not really expect low bass output from a speaker of this size. However, very large amounts of bass boost, in excess of 20 db at 50 Hz, could be applied without introducing any "tubbiness" or bottom-heavy sound. The bass, when so boosted, could really be felt, without any audible distortion or other sign of distress from the speakers.

To summarize, the Fisher XP-55 is a first rate, very compact speaker system that can be equalized readily by amplifier tone controls (and, after all, that is what they are for) to rival much larger systems in frequency response, and which surpasses many of them in clarity and definition. It has a "big sound" to a degree not often found in a system of its size. We liked it. The Fisher XP-55 sells for $59.50.

For more information, circle 158 on reader service card

The tone-burst response photographs were taken at 800 and 4,000 Hz. The general excellence of the response is evidenced by the sharp starts and stops and the clean interval between bursts.

For more information, circle 159 on reader service card

HIFI/StereO REVIEW

BSR McDonald MODEL 600/M44-E AUTOMATIC TURNTABLE

In the March, 1967 issue of HiFi/Stereo Review we reported on the BSR McDonald 500, a new low-cost British record changer that brought to the $50 class of record players a number of features previously offered only in considerably more expensive models. Now the McDonald line has been augmented by the new 600 Series record players. They are, in most respects, very similar to the earlier 500 Series, but several worthwhile technical improvements have been added.

Like the 500, the new 600 is a four-speed player with interchangeable manual and automatic spindles. Its lightweight aluminum arm has a sectional counterweight that can balance the lightest and the heaviest phono cartridges presently available. The desired tracking force is dialled in by a knob calibrated from 0 to 6 grams, with click-stops at 1/3-gram intervals. An anti-skating device in the 600 Series is set by a separate calibrated control whose markings correspond to the tracking-force setting.

In common with the McDonald 500, the 600 has an automatic arm latch that releases when the unit is started and locks the arm when it returns to rest after play. There is a cueing lever that is used to raise the pickup from the disc and to lower it into the same groove it left.

The BSR McDonald 600 is offered as a complete, almost ready-to-play system installed on a walnut-finish wooden base with a tinted plastic dust cover. The model we tested, the 600/M44-E, is equipped with a Shure M44-E elliptical-stylus cartridge.

In our tests, the rumble level of the Model 600 measured -28 db, including both vertical and lateral components, and -32 db for the lateral rumble components only. These figures were about 5 db better than the corresponding measurements on the Model 500. Wow and flutter were very low: flutter was only 0.05 to 0.07 per cent at the various speeds, and wow was about 0.1 per cent. Tone-arm tracking error was excellent—less than 0.5 degree per inch of radius over the record's playing surface. The tracking-force dial calibration was accurate within the 1/3-gram resolution of the click-stop adjustment once the force had been set correctly at one point with an external gauge. However, there is a degree of uncertainty in balancing the arm that can lead to large errors in tracking force unless it is checked by means of a good separate stylus-force gauge. Arm resonance with the Shure M44-E cartridge was at 18 Hz, with a low amplitude of about 0.15 db.

The anti-skating compensation worked well, as evidenced by the measured reduction in distortion when tracking high-level, outer-groove-wall modulation on test records. The recommended settings of the anti-skating dial were satisfactory, although we found a slight improvement when it was set about 1 gram higher than suggested. The cueing action is undamped, and the tone arm will fall as fast as the lever allows it to. Therefore, it is necessary to move the lever slowly to avoid having the arm bounce as the stylus contacts the record surface. The cueing device returns the stylus to the same groove it left, and is unaffected by the anti-skating force, which on some players causes the arm to drift outward as it is lowered.

Mechanically, the BSR McDonald 600 worked well, and we could not fault its operation. The turntable ran about 1 per cent fast, but was unaffected by line-voltage variations. In fact, we found that the entire changer mechanism functioned at any line voltage from 80 volts to 140 volts, which speaks well for the design and construction of the unit's four-pole induction motor. At its price of $89.50, the BSR McDonald 600/M44-E represents a fine value in a complete automatic record-playing unit.

For more information, circle 159 on reader service card

HIFI/Stereo Review
Meet the “Copy Cat”

The New Sony Model 155
Playback/Dubbing Stereo Tape Deck!

If you now own a stereo tape recorder, you can become a "copy cat" for only $99.50! For the cost of about fifteen pre-recorded tapes, you can own your own complete 4-track stereo tape duplicating system and build a fabulous stereo tape library at a fraction of the cost of pre-recorded tapes! The Sony Model 155 is a complete stereo transport deck with solid-state playback pre-amplifiers specifically designed to be used together with your present stereo tape recorder for dubbing!

The Model 155 has features and performance never before heard of at under $100.00! For example...
- Three speeds
- Special filter for virtually flutterless performance
- Retractable pinch roller to permit tape threading with one hand ease
- Stereo headphone jack for private listening, and
- The flexibility of vertical or horizontal operation! These are all features normally found on only much higher priced equipment.

- The Model 155 can also be used just for stereo tape playback through your existing components or package stereo music system. Imagine...

Sony quality true-fidelity stereo tape playback for under $100.00! Complete with handsome walnut finish, low-profile base and optional dust cover. Let the Model 155 Playback/Dubbing Stereo Tape Deck make a "copy cat" out of you! And, as always... you can count upon the extraordinary "Sound of Sony"!

AMERICA'S FIRST CHOICE IN TAPE RECORDERS

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CIRCLE NO. 78 ON READER SERVICE CARD
We built our new Dual 4-track stereo tape deck with the same precision and reliability we put in our Dual turntables.

Take the tape heads, for example. We make them ourselves. Their unique hyperbolic contour provides maximum tape-to-head contact. And they go a long way towards explaining the Dual's superior high and low end response. (They also eliminate the need for pressure pads.)

The advanced braking system coordinates a slip-clutch and a tension limiter, so that even the thinnest tapes won't stretch or break.

Other features of the Dual TG 27 include pushbutton operation, mixing controls for any two inputs, level controls that operate synchronously or independently, sound-on-sound, "pause", automatic end-of-tape stop and instant tape-counter reset button.

For more information, write United Audio, 535 Madison Ave., New York, N.Y. 10022.

Specifications: Frequency response at 7½ ips. 25-16,000 Hz ±2.5 db; at 3¾ ips. 30-13,000 Hz ±2.5 db. S/N ratio: 50 db minimum. Wow and flutter: 0.1% maximum. All silicon solid state. Dimensions: 14¼" x 11". $189.50. Combination base and plexiglass walnut-panneled dust cover. DCB-27 $34.50.

CIRCLE NO. 85 ON READER SERVICE CARD
Which three Duals won't you buy?

To some of you, buying a Dual automatic turntable may pose somewhat of a problem. Not that it was our intention to create one. We simply wanted to make Dual precision engineering available to everyone, in every price range and for every application. But we outdid ourselves. We made four automatic turntables (from $69.50 to $129.50) that are, in every respect, Duals. For example: all four have a low-mass tonearm, a constant-speed motor, feather-touch slide switches, a heavy platter, and an elevator-action changer spindle. And all four have performance that rivals the best manual turntables.

This means that when you buy a Dual at $69.50, you don't get more rumble. You simply get fewer features. Features that nobody else has anyway.

Like the variable pitch control, the single-play spindle that rotates with the record to eliminate any possibility of record slip or bind, the cue-control that operates on automatic as well as manual play, and the direct-dial anti-skating control for totally accurate skating compensation.

So, if buying a Dual automatic turntable does present a problem, it's simply because it may take you a little more time to select the one Dual with the features you'd want for your system.

But don't get angry with us. After all, by making it a little more difficult for you to choose one, we've at least made it possible for you to own one. A Dual.

IT SOUNDS LIKE...
A concert-goers guide to the apt adjective
By ALFRED TOIZER

At a recent concert, during the premiere of a new work whose first few minutes didn't seem to promise much, I found that my mind had wandered to detecting the influences upon the piece by more illustrious composers. For a moment, the work had a Bartokian flavor, which soon evaporated. Some minutes later, it sounded a bit Prokofiev— I was brought up short. Just how does one make the name Prokofiev into an adjective? Try it: Prokofievian? Prokofievesque? Prokofieverish? While I was settling tentatively on Prokofievical, the orchestra began an almost too Brahmsical Brahms.

My thoughts were far away by then, as they usually are during Brahms. I had stumbled across a problem that didn't seem to have an easy solution. Some conventional suffixes are employed in making a composer's name into a modifier: Mozartian and Wagnerian, for instance. But who wants to have gargle something like Yardumianian? Then there are Haydnesque and Beethovenesque—but can there be Hovhanessianeque? Fortunately, English has many ways of creating adjective forms, and a skilled word-coiner can move among the variety of available endings for something fitting. He can incidentally achieve a great deal of descriptive validity. The music of Berlioz, for example, presents a number of possibilities: the Requiem is Berliozonic, the Symphonie fantastique is Berliotic, the Damnation de Faust is Berliesque, the Roméo et Juliette is Berlious.

Often liberties can—indeed, must—be taken with the root name. Literary historians shaved half a "w" off Shaw to make Shavian. Certainly, then, Mendelssohn's works can be Mendelssonic to music cataloguers.

Still, limits must be set, lest the imagination simply run amok. As a charter Mahlerite, I would become fevered at a description of one of his symphonies as Mahlerial. Gluck was too masterly to be converted into Glucky, and Gluckose comes close to being an insult. Adolphe Adam would be dealt the death blow by Adamantine, and Chopin cannot be panned as Chopinic. So you see, this is no light matter.

In his private affairs, Bach may have been Bacchic, but his music is not. Bachsical is too flippant. My suggestion is Bachological, though it may be thought too academic. I think everyone would agree that Cosi fan tutte is Mozartian, Don Giovanni Mozartartic. From these it's just an easy step to saying that the "Romantic" Symphony makes me Brucknervous.

Since no one can stop me, I'll point out that when Herr Ludwig tore the dedication page off his Third Symphony, (Continued on page 46)
The action continues! Enoch Light continues to release Project 3 albums to critical acclaim!

Tony Mottola's LUSH, LATIN & LOVELY with Guantanamera, Somethin' Stupid, Sunny and more. The Free Design in their first album with Kites Are Fun, Make the Madness Stop and ten more. Bobby Hackett's A TIME FOR LOVE with The Eyes of Love, My Funny Valentine, You Only Live Twice and nine others. Enoch Light's famous Light Brigade playing To Sir With Love, Tara's Theme, Live For Life and many more marvelous movie themes.
A Sound Investment

The 711B FM Receiver. For real music to your ears. Every touch of sound from FM, tape or record player, arrives with distortion-free reproduction whether it’s the softest whisper of a muted guitar or the rolling crescendos of tympani.

100 watt power rating (IHF) with frequency response of ±1dB, 15 to 30,000 Hz, the 711B is fully silicon transistorized, has the latest FET front end, integrated circuits, automatic reset circuit breakers. Between-station noise is completely eliminated by Altec’s new muting circuit.

The professional look. Certainly the professional touch. (Professional sound engineers have installed Altec quality in broadcast and recording studios for over three decades.) That’s why it’s the very sound buy at $399.50. See your Altec dealer. Or send for our 1968 Hi-Fi Catalog.

hit act was understandably Beethovenful. Napoleon, in fact, accused him of being Beethovenomous (Beethovenious). The late quartets are universally regarded as Beethovenomous. Late Liszt, however, is just Lisztless. I sometimes find Richard Straussled, but his orchestrations are never Straussickly. Only a poor punster and musical illiterate would speak of Orff’s work as Orfful. But Sergei at best is Rachman-an’offish, at worst Rachmaninofful.

I can think of few adjectives more à propos than Debussymly. It’s a good thing Ravel composed no trumpet flourishes, for someone would certainly have remarked that they were Ravelle-y. By and large, Edouard is Lalovely. Of the Songs of the Auvergne are quite Canteleoubhritic. Janáček’s career was certainly Janáčckered. Zoltán was frequently Kodállyverse, but seldom Kodályverse. When Leonard Bernstein next discusses humor in music on television, he has my permission to refer to Dvořák’s lighter moments as Dvorákular.

Sibelius and Delius already sound like adjectives, but that’s not going to deter me from suggesting Sibellant and Sibeline. On second thought, Sibellustrious and Deliusual are much more expressive.

A simple “-an” suffix probably suffices for Italian names, with their convenient “i” endings, but I won’t hesitate to remark that Falstaff is veritably Verdiantic, Otello’s nemesis Iago is Verdiious, and by the fourth act Rigoletto is clearly Verdimented. Norma is a difficult role, and I exhort critics to be Belkinent with the divas who essay it.

The plot of Boris is so tortuous it must be followed with a Mussorgskymatic. But if I were to describe the Tsar himself as Mussorgskyning, would that be godounov? Meditiolelele is Boitotally too long. Faust sounds Gounoidal, doesn’t he? Some have said that the depiction of Matthias Grünewald in Mathis der Maler is Hindemithical, but not me.


By this point, as you, dear reader, are no doubt painfully aware, even the levellest head is in danger of losing itself in intoxicating flights of insane portmanteau invention. Only with the greatest effort was I able, that evening at the concert, to pull myself back from the brink and calm myself before the final bars of the Brahms. But as I left my seat, I indulged myself one last time: I decided the composer of the piece that had started it all had been a Prokofieverlasting bore who hadn’t the talent to create anything more than a Prokofieffette Prokofiefigy.
Now you have 101 reasons to buy the Uher 4000 Report-L.

After June 15th you’ll have only 1.

The first 100 reasons are all one dollar bills you won’t have to part with, during our “Own the Best” sale. The UHER 4000-L will cost you $340 instead of $440, now through June 15th.

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CIRCLE NO. 71 ON READER SERVICE CARD
THE BASIC REPERTOIRE  
Item One Hundred

by Martin Bookspan

THIS MONTH the Basic Repertoire series passes a significant milestone: the selection, Liszt’s Piano Concerto No. 1, in E-flat, is the one hundredth item to be treated in this monthly feature devoted to disc-by-disc comparison of the available recordings of the standard musical literature. I am especially pleased on this “anniversary” because the essay portions of all the installments since the series began nearly ten years ago are to appear in a book that Doubleday plans to publish in the fall. Thus, the many readers of HiFi/Stereo Review who have written to me over the years inquiring whether there was a one-volume collection of the Basic Repertoire articles will soon have such a volume available, complete with an up-to-date discography of recommended recordings.

This anniversary is a convenient occasion for a re-statement of the basic philosophy behind this series. As Editor William Anderson has written, it is the public that elects compositions to the Basic Repertoire through its concert-going and record-buying habits. A work’s popularity, measured by frequency of performance and the number of available recordings, determines the selection of a work for inclusion in this series. But the judgments about the quality of performances are strictly one man’s opinion. I am not as much concerned with a note-perfect projection of the printed score as I am with a direct and passionate involvement of the performer with the music he is re-creating. This elusive quality is a rare experience in the music-making of our time—rarer, perhaps, in the recording studio than on the concert platform. Because of the absence of this quality I reject well nigh the total recorded outputs of certain meticulous craftsmen whose work is, for me, nearly always devoid of human warmth and communicative spontaneity. Technique is not enough.

And so to item number one hundred: Liszt’s First Piano Concerto. Eighteen-forty-nine, the year of the composition of the concerto, was a crucial one for Liszt. It marked his withdrawal from the life of a touring piano virtuoso and his acceptance of the position of permanent conductor at the Court Theater in Weimar. The Concerto is extroverted to the point of exhibitionism, and it is a perfect mirror of its composer, the fire-breathing virtuoso

LISZT’S

PIANO
CONCERTO
in E-flat

MARCH 1968 49
Liszt was the soloist at the colorful premiere of his Piano Concerto No. 1 at Weimar in 1855. Today there are nineteen recorded performances available; Nevtolav Richter's version (Philips) is passionate yet responsive to the quieter passages; Tamás Vásáry stresses lyricism rather than thunder (DG); André Watts gives a dynamic reading (RCA Victor), about whose life and art so many legends have been created.

A vivid description of Liszt's performing style was written in 1840 by no less a person than Hans Christian Andersen, who had attended a recital by the twenty-nine-year-old virtuoso:

An electric shock seemed to thrill the hall as Liszt entered. Most of the women rose. A sunbeam flashed across each face, as though every eye were seeing a beloved friend. . . . As he played . . . I saw the pale face assume a nobler, more beautiful expression . . . he grew handsome—handsome as vitality and inspiration can make one. . . . It did not sound like the strings of a piano. . . . The instrument appeared to be changed into a whole orchestra. . . . When Liszt had done playing, the flowers rained down on him.

Judging from this and other written accounts of Liszt's public performances, there can be no doubt that his playing exerted a mesmerizing influence upon his audiences. And though both his piano concertos contain uninhibited flights of virtuosic abandon, they also reveal the innovative side of Liszt the creator. In form they are closer to the symphonic poem than to the standard concerto: both works are in a single continuous movement that naturally subdivides into several freely merging sections lacking the customary development. The piano is the center of attention, but the orchestral parts are of considerably greater importance than they are in the concertos of Chopin, for example. A good many solos are assigned to the instruments of the orchestra; of these, the most famous is the prominent triangle solo in the Scherzo section of the First Concerto—an innovation that led the Viennese critic Eduard Hanslick to dub the score, in derision, 'the triangle concerto.'

The first performance of the E-flat Concerto was given at Weimar in February, 1855, during a week-long series of concerts principally devoted to the music of Berlioz. The concerto was the only piece not by Berlioz to be performed, but Berlioz conducted it and Liszt himself was the soloist. How the rafters must have shaken!

At latest count there are nineteen different recordings of the score listed in the Schwann catalog, all but three of them available in stereo. Nine, in my opinion, are usually good: the versions by Entremont and Ormandy (Columbia MS 6071, ML 5389); Farnadi and Boult (Westminster WST 14125); List and Lehel (Westminster WST 17025, XWN 19(025); Pennario and Leibowitz (RCA Victor LSC/LM 2690); Richter and Kondrashin (Philips PH5 900000, PHM 500000); Rosen and Pritchard (Epic BC 1320, LC 3920); Rubinstein and Wallenstein (RCA Victor LSC/LM 2068); Vásáry and Prohaska (Deutsche Grammophon 138055); and Watts and Bernstein (Columbia MS 6955, ML 6355).

I have no hesitation in stating unequivocally that the Richter-Kondrashin collaboration with the London Symphony Orchestra is one of the great recordings of the century. I am not an unqualified admirer of Richter; indeed, I sometimes find his playing precious and calculated. Here, however, he delivers a performance of the Concerto that is full of boundless energy and passion, at the same time investing the quieter, more poetic sections with his special brand of introspection and tonal coloration. Kondrashin has the players in the orchestra performing at top form, and the Philips recording team has reproduced it all in superb detail and clarity.

Space limitations prohibit detailed discussion of the other eight versions; capsule comments will have to suffice. Entremont and Farnadi go all out for flashing fireworks; List, Rosen, and Vásáry are more intimate in their approach, emphasizing the lyricism rather than the thunder; Pennario and Rubinstein steer a middle course between these two attitudes. (The Rubinstein version, recorded about fifteen years ago, is sonically rather dated—he should re-record the Concerto at the first opportunity, and now that Ormandy and the Philadelphia Orchestra will soon be recording for RCA Victor again, they would make the ideal collaborators with Rubinstein.) André Watts plays a dynamic if somewhat overblown performance.

Tape buffs share the record collectors' good fortune: the Richter-Kondrashin collaboration is available as a four-track reel-to-reel Philips release (PT 900000), and it is stunning in the tape format. Of the three other available tapes of the score, my second choice would be the Watts-Bernstein version (Columbia MQ 551).
Why you ought to spend $70 more for Concord's automatic stereo tape deck

Why do you want a stereo tape deck? To get more enjoyment from your music system by taping your own recordings from radio or records. To enjoy listening to the superior sound quality of music on tape. The important word is enjoyment — your investment in your music system is for enjoyment and listening pleasure.

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We could add a third head to our 510D for about $40, but it would not significantly improve the recording or sound reproduction quality. A third head permits you to monitor the tape while recording to determine if the recorder is operating properly. This used to be necessary 15 years ago when recorders were used by radio stations and did not have the reliability of today's solid state equipment like our 510D. On our 510D uni-directional tape deck, you can monitor the sound while recording and the recordings are always perfect. If you spend $40 more for a third head you are not buying anything that either improves the recordings or the listening enjoyment.

Our automatic reverse-a-track 776D records and reproduces sound with excellent fidelity. It adds much to the enjoyment and pleasure of your music system by making it easier to record and more pleasant and enjoyable to listen. It's a better way to make and listen to tapes just as an automobile with automatic transmission is a more pleasant and enjoyable way to drive. The automatic reverse 776D records and plays in both forward and reverse tape directions. While recording it automatically reverses at the end of the reel and continues recording on the second side of the tape. You will never miss a note of a recording on the 776D. For listening, the 776D plays side one of the tape, automatically reverses and plays side two, then stops. It can be replayed at the touch of a knob without necessity of re-threading. The tape is always on the supply reel for convenient replacement or replay. A pre-recorded tape automatically plays side one, then side two, then stops automatically.

The automatic 776D has many other important features including solid state preamplifiers, headphone jack monitoring for private listening, four heads — fluxfield heads — center drive capstan — automatic and manual reverse at any point on the tape — electronic automatic stop before reel ends — the world's quietest and most reliable tape transport mechanism with Concord's famous "quality that lasts."

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March 1968

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You can imagine what our entire tape collection is like.
ONE OF THE most startlingly successful newcomers to the tape scene is the cassette recorder. Virtually every major manufacturer of tape recorders and a host of minor ones are currently offering cassette machines for sale, and hardly a week passes without the announcement of a new brand or model about to be released.

First introduced by Norelco and Mercury several years ago, the cassette made steady if somewhat unspectacular sales progress. It found favor with those people who were looking for a small, lightweight, easy-to-use machine with good voice intelligibility. It was ideal for taping interviews, recording business conferences, and dictation. Then, about a year ago, a number of other companies began marketing their own versions of the machine, and the race was on.

What is the secret of this sudden success? To begin with, the cassette is probably the easiest way yet devised for handling magnetic tape. You just drop it into the machine, and you are ready to record or play back. It plays for 30, 45, or 60 minutes (depending upon the length of tape in the cassette). Then you turn it over, and it records or plays an equal amount of time in the other direction. No fuss, no bother. If it's just playback you're after, it is almost as quick and easy to put into operation as a phonograph.

Cassette machines come in both two-track mono and four-track stereo versions. In order to insure complete compatibility between mono and stereo tapes (this is especially important for the playback of the rapidly proliferating prerecorded cassette stereo tapes), cassette
manufacturers have adopted a stereo track configuration that differs from that employed in reel-to-reel recorders. Where the latter use alternate tracks for the left and right channels, the cassette machines use adjacent tracks. This permits the right and left stereo tracks to be played simultaneously as a combined mono track by a half-track mono machine.

The types of cassette recorders and the features they offer are bewildering in their variety. Are you interested in a small, lightweight machine for interviews or simple voice recording? Take your pick from thirty or more. Would you like an AM or AM/FM transistor radio that will let you record broadcasts as you listen to them? There are several available. Would you like to add a stereo cassette-player/recorder tape deck to your present stereo system? No problem—a number of such units are now on the market. Cassette recorders are available in at least eight different forms:

1. A small, portable battery-operated mono record-playback unit.
2. A similar, quite inexpensive, unit that only plays prerecorded tapes.
3. A somewhat larger desk-type unit, generally a.c.-operated, that serves primarily for dictation and to record business conferences.
4. An a.c.-operated stereo deck used in conjunction with a home stereo system for playing back prerecorded tapes. (It has its own preamplifiers and can record as well.)
5. A completely self-contained stereo music system with its own amplifiers and speakers.
6. A hybrid combination with a portable transistor radio.
7. A cassette unit as a built-in or removable part of a "stereo-compact" table-top hi-fi system.
8. A mono or stereo tape playback machine for use in automobiles (either with or without recording capability).

One company, Crestwood, is so impressed with the potential of the cassette player as a quality portable music-maker that they are producing a companion battery-operated amplifier-speaker combination intended to provide big sound from small cassette players. The unit sells for $69.50 in a portable case (with room to install the cassette player) measuring about 16 x 14 x 8 inches.

In preparing this article, a number of cassette machines were examined and tested to see just what the average user could expect by way of performance. The tests were essentially of the in-use variety, and were intended to provide generalizations rather than definitive technical evaluations of specific machines. Briefly, this is the way the tests were conducted. The recorders were first checked out to make sure they were functioning well mechanically. Next a voice recording was made with each of the machines using its own microphone. Generally speaking, these voice recordings worked out well. There were naturally audible differences between machines, either because of a particular combination of mike and recorder or because—as was sometimes the case—the recorder had an automatic level control. But as far as intelligibility was concerned, all the machines were quite acceptable.

A series of off-the-air music recordings was then made, using a direct connection to an FM tuner and a good station as signal source. Music played back through the built-in small speakers of these recorders understandably often had a sound quality resembling that of a small transistor radio. However, when the same off-the-air cassette recordings were played back (using the recorder's equivalent of a tape-output jack) through a full-range hi-fi system, the results were vastly improved. While several of the recorders put a somewhat restricted frequency range on the tapes, a number of them provided surprisingly life-like sound, albeit with an audible loss of the very highest frequencies.

Finally, a 3,000-Hz test tone was recorded and played back on each machine in order to determine relative wow and flutter characteristics. While some of the recorders were better than others, none reproduced the tone without some audible wow and flutter. However, on music (and this included the playback of prerecorded cassettes), most of the machines had wow and flutter characteristics well within the range of acceptability although not up to the standards of a good reel-to-reel recorder.

In general, as with all audio products, you get what you pay for in cassette recorders. With few exceptions, the higher-priced units outperformed the lower-priced ones. But a word of caution: regardless of price, too many of the machines I checked had one or more things wrong with them. Apparently these faults were not inherent in the design, but were rather the result of poor quality control or damage in shipment. It would seem wise, therefore, to try out any cassette recorder before you take it home—or, if this proves impractical, make sure you have full return privileges. The machines are, of course, relative newcomers to the audio market, and when early production problems are worked out (and sales volume increases) the quality-control situation should improve.

Your choice of a suitable cassette recorder will be determined by what you intend to do with it. If all you want is a machine to record interviews or conferences, then one of the less expensive portable machines, possibly with automatic level control, is your best bet. On the other hand, if you want a cassette machine to serve as another program source for your stereo system, then one of the stereo-deck versions is the obvious choice.

Aside from these broad-choice categories, there are a number of other factors to consider when purchasing a cassette machine. First and foremost is ease of operation. In this regard, cassette recorders can be divided generally into two groups: those that employ some type of slide lever to control all of the functions (play, record, fast-forward, and rewind), and those that employ a row of "piano keys." After extensive use tests, this writer feels

(Continued on page 56)
### A CASSETTE-RECORER SAMPLER

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**NOTE:** Because of the rapid evolution still in process in the cassette field, the above listing cannot be considered definitive as to the units that will be available at the time of publication. Further, a listing in this chart does not constitute an endorsement of the specific product listed, nor does omission of a product indicate anything negative about it. In the chart, the term 'complete system' refers to machines that combine a tape deck and a power amplifier with separate speakers. A 'compact system' includes extra features such as a turntable or tuner and has inputs for additional equipment.

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that the piano-key type is somewhat more convenient to use. This is particularly true with those machines that have locking fast-forward and rewind modes. You simply press the appropriate key and the machine does the rest. In contrast, some other machines require that the lever or key be held in position for the entire length of time it takes the machine to rewind or fast-forward the tape (generally a minute or so).

Still on the subject of convenience, many of the machines offer a cassette-eject system: all you do is press the appropriate button, and the cassette is automatically lifted part-way out of the machine. You run no risk of breaking a fingernail trying to remove a cartridge, as is the case with some of the units. Another convenience, particularly if you intend to use the recorder for interviews, is automatic level control: ALC compensates for differences in loudness and tends to make all the sounds being recorded of equal volume. You never have to set the gain or alter it during the course of a recording session. However, it does have some drawbacks. On the machines tested, the ALC was not defeatable, which means you get the same ‘compressed’ effect when recording music, and since music depends upon differences in volume or loudness to create certain aesthetic effects, this action is not altogether desirable.

Almost all of the machines have provisions for operating from an a.c. line as well as their built-in batteries. While a number of the recorders had an integral a.c. power supply, most required a separate a.c. adaptor (at an additional cost of about $10 to $20). In some machines, the a.c. source also functioned as a battery charger, which helps extend battery life. Most of the recorders will run about 15 hours on a set of fresh batteries. (It is important, by the way, to keep batteries fresh, because run-down batteries will, on most of the units, affect tape speed, causing the machine to run slow.

**CARTRIDGES: 4-TRACK, 8-TRACK, AND CASSETTE**

By Larry Klein

A n insight into some of the reasons for the popularity of the cassette-type tape cartridge can be gained by examining the physical and electrical features that distinguish it from the four- and eight-track cartridges. (Incidentally, the term ‘cassette’ was apparently adapted simply to differentiate the Philips-developed cartridge from the other available types.) One of the most significant factors, to my mind, is the relative physical sizes of the cartridges: the cassette measures approximately \( \frac{3}{8} \times 2\frac{1}{2} \times 4 \) inches, as contrasted to the size of the four- and eight-track cartridges, which measure approximately \( \frac{3}{8} \times 1 \times 5 \) inches. The contrast is pointed up by the fact that four cassettes will fit physically into the space occupied by one of the other types. The radically smaller dimensions of the cassette are significant not only in respect to advantages in storage and handling, but also in that it allows the machine that plays the cassette to be similarly compact.

The hub-to-hub arrangement of the tape in the cassette—as opposed to the continuous-loop setup used in both the four- and eight-track cartridges—has certain mechanical tape-handling advantages. For example, unlike the four- and eight-track machines, cassette units incorporate a fast-forward and rewind function. This makes it possible to find a desired selection on the tape with about the same ease as with a reel-to-reel machine. (In this respect, all cassette machines would benefit enormously from having an index counter, but unfortunately this feature is not yet standard.) By contrast, few, if any, of the four- and eight-track machines have a fast-forward or rewind function, mostly because of the mechanical difficulty inherent in pulling the tape rapidly from the center of the reel and wrapping it around the outside of the reel as is required by the continuous-loop format.

Another, and equally significant, factor in the rapid growth of the cassette medium is the cassette’s ability to record. Few, if any, of the cassette machines lack a recording function; few, if any, of the four- and eight-track machines have it. This results partly from the difficulty of home recording in the eight-track format—where the problems of crosstalk and track-location accuracy are difficult, although not impossible, to solve. In respect to playing time, there is little to choose from among the three cartridge types. Since, as has been indicated, the four- and eight-track machines rarely have recording capabilities, there is no much point in discussing that aspect. In respect to prerecorded commercial tapes, the manufacturers in general provide the equivalent of one disc album per cartridge.

At this point in time, it is hazardous to state what the relative fidelities of the three systems are—or predict what they could be. On the face of it, the four-track format (which has about the same tape-track width as the standard reel-to-reel four-track stereo prerecorded tapes) should theoretically provide the best signal-to-noise ratio in playback because of its wider track in comparison with the eight parallel tracks on quarter-inch tape used in the eight-track cartridges and the four tracks on \( \frac{1}{8} \)-inch tape used in the cassette. The situation is further complicated by the fact that both the four- and eight-track cartridges operate at \( 3\frac{1}{2} \) ips, whereas the cassette runs at \( 1\frac{3}{8} \) ips.

It is also difficult to make valid comparative listening tests among the various types because of the variability in fidelity of the recorded material. None of the prerecorded cartridges has achieved the sound quality—in respect to noise, frequency response, and dynamic range—that is usual in prerecorded reel-to-reel tapes. In general, it seems fair to state that the average fidelity of all three of the prerecorded cartridges is at about the point that reel-to-reel was as of 5 years ago. Some of the
Fortunately, most of the battery-operated units tested had a meter to indicate battery condition.

It is difficult to generalize on the quality of sound you can expect from a cassette recorder because it varies so much from model to model. Some of the recorders were capable of reasonably good performance, while others fell well short of hi-fi quality. Most machines have a rated frequency response of 80 to 10,000 Hz, and they probably come within at least half an octave of their claim. But even a 100 to 7,000 Hz response can sound pretty good if it is clean. As far as mechanical and electrical noise is concerned, there seems to be a wide variation from machine to machine and even among machines of the same model. Therefore, as was suggested earlier, it is best to listen carefully to the specific unit you intend to buy to make sure it is acceptable in these respects.

As for the cassettes themselves, they were originally capable of recording for one hour (30 minutes to a side) at 17½ ips, which is the standard cassette recorder speed. Lately, however, some cassettes have been using a thinner tape that can record up to 45 minutes on a side—and some will even record for an hour.

The cassette recorder is a remarkable combination of electronic sophistication and ease of use. Although a good reel-to-reel recorder will provide superior recording and playback performance, the cassette machines do offer surprisingly good performance with acceptable sound quality for less-demanding uses. Moreover, there is every reason to believe that in the not-too-distant future these marvelous midgets will be capable of really first-class reproduction. When they are, the reel-to-reel medium will have a revolution on its hands.

Nicholas Benton is a free-lance writer whose articles have appeared in many of the country's leading magazines. As a long-time enthusiast, he has frequently commented on the audio scene.

Fidelity problem is undoubtedly a product of the duplication process, and some results from inadequate heads or electronics in the machines, but it is difficult to apportion the blame precisely. In my opinion, none of the systems is presently suitable for high-quality reproduction of classical music. The wow and flutter characteristics of the machines become disturbingly apparent on piano works, and their hiss level is obtrusive during quiet passages. The compression of the dynamic range applied to the four- and eight-track cartridges to make them suitable for automobile-player use (this has been discussed in my "Q & A" column) also degrades the sound excessively on classical material. And, of course, there is the loss of the very highest frequencies as mentioned in Nicholas Benton's report.

None of the above criticisms is particularly pertinent when applied to cartridge recordings of pops or rock material. Since, in general, the dynamic range of such music is compressed during the original recording process and quiet passages are few, all three of the cartridge systems appear to do equally well in reproducing non-classical material. For a dance party, for example, the eight-track machine with its automatic sequencing of tracks is ideal.

That, in brief, is the status of tape cartridges at the moment; it is too soon to attempt a precise prediction as to where they are going. I expect all three systems to improve significantly—that is, if, in the minds of the manufacturers, public acceptance warrants further investment in research and development. As of now, they have a fascinating potential and many valid uses, but for those concerned with attaining the best in high-fidelity music reproduction, the cartridge machine is not yet the answer.

The three basic types of tape cartridge are shown here without covers. Far left is the Fidelipac four-track cartridge. Center, the Lear Jet eight-track, which differs from the four-track in using a built-in pinch roller. The Philips cassette above is a miniature hub-to-hub system enclosed in a cartridge.
The Sufferings of Corno di Bassetto

"D'Andrade took the greatest pains to be a failure as Figaro, and succeeded."

"Maurel [as Don Giovanni] behaved very much as if his uncle had dropped in unexpectedly in the middle of a bachelor's supper party."

"Mr. [William] Wallace knows how to use every instrument except the scissors."

"By the time I reached Paderewski's concert... his concerto was over, the audience in wild enthusiasm and the pianoforte a wreck."

"I am middle-aged in years and patriarchal in wisdom; and so before the end of the first bar I knew that the sonata was going to be a failure."

"She [Lady Hallé] took the first movement of Beethoven's Septuor at about two-thirds of the lowest speed needed to sustain life; and the others followed her from note to note, and thought of other things."

"Mr. [George] Henschel sat down comfortably to the piano and murdered Schumann in cold blood."

"I take [Hubert Parry's] Job to be, on the whole, the most utter failure ever achieved by a thoroughly respectable musician. There is not one bar in it that comes within fifty thousand miles of the tamest line in the poem. This is the naked, unexaggerated truth."

"Stanford's Eden is as insufferable a composition as any festival committee could desire."

GEORGE BERNARD SHAW: Critic of Music

By Henry Pleasants

"If you do not say a thing in an irritating way, you may just as well not say it at all, since nobody will trouble themselves about anything that does not trouble them."

So said George Bernard Shaw. And he practiced what he preached, not only as a playwright and in his personal correspondence, but also as a professional music critic in London from 1888 to 1894. Suitably framed above are some choice examples of the "irritating way" in which he approached his critical duties. When we read Shaw's criticism, it should be noted immediately that he was not exercising his wit and indulging his spleen at the expense of small fry. Villiers Stanford was Professor of Music at Cambridge. Hubert Parry was Choragus of Music at Oxford. Henschel had succeeded Jenny Lind as Professor of Singing at the Royal College. All of them would subsequently be knighted. Composers Stanford and Parry, moreover, were held in as high esteem as Vaughan Williams would be a generation later, and as Benjamin Britten is today.

Shaw, characteristically, was taking on the Establishment, bringing to the job what he used to call "that power of accurate observation which is commonly called cynicism by those who haven't got it," and he defied the inevitable reaction. As he wrote in the autumn of 1892, Guest artists and most interesting performances pass, and must continue to pass, unnoticed in this column because they are under the auspices of gentlemen who have threatened me with actions when I have pointed out the imperfections in their enterprises, though, most inconsistently, they never sent me a ten-pound note when I praised them... I wish artistic entrepreneurs of all sorts to know that if they want mere advertisements they must pay for them, and if they want criticism they must take the rough with the smooth.

It was of course, a spectacular performance, unique in its combination of audacity, impudence, and wit; and the London musical community was too shocked at the time to appreciate how much excellent criticism went along with all the amusing and outrageous strictures and barbs. What he wrote for the Star in 1888-1889 (under the nom de plume of Corno di Bassetto) and for the World from 1890 to 1894 (under his own name) reappeared in book form in the 1930's, thus making it possible for a new generation of music-lovers to make a re-
appraisal of Shaw as music critic, its judgment uninhibited by reminders of personal affront. The verdict was flattering, and Shaw was still around to feign surprise.

W. H. Auden has called Shaw "probably the best music critic that ever lived." And he is not alone in that opinion. The adjective, in any case, is well chosen. Had Auden called him the greatest of all music critics, he might have invited and merited contradiction. Greatness somehow implies a mature lifetime of sustained dedication and achievement. But best could also mean the most readable and the brightest; and about these attributes, as applied to Shaw, there can hardly be any doubt.

There have been greater critics—Hanslick certainly, Newman probably, and Rochlitz perhaps. Berlioz was close to Shaw as an imaginative stylist, and he knew a lot more about music. Schumann was superior to any other in his insights into the craft of composition. Hugo Wolf was Shaw's equal as a public nuisance, but only rarely so amusing. Henry Chorley, in the critical account he left of music in the mid-nineteenth century, and especially of opera, was more valuable.

But none of them is as much fun to read as Shaw, or as brilliantly combines readability and insight. Had Shaw stuck to the profession he might well have become the greatest of music critics as well as merely the best. But for a man of his restless disposition and wide range of interest it was too restrictive an occupation. Toward the end of his six seasons he was obviously bored. He complained again and again about the length of concert programs (which were about twice as long as they are now), and there are several references, in the reviews of 1893 and 1894, to falling asleep on the job. Paderewski's manner of taking his bows, for instance, reminded him of a critic 'who, falling asleep at a concert, nods forward until he overbalances himself and recovers just in time to avoid falling with a crash on his nose.' And during a performance of a Rubinstein violin sonata: "I thought over my past life exhaustively, and elaborated several plans for the future. Finally, I had a long and delicious sleep...."

It is unlikely there will ever be another critic quite like him. The solemn approach to music and to criticism that is fashionable nowadays would not for long tolerate Shaw's congenital and determined irreverence. Nor would a musical community, today, fail to expose the gaps in his musical education or to challenge the propriety of such avowedly personal and biased opinions. Music criticism, in our time, is expected to combine respectability, objectivity, decorum, learning, and good citizenship. Given these qualifications, it is little wonder that most of it is also unconsciously dull.

Shaw lacked all these qualifications: of formal education he had none, either academic or musical, and he had a poor opinion of what formal education could accomplish. Once, when Joachim was announced as Professor Joachim, he complained:

At a time when all the best friends of art are striving to turn our professors into artists, it seems too bad to turn one of our greatest artists into a professor. However, he did not play in the least like one.

He didn't think much of formal education for composers, either. "I am sure," he said in one of his notices, "that literary composition is infinitely more difficult than musical composition, yet I never thought of going to a professor to learn it." He studied Don Giovanni at home instead, and learned "how to write seriously without being dull." His method, according to Hesketh Pearson, his biographer, was "to find the right thing to say, and then say it with the utmost levity," the real joke being, Pearson added, "that he was always in earnest." The consistent juxtaposition of earnestness and levity was devastating.

But Shaw could not help himself. As a small boy he had, by his own account, been extraordinarily impudent, and in boyish fancies he liked to cast himself as the villain, finding villains much more interesting than heroes. Something of the impudent small boy remained with him all his life, and it was a strong part of his make-up when he emerged as a music critic at the age of thirty-two.

He was already delighted with—and undoubtedly cultivated—his conspicuously Mephistophelean appearance; and there can have been no nuance of disbelief in his voice when he exclaimed to an illiterate phrenologist who had called him a "septic": "Why? Have I no bump of veneration?" "Bump?" replied the phrenologist, "it's a hole!" "Out of the hole," says Pearson, "came Shaw's fame; his lack of veneration was his most conspicuous quality as a writer; it made his reputation as a critic." But there was more to it than that. Others have been both irreverent and literate. Shaw's secret was showmanship. He cultivated the high art of exaggerating just enough to turn criticism into caricature. Then he would compound the outrage by insisting that no caricature was intended. And the first and most consistent of his caricatures was himself.

His posturings were part of the act. A good critic, he knew, was bound to be unpopular, so he simply accepted the inevitable and declared himself to be a public enemy.

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**Shaw on Music**

*London Music* in 1888-89, as heard by Corno di Bassetto (later known as Bernard Shaw), with some further autobiographical particulars, Dodd, Mead & Company, New York (1937).


Charles Villiers Stanford (1852-1924), Hubert Hastings Parry (1848-1918), and George Henschel (1850-1934) were three of the big guns of British music whose emplacements Shaw attacked with wit and spleen. Henschel, a composer himself, sang music of the other two.

"his hand against every man and every man's hand against his," rejoicing in his prejudices, his passions, and his destruction.

"People have pointed out evidence of personal feeling in my notices," he once said, "as if they were accusing me of a misdemeanor, not knowing that criticism written without personal feeling is not worth reading. . . . The artist who accounts for my disparagement by alleging personal animosity on my own part is quite right."

Or, as he put it on another occasion, "I have never been able to see how the duties of a critic, which consist largely in making painful remarks in public about the most sensitive of his fellow creatures, can be reconciled with the manners of a gentleman. . . . Never in my life have I penned an impartial criticism, and I hope I never may."

He was not, of course, so lacking in veneration as he liked to pretend. And for him the most venerable figures in the pantheon of music were Bach, Mozart, and Wagner, especially the latter two. How profoundly he understood them both, and how acutely he could appraise their respective positions in the evolution of Western music, is illustrated by these passages from a notice of December 9, 1891:

Mozart . . . like Praxiteles, Raphael, Molière or Shakespeare, was no leader of a new departure or founder of a school. He came at the end of a development, not at the beginning of one, . . . In art the highest success is to be the last of your race, not the first. Anybody, almost, can make a beginning; the difficulty is to make an end—and to do what cannot be bettered. . . . Here, under our very noses, is Wagner held up on all hands as the founder of a school and the arch-innovator of our age. He himself knew better; but since his death I appear to be the only person who shares his views of the matter. I assert with the utmost confidence that in 1991 it will be seen quite clearly that Wagner was the end of the nineteenth century or Beethoven school, instead of the beginning of the twentieth-century school, just as Mozart's most perfect music is the last word of the eighteenth century, and not the first of the nineteenth.

One is reminded here of Hanslick, strange as it may seem to be associating the pro-Wagner Shaw with the anti-Wagner Hanslick. But now, at a distance of nearly a century, pro and anti lose their significance. Both Shaw and Hanslick recognized in Wagner not only a great, but also a terminal, figure, and at a time when nobody else did. Shaw liked him, and Hanslick did not. But they shared a common and, at the time, radical view of his significance.

Shaw was not, in fact, the "perfect Wagnerite" that one would assume from the title of his singularly Shavian interpretation of Der Ring des Nibelungen (1898). As early as March 16, 1892, he wrote:

As soon as our Wagnerians (and do not forget that there is no more enthusiastic Wagnerian than I have shown myself) have had their eyes opened to the fact that Wagnerism may cover a plentiful lack of culture and love of stimulants in music, we shall hear more of Mozart's symphonies and concertos, scandalously neglected now for a whole generation, and yet far more beautiful and interesting than any of their kind produced since, by Beethoven or anyone else.

And his Wagnerian ardor cooled as he grew older. In 1935, when he wrote a preface to a collection of his music notices, Shaw on Music, he came very close to a recantation:

You may be puzzled to find that the very music I was brought up on; the pre-Wagner school of formal melody in separate numbers which seemed laid out to catch the encores that were then fashionable, was treated by me with contemptuous levity as something to be swept into the dustbin as soon as possible. The explanation is that these works were standing in the way of Wagner, who was then the furiously abused coming man in London. . . . Nowadays the reaction is all the other way. When the wireless strikes up the Tannhäuser Overture I hasten to switch it off, though I can always listen with pleasure to Rossini's overture to William Tell.

The Funeral March from Götterdämmerung hardly keeps my attention, though Handel's march from Saul is greater than ever. . . . The post-Wagnerian harmonic and
contrapuntal anarchy is so complete that it is easier, technically, to compose another Parsifal than another Mass in B Minor or Don Giovanni. I am no longer a combattant anarchist in music, not to mention that I have learnt that a successful revolution’s first task is to shoot all revolutionists.

Shaw had not been as hard on Italian opera as he liked to pretend. He was hard on the way it was produced and sung, but beneath all the abuse the reader easily detects an abiding affection. He was, after all, an amateur singer, and he would become a professional man of the theater. This was, one feels, the music closest to his heart, if not always to his head. The underlying affection is unmasked from time to time, as in this notice of November 2, 1892:

Il Trovatore, Un Ballo, Ernani, etc., are no longer read at the piano at home as the works of the Carmen genre are, and as Wagner’s are. The popular notion of them is therefore founded on performances in which the superb distinction and heroic force of the male characters, and the tragic beauty of the women, have been burlesqued by performers with every sort of disqualification for such parts from age and obesity to the most excruciating phases of physical insignificance and modern cockney vulgarity.

And about the new Italian operas of his time he was as prescient as about Wagner. In MASCagni, Leoncavallo, Puccini, and the late Verdi he saw a rebirth of Italian opera, and in Puccini, who, at the time, had not got beyond Manon Lescaut, he found the man "who looks to me more like the heir of Verdi than any of his rivals." And he sized up Ponchielli correctly enough: "It would have been kinder, even when Ponchielli was alive, to tell him frankly that all his straining at the bow of Ulysses was not bending it one inch."

On instrumental music he was less sure of foot, and on Brahms, especially, whose Requiem he once described as a "colossal musical imposture," he made mistakes for which he later apologized, holding them up as a warning to young critics "who know too much." He shared the Wagnerite tendency to see Brahms in caricature. To Hugo Wolf, for instance, Brahms was always a doddering old fogey, passed over by time. To Shaw he was an overgrown child:

His wantonness is not vicious; it is that of a great baby, gifted enough to play with harmonies that would baffle most grown-up men, but still a baby, never more happy than when he has a crooning song to play with, always ready for the rocking-horse and the sugar-stick, and rather tiresomely addicted to dressing himself up as Handel or Beethoven and making a prolonged and intolerable noise.

Some of Shaw’s other lapses cannot be written off as mere symptoms of virulent Wagneritis, least of all his dismissal of Schubert’s Symphony in C as an "exasperatingly brainless composition," or his heralding of Hermann Goetz’s Symphony in F as "the only real symphony that has been composed since Beethoven died." Compared to this composer (1840-1876), now remembered fitfully for the overture to his The Taming of the Shrew, Brahms, according to Shaw, was a dolt.

But he was rarely so far off. Few, today, would quarrel with his references to Mendelssohn’s "kid-glove gentility, conventional sentimentality and despicable oratorio-mongering," or to Schumann’s "laboriousness and dependence on external poetic stimulus." Nor would many hackles be raised at his reaction to the "nationalist" music then beginning to come from eastern Europe: "The adolescent enthusiasms, the revolutionary ardos, the belated romanticism of Slav and Czech can produce nothing for England except toys for her young people." Even the outraged admirers of Dvořák might secretly relish the Shawian intransigence.

Every critic, probably, has his pet abomination, and Shaw’s was oratorio, which is a particularly vexing abomination to entertain in England. His antipathy had nothing to do with his atheism. It was rather that he doubted the sincerity of the religious fervor. What galled him about oratorio was the solemnity, the pretentiousness, the respectability, and the sanctimony. To this irrepressible Irishman, oratorio was at once very English and very dull.

"Sham religious works," he used to call them, "unstaged operettas on scriptural themes, written in a style in which solemnity and triviality are blended in the right proportions for boring an atheist out of his senses or shocking a sincerely religious person into utter repudiation of any possible union between art and religion."

Victorian style only partly masks a very angry young man of music: George Bernard Shaw, aged thirty-six, in a photograph of 1892.
The older and generally more familiar Shaw was a prize subject for artists, as in this 1925 watercolor by Sir Bernard Partridge.

In one of his last notices he quotes Ruskin on the subject: "Of bestial howling and entirely frantic vomiting up of damned souls through their still carnal throats, I have heard more than, please God, I will ever endure the hearing of again, in one of His summers." To this Shaw added: "I take the liberty of squeezing Mr. Ruskin's hand in mute sympathy with the spirit of this passage."

Or maybe it was just that so many of the oratorios he was hearing were by English composers, most of them professors—Parry, Stanford, Cowen, Wallace, etc.—all aping Spohr and Mendelssohn just as the latter had aped Handel. Shaw had a low opinion of English music, and he also had a credible theory as to why the English people, who had been so musically creative through Purcell's time, became sterile after the seventeenth century.

What broke up English music was opera. The Englishman is musical, but he is not operatic; and since, during the last two centuries, music has been so confounded with opera that even instrumental music has been either opera without words or else the expression in tone of a sort of poetry which the English express with great mastery in spoken verse, our composers have been able to do nothing but abjectly imitate foreign models. . . . If the English language is to be musically treated at all, it must be done in the style of Purcell, and not in that of Verdi.

Shaw made no exception, curiously, even for Gilbert and Sullivan, preferring the more plebeian vitality of the music halls. Most people tend to rate Gilbert above Sullivan as the distinctive genius of the team, but not Shaw. Conscious of his own virtuosity with the English language, he could remain unimpressed by Gilbert's verbal conjuration:

Mr. Gilbert's paradoxical wit, astonishing to the ordinary Englishman, is nothing to me. Nature has cursed me with a facility for the same trick; and I could paradox Mr. Gilbert's head off were I not convinced that such trifling is morally unjustifiable. As to Sir Arthur's scores, they form an easy introduction to dramatic music and picturesque or topical orchestration for perfect novices; but I had learned it all from Meyerbeer.

He had a thing about program notes, too, commonly written by professors, of course, and he once felt called upon to caricature them with a Shavian discourse on Hamlet's soliloquy:

Shakespeare, dispensing with the customary exordium, announces his subject at once in the infinitive, in which mood it is presently repeated after a short connecting passage in which, brief as it is, we recognize the alternative and negative forms on which so much of the significance of repetition depends. Here we reach a colon; and a pointed pository phrase, in which the accent falls decisively on the relative pronoun, brings us to the first full stop . . .

In a set piece such as this, directed at a convention rather than at any particular person or item, lies the clue to Shaw's impossibility as a music critic. It was not merely that he was as great a virtuoso in his own right as those who were the objects of his criticism, although this inevitably exposes the critic to the charge of displaying his own virtuosity at the expense of others. It was rather his propensity for attacking not only the individual artist or performance, but also the community and the institutions within which musical art functioned and by whose criteria it was commonly judged. Shaw simply could not accept the disciplines of the club, nor could he disguise his opinion of its members.

"It has taken me nearly twenty years of studied self-restraint, aided by the natural decay of my faculties," he wrote in the autumn of 1893, "to make myself dull enough to be accepted as a serious person by the British public, and I am not sure that I am not still regarded as a suspicious character in some quarters."

This was not the kind of levity that sat well with the English, least of all from a flagrantly bearded Irishman; nor could they be expected to appreciate his suggestion that the affairs of the London Philharmonic Orchestra might be considerably improved by "the compulsory retirement of all directors at the age of ninety-five, into a lethal chamber if possible."

When he retired from music criticism in 1894, according to Pearson, "the professors and entrepreneurs breathed again." But the six-year barrage of insult and injury was not readily forgotten. It took Shaw nearly a century to get into Grove's Dictionary.

The Reeling
Mind

By Charles Rodrigues
A Beginner's Introduction to
TAPE-RECORDER TERMINOLOGY

The tape recorder, possibly because it has both mechanical and electrical aspects, is for the novice one of the most difficult audio components to understand. Describing the combination of mechanical and electronic features that go into a recorder is a task requiring a large, sometimes obscure vocabulary. If you don't learn just what the special jargon is all about, it is difficult, at this point in tape-recorder history, at least, to choose intelligently the one recorder that will best meet your specific needs. The task is further complicated by the tremendous versatility of the modern tape recorder. Almost any tape recorder can do a lot, but different machines can do different things. Without understanding the special language, you cannot be sure of just what a machine can do, or whether it has the features you need. It may be reassuring to know that a particular recorder has “sound-on-sound” facilities, but if you're not quite sure what sound-on-sound means, knowing it exists is not much help. If you think that a “dropout” or a “head” is some kind of hippie, and that “squeal” is something that informers do, then it would be a good idea to study the short glossary of tape terms that follows. Adapted by HiFi/Stereo Review's technical staff from 101 Terms: A Glossary of Tape Recording Terms, published by the Magnetic Products Division of the 3M Company, it may not only save you some money when you go recorder shopping, but will also give you a better idea of what it is you're buying and how to get the most out of it.

—William Wollheim
Acetate Base—The transparent cellulose-acetate plastic film that forms the backing for many magnetic recording tapes.

Acoustic Feedback—The echo, howling, or reverberation caused by a system's microphone(s) picking up the sound output from its own speaker(s).

Automatic Reverse—The ability of some four-track stereo tape recorders to play the second pair of stereo tracks automatically (in the reverse direction) without the necessity for interchanging the empty and full reels after the first pair of stereo tracks is played. (See also Four-Track Recording)

Automatic Shut-Off—A device (usually a mechanical switch) incorporated into most tape recorders that automatically stops the machine when the tape runs out or breaks.

Azimuth Adjustment—The mechanical adjustment of a magnetic head whereby exact alignment of the head gap with a standard tape-recorded magnetic pattern is achieved. Of prime importance for optimum high-frequency performance and recorder-to-recorder playback compatibility. (See also Head Alignment)

Azimuth Loss—The signal loss caused by lack of alignment between the playback head gap and the signal recorded on the tape.

Backing or Base—The flexible material, usually cellulose acetate or polyester, on which is deposited the magnetic-oxide coating that "records" the taped signal.

Bias—A constant signal or tone added to the audio signal during recording to circumvent the inherent non-linearity of magnetic systems. The best (and most commonly used) bias is a high-frequency (usually 50,000 to 100,000 Hz) alternating current fed to the recording head along with the audio signal to be recorded.

Bulk Eraser or Degausser—A hand-held (or larger) device used to erase an entire reel of magnetic tape without removing it from the reel. It generally produces a strong alternating magnetic field that neutralizes all previously recorded magnetic patterns on the tape.

Cartridge—A sealed plastic container that holds tape of 1/4-inch or narrower width. Designed to eliminate manual tape threading, cartridges operate on either the continuous-loop (single hub) principle or the reel-to-reel (double hub) system. Cartridge machines are usually smaller and simpler to use than ordinary open-reel units. (See also Cassette)

Capstan—The driven spindle or shaft in a tape recorder—sometimes the motor shaft itself—which rotates against the tape (which is backed up by a rubber pressure or pinch roller), pulling it through the machine at constant speed during recording and playback modes of operation. The rotational speed and diameter of the capstan determine tape speed.

Cassette—A type of tape cartridge operating on the hub-to-hub principle and now coming into wide use in portable and some home machines.

Cps—Abbreviation for "cycles per second," the units for expressing frequency. The term "cps" is now obsolete and has been replaced by "hertz." (See also Frequency and Hz)

Crustalk—The undesired mixing of signals between the channels or tracks of a tape recorder.

Decibel—Abbreviated "dB" or "db," it is a relative measure of sound intensity or "volume." It expresses the ratio of one sound intensity to another. One db is about the smallest change in sound volume that the human ear can detect. (Also used to express voltage and power ratios logarithmically.)

Deck, Tape—A tape recorder designed specifically for use in a high-fidelity music system. It usually consists only of the tape transport mechanism and preamplifiers for recording and playback. It does not include power amplifiers or speakers.

Distortion—Any difference between the original audio signal and that reproduced by a recording machine. Distortion takes many forms, and although it can never be completely eliminated, it can be reduced to a very low level in a good recording and reproducing system.

Dropout—During playback, the instantaneous loss of a recorded signal resulting from imperfections in the tape. These may take the form of non-magnetic foreign particles imbedded in and flush with the tape's surface. However, these imperfections are most commonly high spots on the tape surface that push the tape away from the magnetic head, thereby increasing the areal factor and reducing its performance. Small dropouts have less effect on low-frequency than on high-frequency signals. Also, full-track recordings are less sensitive to dropouts than are the narrower track widths. High-quality sound recording tapes are practically free of dropouts.

Dual-Track Recorder—Usually a monophonic recorder with a recording-head gap that covers somewhat less than half the width of a standard quarter-inch tape, making it possible to record one track on the tape in one direction and (by turning the reels over) a second track in the opposite direction. Also known as "two-track" or "half-track."

Dub—A copy of another recording. Tape recordings are easy to duplicate with a minimal loss of quality by recording from one machine to another.

Dynamic Microphone—An electromagnetic pressure microphone that employs a moving coil in a magnetic field to convert sound pressure to electrical energy in a manner similar to that of an electric generator. Impedance and output are generally lower than those of the ceramic or crystal microphone types. Low impedance permits the use of longer connecting cables without high-frequency loss or hum pickup.

Dynamic Range—The voltage ratio (expressed in decibels) between the softest and loudest sounds a tape recorder or other device can reproduce without undesirable distortion in loud passages and excessive noise in soft ones.

Editing—The alteration of a tape recording by physical means to eliminate or replace undesirable portions, add portions not present in the original, or otherwise rearrange the original. Magnetic tape is unsurpassed for editing purposes, since it can be easily cut and spliced.

Equalization—The selective amplification or attenuation of certain frequencies. Also refers to recognized industry standards for recording and reproducing "characteristics" (such as the NAB Standard), the proper use of which can assure uniform reproduction of prerecorded tapes and improvement of a system's signal-to-noise ratio.

Erasure—The neutralization of the magnetic pattern on tape by use of a strong magnetic field, thereby removing the recorded sound from the tape. During recording, the erase head on a recorder automatically removes any sound previously recorded on the tape just before the tape reaches the record head. (See also Bulk Eraser)

Extra Play—Also called "long play" or "extended play." Refers to tape that gives 50 per cent more than standard playing time on a standard reel because it employs a thinner base together with a thinner but usually more responsive oxide coating.

Fast Forward—The provision on a tape recorder permitting tape to be run rapidly through it in the normal play direction, usually for search or selection purposes.

Feed Reel—Also called "stock," "supply," or "storage" reel. The reel on a tape recorder from which the tape is taken as the machine records or plays.

Flutter—Very short, rapid variations in tape speed causing pitch and volume variations that were not present in the original sound. A form of distortion.

Foot Switch—An electrical or mechanical foot-pedal device for stopping and starting a tape recorder without use of the hands. (Continued overleaf)
Useful for dictating and for transcription.

Four-Track or Quarter-Track Recording—The arrangement by which four different channels of sound may be recorded on quarter-inch-wide audio tape. These may be recorded as four separate and distinct tracks (monophonic) or two related (stereo) pairs of tracks. By convention, tracks 1 and 3 are recorded in the "forward" direction of a given reel, and tracks 2 and 4 are recorded in the "reverse" direction.

Frequency—The repetition rate of cyclic energy, such as sound or alternating electrical current, expressed in cycles per second (hertz or Hz) or thousands of cycles per second (kilohertz or kHz). By convention, “bass” frequencies in music extend from about 20 to about 200 Hz. “Treble” sounds are at the high-frequency extreme of the sound spectrum and may extend from 2 or 3 kHz to the frequency limit of audibility (about 18 to 20 kHz). “Middle” (or “mid-range”) frequencies occupy the remainder of the spectrum, from 200 Hz to about 3 kHz.

Frequency Range—The span between the highest and lowest pitched sounds that a tape recorder or other sound-system component can reproduce at a usable output or volume level.

Frequency Response—Always specified as a range, such as 50 to 15,000 Hz; but in order to be meaningful it must be further defined in terms of decibel variation from absolute flatness over a specified frequency range (e.g., ±3 db from 50 to 15,000 Hz). An indication of a sound system's ability to reproduce all audible frequencies supplied to it, maintaining the original balance among the low, middle (or mid-range), and high frequencies.

Gain—The voltage ratio of the output level to the input level for a system or component of a system. Usually expressed in decibels.

Gap—The effective distance between opposite poles of a magnetic head, measured in microinches or microns. Especially critical for playback heads in which gaps must be narrow in order to resolve (reproduce) high-frequency (short wave-length) recordings. Recording heads generally have wider gaps than reproducing heads.

Harmonic Distortion—Distortion characterized by the appearance in the output signal of spurious harmonics of the fundamental frequency. Usually expressed as a percentage of the output signal.

Harmonics—Overtones that are integral multiples of the fundamental frequency. In properly balanced a.c.-biased tape recorders, only the odd-order harmonics (primarily the third) are generated by the recording process and these are very low in amplitude.

Head—In a magnetic-tape recorder, the generally ring-shaped electromagnet across which the tape is drawn. Depending on its function, it either erases a previous recording, converts an electrical signal to a corresponding magnetic pattern and impresses it on the tape (record function), or picks up a magnetic pattern already on the tape and converts it to an electrical signal (playback function). Most home recorders have a separate erase head, but combine the record and playback functions in a single unit. Professional machines and those intended for the serious amateur have separate heads for erase, record, and playback.

Head Alignment—Includes all mechanical adjustments necessary to assure proper spatial relationships between the head gaps and the tape—or, more specifically, a properly recorded tape track. It may be separated into five attributes describing correct head attitude:

1. Azimuth or skew, in which the width dimension (corresponds to track width) of the head gap is at a precise 90-degree angle to the tape edge.
2. Height, in which the gap-width dimension is centered on the standard track location.
3. Tilt, in which the face of the head must be simultaneously tangent to both edges of the tape and without distortion of either of the latter.
4. Tangency, in which the gap is tangent with, and contacting the specific portion of, the head face containing the head gap, and remains so during the playing of the tape.
5. The adjustment toward or away from the tape to assure proper contact pressure ("wrap") between head and tape.

Head Demagnetizer or Degausser—A device used to neutralize possible residual or induced magnetism in heads or tape guides. Unless the recorder has an automatic head-demagnetizing circuit and non-magnetic tape guides, periodic use of a head demagnetizer may be necessary to avoid addition of hiss noise to, or even partial erasure of, prerecorded tapes.

Head, Hyperbolic—A tape-recorder head with faces so shaped that a minimum of tape tension is required to ensure good tape-to-head-gap contact.

Hz—The standard abbreviation (of hertz) which has replaced cps (cycles per second) as the term for the unit of frequency.

Impedance—The resistance to the flow of alternating current in an electrical circuit, generally categorized as either "high" or "low," but sometimes given in ohms or millions of ohms (megohms). Commonly used to rate electrical input or output characteristics of components so that proper "match" can be made when interconnecting two or more devices (such as a microphone, tape recorder, and loudspeaker). Power loss or frequency discrimination can result from a "mismatch" of impedances between two units.

Index Counter—An odometer type of counter that indicates revolutions (not feet of tape), usually of the supply reel, thereby making it possible to index selections within a reel of tape and readily locate them later on a given machine.

Input Signal—An electrical voltage embodying the audio information that is presented to the input of an amplifier, tape recorder, or other electronic component.

Input—The terminals, jack, or receptacle provided for the introduction of the electrical input signal voltage into an amplifier or other electronic component.

Intermodulation Distortion—Distortion that results when two or more pure tones produce new tones with frequencies representing the sums and differences of the original tones and their harmonics.

Inverter—Device to change one type of electrical current to another type. Frequently used to change 6- or 12-volt direct current to 120-volt alternating current for operation of an a.c. tape recorder in an automobile or boat.

Ips—Abbreviation for tape speed in inches per second.

Jack—Receptacle for a plug connector leading to the input or output circuit of a
tape recorder or other piece of equipment. A jack matches a specific plug.

kHz—Abbreviation for kilohertz, or one thousand cycles per second. For example, 19 kHz equals 19,000 Hz.

Leader and Timing Tape—Special tough non-magnetic tape that can be spliced to either end of a magnetic tape to prevent its damage and possible loss of recorded material. Either white or in colors, it usually has some type of marking that enables it to be used as a timing tape. It therefore can be spliced between musical selections to provide desired pauses in playback.

Level Indicator—A device on a tape recorder for indicating the level at which the recording is being made; it serves as a warning against under- or over-recording. It may be a neon bulb (now becoming obsolete), a "magic eye," or a meter. (See also VU Meter)

Loudness—Sound level as perceived by the average human ear, an organ more sensitive to "mid-range" frequencies than to low or high extremes, especially at low volume levels.

Low-Noise Tape—Magnetic tape with a signal-to-noise ratio 3 to 5 db better than conventional tapes, making it possible to record sound (especially wide-frequency-range music) at reduced tape speeds without incurring objectionable background noise (hisss) and with little compromise of fidelity. Additional characteristics of most low-noise tapes include extremely good high-frequency sensitivity and a heavy-duty binder system for reduced ruboff of magnetic oxide and an increase in wear life over ordinary tapes.

Low-Print Tape—Special magnetic recording tape significantly less susceptible to print-through (the transfer of signal from one layer of tape to another), which results when tape is stored for long periods of time. These tapes are especially useful for "master recording" (making an original recording from which copies will be made) on professional-quality equipment.

Microphone—A sound transducer or device for converting sound waves into electrical energy of the same frequency.

Microphonic—A condition resulting from the mechanical vibration of some part (other than the microphone) within the electrical circuit of an amplifier, tuner, etc., that causes corresponding electrical disturbances in its output signal. It usually appears as a "bonging" sound.

Mil—One one-thousandth of an inch. Tape thickness is usually measured in mils.

Mixer—A device that allows two or more signal sources to be blended, balanced, and fed simultaneously into a tape recorder or amplifier.

Monophonic (Monaural) Recorder—Refers to single-channel recorders, as distinguished from stereophonic types. Current home recorders are almost all four-track stereo.

Monitor Head—A separate playback head on some tape recorders that makes it possible to listen to the material on the tape an instant after the recording is made and while the recording is still in progress.

NAB Curves—Standard tape-recorder playback equalization curves established by the National Association of Broadcasters. (See also Equalization)

Noise—Unwanted electrical signals produced by electronic equipment, heads, and also by rough or non-homogeneous oxide coatings on magnetic tape. Mostly confined to the extremes of the audible frequency spectrum where it occurs as hum and/or hiss, it may be reduced to negligible levels by good machine and tape design. (See also Low-Noise Tape)

Noise, Weighted—The noise measured within the audio frequency band using a measuring instrument that has a frequency-selective characteristic. The frequency sensitivity of the instrument is adjusted to correspond to that of the average human hearing response.

Octave—The interval between two frequencies of sound or electrical energy having a ratio of 2:1.

Output (also Maximum Undistorted Output)—The useful signal delivered by a recorder using a particular type of tape, usually at an arbitrarily fixed level of harmonic distortion (1 or 3 per cent) and relative to the performance of a tape with standard characteristics (such as Scotch No. 111).

Oxide—The ferro-magnetic particles which, when properly dispersed in a plastic binder and coated on a backing or base, form the magnetic portion of magnetic tape. Conventional oxide particles are chemically known as gamma ferric oxide, are brown in color, acicular (needle-like) in shape, and of micron length. Less conventional oxides have been developed that exhibit significantly different magnetic properties (and size). All oxides used in magnetic tape maintain magnetism induced in them until demagnetized by an external magnetic field.

Patch Cord—Sometimes called "signal lead." A short shielded wire or cable with a plug on either end (or with a pair of clips on one end) for conveniently connecting together two pieces of sound equipment such as a phonograph head and tape recorder, an amplifier and speaker, etc. Not to be used for 120-volt current.

Pause Control—A feature of some tape recorders that makes it possible to stop the movement of tape temporarily without switching the machine from "play" or "record" positions. Essential for a tape recorder used for dictation and generally helpful for editing purposes.

Playback—The reproduction of sound previously recorded on a tape. The opposite of record.

Playback Head—Magnetic head used to pick up a signal from a tape. Often the same head as is used for recording, but with its circuits changed by means of a record/play switch which also energizes the erase head. (See also Head)

Plug—A circuit connector that is inserted into a jack.

Polyester Base—A plastic-film backing for magnetic tape used for special purposes where strength and resistance to temperature and humidity change are important. (Mylar is a du Pont trade name for their brand of polyester.)

Portable Recorder—Originally, any tape recorder designed for easy mobility and requiring connection to only a 120-volt a.c. supply for operation. Recently the term has been applied specifically to battery-powered units that do not require external power for operation.

Power Amplifier—An amplifier designed to produce sufficient power to operate a loudspeaker. (See also Preamplifier)

Power Cord—Cord for connecting the tape recorder to an external power source, such as a 120-volt a.c. line.

Preamplifier (also Preamp)—An amplifier that raises extremely weak signal levels (such as those from a microphone, magnetic playback head, or a phonograph pick-up) to a level sufficient to drive a power amplifier. Some tape recorders combine the preamp and the power amplifier. Others—especially tape recorders designed for use as a built-in part of a stereo system—may include a preamplifier, but no power amplifier. The tape-recorder's preamplifier usually includes the record and playback circuits.

Prerolled Tape—Tape recordings that are commercially available and generally embody the same material that is available on phonograph records.

Pressure Pad—A device that forces tape into intimate contact with the head gap, usually by direct pressure at the head assembly. Felt or similar material, occasionally protected with self-lubricating plastic, is used to apply pressure uniformly and with a minimum of drag on the backing (non-coated) side of the tape.

Pressure Roller—Also called "pinch roller" or "capstan idler." A hard-rubber roller that holds the magnetic tape tightly against the capstan, permitting the latter
to draw the tape off the supply reel and past the heads at a constant speed. (See also Captan)

Print-Through—Undesired transfer of the magnetic pattern from layer to layer of tape on a reel.

Raw Tape—A term sometimes used to describe tape that has not been used for recording. Also called "virgin" or "blank."

Reel-to-Reel—Designates those tape machines that do not use a cartridge or cassette. Also known as "open-reel."

Rewind Control—A button or lever for rapidly rewinding tape from the takeup reel to the supply reel.

Saturation—The condition reached in magnetic tape recording where output does not increase with increased input, and hence distortion increases significantly. Useful for defining reference output levels, since it is independent of bias current.

Sensitivity—As used to describe the capabilities of raw tape, it indicates the relative output for a given input in the linear (low-distortion) portion of a tape's magnetic transfer characteristic. Sensitivity data plotted as a function of frequency (or wave length) gives frequency response, usually relative to a standard reference tape.

Separation—The degree to which two stereo signals are kept apart. Stereo realism depends on the successful prevention of their mixture in all parts of a hi-fi or tape system. Tape systems have separation capability superior to that of disc systems.

Signal-to-Noise Ratio—The voltage ratio, usually expressed in decibels, between the loudest undistorted tone recorded and reproduced by a recorder, and the noise reproduced when the audio signal is reduced to zero.

Sound-on-Sound—A method by which material previously recorded on one track of a tape may be re-recorded on another track while simultaneously adding new material to it.

Splicing Block—A metal or plastic device incorporating a groove within which ends of the tape to be spliced are held. An additional diagonal groove provides a path for a razor blade to follow in cutting the tape. It makes splices very accurately using narrow-width (75") splicing tape. (See also Tape Splicer)

Splicing Tape—A special pressure-sensitive, non-magnetic tape used for joining two lengths of magnetic tape. Its "hard" adhesive will not ooze, and consequently will not gum up the heads or cause adjacent layers of tape on the reel to stick together.

Squeal—The audible noise caused by alternate sticking and release of tape. It may occur at heads, pressure pads, or guides where friction develops with the face or back side of a magnetic tape. It is largely eliminated by regular cleaning of suspected surfaces and by using a tape employing a built-in dry silicone lubricant.

Takeup Reel—The reel on the tape recorder that accumulates the tape as it is recorded or played.

Tape Guides—Grooved pins or rollers mounted between and at both sides of the tape-head assembly to position the magnetic tape correctly on the head as it is being recorded or played.

Tape Lifters—A system of movable guides that automatically prevents the tape from contacting the recorder's heads during fast forward or rewinding modes of operation, thus preventing head wear.

Tape Loop—A length of magnetic tape with the ends joined together to form an endless loop. Used either on standard recorders, special "message-repeater" type units, or in four-or eight-track cartridge devices, it makes possible the repetitive playback of a recording without rewinding the tape.

Tape Monitoring—See Monitor Head

Tape-Transport Mechanism—The platform or deck of a tape recorder on which the motor (or motors), reels, heads, and controls are mounted. It includes those parts of the recorder other than the amplifier, preamplifier, loudspeaker, and case.

Tape Player—A unit that is not capable of recording and is used only for playing prerecorded tapes.

Tape Speed—The speed at which tape moves past the head in recording or playback modes. Standard tape speed for home use is 7½ ips or half that speed (3½ ips). Speeds of 17½ and 35⅜ ips are found on some machines, but on reel-to-reel recorders are usually suitable only for non-critical voice recording. Some cartridge machines using special tape and circuits achieve very good results at the slow speeds. Professional recording speed (for making original master tapes of music, for example) is usually 15 ips and sometimes higher.

Tape Splicer—A device, similar to a film splicer, for splicing magnetic tape automatically or semi-automatically. Different models vary in operation, most using splicing tape; some professional units employ heat. (See also Splicing Block)

Telephone Pickup—Any of several devices used to feed telephone conversations into a tape recorder, usually without direct connection to the telephone line and operating by magnetic coupling.

Tensilized Polyester—A polyester tape backing that has been prestretched principally in the lengthwise direction for increased longitudinal strength.

Tone Controls—Control knobs on a tape-recorder amplifier used to vary bass and treble response to achieve the most desirable balance of tone during playback.

Track—The path on the magnetic tape along which a single channel of sound is recorded.

Triple-Length (or Triple-Play) Tape—An extra-long-play magnetic tape for maximum recording time on reels of a given size. It uses an ultra-thin but very strong 0.5-mil tensilized polyester base.

Two-Track Recording—On quarter-inch-wide tape, the arrangement by which only two channels of sound may be recorded, either as a stereo pair in one direction or as separate monophonic tracks (usually in opposite directions).

Uniformity—In terms of magnetic tape properties, a figure of merit relating to the tape's ability to deliver a steady and consistent output level when being recorded with a constant input. Usually expressed in decibel variation from average at a mid-range frequency.

VU Meter—A "volume unit" meter that indicates audio-frequency levels in decibels relative to a fixed 0-db reference level. The meter movement differs from those of ordinary voltmeters in that it has a specified ballistic response adapted to monitoring speech and music. Used in many home and most professional recorders to monitor recording levels and maintain them within the distortion limits of the tape.

Wave Length—In tape recording (and referring specifically to the tape magnetization created by pure single-tone recording), the shortest physical distance between two points of the same magnetic polarity and intensity; also, when expressed in mils, the ratio of tape speed (in ips) to recorded frequency (in kilohertz).

Weighting Characteristic—The shaped frequency-response characteristic of a measuring device used to produce more realistic indications of the subjective response of the ear than are obtained with unweighted (flat) measurements.

Wow—A form of distortion in sound-reproducing systems caused by periodic variation in the speed of the medium (such as tape) and characterized by its effect on pitch.

Wrap—The length of the tape's path along which tape and head are in intimate physical contact. Sometimes measured as the angle of arrival and departure of the tape with respect to the head. A "good wrap" means a good tape-to-head-gap relationship. (See also Head Alignment)
The difference between the track widths of a half-track recording and two tracks of a four-track recording are illustrated by 3M's tape viewer placed over a spliced length of quarter-inch magnetic tape. Minute iron particles in suspension in the viewer trace out the magnetic modulations on the tape.

RECORDING TAPE: A SHORT PRIMER
EXPLORING THE QUESTION OF WHICH TAPE TO USE FOR VARIOUS RECORDING PURPOSES
By WILLIAM H. MADDEN

For some people, tape recording becomes fraught with mystery and confusion the moment they have to buy a new reel of tape. Should they choose acetate or polyester base? Which reel size? Which length or thickness—300, 600, 900, 1,200, 1,800, 2,400, or 3,600 feet; 1/4, 1/2, 1, or 11/2 mil? And should it be low-noise, all-purpose, high-output, low-print, master, standard, extra-strength, double-length, or triple-length? Tensilized, non-tensilized, or lubricated?

Despite the profusion of lengths and types, there is no real mystery connected with magnetic tapes. In order to answer the question "What kind of recording tape should I buy?" it is helpful to be aware of some basic tape facts. All tapes have three things in common: (1) the "active" recording medium, or oxide; (2) a flexible backing (or base); and (3) a binder to join the oxide to the backing.

The question of which backing is best has been argued nearly as long as tape recording has existed. A tape's backing determines its physical characteristics—resistance to tearing or stretching, ability to bend and flex, and reaction to temperature and humidity. The first crude German tapes and those first introduced in the United States in 1947 had paper backings. While easily torn, paper backing was relatively immune to the effects of temperature and humidity. But its surface could not be made smooth enough to permit an even coating of oxide. Nor could it be made thin enough to accommodate more than about 20 minutes of recording time (using a large reel of tape at the very fast 60 or 30 ips speeds required in those days).

About a year later, the first plastic base was developed. Today this is known as cellulose acetate or, more popularly, just acetate, and many inexpensive or all-purpose tapes are now generally backed with acetate. Some recordists prefer it because of its non-stretch, clean-break characteristics, which make it easy to splice. Since all tapes stretch before breaking, it is more correct to say that they have a yield (or stretch) point as well as a breaking point. How much force it takes to reach these points is a function of the tape's strength. Obviously, the yield point of any tape should be such that the rewind, fast-forward, and stop modes of a normally adjusted recorder will not stress it unduly.

Acetate backings have a yield point at about 5 per cent elongation, which means that tape stretched to this degree (or below) will return to its normal length without any effect on the tape's performance. Stretched beyond this point, the tape becomes permanently distorted and breakage will occur at about 25 per cent elongation (stretching), depending on the relative humidity.

Acetate backings have a plasticizer that causes them to absorb more moisture under conditions of high relative humidity. This results in greater flexibility and more stretch before breaking; conversely, acetate tapes become brittle under conditions of low humidity. Excessive brit-
Uneven dispersion of the oxide particles in a tape coating (shown in the photomicrographs to the right) results in high hiss levels that reduce the available dynamic range of the tape. This problem can also lead to high-frequency losses in both recording and playback.

Tleness, or "aging," is really the loss of the plasticizing agent brought about by storage under conditions of low humidity or high temperature.

The effect of humidity on acetate can be illustrated with an extreme example: if the relative humidity were to drop from 90 to 30 per cent, a 1,200-foot roll of tape with acetate backing would shrink almost 11 feet. If the reel were tightly wound (and it shouldn't be), this could cause cupping or other physical distortions of the tape surface, rendering it useless.

Enter polyester. Nearly 85 per cent of all types of magnetic tapes (including computer and video tapes) are now manufactured on polyester backings. (The term "Mylar," a proprietary name, refers to only one brand of polyester backing in current use.) Polyester backings have two substantial advantages: stability and strength. Like acetate, polyester becomes permanently distorted (and useless) when stretched beyond the 5 per cent yield point—but it takes twice as much tension to reach this point, compared to acetate. Unfortunately, polyester will elongate anywhere from 90 to 150 per cent before it breaks. To minimize the effect of this characteristic, some tapes are "tensilized," that is, evenly prestretched during manufacture to prevent further stretching during normal use. The strength of polyester backings has made possible the production of extremely thin tapes. Obviously, the thinner the tape, the more tape—and hence recording time—can be accommodated on a reel of a given size. These thinner tapes are known variously as double-length (or double-play), triple-length, and so forth.

Temperature affects both backings in about the same way, although acetate is somewhat more sensitive. In general, the higher the temperature, the more flexible each backing becomes. Humidity, on the other hand, does not affect polyester tape. This kind of backing requires no plasticizing agent and suffers no apparent aging, which makes it ideal for long-term sound storage.

Plasticizers and lubricants are added to the binder mixture during manufacture rather than later. Lubricants prolong the life of the tape and of recorder parts that come into contact with it. They also eliminate annoying squeal, caused by the tendency of a tape to alternately stick and slip as it passes over a head. The dry silicone lubricant used in some tapes actually leaves a minute protective coating on recorder heads as the tape is played, and lasts for the life of the tape.

Magnetic-tape oxides determine the electrical characteristics of a tape—its performance in the areas of recording, storing, and reproducing signals. The oxide itself is composed of minute iron-oxide particles in a uniform coating held to the backing by the binder. Ideally, an oxide formula should provide uniform output and should be magnetically "soft." A magnetically soft tape is one that can be easily erased or re-recorded but nonetheless retains its magnetic properties during storage.
The first oxides, developed for paper-backed tapes, provided good reproduction but were difficult to erase—the old signal would come through even when the new material was recorded over it. The reddish oxide formulations developed for the first plastic bases resulted in tapes that could be easily erased, but they had to be recorded and played back at high speeds in order to reproduce a full range of frequencies. Better oxides—with smaller particles dispersed more uniformly—have since been developed, enabling a machine to record at speeds of 7 1/2, 3 3/4, 1 7/8, and even 1 5/16 inches per second and still produce a usable signal.

Two special oxide formulas—dark green and black in color—have been developed to solve certain recording problems. The first, a high-output oxide, has a signal output that is 6 db greater (for a given record-head signal input) than the now-standard red oxide. Therefore, tape with high-output oxide is particularly useful with recording equipment that has excessive noise or hum, because it is possible to achieve a desired signal strength with less playback-amplifier gain than is needed by standard oxide, and decreasing amplifier gain decreases the noise. The high-output oxides are also able to accommodate sudden loud signals or surges without overloading (distorting). Conversely, they are especially sensitive to weaker sounds.

The latest oxide development (intended originally for use in professional mastering at speeds of 15 ips and higher) resulted in low-noise tape. This special oxide, which is black, has reduced background tape hiss or noise by 6 db. Low-noise tape also has a built-in high-frequency boost that helps maintain a wide frequency response at the slow tape speeds. Although such tape is premium priced (it costs perhaps 30 per cent more than all-purpose tape), its ability to record twice the material per reel at slower speeds—without serious sacrifice of reproduction quality—becomes an economic consideration for the home recordist.

The properties of various types of tape are important in deciding which kind to buy; the other big consideration is obviously the purpose for which you intend to use it. A visit to any well-stocked electronics outlet will prove that there is literally a tape for every purpose, as evidenced by the profusion of types and brand names.

If you intend primarily to make recordings of speeches, interviews, and the like, in which wide-range response is not important, a standard or all-purpose tape is best from the standpoint of economy. If a long conference is in the offing, try one of the thinner double- or triple-length tapes at the slower recording speeds.

For music, an all-purpose tape on the average machine can provide good results at the 7 1/2-ips speed, and a low-noise tape can offer equivalent fidelity at 3 3/4 ips. Tapes are offered in various lengths on reels of different sizes, so it would be wise to consult a recording-time chart to pick the one closest to the length of the selection or selections to be recorded. If the music has a wide dynamic range—that is, contains extremes of loud and soft passages—or if you are copying a second- or third-generation tape, perhaps a high-output tape might be best. Both high-output and low-noise tapes will keep background noise to a minimum. (Continued overleaf)
When long life is a factor, select a polyester backing with a low-print oxide. Through special formulation of the oxide, the various low-print tapes tend to minimize print-through "echo," either before or after, which is actually the recorded signal of one layer impinging on adjacent layers on the reel.

For tape correspondence, tiny 3-inch reels are offered in varying tape lengths. Normally these tapes come packed in special mailer boxes that require only an address label and a stamp.

Splicing tape is in a category by itself. The need for the first splice occurred immediately after the first piece of tape broke or required editing. Eventually every recordist experiences a similar need. Although whole articles in this magazine and elsewhere have been devoted to the subject of editing and splicing, a few guidelines can keep the new home recordist, his tapes, and his equipment out of trouble.

- Make splices only with tape that is specified as splicing tape. Other transparent pressure-sensitive tapes may hold the ends of the recording tape together, but some of the adhesive will probably ooze around the splice, damaging the oxide or causing stickiness between layers on the reel. The adhesive may also get onto the heads and make them sticky.
- Cover the entire splice area—and then some—with the splicing tape, making sure that the ends of the recording tape meet, but do not overlap.
- Use some kind of splicing block or jig. Through long practice, professional tape editors can make splices with no mechanical aids other than scissors, but most of us are not so adept. A good splice, produced in a block, will pass smoothly and inaudibly through tape guides and over heads.
- Use a 30- or 45-degree cut where the tape ends join to eliminate the audible pop that frequently results from 90-degree splices. Mechanical splicers are designed to cut at the proper angle.

You should consider the recording tape you buy as another link in your sound system, and remember that the contribution a given tape can make to high-fidelity sound reproduction depends on other components in your installation. For example, a premium tape may produce no audible improvement when used with a low-quality recorder that cannot take advantage of its low-noise and extended high-frequency characteristics. In such a case, premium tape would be a waste of money, since an all-purpose type would serve just as well. If you are in doubt about whether your machine warrants the use of premium tape, buy a roll and judge for yourself whether improvement is audible.

Many people spend hundreds of dollars on a recorder and then try to economize by buying cheap tape. By using the so-called "white-box" tape, they frequently not only get poor results but sometimes even damage the recorder. They then blame the manufacturer of the recorder for the time and money they have to spend on repairs that otherwise would have been unnecessary. White-box or off-brand tapes are frequently end-of-run, reject products not up to a reputable manufacturer's specifications. They may also be products actually intended for the bargain counter and manufactured without regard for quality control in the areas of slitting, oxide uniformity, splices within the reel, or dropouts. Many of these products have an abrasive effect on tape heads and guides, actually wearing them down measurably after only a few playings. Although some white-box tapes may provide high-quality sound recording, you can never predict quality from reel to reel, or even within the same reel. Branded merchandise from a respected manufacturer carries his guarantee of quality or replacement.

And the quality in terms of output level, frequency response, distortion, and noise is maintained within rigid standards from reel to reel.

Assuming you have selected your recording tape, you will naturally want it to continue to give optimum performance. Many of the rules for handling and storing tape have to do with protecting the oxide. Since the oxide "contains" the recorded signal, dust and dirt or physical damage to this surface will result in the kind of signal loss called a "dropout." A signal loss can also occur if the tape is bent or kinked, preventing it from passing smoothly over the recorder's heads. Here are some rules for preserving the quality of your valuable tape recordings:

- Store tape in its original box to protect it from dust or damage.
- Stand the tape boxes on edge like books, rather than flat in piles. This will prevent warped reels and damage to the edges of the tape.
- Avoid storage in areas of extremes of temperature or humidity. Tape experts recommend room temperature with a relative humidity of 40 to 60 per cent. If the tape is cold, let it warm up to room temperature before playing. For long-term storage, use low-print, polyester-backed tape, and store it in metal cans sealed with pressure-sensitive tape.
- Avoid the build up of excessive tension within a reel of tape by rewinding it occasionally. If your recorder tends to produce tightly packed tape in the rewind or fast forward mode, have it adjusted.
- Avoid the build-up of excessive tension within a reel fields such as are produced by motors and some speaker systems.
- Clean the recorder heads and tape guides regularly to eliminate any dust or oxide flakes that could later rub off on a tape and produce dropouts.

Unlike phonograph records, which (under usual playing conditions) wear a little with each playing, tape does not wear significantly if it is properly cared for. Laboratory tests have shown that with good care and storage conditions, tape should last at least one hundred years.

William Madden, who has been associated with recording tapes for more than twenty years, is National Sales Manager, Scotch Sound and Video Tapes, for 3M's Magnetic Products Division.
HI FI/STEREO REVIEW'S SELECTION OF THE TOP RECORDINGS
BEST OF THE MONTH

CLASSICAL

HANS WERNER HENZE'S THE YOUNG LORD

A cracklingly brilliant operatic tour de force is superbly recorded by Deutsche Grammophon

The young German composer Hans Werner Henze (b. 1926) is some thirteen years younger than England's Benjamin Britten. At the same time, Britten's internationally acclaimed stature in contemporary opera was far more substantial (in point of performance) at the age of forty-two than Henze's is. Still, on the basis of my own familiarity with just two of Henze's six operas (Elegy for Young Lovers and now Deutsche Grammophon's elegant new release of the recent The Young Lord), my hunch is that Britten's sole up-coming rival for dominance of an internationally viable lyric theater is Henze.

Different though the two composers may be as to background and even generation, they share certain areas of common ground musically. Both are eclectics — unabashed. Britten derives not only from his English predecessors, but from the post-World War I School of Paris, American Aaron Copland, and, like just about everyone else of his generation, from Stravinsky. Henze's work comes out of the newer, post-Webernian, Schoenbergian School of Darmstadt—post-World War II. With an eclectic, assimilative talent similar to Britten's, Henze has learned, with an increasingly (perhaps by now somewhat alarmingly) instinctive "rightness," to merge his atonal orientation with the single other significant stylistic development in Western music since World War I: Stravinsky's tonal neoclassicism. Each composer, Henze perhaps more uncannily, has superimposed on these varying textural techniques a personal, intensely lyrical vocal style. Each composer, moreover, is generously endowed with what we call a "sense of theater"; each uses the orchestra with eerie resourcefulness and skill.

So much for analogy. Henze's The Young Lord is described as a "Comic Opera in Two Acts, by Ingeborg Bachmann, from a fable in "The Sheik of Alexandria and His Slaves," by Wilhelm Hauff." But, in this adaptation, black-comic opera with surrealist overtones might characterize it better.

As briefly as possible, the plot: in 1830, an English nobleman named Sir Edgar (a mimed, not a sung, part in the opera) comes to live in the town of Hulsdorf-Gotha. His entourage is curious: Begonia, a Creole cook from Mon Luis Isle, and Jeremy, a Turkish page. Sir Edgar's behavior is also idiosyncratic: ancient party that he is, he is still regarded as a social and matrimonial "catch" among the upper-crust local-yokels. But he will have no part of them.

Somewhere along in Act I, "a little circus, with very humble performers . . . has set up a tent in the main square." The town notables would evict it—along with such performers as Vulcano, a Milanese fire-eater; Adam, a dancing monkey; and "Rosita, the Cloud-walking Maiden"—but Sir Edgar leaves his house for the first time to offer both financial assistance and shelter to the performers.

Act II begins with shouts of mounting agony from the Englishman's house, punctuating a love duet between Luise and Wil-
helm—the opera's "love interest." The notables indig

namately investigate, but their anger subsides when they are
told that the wails come from young, handsome Lord
Barrat, Edgar's nephew, who is being flogged to subdue
his reluctance to learn German so that he can properly
enter local society. When finally he does so, he not only
treats the citizenry to irrational, destructive behavior (all
choose to regard it as chic eccentricity, much to be imi-
tated), but manages to wrest Luise's love from Wilhelm.
During a surrealistic closing scene, the Young Lord whirls
Luise about in a madly choreographed ballroom scene.
When he goes impossibly berserk, the citizenry at last see
the truth: the young "aristocrat" is not exactly an emperor
without clothes—but the clothes do, in fact, disguise the
figure of Adam, the monkey from the circus.

If Henze's libretto has been synopsized at length, it is
because it is difficult to describe the score without allusion
to it. The opera's earlier episodes could be mistaken for a
light-weight mimicry of Stravinsky's The Rake's Prog-
ress: the set pieces, the fuzzy vocal ensembles, the duets.
Henze's music here is calculatedly more Franco-Italian
than (even) remotely German. Its orchestral continuity
has the brilliant crackle one associates with Falstaff.

But with the love duet opening Act II, the composer
insinuates a more chromatic texture. The lovers' voices
soar in ecstasy—even as they remain oblivious to the tor-
tured cries coming from Sir Edgar's house. The scene is
an ironic one, but the opera's darkening musical mood pays it
no heed. And though Luise's big solo aria opening the last
scene is a tour de force of operatic "manner," the com-
poser is nonetheless moving stealthily away from the neo-
classic parodies of "comic opera" to the Central European
quasi-atonal techniques that make the symbolic, nightmare
finale shocking but completely "believable."

One tends to worry about the future of a composer who
can perform such musico-theatrical sleight-of-hand so
young: he may turn out to be too clever for his own good
—and ours. But he has recognized that, talent apart, an
internationally viable opera must, if only for the sake of
musical contrast, utilize many twentieth-century techniques
rather than one—even if they appear to be opposites. I've
not seen The Young Lord in production; I have not even
seen a score. But judging from DGG's superb recording,
I would be willing to place a bet that, if it failed on the
stage, neither the music nor the libretto would be at fault.

The vocal performances are superb all the way through
—and particularly those of Edith Mathis and Donald
Grobe as the young lovers. Although much of the writing
is an irreverent put-on of traditional ensemble operatic
style, it would be unfair not to acknowledge the excellence
of the singing in this area. The orchestra sounds ever on
its toes, and conductor Dohnányi keeps the score moving
at a lively pace. Finally, the recorded sound and stereo
treatment are uniformly superb. I guess you've just read
a rave review.

William Flanagan

HENEZE: The Young Lord (A Comic Opera in Two
Acts), Edith Mathis (soprano), Luise; Loren Driscoll
(tenor), Lord Barrat; Lisa Otto (soprano), Frau Hasen-
treffer; Vera Little (mezzo-soprano), Begonia; Helmut
Krebs (tenor), Prof. von Mucker; Barry McDaniel (bari-
tone), Secretary; Donald Grobe (tenor), Wilhelm; others.
Schönberg Boys Chorus; Chorus and Orchestra of the
German Opera, Berlin, Christoph von Dohnányi cond.

DEUTSCHE GRAMMOPHON ® 139257/8/9 three discs $17.37.

STRAUSS' DER ROSENKAVALIER
IN DELECTABLE MINIATURE

Lisa della Casa and Anneliese Rothenberger present
scenes from the opera in a bravura collaboration

BY AND LARGE, the recorded history of Richard Strauss' 

enchanting Der Rosenkavalier has been a treat for the
discophile: the legendary Viennese recording (now on
Angel GRB 4001) provided enjoyment for the pre-
vious generation, and two outstanding microgroove ver-
sions (London 4404 and Angel 3563) do the same for
the present one. Those familiar with the opera's current
 stagings, however, have had a valid cause for complaint:
the absence from recordings of Lisa della Casa's Mars-
challin and Anneliese Rothenberger's Sophie, both deli-
ghtful and universally admired achievements.

The gap has now been filled in bravura fashion. Rec-
ognizing the fact that Der Rosenkavalier cannot be com-
plete without Der Rosenkavalier (Octavian) himself, the
two sopranos have managed to create a third by dividing
that vital Rosenrolle between themselves. Thus Miss Ro-
thenberger sings the part for the concluding scene of
Act I (following Lisa della Casa's monologue "Da geht
er hin"), and Miss della Casa becomes Octavian for the
various duets with Miss Rothenberger's Sophie, both

delightful and universally admired achievements.

The disc, then, is a feast of ear-caressing soprano sing-
ing bathed in some of the most haunting orchestral
sonorities ever created. The stage portrayal of Lisa della
Casa's Marschallin—aristocratic, with an almost glacial
poise hiding an inward poignancy—is faithfully cap-
tured; her Octavian is relatively restrained in point of
"boyishness," but otherwise exemplary. Vocally, she is
outstanding in both roles, though it must be admitted
that a few years ago her Marschallin exhibited a firmer,
steadier line. Miss Rothenberger's Sophie is perfection
itself, and though her Octavian is at times somewhat

HIFI/Stereo Review
less effective owing to the low tessitura, she never fails to delight.

The liner notes describe Rudolf Neuhaus as an "outstanding advocate of Richard Strauss's music," and his sensibly paced, expressive conducting confirms the point. The city of Dresden has, of course, long been recognized as a locale particularly devoted to Strauss: it was the scene of the world premieres of Der Rosenkavalier, Salome, Arabella, Daphne, and Capriccio!

I have only one reservation about the engineering: in the final scene, when Miss della Casa reverts to the Marschallin's role to utter her gentle, resigned "la, jet" following Faninal's unintentionally bumbling observation about youth, her touching delivery of these two eloquent syllables is obscured by the orchestra. Nonetheless, the disc is a gem, and it is produced with extravaganza: in addition to von Faninal, we also get the Four Footmen to complete the atmosphere in the Act I finale.

George Jellinek

RICHARD STRAUSS: Der Rosenkavalier. Marschallin's Monologue and Final Scene from Act I; Presentation of the Silver Rose and duet "Zu ihm hatt' ich ein Zutraun" from Act II; Final Duet from Act III. Lisa della Casa and Anneliese Rothenberger (sopranos); assisting artists; Dresden State Orchestra, Rudolf Neuhaus cond. ANGEL S 36436 $5.79.

JAZZ

THE FRESH AND ORIGINAL PIANO VOICE OF RAN BLAKE

Deep sensitivity and a bold imagination are fused in a uniquely evocative and memorable piano style

For ten years, Ran Blake, now thirty-two, has been a peripheral jazz figure. Best known for his long association with singer Jeanne Lee, he has also performed as a soloist, though with little recognition. He did not fit easily into any jazz category, and so he was suspect. But he has continued studying and composing, trying to relate his wide-ranging interests in the life of his time to his music. Now, in ESP-Disk's "Ran Blake Plays Solo Piano," made in 1965 but recently released, he emerges as an unusually evocative and personal pianist-composer, the freshest instrumental voice I've heard on disc in recent months.

As Gunther Schuller writes in his astute notes, in Blake's music "the worlds of jazz, popular music, and advanced 'classical' music intersect, overlap, blend, and fuse in an unpredictable array of patterns. But what distinguishes Ran's music from most other attempts in the same direction is its integrity. It is not glib and superficial eclecticism." I would go farther. It is not even eclecticism any longer. For although all the elements Schuller cites (particularly jazz) are present in this recording, Blake has by now absorbed these intersecting influences and has created his own strongly distinctive style as pianist and composer. And he does remain, as Duke Ellington would put it, "beyond category."

For one thing, Blake's rhythm is open, changing within and between compositions according to the inner necessities of each work. He does not usually "swing," either in the accepted sense or in terms of the complicated implicit pulsations of avant-garde jazzmen. But there is a firm rhythmic structure in all his work, and the ways in which he phrases are often from within jazz. Blake is essentially an impressionist (Schuller mentions his "ear and feeling for the 'tone-poem genre'"), and the colors he uses for his delineations of moods and events are taken from a wide range of sources—from Ornette Coleman to Charles Ives to gospel music. But again, they are remixed into his own textural language, which is remarkably wide in range and inventive in detail.

Part of this piano album consists of Blake's re-composing of pieces by jazzmen Ornette Coleman and George Russell. In both cases, these tributes are decidedly personal extensions of the musical premises and moods of the originals. Also, in the standards he chooses, Blake so recasts the material as to provide entirely new perspectives on the songs—and this he does with a depth of sensitivity and a boldness of imagination that make his performance of them increasingly rewarding with each playing. Of his own originals, Eric is a powerful but not in the least orotund threnody for the late jazzman Eric
Dolphy. Sister Tee, dedicated to Eliza Carter of Sweet Daddy Grace's Church in Harlem, affectionately personalizes gospel music. And Birmingham, U.S.A. transforms social commentary into music that has its own reason for being.

I have no idea whether, economically, there is a place in today's music for so unique a phenomenon as Ran Blake. And I don't know how much this album will help him in terms of air play, for what would a disc jockey call it? But Ran Blake has accomplished this much, and it is a considerable achievement. In a time when "doing your own thing" often creates its own hierarchies of conformity, Ran Blake is still undeniably himself. Nat Hentoff

RAN BLAKE: Ran Blake Plays Solo Piano. Ran Blake (piano). Stratusphunk; There'll Be Some Changes Made; Good Mornin' Heartache; Lonely Woman; and six others. ESP-DISK® 1011 $1.98.

ENTERTAINMENT

A TREASURY OF HIGHLIGHTS FROM BROADWAY MUSICALS

CBS' two-disc survey of the American musical theater includes a volume of fact and reminiscence

There are few personalities in the musical theater more known or more knowledgeable than conductor Lehman Engel. In his introduction to the handsome hard-cover book which is one component of the CBS Legacy Collection album "The American Musical Theater," critic Brooks Atkinson recalls his "many memories of gazing at the back of Mr. Engel's head and seeing his white shirt cuffs giving the beat." Me too. And the sight of that round head in the spotlight, signalling a show orchestra's charge into the overture of some glittering musical, invariably holds out the promise of a beautifully organized, polished, and exhilarating performance from opening chord to final curtain. The same can be said of this book. It is put together more expertly, more informatively, more readable, and more entertainingly illustrated than any previous volume on the subject.

The chapter on the history of the American musical from the pastiches of the eighteenth century to the time of the "breakaway" from the influence of European operetta in the twentieth covers with clarity, dispatch, and the brisk Engelian beat a vast swamp of material in which pedants usually get completely bogged down. The accounts of the pendulum-swing from the ultra-romantic to the anti-romantic extremes on Broadway through the years are fascinating. And when Mr. Engel deals with the concrete problems of preparing the libretto, the lyrics, the music, and the actual production of some gargantuan Broadway blockbuster, he knows precisely whereof he speaks.

As for the album itself, though eccentric in some of its inclusions, it is a happy affair. In the space of two discs, and with all selections limited to the Columbia catalog, it can scarcely live up to its claim of being "a survey of America's unique contributions to the musical stage," but it adds up to an unusually rewarding try nevertheless. Opening with the scintillating overture to Candide under the baton of Samuel Krasilnikoff (not as brilliant as Leonard Bernstein's own recording of the same, but bright enough), it offers one highlight after another from the introductory chorus of Show Boat to the staggering first-act finale of West Side Story, with stops on the way including Greenwich Village (the Christopher Street chorus from Wonderful Town), the Brooklyn where the tree once grew (what a thrill to hear Shirley Booth again intoning the hilarious He Had Refinement), the Catskills Row of Porgy and Bess (two numbers), the rainy plains of Spain as celebrated by Rex Harrison and Julie Andrews, and lots more.

Everyone is bound to be disappointed at the absence of some personal favorites, as was this listener (I missed, for example, On the Town, Kiss Me, Kate, and On Your Toes, all of which, as it happens, are in the Columbia catalog). If there is a real fault to find, it is in the emphasis on sentimental solo ballads at the expense of the ensemble hi-jinks which preserve the comedy element in our musical comedies. Still, there are some—the hard-edged Gee, Officer Krupke vaudeville from West Side Story, for example, and the articulately inarticulate Conversation Piece from Wonderful Town. Even with this petty reservation, I'd have been happy to let "The American Musical Theater" go on for another four sides or more. Maybe, with all those additional original-cast albums and other musical-comedy treasures still in the vaults at Columbia, some day it will. Paul Kreisb

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BACH: Complete Organ Works, Volume One. Passacaglia and Fugue in C Minor (BWV 565); Fantasia and Fugue in G Minor (BWV 542); Fantasia and Fugue in C Minor (BWV 537); Toccata and Fugue in F Major (BWV 540); Toccata and Fugue in D Minor ("Dorius"); BWV 358; Toccata, Adagio, and Fugue in E Major (BWV 564); Trio Sonatas Nos. 1 in E-flat Major (BWV 525), 2 in C Minor (BWV 526), 3 in D Minor (BWV 527), and 4 in E Minor (BWV 528). Lionel Rogg (Silbernmann Organ at Arlesheim). Epic 3 BSC 166, LSC 6066 three discs $11.39.

Performance: Highly efficient but dramatically unpersuasive
Recording: Good
Stereo Quality: Satisfactory

This first volume of an intended integral set of Bach's organ music by the thirty-one-year-old Swiss organist Lionel Rogg contains some of the largest-scale works as well as the first four of the six trio sonatas. The performer, who has here embarked on his second complete Bach voyage (the first issued in Europe a few years ago was in mono only), is an extremely skilled player, facile in technique and obviously possessed of a considerable stylistic knowledge. His previous Bach issue as well as his newer Bach discs have elicited exceptionally favorable reviews, those of Marie-Claire Alain on Musical Heritage Society; Mr. Rogg clearly knows his materials (by that I mean both the music and the fine Silbernmann organ); he tends, however, to avoid dramatic expression, often running phrases together. He seems to eschew Bach's rhetoric, for instance, in the F Major Toccata, which he takes at a very quick pace and without building up a sense of harmonic tension or climax. He favors fairly heavy registration, not always to the best advantage—as, for instance, in the trio sonatas, which sound ponderous and weighty in spite of the brisk tempos. His preference for ornamentation stops, too, is not ideally served by the engineering, which tends to emphasize the upper partials at the expense of the fundamental (the tone a fifth higher than the main note is sometimes much too prominent to the ear). His most impressive playing can be heard in the Passacaglia and the famous D Minor Toccata and Fugue. It may well be, however, that others will find the playing throughout a far more impressive experience than I did. With the previous reservation noted, the recording is quite satisfactory, but there is some constriction in my stereo copy. Note that though this is a three-disc set, Epic is selling it for the price of two.

L. K.

ERNST HAEFFLIGER
A dramatic and sensitive Evangelist

BACH: St. Matthew Passion (complete). Ernst Haefliger (tenor), Evangelist; Walter Berry (bass), Jesus; Agnes Giebel (soprano); Margh Höffgen (contralto); John van Kesteren (tenor); Franz Crass and Leo Ketelaars (bass); Netherlands Radio Chorus; Boys Chorus of St. Willibrord's Church, Amsterdam; Concertgebouw Orchestra, Amsterdam, Eugen Jochum cond. Philips 3 PHS 4-999 four discs $25.16.

Performance: Revised traditional
Recording: Good
Stereo Quality: Fine

As a performance of a Bach Passion, this recording finds a middle ground between the fairly traditional (perhaps one should say "Romantic") manner of interpretation and the newer, more objective, "historically correct" style. Thus, there are places where the orchestral texture is extremely clear and lines are carefully delineated, and the harpsichord given a prominence seldom accorded it. When it comes to ornaments, or, for that matter, large choruses, the performance reverts to the older tradition (i.e., short appoggiaturas, opaque choir). So far as the general tone of the interpretation is concerned, almost the whole first half is for me frustratingly underplayed emotionally—the great passion of the opening chorus is quite glossed over, for example. With the Taeriae (the crowd choruses) things begin to get more exciting, but nowhere would I term this a Baroque performance in the proper, passionate sense of the term, in which one is gripped by the anguish not only of the story but of the setting—by Bach's incredible harmonic, melodic, and contrapuntal language. The vocalists, it must be said, are among the best one could hear in any Bach Passion today; particularly admirable is Ernst Haefliger, who as the Evangelist provides the drama, rhetoric, and sensitivity that conductor Jochum so often fails to supply. The chorus is competent, but too cool most of the time and lacking in bite. The recorded sound is satisfactory: smaller ensembles emerge with excellent clarity and balance, but larger ones are apt to be muddy, and there is some construction near the side ends. The album contains reproductions of thirteen Rembrandt drawings, and a German libretto with only a partial English synopsis.

L. K.

BARTOK: Contrasts; Suite, Op. 14; Sonata for Two Pianos and Percussion. Erzsébet Tusa (piano), Mihály Szűcs (violin), Bela Kovács (clarinet) in Contrasts; Erzsébet Tusa (piano) in Suite; Erzsébet Tusa and István Antal (pianos), Ferenc Pétz and Josef Merten (percussion) in Sonata. Qualiton 3 LPX 1280 $6.98.

Performance: A little tame, perhaps?
Recording: Good
Stereo Quality: Excellent

There are two reasons why this release doesn't make me happy, and these are simply its two biggest numbers. Bartók's Sonata for Two Pianos and Percussion, composed two years after completion of his masterpiece, Music for Strings, Percussion, and Celesta (1937), is a piece I've never understood his purpose in writing. The later work is more raw-boned and angular, and some think it braver than the earlier one. But it is conceptually so similar to the larger work that, forgetting harmonic "audacity," it has always seemed to me like a sketch for it or an unwitting success in lousing it up. Maybe I'd love the Sonata if its predecessor didn't exist; as it is, I listen and shrug.

Contrasts, written for Benny Goodman and Joseph Szőke in 1939, is an ugly piece. (I don't think I've ever used that adjective to
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(Continued on page 84)
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This twenty-sixth recorded performance of the Seventh Symphony to enter the current listings of the Schwann catalog is singular, if only because Leinsdorf alone, to my knowledge, observes all repeats indicated in the score. Thus the Symphony's customary thirty-five-minute span is stretched to forty-five. But Leinsdorf is canny in his handling of dynamic contrasts relative to the expanded proportions: by toning down the element of obsessive rhythmic pattern and stressing line and texture, he escapes the peril of the repeats becoming merely boring. Interesting too, if not wholly convincing, is his insistence on playing the two final notes of the slow movement's main theme as a true stacatto. The performance as a whole is indeed scrupulous—reasonably vital rhythmically, warmly lyrical, linearly transparent, and beautifully recorded. The Coriolan Overture performance that turns up as a filler (why couldn't it have been used as introduction?) gets a good, solid reading, but in my opinion could stand a more high-strung treatment of the opening section.

D. H.

RECORDING OF SPECIAL MERIT


BRAHMS: Magelone Songs, Op. 33, Jakob Stämpfli (bass), Martin Galling (piano). Turnabout ® TV 34176, $2.50.

Performance: Haefliger has the edge
Recording: Epic is better defined
Stereo Quality: Both good

The Magelone Songs were inspired by Schubert's Magelone, a poetic tale by Ludwig Tieck, based in turn on a Provençal legend. Tieck was a thoroughgoing Romantic whose influence on the German artists of his time was considerable. It is easy to understand the young Brahms' attraction to these poems, for which he provided elaborate musical settings of great variety. At least half of the fifteen songs are on a par with his best lyrical inspirations, and the entire sequence is quite captivating as a result of the constant changes in mood and atmosphere and of the effectiveness of the piano writing. It is good to have these two versions in the catalog to fill the gap occasioned by the deletion of Dietrich Fischer-Dieskau's outstanding interpretation (Decca DL 9401).

By an interesting coincidence, both singers on the current discs are Swiss artists. If my preference leans toward Haefliger, it is partly because the music seems to suit his high voice better. Stämpfli, who has some impressive Bach recordings to his credit, is a bass-baritone. Though his approach is not top-heavy and he is, in fact, a steadier vocalist than Haefliger, with a more assured command of the dramatic and declamatory passages, Haefliger is the more seasoned lieder interpreter: his delivery is more pointed and malleable. Furthermore, his mid-range is quite beautiful, and he can spin out exquisite legato phrases in such melting songs as "Sind es Schmerzen, sind es Freuden" (No. 3). Thus, even allowing for some strained top notes and an occasional waver on sustained notes, the overall effect of Haefliger's performance is superior to Stämpfli's dependable but rather uneventful singing. Both pianists do well in their virtuosic parts.

Despite the fact that the Turnabout disc offers more pronounced stereo separation (not absolutely essential for lieder), the balances seem more just, the overall sound better clarified on Epic. Both discs, however, are well engineered.

The full German texts and sketchy English summations are provided on the Turnabout jacket. Epic supplies helpful annotations and a statement that there are "complete German and English texts enclosed." This unfortunately was not the case with the review copy.

G. J.

American Composers Series:

WALLINGFORD RIEGGER

by Richard Franko Goldman

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Performance: Disappointing
Recording: Not opt
Stereo Quality: Resonant

The Brahms Serenades can use recorded attention as much as any good-sized works by a major composer (but the Second even more than the First). And the much-heralded Chamber Symphony of Philadelphia under Brusilow, the former concertmaster of the Philadelphia Orchestra, gives every promise of being a first-class organization and making a major contribution to American musical life. And yet it all doesn't quite work here.

The basic error is elementary and unfortunate. After all the liner-note talk about the Chamber Orchestra, how the Brahms was originally a chamber work, and so forth, what is actually heard on this disc is a huge symphonic production with an orchestra that... (Continued on page 86)
A FLEXIBLE PREAMPLIFIER

At one time, the function of a preamplifier was simply to increase the level of a signal. Then, as the art of sound reproduction has become more sophisticated, additional functions have been added. First came tone controls, then equalization, filtering, tape monitoring, blending, and so on.

What was once a simple amplifying circuit and a volume control is now a control center, handling a variety of sources with input signals ranging from a few millivolts to several volts (a range of 1000 to 1), and which must impress special response characteristics on some of these signals. Requirements for distortion now are far more stringent than in the past. Distortion levels which were once significant laboratory achievements are now common in commercial equipment.

The resultant increase in complexity of the preamplifier has caused some confusion. The knobs and switches which the audio hobbyist considers mandatory for proper reproduction bewilder and dismay family and friends.

The Dynaco PAT-4 is a preamplifier which simplifies operation so that the basic functions are readily utilized by the uninitiated. The illuminated power switch tells you the system is on—and transistors eliminate any waiting. The two large knobs are the primary controls—one selects all sources (including the tape recorder) and the other adjusts the volume. [A third similar knob on the companion stereo Dynatuner completes the radio controls.] The smaller knobs and remaining switches contribute the complete versatility and unlimited flexibility so much appreciated by the enthusiast.

A separate front panel input lets you plug in a tape recorder, or an electronic musical instrument. Its special design even makes it possible to mix a guitar, for example, with a microphone, records, or radio. There's a 600 ohm output on the front panel, too, which enables easy connection of a recorder, and has sufficient power to drive medium impedance headphones without the need for a power amplifier.

You may save a power amplifier in another way, too. If you need a remote speaker system, or a center or third stereo channel, the PAT-4's exclusive "blended-mono" mode is all set to provide this from your regular stereo amplifier, where other preamps having center channel outputs require an additional power amplifier.

A sharp 3-position high frequency filter cuts the scratch with minimal effect on the music, and there's a low frequency filter, too. The "Special" low level input can provide for a second phonograph input, or for a special equalization position when you want to listen to older discs. Dynaco's patented "X" type tone controls provide smooth continuous tonal adjustments with the precise "center-off" assurance of step-type controls, without the complication of separate switches.

The overall quality of parts, ease of construction for the kit builder, accessibility for service, and audio performance are in the Dynaco tradition of acceptability to the perfectionist. On every performance count, the PAT-4 is exceptional. Noise and distortion are almost non-existent. Equalization is precise. Frequency response is superb, resulting in outstanding square wave and transient characteristics. There is not a trace of so-called "transistor sound". And finally, there's the undeniable virtue of complete independence from the power amplifier, so that you can choose the power, price, and tube or transistor design as your requirements dictate.

The PAT-4 is of the quality standard set by the world-famous PAS-3X. That preamplifier has been widely accepted and acclaimed for many years as the finest quality and reasonably priced. How does the PAT-4 compare with the PAS-3X? Well, the quality of both is fully comparable. It is doubtful that it would be possible to hear any difference between them on careful listening tests. The PAT-4 does have some extra features which justify its slightly higher cost for many users.

The PAT-4 is very much in demand, and it will be many months before it is in ready supply. If you are willing to forego its extreme flexibility, the PAS-3X will match its quality, with the added virtues of economy and availability. If you want the ultimate in flexibility along with quality, please wait for the PAT-4. It is worth waiting for.

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MARCH 1968

IN EUROPE WRITE: DYNACO A/S, HUMLUM, STRUER, DENMARK
sounds slightly short on its string complement. The effect is like that of certain older studio recordings in which the string complement was kept down as an economy measure. And the recording itself doesn’t help. By producing a souped-up sound (resonant, but without much feeling of depth or vitality) RCA Victor only serves to point up the discrepancy between the promise and the delivery. For example, one of the joys of the chamber orchestra, particularly in a ‘neoclassical’ work like this one, is that the winds’ pristine colors can ride over, or through the strings. But the sound and ensemble here have been gunked up so much that such advantages are lost.

Some may think I’m being too hard on a group which has admittedly been formed by some of the finest instrumental talent in the country, and with the highest artistic aims. But this is just the reason I feel I must be severe. If a project like this is to survive, it must seek out its proper means of expression and find its own individuality. Natural talent and great sight-reading ability are not enough; it’s going to take a lot of reflection and even more hard work. End of lecture.

E.S.

**RECORDINGS OF SPECIAL MERIT**

**BRAHMS: Sonata for Two Pianos, in F Minor, Op. 34a. MARIE-JOSE BILLARD and JULIEN AZAIS (pianos). WORLD SERIES 3 PHC 9067 $2.50.**

**BRUCKNER: Symphony No. 8, in C Minor, Op. 66. LONDON 5 CS 6533, CM 9533 $5.79.**

Performance: Both good

Recording: Both good in different ways

Stereo Quality: London’s more effective

Until now, the only recording of the two-piano version Brahms made of his F Minor Piano Quintet was an ancient mono disc on the West-Coast Educo label. Now we have two stereo disc versions of high excellence, from World Series and London, respectively. Though the full-price London disc offers the glittering Saint-Saëns Beethoven Variations as a bonus, the WS, at $2.50, represents a first-rate bargain on all counts; and I rather favor WS’s somewhat more distant microphone pick-up, with its greater feeling of room tone, over London’s rather close miking, even with its fuller tone and more pronounced stereo differentiation between the two pianos.

The Eden and Tamir performance is a shade more taut than that of the Billard-Azais team, which seems a bit more romantically free-wheeling. Choice here is essentially a matter of taste, pocketbook, and a liking for Saint-Saëns. Personally, I find the WS treatment more my dish of tea on all counts, musically and sonically speaking.

It is, I am told, I found listening to this music in its two-piano form a singularly absorbing and exciting experience, with the heaven-storming Scherzo especially effective as a two-piano piece. I can hardly blame Brahms for reminding his publisher not to allow the two-piano version of his Op. 34 to suffer neglect. In short, I urge purchase of one of these discs whether or not you happen to own the two-stereo disc versions of high excellence, the West-Coast Educo label. Now we have two stereo disc versions of high excellence, from World Series and London, respectively. Though the full-price London disc offers the glittering Saint-Saëns Beethoven Variations as a bonus, the WS, at $2.50, represents a first-rate bargain on all counts; and I rather favor WS’s somewhat more distant microphone pick-up, with its greater feeling of room tone, over London’s rather close miking, even with its fuller tone and more pronounced stereo differentiation between the two pianos.

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In reviewing the Angel recording of the Bruckner Eighth Symphony with the late Carl Schuricht and the Vienna Philharmonic about two years ago (February, 1966) in HIFI/STEREO REVIEW, I said that this colossus among Bruckner symphonies ‘takes a conductor gifted with an unerring sense of proportion and pacing, as well as an orchestra with unlimited stamina and lung power, to give convincing realization to its now apocalyptic, now darkly brooding utterance.’

I complained that Schuricht met all the qualifications, as did his orchestra, but that they were betrayed by the recording. Now we have the redoubtable Georg Solti and the Vienna Philharmonic, plus London’s recording of the stormy and apocalyptic Dolly noise-reduction system. The recorded sound beggars description in its realism. The dynamic range is breathtaking, the stereo localization unerringly effective. However, I find Solti—at least in the intensely dramatic first movement—unable to bring to life in his Op. 34 to suffer neglect. In short, I urge purchase of one of these discs whether or not you happen to own the music in its quintet form.

**D. H.**


Performance: Intense

Recording: Superb

Stereo Quality: Brilliantly effective

In reviewing the Angel recording of the Bruckner Eighth Symphony with the late Carl Schuricht and the Vienna Philharmonic about two years ago (February, 1966) in HIFI/STEREO REVIEW, I said that this colossus among Bruckner symphonies ‘takes a conductor gifted with an unerring sense of proportion and pacing, as well as an orchestra with unlimited stamina and lung power, to give convincing realization to its now apocalyptic, now darkly brooding utterance.’

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HINZE: The Young Lord (see Best of the Month, page 75)
(Continued on page 94)
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CHARLES IVES: String Quartets, Nos. 1 and 2. The Juilliard Quartet. COLUMBIA ® MS 7027, ® ML 6427 $5.79.

Performance: Probing Recording: Excellent Stereo Quality: Excellent

While I imagine certain spokespersons for the Ives cult will find these performances by the Juilliard Quartet too precise and measured, the record nonetheless gets my particular vote just about all the way. As a matter of fact, these performances of the Second Quartet No. 2... most of it is Ives' private comments, jottings on the manuscript meant only for himself," while Fox's annotator for the Kohn String Quartet's coupling obviously thinks otherwise: "At the beginning of the Ms. Ives has indicated the programmatic content of the Quartet..."

Thus, one considers again the problem of "program" music in Ives. And the Juilliard Quartet's performance of the early First Quartet (1896) is something of a revelation. Ordinarily, the piece sounds like a gauche put-on of academicism any more than that the quotations seem somehow inserted as private jokes, very much as a playwright might use them—soundg neither foolish nor clumsy. Resultantly, an inserted moment of academic lyricism can sound surprisingly earnest and elegant, whereas the usual miscalculation of emphasis on either musical extreme makes the music seem either ineffectively cheeky or sentimental.

Less revealingly, perhaps, in the more complex music, a mysterious, opaque textural conception of the Second Quartet (1907-1913), allusions to Dixie and Marching Through Georgia again seem full of private (as opposed to programmatic) meaning in an anguish-stricken, desperate way. So, who is to say that the quotations in the earlier quartet are a put-on of academicism any more than that those of the latter are a put-on of the work's more personal overall context?

The Juilliard's performances, as I have suggested, may seem rather on the refined side to some, myself find reason to question the diligent attention paid to the inner-voice complexities of the Second. I'm not sure they were ever meant to be that important as musical line. Nevertheless, these are the most absorbing performances of the two quartets by Ives that I have ever heard.

I love Columbia's cover, by the way. The celebrated photograph of Ives, Mona Lisa smile and all, appears wraithlike through a half-cover slice of his notoriously indecipherable musical penmanship. "Figure that out, if you will," the smile seems to say. Recorded sound is first-rate.

JANÁČEK: The Makropulos Case. Libuše Prylová (soprano), Emilia Marty; Ivo Zídek (tenor), Albert Gregor; Rudolf Vouněc (tenor), Vítěz; Přemysl Kočí (baritone), Jaroslav Prus; Viktor Kočí (tenor), Janek; Karel Berman (baritone), Dr. Kolenatý; Helena Tattermuschová (soprano), Krasina; others. The Prague National Chorus and Orchestra, Bohumil Gregor cond. EPIC ® B2C 167, ® L2C 6067® two discs $11.59.

Performance: Well-paced, authentic Recording: Excellent Stereo Quality: Excellent

The Makropulos Case, Leos Janáček's ultimate opera, was first presented in 1925, which makes it contemporaneous with Berg's Wozzeck and Puccini's Turandot. This, however, is mere coincidence, for the three operas have virtually nothing in common. Janáček respected both Berg and Puccini, but went his own way. There were influences on his art (Moussorgsky, for one), but his entire operatic activity was dedicated to one obsessive goal: to find a musical equivalent of Czech speech patterns and rhythms. Born of such an intensely nationalistic principle—that not always nationalistic in subject matter—the Janáček operas are not easily exportable. And yet they seem to be gaining international ground, as recent American stagings and concert performances of Jenufa, Kata Kabanova, and The Makropulos Case attest.

Opera's time-honored alibi does not apply to The Makropulos Case; it has an absorbing libretto drawn by Janáček himself from Karel Capek's play. The action takes place in the "present" (around 1920), and it revolves around a hundred-year lawsuit involving valuable properties. The case is about to be brought to its long-awaited conclusion when the appearance of a mysterious woman, a life-prolonging experiment, has been kept alive for more than three hundred years. Capek's play (and the opera's libretto) weaves this supernatural element into the present with extraordinary skill; it is a realistic drama with pointed characterizations, revealing a bitter, dejected view of mankind.

So much for the drama. About the music, I have ambivalent feelings. Janáček's vocal writing has an absolute naturalness about it, this is not speechstimme in a Berg sense, for the pitches are sung in the normal manner and the voices are kept in their natural registers; the ear therefore adjusts to their speech-like patterns with relative ease. And underneath the vocal line there is a busy, endlessly inventive orchestral commentary. Given these elements, plus the absorbing, fast-moving story (with the aid of the printed text), the opera unquestionably holds one's interest. Whether it will prove more rewarding on repeated listening, I am not yet prepared to say.

I go along with annotator Robert T. Jones' observation that Janáček's unique style "demands a talent for listening and a quick ear," but I cannot accept his likening Janáček's technique to the Verdi of Falstaff, compared to Falstaff, in which arias, ensembles, parlando episodes, and quicksilver inspirations follow one another in a stunning profusion of wit and pure sunlight, Janáček offers a wide variety of brilliantly orchestrated color.

The fascinating role of Emilia Marty, the opera singer, calls for the gifts of a Maria Callas or at least a Marie Collier (who sang the role in London recently). Miss Prylová may be in their class as an actress, but vocally she is quite suitable for the role. The vocal gifts revealed here are all rather modest, but the entire cast performs with dramatic strength and utter conviction, particularly Milan Karpíšek in the brilliantly characterized role of a feeble-minded ancient, one of the durable Miss Marty's many lovers. The performance shows all the earmarks of an exceptional ensemble effort, led with precision and constant animation. Technically, the recording is absolutely first-rate.

Despite my less than enthusiastic response to Janáček's idiom, I urge listeners to hear this work and draw their own conclusions. Like Béla Bartòk, Janáček broke his own paths. He was lonely and unfashionable, he founded no school, and it is not likely that he will ever become a popular fad. But his music is substantial, and it is recognizably his own.

G. J.

KABALEVSKY: Requiem. Valentina Levko (contralto); Vladimir Valatis (baritone); Moscow Chorus and Children's Chorus of the Art Institute; Moscow Philharmonic Symphony Orchestra, Dmitri Kabalevsky cond. MELODY/A'THREL ® SRB 4101 two discs $11.58, ® RB 4101 $9.58.

Performance: Authentic Recording: Attractive Stereo Quality: Lush

This is a Russian "War Requiem," a requiem for the dead of the last war and a plea for peace. It is an entirely traditional work, simpler and more traditional than, say, Boris Godunov. Much of it—leaving out the noisier orchestral ostinato tutti—might have been written by some Russian late Romantic with a turn for a Russian hymn and folk idiom tempered by an Italianate melodramatic flair. At least most of the usual bombast that Soviet symphonic composers tend to produce for occasions like this is missing; the piece has a certain conviction. The plaintive, wailing quality of a great deal of the melodic material is overdone, but there are things that are genuinely affecting; the song addressed to a tomb.

(Continued on page 96)
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With these releases we now have four currently available versions of Mahler's Third, and we shall hear undoubtedly from both Georg Solti on London and Otto Klemperer on Angel within the near future. Meanwhile, the two performances under consideration here stand at a considerable remove from both the free-wheeling emotionalism of Bernstein (Columbia) and the expansive lyricism of Haitink (Philips).

Certainly Leinsdorf conveys in his reading little of Bernstein's intense commitment, let alone rhythmic urgency, while the wonderful slow finales gets a decidedly cool and brisk treatment—fully five minutes faster than Bernstein's. The two short vocal movements come off well enough, thanks in large measure to Shirley Verrett's expressive singing of the Zarahtustra Midnight Song text. The recorded sound is spacious, yet finely detailed—decidedly more clean and transparent in texture than either Columbia's or Philips'.

Rafael Kubelik seems to be trying for a middle course between Leinsdorf's discipline and the expressive emphasis of Haitink and Bernstein. He does not linger, but he does let the music breathe naturally. Though his finale is less than a minute longer than Leinsdorf's, it has more heart and intensity. Rafael Kubelik seems to be trying for a middle course between Leinsdorf's discipline and the expressive emphasis of Haitink and Bernstein. He does not linger, but he does let the music breathe naturally. Though his finale is less than a minute longer than Leinsdorf's, it has more heart and intensity. Rafael Kubelik seems to be trying for a middle course between Leinsdorf's discipline and the expressive emphasis of Haitink and Bernstein. He does not linger, but he does let the music breathe naturally. Though his finale is less than a minute longer than Leinsdorf's, it has more heart and intensity.
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The recorded sound DG has accorded Kubelik seems of the close-up, multi-miked type, which emphasizes stereo localization and brings out a wealth of details as well, especially in the lower orchestral registers. Indeed, the bass impact in the climactic moments of the Kubelik album is so substantial that some tone-control adjustment may be necessary. Special honors in the Kubelik performance go to the solo trombonist in the first movement and to the posthorn soloist in the third movement (although it is not indicated on the labels of the test pressings received for review, I suspect that a real posthorn is used here rather than the trumpet employed in most other recordings).

Taking the four presently available recorded performances as a group, I find no single clear-cut choice. I would prefer to own both the Bernstein and Haitink readings, with Kubelik as an alternate for those times when Bernstein Messiaen's music, and I have not suddenly changed my mind about it. But I think I can fairly give this recording the "special merit" label in view of the importance of the composer's work, the special significance of the work space, the perspicacious advocacy of the composer's wife (Yvonne Loriod) and his pupil (Pierre Boulez) in putting this music across.

And I await the Resurrection of the Dead was commissioned by André Malraux (i.e., the French state) and first performed at the Sainte-Chapelle in Paris and in Char- tres, the latter performance in the presence of President de Gaulle. The work, which is expressly intended for performance in vast spaces, is scored for a large orchestra of winds, brass, and percussion all laid out in great sonorous blocks of sound that resonate and ring like solemn warnings of the apocalypse. Messiaen makes no secret about his mystical pretensions in the symbolism of each grand gesture—a giant J. Arthur Rank gong or a woodwind cluster based on real bird calls or a dissonant brass chorale or a superimposition of all three, built in great, slow, sonorous cycles up to tremendous climaxes. This music is at once too simple, too rhetorical, and too blatant about its mystical pretensions for me to be entirely convinced, but it does have scope and grandeur.

The Colors of the Celestial City is a more immediately attractive work in its far greater variety and better sense of scale and proportion. The work, scored for piano, winds, and percussion, was first performed in 1964 in Donaueschingen, W. Germany, and later that year in Brussels and Paris, each time with Pierre Boulez and Loriod. It is, in its way, an effective work which synthesizes—in about twenty minutes' length—an almost incredible number of disparate elements: medieval plainsong, Greek and Hindu rhythmic patterns, generative and manipulational patterns, various types of percussive and cluster timbres. Like all of Messiaen's later work, it is an essentially static piece built up in great blocks of sonority (very much in the manner of Varèse, whom Messiaen has certainly influenced).

I happen—by coincidence—to have been present at all of the above-mentioned "live" performances of the work and, having now heard it a couple of additional times, on record. I must say that it does not grow in stature on repeated hearings. This music makes its maximum effect the first time—and this can be a genuine and moving effect. But either you dig it or you don't; either you're willing to be taken along on a Messiaen mystical tour or the music seems to fall apart into its primitive building blocks of sound. There are no great hidden subtleties beneath the sonorous surface.

Mme. Messiaen gives a first-class performance of the solo in the Conleurs and the excellent Strasbourg group and Paris musicians of the Domaine Musical give a superb performance under Boulez's direction. The sound is ideal for this sort of thing. It is clear and controlled, yet it has enough depth and richness. With all my own reservations about this music, I still recommend it for the "well-read" music lover—for anyone who wants to be literate about a certain essential aspect of contemporary music and who wants to undergo a certain kind of experience that is undoubtedly remarkable and possibly even unique.

E. S.

MOZART: Quartet No. 1, in G Minor, for Piano and Strings (K. 448); Quartet No. 2, in E-flat Major, for Piano and Strings (K. 421), Yvonne Loriod (piano), members of the Budapest String Quartet, ODYSSEY 521 16 0139 $2.49.

Performance: Dry
Recording: Vintage 1946

This Odyssey reissue of Mozart chamber music performed by members of the Budapest Quartet, with George Szell playing the piano, was originally recorded by Columbia in 1946. For all its virtues, it is more interesting in its reminiscence of how our notion of Mozart performance has changed over the last twenty years than it is as performance itself.

Oddly enough, the tone of a quotation from the Sunday Review featured on the sleeve of Odyssey's release (presumably excerpted from a newspaper article of the release of these performances) inadvertently illustrates my point: "Conductor Szell is a first-rate Mozart player, accurate, musical, without ostentation...." And indeed, the playing is "accurate, musical, without ostentation." But it is also Mozart-playing of the computer-precise, rigid, "classical" school that today is outmoded, if not in a state of disrepeute. Mozart's "classical perfection," we realize.

(Continued on page 100)
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The engineering is clean and intimate-sounding. Conductor Vaughan maintains clear textures and a line generally in keeping with orchestral playing. His pacing seems deliberate and somewhat lacking in bite, though I doubt that even his erstwhile mentor, Sir Thomas Beecham, could have succeeded in energizing this relatively pallid opera. It is simply not top-drawer Mozart. Not that 1775 was an off-year for him—let us remember the five violin concertos! It must have been that Archduke, . . .

G. J.

RECORDINGS OF SPECIAL MERIT


Performance: To the manner born
Recording: Good
Stereo Quality: Good enough

The eighty-seven pieces contained in these two Vox Boxes represent the complete solo-piano output of Serge Prokofiev, exclusive of transcriptions of works composed originally for other media. What with a consistently high level of performance and interpretation, good (if not spectacular) recorded sound, and attractive prices, György Sándor and the Vox production staff have made a major contribution to the documentation of twentieth-century keyboard music. Special thanks are due the excellent and highly informative program notes by Contributing Editor Eric Salzman, a composer and historian-analyst of contemporary music.

It is fitting that the Budapest-born Mr. Sándor, heretofore associated—in recorded performance, at least—with the music of Liszt and Bartók, should have undertaken the Prokofiev project. For Prokofiev, both as composer-virtuoso and as gladly creative innovator, had much in common with the earlier Hungarian master as well as with Bartók, who was ten years his senior. I was struck, for example, by similarities between Prokofiev's Suggestion diabolique from Op. 4 and the more demonic virtuoso essays of Liszt, and by those between the Toccata, Op. 11, and Bartók's Allegro barbaro, composed within a year of each other.

The fierce motoric energy of Prokofiev's earlier 'football music' (as Nicolas Slonimsky was wont to term the more athletic pieces) is by no means the whole story of his piano style. The Visions fugitives of 1915-1917 are spellbindingly poetic, far removed from the style mécanique which the critics of the 1920's tried to pin on the young Prokofiev in the course of his petrifications through Europe and the U.S. The polarities of the poetic and the athletic Prokofiev are perhaps most tellingly united in the one-movement Third Sonata (1917), and are very much in evidence too in the fierce outer movements of the Sonata No. 7 and its Schumannesque slow movement. Mr. Salzman may have captured the music of the Eighth and Ninth Sonatas with the mature Schubert masterpieces in the same form.

Save for the terrific rhythmic verve of his fast pieces, it is hard for me to pin down specifically Russian characteristics in Prokofiev's piano music, any more than I can with that of Scriabin. It is enough to say that the composer's hallmarks is plainly present on all that comes after the derivative Op. 1 Sonata. All in all, Prokofiev's piano music represents the most substantial contribution to the keyboard repertoire, only Bartók's excepted, since Debussy.

The dominating characteristics of György Sándor's recorded performances are firmness of rhythmic control and very clean articulation of passage-work and figuration, with a surprising finesse for the lyrical and coloristic elements in the smaller pieces. It is quite true that Sviatoslav Richter can go Sándor one better in subtlety of nuance, as in his DGG recording of the Eighth Sonata, and Horowitz's old RCA Victor mono version of the Seventh is unchallenged by Sándor, but the fact remains that these Vox albums are a very solid musical achievement on all counts. The piano is recorded with fairly close microphone placement, producing the sound of a smallish living room rather than a concert hall; but in these terms the result is entirely satisfactory.

D. H.

RACHMANINOFF: Isle of the Dead (see SRIABIN)

RECORDING OF SPECIAL MERIT

ROSSINI: La cambiale di matrimonio. Renato Scotto (soprano), Fanny; Renato Capucci (bass), Slook; Mario Petri (bass), Norton; Roland Parigi (baritone), Tod Mili; Nicola Monti (tenor), Edouard Milfort; Giovanni Fioroni (mezzo-soprano), Clarina. Virtuosi di Roma, Renato Fasano cond. Everett # S 416-2, # 416-2* two discs $5.96.

Performance: Delightful
Recording: Very good
Stereo Quality: Very good

I gave a glowing review to this version of Rossini's first opera when it originally appeared on Mercury (July, 1961) and, on the occasion of this reissue, I am happy to reiterate my praise. The opera itself is an absolute charmer: the expected buffo ingredients are enlivened by the zesty character of Mr. Slook, who reflects the European version of 1810 of the Ugly American. He is all business, lacking entirely in savoir faire, carrying on with a bull-in-the-china-shop directness, but finally emerging as a man of wit, generosity, and courage in a world that regards him with suspicion. Rossini's treatment of this one-actor is compact, quick-moving, full of bubbly melodies. La cambiale di matrimonio is the work of an eighteen-year-old conservatory student, but its quicksilver quality is not far removed from Il barbiere di Siviglia, which Rossini wrote at the ripe old age of twenty-four.

The cast is virtually perfect. Renata Scotto portrays an unwilling mail-order bride winningly, showing the signs of what has since (Continued on page 104).
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developed into subtle artistry, Renato Capaci's characterization of Mr. Slook could hardly be better; his stuffy English adver-
sary is portrayed by Rolando Panerati with ample vocal resource and great vitality.

The orchestral tone of the Virtuosi di Roma is lustrous and exquisitely polished. The engineering brings the voices into clear prominence, and surrounds the proceedings with considerable hall echo. In all, a won-
derful package.

G. J.

SAINT-SAÉNS: Variations on a Theme of Beethoven (see BRAHMS, Sonata)

RECORDINGS OF SPECIAL MERIT


Los Angeles Philharmonic Orchestra, Zubin Mehta cond. LONDON 3 CS 6552, ® CM 9525® $5.79.

SCHUMANN: Poem of Ecstasy, Op. 54, RACHMANNINOFF: The Isle of the Dead, Op. 29. USSR Symphony Orchestra, Yev-
geny Svetlanov cond. MELODIYA/ANGEL ® SR 40019 $5.79.

Performance: Mehta first-rate; Svetlanov for Rachmaninoff

Stereo Quality: London A-1

The "Special Merit" designation applies here most especially to Zubin Mehta's per-
formances of Schumann and Schoenberg, which mark London's very auspicious return

to the domestic American recording scene after a lapse of more than a dozen years.

The hectic and sensual idiom of Schumann has never been precisely my dish of tea

Russian or otherwise—but Mehta, his fine Los Angeles players, and the London record-
ing staff do more to make this 1980 score palatable than any aggregation I have heard,

not excepting Pierre Monteux and the Boston Symphony Orchestra more than a de-

cade ago. Even the organ called for in Schumann's original scoring is brought into

the tonal picture tellingly by Mehta.

The combination of passion and superb control of tempo, dynamics, and ensemble

also lends to Mehta's reading of Schoenberg's post-Tristan sextet Verklärte Nacht (in the

composer's 1943 string-orchestra version) a

freshly and honest impact.

The London sonics contribute mightily to the effect of the whole in both Schubert and

Schoenberg. Microphoning is fairly close-up, but not uncomfortably so; stereo localization

is precise, but not exaggerated. The combined sense of instrumental presence and acous-
tic integration of the whole ensemble, how-

ever, is for me the most spectacular aspect of this recording.

Although Yevgeny Svetlanov's reading (and the recording, too) of the Poem of

Ecstasy may sound painfully raw and vulgar alongside the Zubin Mehta production, he
does deserve a loud huzzah for his impar-
sioned and highly dramatic treatment of

Rachmaninoff's Isle of the Dead, a work for

which I have always had something of a

weakness. I was sorry to see the excellent

Reiner-Chicago Symphony version deleted by

Victor some years ago, but the Melodiya/An-
gel issue is a lovely replacement. D. H.

SHOSTAKOVICH: Symphony No. 13, Vitaly Gromadsky (bass); Moscow Philharmonic Orchestra and Male Chorus, Kiril Kondrashin cond. EVEREST 3 3181, ® 5181

$4.98.

Performance: Moscow, 1965, "live"

Recording: Surprisingly good

Stereo Quality: "Electronically enhanced"

I'd not gotten far into this "first" recording of Shostakovich's Symphony No. 13 before it seemed to me that, although I'd certainly never knowingly heard the work, I had some-

how just finished listening to it. A few weeks or months ago—something like that.

When I began to realize that it is less a symphony than a cantata, and that its texts

are by Yevtushenko, it suddenly struck me that it sounded exactly like a piece I had

been listening to recently and had re-

viewed for this magazine, The Execution of

Stepan Razin. Like Razin, the Symphony is a manifestation of the "new" Shostakovich.

As legend has it, Shostakovich has been slapped down, embarrassed, and re-embraced by Soviet authority so often that the count is hard to keep. In 1961, during the liberalized post-Stalin era, his much-hated Fourth Symphony (1936) was finally trotted out with great success. Elsewhere in the Soviet

Union, the young poet Yevtushenko was jab-

bing away at Stalinist-era abuses with a dar-

ning lack of restraint. Soviet-Russian anti-Sem-

itism was one of his pet peeves, and the first

movement of Shostakovich's Thirteenth, Babi Yar, is a laceratingly blunt attack on it.

It was evidently too much even for jolly

Krushchev, and, after a successful but omi-

nous premiere in 1962, the Symphony was banned. With some textual revision, it

popped up again in 1963. It disappeared and

returned in 1965, since which time, accord-

ing to Everest's annotator, the work has gone back underground.

Altogether, it seems to me much ado about

not much. For musically propagandized social commentary doesn't make the music itself more enlightened or advanced, even if the social content is. To be sure, it's not the feebly

stuff Shostakovich was gingerly putting out during the Fifties; but, like Razin, it's

infinitely back-to-Moussorgsky. (It may be

better, but it's still back.) But while Ra-

zin's text, also by Yevtushenko, seems to have inspired an unsubtle but assault-

ing, grim, and not easily forgotten power, the

Thirteenth Symphony uses similar musical devices to less telling or pointed dramatic ef-

fect. Its movements want textual and rhyth-

mic contrast, emphasis, musical direction; the

piece seems constantly on the brink of mak-

ing a great howl about something—and nev-
er getting it out.

The recording, taped at a live perform-

ance in Moscow in 1965, gives proof that

Moscowites tough as much as we do here. Otherwise, the sound isn't bad; the perfor-

mance seems effectively authentic, if less

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CIRCLE NO. 50 ON READER SERVICE CARD

Here is a performance of the Sibelius Violin Concerto that is poles apart from the recent issues by Perlman and Leinsdorf for RCA Victor or Ferras and Karajan on DGG. Oistrakh and Rozhdestvensky set out to make a really epic work of the Sibelius Violin Concerto. The big—and I mean big!—USSR recorded sound, splendidly bright and reverberant, adds to the stunning effect. Oistrakh is absolutely brilliant in this grandly extrovert treatment, and Rozhdestvensky is behind him all the way. The violinist makes beautiful and exciting things, too, of the not inconsiderable Humoresques, composed more than a decade after the Concerto. D. H.

STRAUSS: Der Rosenkavalier—excerpts

(see Best of the Month, page 76)

STRAVINSKY: Orpheus; Symphony in Three Movements. London Symphony Orchestra, Colin Davis cond. PHILIPS ® PHS 900153 $5.79.

Performance: Good
Recording: Resonant
Stereo Quality: Deep

Until Stravinsky made his own recording, Orpheus was notable in the catalog for its absence. The score is still a rarity, in spite of the fact that it represents (along with the later Agon) a high point of the Stravinsky-Balanchine collaboration, and it is, in its own right, one of Stravinsky’s most remarkable scores. Written in 1947, Orpheus is (as Bernard Jacobson rightly points out in his liner notes) astonishingly close in texture and expression to his spare, late serial works; in fact, in spite of its obvious references to the past (i.e., the Baroquey duet for two oboes and harp that accompanies Orpheus’ Air de Danse), it hardly seems like a neo-classic work at all.

This is a low-keyed performance of a work that is itself a kind of epitome of understatement and quiet, spare beauty. Despite a certain languard beauty here, I miss the sense of tension, of urgency and foreboding that Stravinsky’s own reading suggests. The performance of the Symphony in Three Movements—another of the late neo-classical works written in Hollywood toward the end of the war, and one of Stravinsky’s most solid large symphonic pieces—has more strength. In fact, it is neatly played and has both clarity and zip; here Davis has imparted some of that nervous edge which is so important in much of Stravinsky’s work. But the recorded sound does him in. The rather distant placement of the orchestra, with a halo of resonance, is short on upper partials; thus the timbre lacks the very brilliant cutting edge which is in fact just what this music needs. Too bad: wonderful music, an excellent conductor, and a good orchestra—but the results just don’t measure up.

E. S.


Performance: Adequate
Recording: A bit brassy
Stereo Quality: All right

George Templeton Strong (1856-1948), an almost forgotten contemporary of Edward MacDowell, was a close friend of the (Continued on page 108)
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CIRCLE NO. 92 ON READER SERVICE CARD

MARCH 1968
younger composer during his days in Wiesbaden, Germany. Born the son of a prominent New York lawyer and long-time Philharmonic Society president (whose diaries, published a few years ago, give an extraordinarily vivid picture of New York social and cultural life a century ago), Strong Jr. was initially trained by his intensely musical parents, then went to Leipzig, after which he became closely associated with the Extat circle at Weimar. A few years after MacDowell’s return to America, Strong followed in 1891, but a brief spell of teaching at the New England Conservatory was enough to send him back to Europe. He settled in Switzerland for the rest of his long life, winning some small fame as a water colorist in addition to his reputation as a composer in the post-Lisztian manner. His three symphonies all bear programmatic titles, but have remained virtually unknown since their early performances before the turn of the century. On the other hand, pieces of his have been performed by the Philadelphia Orchestra and by the NBC Symphony under Ansermet and Arturo Toscanini.

The Sixth Symphony was performed on March 4, 1893, by the New York Philharmonic Society under Anton Seidl. The title derives from a work by the early German Romantic writer De la Motte Fouqué, and there is a further superscription: “The struggle of a man against the powers of evil.” There also is cited a motto (from Goethe’s Faust, Part II) on the need to cultivate a sense of awe in the face of the “vast unknown.” There are no subtitles for the first two movements, but the third is called The Two Terrible Companions, referring to Dürrer’s famous engraving Knight, Death, and Devil, and the finale is entitled Struggle and Victory.

The style adopted by Strong in this lengthy but well-crafted victory-through-struggle symphony is a richly orchestrated late-Romantic idiom, the lyrical elements of which might be said to derive from Schumann, while the modal chordal elements and rhythmic dynamism are more Lisztian. Though the piece does have a few arresting moments, 1 fear that it will remain a museum piece rather than a vital musical experience. Save for the recurrent chorale elements, the melodic substance of the Sixth Symphony lacks genuine distinction; nor is its development interesting enough to justify the excessive length of the work as a whole.

The recorded performance under Karl Krueger, one-time conductor of the Detroit Symphony and Kansas City Philharmonic and now in his seventy-fourth year, is devoted, if not as sinewy as it might be. The orchestral balances are heard on my loudspeakers tended to favor brass at the expense of the all-important violins. Otherwise, the sound is generally quite acceptable.

It should be noted that this recording of the Templeton Strong Sixth Symphony is only one out of half-a-hundred items available from the Society for the Preservation of the American Musical Heritage, which, under Dr. Krueger’s guidance, offers the only systematic disc documentation of American music before 1910.

VERDI: AIDA, Birgit Nilsson (soprano), Aida: Mario Sereni (bass), Amneris: Franco Corelli (tenor), Radames: Grace Bumbry (mezzo-soprano), Amneris: Ferruccio Mazzoli (bass), the King; Bonaldo Giaiotti (bass), Ramfis; Piero de Palma (tenor), Mirella Fiorentini (soprano), Priestess; Orchestra and Chorus of the Opera House, Rome, Zubin Mehta cond. ANGEL 5 SCL 3716 three discs $17.37.

Performance: Exciting but uneven
Recording: Excellent
Stereo Quality: Good

It is only fitting that AIDA, which offers virtually everything an opera is capable of offering—absorbing drama, theatrical effectiveness, and superb music—should have an ideal performance. The goal is elusive, though in the theater it often seems within our grasp: let the achievement be only near-perfect, and imagination will supply the rest. On records, alas, the magic seldom works. Cold reason holds enthrallement in check; we analyze, compare, and, frequently, reject. Perfection has so far eluded all recorded versions, and Angel’s new all-star effort is no exception.

The conductor is the phenomenally gifted Zubin Mehta, whose performances of AIDA at the Metropolitan Opera two seasons ago were the fastest readings on record. He was a comparative newcomer to opera then, but a musical mind of his brilliance develops at a remarkable pace. Much of what he does in this recording is exciting. His dramatic flair is undeniable, his energy virtually inexhaustible. His handling of the singers is firm, yet not inconsiderate when the beauty of the musical phrase is the issue. His dynamics are consistently well-judged, and his tempos, in themselves, are seldom really hurried. And yet there is still a restlessness about his leadership that results in uneven and inconsistent sequences. Like many conductors of the contemporary school, Mehta approaches Verdi bearing the Toscanini standards of energy, rhythmic propulsion, and no-nonsense musicality, but without the two modest flags that carry the simple inscriptions of Toscanini’s artistry: “cantare” and “sostenere.”

The Nile Scene of the present recording is a good case in point. The opening is singularly lacking in the magical atmosphere inherent in Verdi’s writing, but the ensuing (Continued on page 110)
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CIRCLE NO. 18 ON READER SERVICE CARD

Recording: Exceptional. G. J.


The melodic wealth of Schubert's "Arpeggione" Sonata, the lovely and infrequently heard Schumann pieces, and the Chopin display vehicle represent a rather limited sort of repertoire, played here with great tonal richness by Leonard Rose. Indeed, the sheer bulk of the sound that he generates in the Schubert sonata makes one wonder whether the recording is out of balance. But a hearing of the somewhat light-toned Vox disc with Paul Olefsky inclines one to the view that the Rose cello rather than microphone balance is the principal contributing factor. There is only the early Reginald Kell disc of the Schumann in its original clarinet version to consider alongside Rose's version here. In the Chopin, though, there are rival versions by such redoubtable virtuosos as Starker and Rostropovich. In terms of total programming, however, Rose's A-1 performances, ably abetted by Samuel Sanders at the piano, form a winning combination. D. H.


Performance: Right singer, wrong parts. Recording: Excellent. Stereo Quality: Excellent.

If this recital was designed to prove that Teresa Stich-Randall, a much-admired interpreter of Bach, Mozart, and Handel, is equally at home in Italian opera from bel canto to verismo, the point remains unproved. Miss Stich-Randall is an artist of solid musicality. Her tone is warm and even, and she can sustain a lyrical line admirably—qualities which add up to generally pleasing results in the Puccini and Boito arias. In the Bellini-Donizetti-Verdi excerpts, however, she sounds decidedly ill at ease and quite unidiomatic. Without going into specifics, the qualities most noticeably lacking are spontaneity, fire, and genuine involvement. There is expertise in abundance, and a wealth of beautiful sound, but everything is studied, unconvincing, and unmoving. The negative impression is compounded by Priestman's uninspiring leadership and by insensitive and distinctly un-Italian singing by what the jacket insists upon calling the Volksopern Chorus. Save for the over-prominent harp in "Vissi d'arte," however, the technical quality of the recording is exceptional. G. J.
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THE BEATLES: Magical Mystery Tour

The Beatles (vocals, instruments). Magical Mystery Tour: The Film on the Hill; Flying; Blue Jay Way; Your Mother Should Know; I Am the Walrus ("No You're Not," said Little Nellie); and five others. CAPITOL SMAL 2835. $5.79.

Performance: Repulsive
Recording: Fair
Stereo Quality: Good.

Although I never imagined the Beatles were completely sane, I began to be seriously concerned for their mental health when they announced they were God. Oh, sure, they later tried to smooth things over by explaining they really meant that one out which convinces me that someone should do society a favor by locking them up. I say "new" only because side one is devoted to their score for a television film special previously unexposed in this country (we didn't know how lucky we were, folks); side two is a compilation of 45-rpm singles most Beatles fans already own, such as Penny Lane, Strawberry Fields Forever, Baby You're a Rich Man, and the delightfully ingenious All You Need Is Love. For the rest of the salacious drivel on this cloaca, I am the walrus, Goo Goo Goo, you are me and we are all together...

Up to now my main criticism of the Beatles has been their inability to perform their own songs well. They write intelligently, but they are lousy entertainers and downright untalented, tone-deaf musicians. (I make exceptions of their superb vocal treatment of All You Need Is Love and their lovely instrumental intonation on Penny Lane, although I'd still like to hear what the Weavers would have done with that first tune.) Their farcical, stagnant, helpless bellowing on the Mystery Tour songs proves my point; worse, this disc provides the first group of Beatles compositions I never ever will want to hear again performed by anybody!

Now let's examine this creepy phenomenon. Ever since the fellows gave up singing about narcotics in favor of meditation with the great Indian guru Maharishi, their music has become so totally divorced from reality as the rest of the world knows it that I, for one, can no longer identify with it on any level. I appreciate their bizarre incorporation of honky-tonk piano, sitars, bag-pipes, etc., as much as the next man, but gimmicks don't compensate for confused musical ideas. First in this mystery tour there is the title tune itself, no more than a Radio City Music Hall parody. Nothing different or clever there. Then there is a song called The Fool on the Hill, which I rather liked because it features some lovely flute work and because it is the only item on the disc that is not distorted so much that you can't understand the lyrics. It will probably be picked up by people who can sing, and then maybe I will like it even more. Next, something called Flying, a two-minute and sixteen-second instrumental interlude which sounds like the soundtrack of an old Marja Montez jungle movie at just about the point where she feeds the chanting populace to the cobras. Fourth, Blue Jay Way (go figure that one out) which consists of three minutes and fifty seconds of the Beatles sounding as if they are singing under water or gargling with Listerine. Boring as hell.

There's more. There's Your Mother Should Know, which is nothing more than a Gaslight Era cabaret tune full of da-das and yeah-yehs. Finally—and this I've got to quote or you'll never believe it—comes the cherry on the banana split. I Am the Walrus ("No You're Not," said Little Nellie) defies any kind of description known to civilization. Not only is it ugly to hear, lacking any cohesion of style or technique, but it is utterly silly and pointless. It begins with an intro sounding suspiciously like one of John Barry's James Bond film scores, then lapses into twenty-five lines of stuff like: "I am he as you are he as you are me and we are all together... sitting on a corklake waiting for the van to come... I am the eggman, they are the eggmen—I am the walrus goo goo goo doo..."... and so on and so forth. You have been warned...

Glen Campbell

Country-and-western, contemporary style

Glen Campbell seems to me to be one of the better country-and-western singers. I was particularly taken by the performance he gives here of the title song, which he is able to make both touching and unsentimentally convincing. Campbell's avoidance of the easy, jejune tear-jerker sets him rather apart from the older generation of country singers and gives his performances a marked degree of believable reality. There is also a healthy touch of sardonic humor in his voice in such songs as You're Young and You'll Forget. This album and Campbell's performances would seem to me to be an almost ideal blend of traditional country-and-west-
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LEN CHANDLER: The Lovin' People.

Len Chandler (vocals): orchestra. Bound to Fly; The Naked Fool; The Lovin' People; And Still I Dream; Behind Your Eyes; Touch Talk; The Language of Love; and three others. COLUMBIA S CS 9555, M CL 2753 $4.79.

Performance: Reckless and uninspired

Recording: Good

Stereo Quality: Good

Len Chandler is a folk singer who has been infected by an overdose of flower power. To escape the folk-song confines of his meager beginnings at the Gaslight in Greenwich Village, he advertised for sixty-five hippies to come together bringing milk and food for a mothers-help organization in the hippie-infested East Village, and took them to a recording studio, where they spread out on the floor with flowers and wine. Then he recorded these sides, with all the noise of the group on the floor lending atmosphere.

The result is one of the most solemn pop discs I've heard. Showcasing Chandler in a variety of moods ranging from maddeningly morbid to downright suicidal, Columbia has backed him up with a series of monster rhetorical arrangements, guitars and Fender basses and organs and English horns and corgas and flutes twittering wanly away in the background. It all adds up to an opera-

In terms of material, the effort divides nearly into two categories: half slow and dreary surrealistic love poems full of candlelight and incense, and half self-indulgent psychedelic carousel whirs of reckless impressions of green fingers and galloping steeds and such. Throughout, Chandler, with his vague, crumbling voice, sounds like a bearded and sandaled Tony Bennett. The whole thing adds up to an opera-

THE DOORS: Strange Days, The Doors (vocals and instrumental). Strange Days; You're Lost Little Girl; Love Me Two Times; Unhappy Girl; People Are Strange; When The Music's Over; and four others. ELEKTRA S EKS 74014, M&H EK 74014 $4.79.

Performance: Scatological

Recording: Good

Stereo Quality: Good

In a recent statement to the New York Times, Jim Morrison, who is more or less the leader of the Doors, said in reference to their live performances, 'I think of us as erotic politicians.' If it's all the same to Mr. Morrison and his colleagues, I'd rather not. I'm not shocked at the current rock fad for scabrous lyrics (in this particular the Doors are no more offensive than many other groups), for they have been with us ever since the dawn of music, nor do I care spe-

HARRERS BIZARRE: Anything Goes.

Harpers Bizarre: Ted Templeman, Dick Soppetonne, Eddie James, John Petersen, and Dick Yount (vocals); orchestra. This Is Only the Beginning; anything goes; Two Little Babes in the Woods; Snow; Chattanooga Choo Choo; Mellow; and nine others. WARNER BROTHERS S WS 1716, W W 1716 $4.79.

Performance: Never in Vogue

Recording: Confused

Stereo Quality: Excellent

Somebody—the liner notes wisely decline to inform us exactly who—apparently thought that it would be a gas to make this album.
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Specifications:
Tuner Section: Signal-to-Noise Ratio — 70 DB; Harmonic Distortion at 400 Hz, 100% modulation — 0.15%; Frequency Response, 75 microsecond de-emphasis — ±0.5 DB; Multiplex Separation, 20 Hz — 43 DB, 1000 Hz — 45 DB, 10k Hz — 35 DB, 15k Hz — 30 DB. Amplifier Section: Power, 40 rms watts per channel at 4 and 8 ohms, 20 Hz to 20k Hz; Distortion, 0.2% THD; Frequency Response, 15 Hz to 30k Hz, ±0.5 DB. Dimensions: 18¼" wide x 16" deep x 6" high.
They were mistaken. Most of it is supposed to be funny, hip, or musically daring. It is none of these things. It is a mind-bending bore composed of random sound effects, in- 
different singing by the Harpers Bizarre, and sophomoric attempts at sophistication. It opens with a crashing interlude of music that 
Warner Brothers have used for years to in- 
troduce their films, it then proceeds to the 
putrtured voice of "Smilin' Eddie Fatootsie" 
who is supposedly broadcasting from the roof 
of the Altoona Motor Hotel. After that side- 
splitter we are segued into an old recording 
whom is supposedly singing his own Anything 
Goes, which, after several bars, the Harpers 
Bizarre also then proceed to sing in a con- 
siderably less epicene but vastly less amusing 
style. The same sort of thing happens with Mr. Porter's classic legend of those worldly- 
wise orphans, Two Little Babes in the 
Woods, and it is another disaster. Aside from 
Chattanooga Choo Choo, which has its dis- 
anming moments, this Harpers Bizarre effort 
has all the earmarks of a real subscription- 
canceller.

NOEL HARRISON: Collage. Noel Har- 

rison (vocals); orchestra, Don Peake, cond. 
and arr. Suzanne; Strawberry Fields Forever; 
A White Shade of Pale; Museum; Just Like 
a Woman; People in the Rain; and six oth- 
er. REPRIS $6265 $4.79, OR 6263 $4.79. 
Performance: Monotonous 
Recording: Good 
Stereo Quality: Good

Noel Harrison may just be the most boring 
rock singer in the business. In his television 
appearances he has all but put me to sleep. 
On this disc of accumulated bits and pieces of 
current neo-folk and psychedelia which the 
moods and tempos change, but Harrison 
doesn't. Most of the material is fifth-class, ex- 
cept for White Shade of Pale, which has 
been done better by just about everybody 
else, and the Beatles' Strawberry Fields For- 
ever, which has never been done well by 
anybody. The only band Harrison comes 
on is Bob Dylan's Just Like a Wom- 
an, and even here he sings so far behind the 
beat that it's nerve-wracking. The use of 
Western instruments doesn't help much. And 
the sound-effects man who nearly drowns 
his voice with a deluge from a scratchy 
old radio-show audiocassette labeled "Background Raindrops on People in the Rain 
should be fired.

Harrison's choice of songs is as unin- 
spired as his delivery is unimpressive. This 
disc is like an assortment of TV dinners of 
instant poetry, "She sees her own eyes weep- 
ning, hears her own voice beneath her mind, 
and everything is fine as she holds up the sign 
of the queen to her eyes and her mind, 
moans Harrison, to the beat of something 
that sounds like a man playing a comb. In- 
teresting. But what does it all mean? I doubt 
that even an intelligent hippie could tell you. 
And one more thing: I wish someone would 
explain to me the popularity of a perfectly 
absurd song called Suzanne. This is the 
kind of stuff we used to write in high school, 
and we'd have been ashamed if anyone saw 
it. Music can't get much sicker than this 
unless perhaps in another song on this 
disc, called Museum: "There she stood in 
drag, looking cool in astrakhan, don't do it 
if you don't want to, I wouldn't 
do a thing like that...

R. R.

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ENDING REVIEW
Know BOZAK’S Concert Grand

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else." In his English lyrics he comes across more like a rough-hewn Mastrioni. This guy has the best of both worlds.

But his personal appeal should not obscure his true technical genius. His guitar work is subtle, gentle, yet gutsy. He is sad and joyful at the same time, funny and touching at the same time, reckless and suave at the same time. Even if all these qualities escape you (God forbid!), you will still be enchanted by his choice of material. You'll no doubt recognize Reza if you've been bright enough to exercise good taste in buying Maria Toledo's recording of the same song, and you will surely identify immediately with Jobim's Samba do Oliven. But this disc is also full of delightful nova surprises, i.e., Oscar Brown Jr.'s American-Negro lyrics to Henrique's Alicinha and If Enterprises, the disc is also full of delightful bossa nova surprises, i.e., Oscar Brown Jr.'s American-Negro lyrics to Henrique's Alicinha and If You Want to Be a Lover.

I can't knock you over the head or force you to buy this great and refreshing album at gunpoint, so I'll just say that you'll be sorry if you don't.

**RECORDING OF SPECIAL MERIT**

**CLAIRES HOGAN: Booze and Losers.** Claire Hogan (vocals); orchestra, Ray Ellis cond. and arr. I'm Always Drunk in San Francisco; Good Times; Whiffenpool Song; Travelin' Light; Here I Go Again; After the Ball; and five others, MGM ® G 611 $4.79, ® E 4501 ℡ $3.79.

Performance: Refreshing
Recording: Good
Stereo Quality: Good

I don't know what Claire Hogan looks like (there is no photo on the album cover), but she sounds exactly like Claire Trevor used to sound in old Humphrey Bogart movies when she leaned against the bar and sang her drowsy, boozy songs. So I'm just going to go right ahead and picture Miss Hogan as looking like Claire Trevor. It helps when I conjure mental images of this voice and these songs. Miss Hogan is one of the most unusual singers I've come across in a long time. Her history is an unusual one, too: fifteen years ago Cy Coleman, one of the best songwriters in the world, used to drop in and see her every night in a tiny Miami bar called The Black Magic Room. Later she became his secretary, Girl Friday, and best friend. It helps to have a best friend like Cy Coleman. Otherwise, this album might never have been recorded. But I'm glad it was. It is thoroughly ingratiating in a lonely, sad, after-hours kind of way, and Miss Hogan sings with a style that is at once soft and mock-tragic, in a voice that is raw and tough enough, and full of enough scotchiness, to pull you right inside the songs with her and make you want to say "Yes, baby, I know..."

Admittedly, the voice isn't much. There are moments, as in Travelin' Light, when it's an even guess as to whether she'll turn up again. But, as I've said before, the voice is never as important as the technique. Miss Hogan, equipped with a monotone lower register that borders on the annoying, is perfectly well suited to these songs, and Ray Ellis has provided for her his best arrangements since the famous "Lady in Satin" disc he fashioned for Billie Holiday. The result is a gossamer triumph for both. As for material, Miss Hogan relies on a

**JONATHAN AND LEIGH: Third and Main.** Jonathan and Leigh seem to be a nice enough young couple judging from their photographs on the jacket, and the music they make on the record seems just as straightforward, unpretentious, and youthful as their looks. I particularly enjoyed their performance of Phil Ochs' brilliant Change, and they do equally fine work on Summer Sorrows and Third and Main. Nothing is pushed or strained here, for which I suppose their producer Elmer Jared Gordon should be thanked, and there is no audible attempt to impress. Jonathan and Leigh would seem, along with people like Steve Gillette, to be welcome arrivals on the folk-rock scene which is currently inundated by people whose souls are on-fire-with-the-injustice-of-it-all but who, not so incidentally, have also found it an enormously profitable vein to exploit.

**MIKE KELLIN: ... And the Testimony Still Coming In?** Mike Kellin (vocals, guitar). No Subsidation Blues; Nervous Nellie; Baby, You Love; Hold Me; I Wonder How It Is; Nervous Nellie; Travelin' Light; Here I Go Again; After the Ball; and eight others. VERVE/FORECAST ® FT 3028 $4.79, ® FT 3028 $3.79.

Performance: Amateurish
Recording: Good
Stereo Quality: Good

Not content with running for political office these days, the actors in our land are also seeking fresh conquests in the musical arena. Mike Kellin, who has been amusing TV audiences for a long time as Chief Petty Officer aboard The Wackiest Ship in the Army, has armed himself for the fray with a guitar, a set of home-made songs, and a contract from Verve/Forecast. The results are curious. His opening bid is a ditty about an alcoholic who tries to raise money from foundations in order to finance his drinking. It will never replace the old Alcoholic Blues. This is followed by jerry-built protest songs of dubious impact on such matters as escalation in Vietnam, the hardships of inflation, and "What we're doing to those little children." The most successful attempt in the set is Song of the Fink, about a FBI man who turns in his whole family on charges of subversion ("I'll name my sister and I'll name my brother, And my mother, and me, So I'll name my mother."). The rest, with weak lyrics and weaker tunes, don't make it. Mr. Kellin's guitar is well-behaved, and his singing voice is almost professional at times. But never quite.

**SHEILA MACRAE: How Sweet She Is.** Sheila MacRae (vocals); orchestra, Sid Fel- ler cond. and arr. You Always Hunt the One You Love; Hold Me; I Wonder How It Is; Heartache; and seven others. ABC ® 611, ℡ 611 ℡ $4.79.

Performance: Routine
Recording: Good
Stereo Quality: Good

Sheila MacRae, an impressionist of recognized gifts and a fine foil for Jackie Gleason on television, also apparently fancies herself a pop singer. Unfortunately this album gives very little evidence to support that notion. Miss MacRae remains basically an impressionist; what she offers here are impressions of a variety of pop singing styles. These styles range from the sing-song dramatic reading she gives to You Always Hunt (Continued on page 124)
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the One You Love to the pseudo-happiness of San Francisco and an attempt to dazzle (like the Supremes) with Love Letters in the Sand, which is performed by Miss MacRae and her daughter Heather. She has also unwisely chosen to revive Heartaches in a new arrangement. It is enough to make one wonder what will become of us all... P. R.

ROD McKUEN: The Love Movement.
Unidentified vocalists; orchestra, Arthur Greenslade cond. and arr. Kill the Wind; Salvation Army Workers Don't Belong in Bars; I'm Strong But I Like Roses; Smoking Banana Will Clean Your Mind; Mini Love; The Complete Madame Butterfly; and nine others. CAPITOL $39.75.

Performance: Well-executed but confusing
Stereo Quality: Excellent
This is a tough one. Rod McKuen's tongue-in-cheek send-up of the current hippie movement is so unusual, so campy, and sometimes so brilliant that I am glad to have it in the section of my record collection labeled "curiosities." On the other hand (I think I still have two)—by the time I finished listening to the cuts on this disc, I felt as though I had just been to a picnic where they served nothing but brownies made with pot), I'm not sure that a man with a brain as fertile as Rod McKuen's should be wasting his time tilling such barren soil. The result is a series of musical images that demonstrate his awareness of the flower scene in all its musical nuances and an admirable ability to make it, cajole, giggle at, and compose for every current fad. But it doesn't add up to a very satisfying whole comment on anything in particular, and it most certainly overshoots its market to fall into the category marked "uncommercial."

Here's what we're faced with: an assortment of in-joke soloists called "Flowers R. Goodforyou," "Dame Madelyn Barefoot," and "Percy Protest," a sitar player named "Moltan Lava," a vocal group called "Members of the Original Cast," an instrumental group called "Pablo Bernstein's Rubber Band," and a really good orchestra called the "Soho Symphony" (because, says McKuen, "they practice in the subway between Kensington Station and Marble Arch."). Okay. That's funny. But who are they? Jonathan and Darlene Edwards' first disc wasn't funny until everybody found out they were Paul Weston and Jo Stafford camping it up. This one isn't either.

First, the overture. Well, it's simply beautiful. It's the kind of thing I would expect from Rod McKuen. It has warmth, humor, feeling, and shows a tremendous talent for composition. Then there is a perfectly uncommercial musical nuance and an admirable ability to make it, cajole, giggle at, and compose for every current fad. But it doesn't add up to a very satisfying whole comment on anything in particular, and it most certainly overshoots its market to fall into the category marked "uncommercial."

This is an earnest and sincere effort by the Medical Mission Sisters. They are heard singing some of the Sister's songs, and I'm sure that, in an effort to speak "in the idiom of the times," often taken on a decided folk flavor. Unfortunately, the voices are too carefully sweet and pure, band after band, so that several times I had to bring myself up short so as not to make comparisons with a professional group like Les Djinns. This is a pleasant and, I am sure, well-meant album, but of interest, I fear, only to those whose concerns are more spiritual than musical. P. R.

RECORDING OF SPECIAL MERIT

ETHEL MERMAN (1932-1935)/LYDA ROBERTI (1934)/MAE WEST (1933).
Ethel Merman, Lyda Roberti, Mae West (vocalists); orchestra, various cond. and arr. Ethel Merman: Eddie Was a Lady; I Get a Kick Out of You; You're the Top; and four others. Lyda Roberti: College Rhythm; Take a Number from One to Ten; Mae West: A Guy Who Takes His Time; I'm No Angel; They Call Me Sister Honky Tongue; and three others. COLUMBIA CL 2751 $4.79.

Performance: The bees' knees
Recording: Superb
The most important news about this release is the superb job that George Engfer has done in transferring the original 78-rpm discs to LP. The surfaces are miraculously quiet, and all the foggy quality so often apparent on collections of old recordings has been dispelled. And of course Mr. Engfer has applied his talents for fine restoration to the work of three quite inimitable ladies. My own favorite bands here are the two that feature Lyda Roberti. Probably very few readers who do not have a particular interest in films have seen Million Dollar Legs, made in 1932, and featuring, among others, Miss Roberti. I have always thought the film itself a comic masterpiece, and Miss Roberti's performance in it as Mata Machee, the super-vamp super-spy, imperishably comic. Unfortunately, her song from that film, When I Get Home—sung as she wriggled down a staircase to an audience of waiting diplomats and describing the earth-shaking...

(Continued on page 126)
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consequences of arousing her—is not included here. Instead there is the innate but good-natured College Rhythm, and the equally inane but perhaps better calculated Take a Number from One to Ten, which shows off Roberti’s unique comic style. Miss Roberti died young with Miles Kreuger’s liner notes that “her premature passing robbed the entertainment world of one of the potentially giant comic personalities of all time.”

Surely, one of the giant comic personalities of all time is Miss Merman. She is heard here meditating on A Guy Who Takes His Time, as well as in several other musical personas to the sexual life. Until her very recent expeditions into rock, there was never much difference between the old West and the new West, and if you thought she was funny, then you will think these recordings are funny now, I do.

I have never thought of Ethel Merman as being particularly comic separated from the jokes or comic songs written for her. Her high spirits and brassy bounce have always seemed hollow to me. Her most effective moments, I have found, come when she reveals the darker side of her stage personality, as she did in Rose’s Twain in Gypsy, and as she does on a wonderful old recording of a Dorothy Fields song about the dreams of a working girl during the Depression, Just a Little Bit More, in which she actually manages to sound wistful. Ethel Merman seems to me a good case to illustrate the distinction between a gifted performer and a creative performer. She is really only as good as her material; when the songs are great, she is up to them; when, however, they are mediocre, she is unable to do much more than bring them a pasted-on smile and an air of earnestness. The result is that Miss Merman’s old recordings stand up only when the composers do also. Cole Porter was unquestionably a popular-song writer of genius, and I Get a Kick out of You and You’re the Top here are superb songs in superb performances.

Miss Merman is able to communicate every nuance of the lyric, every phrase of the music, with incredible precision and sensitivity and the extra “something” Porter put there for her, too. It is a bit disturbing to speculate that perhaps Porter knew more about Merman than Merman did. She is also heard here in another of her great hits, Edie Was a Lady, and though this DeSylva-Whiting-Brown song is great enough in its way, as is her performance of it, it never reaches the peak of the Porter material. The less said the better about the rest of the songs she sings in this collection. And that goes doubly for The Lady in Red!

Buck Owens: The Buckaroos Strike Again! Buck Owens and the Buckaroos (vocals and instrumental accompaniment). Apple Jack; Kern Country Breakdown; Chicken Pickin; Free and Easy; Foolish Notion; Tom’s Waltz; and six others. Capitol 5 ST 2828, 5 T 2829* $4.79.

Performance: Routine Recording: Good

This album I received makes the claim to things like A Dime at a Time and Crazy Reeves’ vocal blend is scarcely a blend at all. Reeves’ vocal blend is scarcely a blend at all. It seems as though every third country-and-western album I receive makes the claim somewhere in the notes that while the album you are listening to is C&W, it also should please a great number of purely pop fans. This latest arrival is no exception, and though I hate to dash any sales-department hopes around UA, this one will not fail to appeal to pop fans but will probably have quite a few pop fans as well. Goldsboro and Reeves’ vocal blend is scarcely a blend at all. They just stand there stoically belting out number after number, and when they come to things like A Dime at a Time and Crazy Arms it gets downright bad. The liner-note hope “that this will not be the last time that Del and Bobby will get together” is not seconded by me.

P. R.
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VIKING 423 A solid, sensible, no-gimmicks unit with three speed, three motor drive and modern solid state electronics at an amazing low price. Quarter track stereo; operates in vertical/horizontal position; built-in pause control; hyperbolic tape heads; push-button counter; directional control levers interlocked for foolproof operation; illuminated record meter, optional remote pause control and walnut base . . . under $250.00
Tommy Roe sings of paisley dreams, plastic worlds, and "visions of a photogenic universe" in a paisley plastic voice with the tiniest tendency to simper. Listening to him is like being trapped inside some paisley pastel plastic kaleidoscope (I have been to Expo '67 and I know). He may appeal to the little boy who beams from the album cover under a Buster-Brown haircut, but he didn't appeal to this listener a bit. In fact, his whimsical ballads, interlarded all too frequently with the sounds of birdsong and tittering children, drove me to the point that I swore off cotton candy for a week. P. K.

**THE SOPWITH CAMEL: The Sopwith Camel.**

The Sopwith Camel (vocals); Hello, Hello; Frantic Desolation; Walk in the Park; THE SOPWITH CAMEL: The Sopwith Camel only to those among my readers who know). My threshold of thrall for this sort of thing is quite limited. I recommend The Sopwith Camel to only those among my readers who are devotees of Grand Guignol in song.

**JOHNNY WATSON: In the Fats Bag.**

Johnny Watson (vocals); unidenti-fied bass and drums. Sweet Sue; Willow Weep for Me; There'll Be Some Changes Made; I Used to Love You; and six others. OKEH ® OKS 14124, © OKM 12124® $4.79.

**Performance:** Unnerving

**Recording:** Very good

**Stereo Quality:** Good

The only connection these performances have with those of "Fats" Waller is that Waller recorded many of the tunes in this set. Otherwise, Watson's brittle, eclectic piano is not at all in the same bag as Waller's boundlessly exuberant, sophisticated extensions of the "stride" piano tradition. And as a vocalist, Watson seems a moderately engaging but routine club singer in comparison with Waller's skills at high satire. P. R.

CANNONBALL ADDERLEY QUIN-TET: 74 Miles Away/Walk Tall. Julian "Cannonball" Adderley (alto saxophone), Nat Adderley (trumpet, vocals on one track), Joe Zawinul (piano), Victor Gaskin (bass), Roy McCurdy (drums). Do Do Do; I Re-member Bird; Walk Tall; 74 Miles Away; Ob Bobe. CAPITOL © ST 2822 $4.79.

**Performance:** Fluent, but rather shallow

**Recording:** Very good

**Stereo Quality:** First-rate

Cannonball Adderley and his colleagues have a fluency that too often becomes simply fa-cile. Rooted in the blues and the basic jazz tradition, including but not going too far be-yond Charlie Parker, Adderley and his men are lively and swing easy. But their work does not stay long in the mind. An exception here is Joe Zawinul's 74 Miles Away, which is more challenging to its players and listeners than most of Adderley's book; still, it does not achieve its full potential. Perhaps I am asking more of Adderley than he wants (Continued on page 130)
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Circle No. 1 on Reader Service Card
RAN BLAKE: Ran Blake Plays Solo Piano
(see Best of the Month, page 77)

GARY BURTON: Duster, Gary Burton (vibes), Larry Coryell (guitar), Steve Swallow (bass), Roy Haynes (drums). Swing Time; General Mojoe’s Well Wild Plan; Sing Me Softly of the Blues; and four others. RCA Victor ® LSP 3838, ℗ LPM 3838â© $4.79.

Performance: Cohesive
Recording: Excellent
Stereo Quality: First-rate

Here the leader, Gary Burton, says: “I would prefer not to have our music claimed as jazz, or rock, or anything. It has a variety of elements in it, the most important being improvisation.” And yet, although I sympathize with Burton’s disinclination to be categorized, this is jazz, and jazz of a consistently high order of lyrical inventiveness. In the past Burton had tended to allow his prodigious technical skills to substitute for intensity of emotional content in his playing, but the presence in his new group of Larry Coryell, a former rock guitarist, has stimulated Burton to be more personal in feeling though hardly outgrowths of bebop as yet. Coryell is strong—emotionally and rhythmically—although his ideas are still rather eclectic. Steve Swallow, who is one of the rock world’s most driven soloists, has purportedly created a fusion of jazz, rhythm and blues, Latin, and psychedelic sounds in this new album. At its core, however, this is hard-blowing, blues-based jazz over dully repetitive rhythmic patterns. The soloists are energetic but predictable (an exception is flutist Jimmy Benson, who also appears on "Something in Your Smile; Kush." His repertory tends to be narrow, his jokes predictable.

Helen Merrill: The Feeling Is Mutual, Helen Merrill (vocals); Dick Katz (piano); Thad Jones (cornet); Jim Hall (guitar); Ron Carter (bass); Pete La Rocca and Annie Wise (drums); Dick Katz, arr. You’re My Thrill; Here’s That Rainy Day; New York, New York; Baltimore Oriole; The Winter of My Discontent; Day Dream; Don’t Explain; and three others. MILESTONE ® MSP 9003, ℗ 1492â© $5.79.

Performance: More fire than substance
Recording: Good
Stereo Quality: Very good

Trombonist Wayne Henderson, best known in recent years as a member of the Jazz Crusaders, has purportedly created a fusion of jazz, rhythm and blues, Latin, and psychedelic sounds in this new album. At its core, however, this is hard-blowing, blues-based jazz over dully repetitive rhythmic patterns. The soloists are energetic but predictable (an exception is flutist Jimmy Benson, who also appears on "Something in Your Smile; Kush." His repertory tends to be narrow, his jokes predictable.

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Performance: More fire than substance
Recording: Good
Stereo Quality: Very good

Trombonist Wayne Henderson, best known in recent years as a member of the Jazz Crusaders, has purportedly created a fusion of jazz, rhythm and blues, Latin, and psychedelic sounds in this new album. At its core, however, this is hard-blowing, blues-based jazz over dully repetitive rhythmic patterns. The soloists are energetic but predictable (an exception is flutist Jimmy Benson, who also appears on "Something in Your Smile; Kush." His repertory tends to be narrow, his jokes predictable.

Helen Merrill: The Feeling Is Mutual, Helen Merrill (vocals); Dick Katz (piano); Thad Jones (cornet); Jim Hall (guitar); Ron Carter (bass); Pete La Rocca and Annie Wise (drums); Dick Katz, arr. You’re My Thrill; Here’s That Rainy Day; New York, New York; Baltimore Oriole; The Winter of My Discontent; Day Dream; Don’t Explain; and three others. MILESTONE ® MSP 9003, ℗ 1492â© $5.79.

Performance: More fire than substance
Recording: Good
Stereo Quality: Very good

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due to one of enormous range and

dance and violence, in which the group seems determined to knock itself unconscious. Only A Little Quiet provides a little quiet; it is performed with a gently swinging bossa-nova flavor which persuaded me not to give up altogether on John Handy.

Protest jazz, the hard-core buffs tell me, is here to stay. They still haven't explained what it has to do with real music. R. R.

DJANGO REINHARDT: Django Reinhardt (guitar), and unidentified others. September Song; Swing Guitar; Nigges; Swing 30; and eight others. ARCHIVE OF FOLK MUSIC ® FS 212, $3.79.

Performance: Django remains fresh
Recording: Just adequate
Stereo Quality. Fake

This collection of Django Reinhardt reissues is a model of how not to package historically valuable recordings. The quality of sound is thinner than on the originals and is further diluted by the 'enhancement' to which it has been subjected in order that a "stereo" version could be marketed. Furthermore, there is no personnel information and no data as to recording dates. Django's playing is still ardent, thoroughly personal, and swingingly rhapsodic. But he can be heard much more clearly in currently available sets on Capitol, RCA Victor, and Verve. N. H.

RECORDING OF SPECIAL MERIT

ANNIE ROSS: Fill My Heart With Song. Annie Ross (vocals); orchestra, Johnnie Spence cond. and arr. All of You; Nature Boy; What's New; Let Me Love You; Lento; bosie Blues; and six others. DECCA ® DL 74922, ® CL 4922* $4.79.

Performance: Assured
Recording: Excellent
Stereo Quality: Very good

Annie Ross is something of a legend among jazz aficionados, and on the basis of this album it's easy to see why. She is a totally musically singer with a voice that, though here it sounds a trifle worn in spots, is still one of enormous range and interpretive power. As with many good jazz voices, there is a smoky sullenness of sound and a built-in hint of regret to her phrasing. One thing is certain: if you listen to her—whether you like her or not—you are aware of a powerful performing presence that can make itself felt through the medium of recordings, somewhat in the manner Billie Holiday could.

There is not a false note, in any sense, on this album. Johnnie Spence's arrangements complement and cajole Miss Ross' voice, and John Barry's assignment as producer has been carried out with unobtrusive good taste and thoroughness. Miss Ross applies herself to the object of this session was to use Helen's voice as an instrument, sometimes carrying the melody, sometimes not, but always complementing the improvisational skills of her co-musicians. I have never been able to listen to more than two cuts on any Coltrane disc without the aid of a Stela-tine tablet, and that is not my idea of a record. John Handy may be the performer to take the place of the late John Coltrane. I do not mean that as a compliment. I have never been able to listen to more than two cuts on any Coltrane disc without the aid of a Stela-tine tablet, and that is not my idea of a pleasant way to spend an afternoon. John Handy never fit into this derriere-garde jazz movement before, but apparently he has now heard about race riots and Selma and James Meredith's attempt to enter the University of Mississippi in the fall of 1962. Sections of minstrel songs and old Southern Negro chants are thrown in for humor, but none of it is very amusing. John Coltrane's Naima is a harrowing affair full of disso-

nance and violence, in which the group seems determined to knock itself unconscious. Only A Little Quiet provides a little quiet; it is performed with a gently swinging bossa-nova flavor which persuaded me not to give up altogether on John Handy.

Protest jazz, the hard-core buffs tell me, is here to stay. They still haven't explained what it has to do with real music. R. R.
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MARCH 1968
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HIFI/Stereo Review

RECORDING OF SPECIAL MERIT

MARTHA SCHLAMME: Raisins and Almonds and Other Jewish Folk Songs. Martha Schlamme (vocals); orchestra, Robert DeCormier cond. Lo mir alle freylekh zein; Der Rebbe Katelwelech; Zog Maran; Der Ferter Nuss'n; Rokhinkes mit Mandle; and twelve others. VANGUARD ® SRV 73004®:

Performance: Elegant Recording: Good

The recipes for Yiddish song, drawn largely from the traditions of Eastern Europe, are pretty much for the sweet tooth. Whether the subject matter is a young girl's delight at a wedding, a shepherd who loses his sheep, or the sorrows of a wife whose husband has been sent to Siberia, sugar and sentimentality are the predominating ingredients in the tunes as well as the words. Yet many are hilarious, as rhymes tumble out to fast dance tunes with rollicking gayety; the lullabies are infinitely tender and touching; the little fables are wise and winning in their simplicity. Miss Schlamme has been singing this music superbly for many years, and the present collection is one of her finest. Miss Schlamme, in a voice that is open, clear, and true—whose every tone is shaped by her close understanding of this material—sings seventeen old favorites with respect, restraint, and all the skill for which she's noted. She is rather too refined at times in her treatment of the luster numbers such as Lo mir alle freylekh zein ("Let's all be merry"), but her gentle touch suffuses each number with a special glowing beauty.

P. K.

RECORDING OF SPECIAL MERIT

PETE SEEGER: Pete Seeger’s Greatest Hits. Pete Seeger (vocals, guitar, banjo). Little Boxer; Ali Yaya; We Shall Overcome; Daring Goes; and eight others. COLUMBIA 5 CS 9416, 3) CL 2616® $4.79.

Performance: One of Seeger's best Recording: Excellent Stereo Quality: Good

As Pete Seeger observes in his characteristically direct liner notes for this album, most of these are not his hits, as the title might imply. But they are pieces "which, at some point or other in my life, were the most requested songs, and in some circles, still are..." They range from union and civil-rights anthems to a South African lullaby-story and reflections on eternal change. The performances, without exception, are Seeger at his most relaxed and persuasive. He does not persuade by the force of his verbal attack or by tricks of style; his integrity leaves no doubt how deeply he believes in what these songs say and promise. His voice is not remarkable; he plays the guitar and banjo well, yet not dazzlingly. But he does put all of himself into what he chooses to sing, and therefore the completeness of his experience and his vision come through. Pete Seeger is a singing populist, a unifier of traditions and people. And although he has not changed the world, he is remembered by his audiences for who he is along with what he sings. If, by some odd chance, you have yet to include a Seeger album in your collection, this is the one to start with. N. H.

RECORDINGS OF SPECIAL MERIT

JIMMIE TARTLON: Steel Guitar Rag. Jimmie Tarlton (vocals, guitar). Books of the Ohio; Put-Together Blues; Louisiana; Joe Bowdry; and ten others. TESTAMENT T T 3303 $4.98.

Performance: Distinctive, skillful Recording: Very good

Jimmie Tarlton grew up in a rural South Carolina family in which his father played banjo and his mother kept old ballads alive. He became a widely traveled entertainer, working with many of the best country bands, and recording, singly and in duets, from 1927 to 1933. For some twenty years— he is now seventy—Tarlton was inactive as a musician, but was rediscovered in 1965 by record collector Robert Noble. In December of that year, a number of the songs in this album were recorded in Alabama by Gene Earle. On the basis of those tapes, Tarlton became a professional again, appearing at the Ash Grove in Los Angeles, where the rest of the album was made. An inventive guitarist, Tarlton sings in a high, resilient voice with an impressive mastery of dynamics and the other arts of narrative flow. He sounds very informal, but there is a high order of seasoned skill in everything he does. Although based on traditional approaches, Tarlton's music, as Ann Cohen observes in the notes, "is a blend of mountain folk, city blues and Hawaiian pop. It is very much his own creation." An accompanying booklet by Norman Cohen contains full texts, historical backgrounds, a bibliography, and a complete Tarlton discography. It is a model of its kind.

(Continued on page 136)
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MARCH 1968
THEATER • FILMS

THE AMERICAN MUSICAL THEATER
—A Consideration by Lehman Engel (see Best of the Month, page 78)

GONE WITH THE WIND (Max Steiner).
Original-soundtrack recording.
Orchestra, Max Steiner cond. MGM ® SIE 105T, @ 1E 105T $5.79.

Performance: Mammoth
Recording: Terrible
Stereo Quality: Artificial

GONE WITH THE WIND (Max Steiner).
Orchestra, Max Steiner cond. RCA Victor ® LSP 3859, ® LPM 3859 $4.79.

Performance: Sub-mammoth
Recording: Good
Stereo Quality: Acceptable

Well, Scarlett O'Hara is back at Tara, and Gone with the Wind, converted to the seventy-millimeter screen "through the wizardry of technicians at the MGM studio in Culver City," and fitted out with six-track stereophonic sound, is running once more.

"Absolutely timeless and inspiring," Bookle Crowther called the revival in the New York Times. I wish as much could be said for the quality of the music track. Not that this is a bad score. It is the best—and worst—of scores. It is the apotheosis of all toward which Hollywood in its heyday ever aspired. To accompany the three-hour-and-forty-two-minute movie (a record for its time) filmed in 1939 from Margaret Mitchell's best-selling Civil War novel, Max Steiner was asked to supply three hours of music inside of three months. Was there enough Zeit-Auscherg in the combined scores of Tchaikovsky, Puccini, and Rachmaninoff to fill such a bill? The composer, whose passionate themes for old Bette Davis movies still stick like glue inside my aging head, came through—and did his own orchestrating besides. He generously manufactured individual themes for Scarlett, Rhett Butler, Melanie, and even minor characters like Belle Watling (bt you don’t remember her, and whipped them all into a gigantic stream of sound which called for the services of a full symphony orchestra and disembodied vocal choir. And so the score sighs and sings and swoons inexhaustibly, drawing on old folk songs, dances, and battle tunes when it runs out of its own melodies.

Alas for the original soundtrack, it sounds simply terrible—almost unacceptable to the human ear in this latest dubbing, for the technology of the transfer was unbelievably poor. On the other hand, with the MGG album you get a thick, profusely illustrated book with a text by Bob Thomas telling the whole history of the movie, from the time the author started writing the book to the night of the premiere in Atlanta. The RCA Victor album contains almost the same section ... the score (although differently labelled), is also under the composer's direction, was also "electronically reprocessed" for stereo, and sounds much better.

P. K.


Performance: Very good
Recording: Good

Hard on the heels of the new so-called "soft" rock we have, with this recording of the soundtrack of a film called The Trip, what I suppose one could call "cocktail" rock. That is, if hippies drank cocktails, which they don’t. I do, however, and I find this an extremely pleasant album to toss a few down by. In the first place, it has, on most of its tracks, a suitably distant and dreamlike quality, so that you don’t have to listen very hard. When your attention is caught, it is likely to be by something like Psyche Soap, which is a ragtime-like ditty that promises that "psyche soap" will make you clean on the inside. Since I have not seen the film, I suppose titles such as Feuch, Five Jug Thing, and Flash, Bam, Poof have some pertinence to the action, but I didn’t find myself worrying much, because the music that the Electric Flag performs here is genuinely good stuff by itself. It is a trifle glossy in spots, and perhaps over-engineered for gimmicky sound effects. Nonetheless, in its soothing way, this is an entertaining album. It might also serve as a nice introduction to "psychedelic" music for any of you out there playing Teresa Brewer records and wondering whether you ought to drop a little acid before it goes out of style.

P. R.

ZIEGFELD FOLLIES. Original recordings of Nora Bayes, Eva Tanguay, Francis McKeely, Nat M. Wills, Bert Williams, Fanny Brice, Will Rogers, Gallagher and Shean, Paul Whiteman, Ukulele Ike, Van and Schenck, Mary Lewis, Veritas ® VM 107 $4.79.

Performance: Historic
Recording: Equally historic

Veritas is a new name among record companies, but it promises, on the basis of its first release, to be a most commendable enterprise. In that first batch (many reviewed in these pages last month) were such "Artists of Timeless Stature" as Josef Hofmann, Ziegfeld Follies disc. The liner notes here (by A. F. R. Lawrence) are well researched and well-written—and best of all, very informative; the cover art is restrained and tasteful; the old recordings have been chosen with care and obvious affection; and there seems to have been a special effort made to avoid a campy aura. The name of the game, of course, is Nostalgia; and there seems to have been chosen with care and obvious affection; and there seems to have been a special effort made to avoid a campy aura. Though I may wonder what the public ever thought of the performers of these bands, I know that promises that "psyche soap" will make you clean on the inside. Since I have not seen the film, I suppose titles such as Feuch, Five Jug Thing, and Flash, Bam, Poof have some pertinence to the action, but I didn’t find myself worrying much, because the music that the Electric Flag performs here is genuinely good stuff by itself. It is a trifle glossy in spots, and perhaps over-engineered for gimmicky sound effects. Nonetheless, in its soothing way, this is an entertaining album. It might also serve as a nice introduction to "psychedelic" music for any of you out there playing Teresa Brewer records and wondering whether you ought to drop a little acid before it goes out of style.

P. R.

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**SPOKEN WORD**

**MEN AND WOMEN OF SHAKESPEARE.** Sir John Gielgud and Irene Worth (readers). RCA Victor VDS 1159, VDM 115 55.79.

Performance: Collector's item
Recording: Adequate to good

A few years ago Sir John Gielgud and Irene Worth toured with a one-man-show for two people, as it were, which they called "Men and Women of Shakespeare." Parts of this are now recorded, with quite sizable excerpts from *A Midsummer Night's Dream*, *The Merchant of Venice*, *Romeo and Juliet*, *As You Like It*, *Hamlet*, *Macbeth*, and *King Lear*.

Sir John is one of the great Shakespearean actors of our day, and Miss Worth, while perhaps not quite matching his eloquence, is an actress of the most consistent distinction. At times here Gielgud seems a slave to his beautiful voice, for what is merely an instrument of his performance in the theater becomes in a recording its total medium, and the special emphasis this places on the vocal inflections is at times unexpectedly unkind. He was my first Hamlet, but I'm sure that his breathy tones in the closet scene reproduced here are not really what I wish to recall from that performance.

Yet when Sir John and Miss Worth are at their best, they are memorable indeed. His Macbeth (a role I cannot recall him playing at all) is magnificent, and his Lear has a tattered majesty that is immeasurablymoving. Miss Worth ranging from Juliet to Gertrude gives a surprising authority to all. For collectors of actors and actresses this record, whatever its inequalities, is a must. C.B.


Performance: Documentary tour de force
Recording: Expert

What we are accustomed to regarding as history, with its speeches and cheering crowds, its shrieking air-raid sirens, roaring engines, and angry polemical exchanges, is noisy stuff. The real evolution of society occurs perhaps more quietly and privately, and can be read with greater truth through the silent prisms of poems than it can in the headlines. Edward R. Murrow was a man who believed in history in the headline sense, and he was tremendously good at bringing the sound of it into some sort of sensible continuity and perspective. In fact, the three-record "I Can Hear It Now" series was a landmark in the history of documentary recording, and hearing it all again now that it has been re-released in one album is both impressive and exhausting.

Murrow's aim was to present the march of "momentous events" during the thirty years from 1919 to 1949 through the voices of the "legendary figures of this era." And it all does indeed unfold like a legend: Wilson warning the Senate that failure to join the League of Nations will lead the nations of the world to war again; the birth of radio; the wiretaps of Will Rogers; Scopes trial; the crash and the Depression; obliteration of the free countries of Europe by the Nazis; war; the Berlin airlift; and all the little human interludes that attracted international attention in between, such as the Duke of Windsor announcing his throne for the "woman I love," Truman imitating H. V. Kaltenborn wrongly predicting his defeat in the 1948 election, and the rest of it. To be sure, the first album (originally released last) is not as exciting as the other two, since Mr. Murrow, faced with either putting up with virtually unlistenable stuff on old records or using performers, chose the latter course. Even though they were selected to match the originals as closely as possible, we know they are performers, and their voices do not necessarily speak to them—as they do later when we know we are hearing the voices of the real Hitler, Chamberlain, Churchill, and Stalin, men whose decisions changed the world.

All three records are put together with an exemplary sense of direction, and indeed constitute a kind of talking history book that is most exciting when the resources of radio are brought into full play. And although Murrow could be terribly solemn and even sententious in his role as narrator, he sensed quite well the irony and the import of events as they occurred, and was often right in his predictions of their results. In all, "I Can Hear It Now" in its entirety is an enthralling encounter-in-sound with the recent past twenty-five years, thought to have been melancholy thought that we continue to "learn from history that we learn nothing from history." P.K.

**SONNETS OF SHAKESPEARE: ELIZABETHAN SONNETS AND LYRICS.** Anthony Quayle (reader). Spoken Arts 729 $5.95.

Performance: Variable
Recording: Excellent

Shakespeare sonnets are the Beethoven Quartets of poetry, and as with all the greatest chamber music, recordings have done them a considerable service. Recordings have also done the act of poetry-reading a considerable service, adding a new dimension of verbal music to the printed page.

The present selection includes twenty-three of Shakespeare's sonnets on one side, and a selection of Elizabethan lyrics, ranging from John Donne to Thomas Nashe, on the other. Anthony Quayle is an actor of distinction, but his performance is curiously variable here. In the darker Shakespearean sonnets—such as No. 144 "Two loves I have of comfort and despair"—his mellifluous voice acquires a dramatic tension that sends me just the right note of agony. But in other places in the cycle he sounds a little too bland.

Blunness is perhaps his difficulty with the metaphorical wit of Donne, yet at times, such as in the famous Marlowe's "Passionate Love," the beauty of his voice and the pure grace of his phrasing are simply irresistible. C.B.
The average embarrassed non-technical music-loving layman's clip-and-save INSTANT GUIDE TO RECORDING TAPE

Does that shiny new tape recorder you got for a gift have you buffalooed? Do you panic at the terms like acetate tapes, Mylar tapes, tempered Mylar tapes, standard-play tapes, longer-recording tapes, double-length tapes, triple-time tapes, low-print tapes, low-noise tapes, and inches-per-second? Here's how to stop trembling and start taping. A complete lessons...plus a clearly marked paragraph of advertising from the makers of Audiotape.

Lesson 1. The Basic Question—Acetate or Mylar Base?

When you record something, you are magnetizing microscopic particles of iron oxide. If you don't know what iron oxide is, don't worry. Just bear in mind that the particles have to be attached to something or they will blow away, so they are coated onto plastic tape. This base tape can be either acetate or Mylar. Choice of base does not affect fidelity of sound, so why a choice? To save you money and trouble. Acetate gives you economy. It's not as rugged as Mylar, but professional recording studios prefer it and use it almost exclusively. You may prefer it too. Mylar gives you mileage. It survives for years even in deserts and jungles (if you're taping tribal chants, you'll want Mylar). Mylar tapes also can be made exceedingly thin, which means a reel can hold more feet for a longer, uninterrupted program. Tempering overcomes Mylar's tendency to stretch under stress, and is used for the thinnest, most expensive tapes (the next lesson takes you painlessly through thick and thin).


Instead of "Play," "Recording," "Length" or "Time," think of "Thickness." Picture a tape-reel 7 inches in diameter. It will hold 1200 feet of standard-recording tape (acetate or Mylar)...1800 feet of longer-recording tape (considerably thinner acetate or Mylar)...2400 feet of double-recording tape (still thinner Mylar). Easy, isn't it? Now move on to:

Lesson 3. Which Speed to Record At.

Your tape recorder probably allows you to record at several different speeds (you, by the way, are a recordist; only your machine is a recorder). What's the reason for this smorgasbord of speeds? The faster the speed, the higher the fidelity; the slower the speed, the more playing time per foot and per dollar.

15 ips (inches-per-second). Commercial recording companies use this speed when they tape your favorite performer for later transfer to records. Forget it.

7½ ips is what you need for really good hi-fi music at home, and for the clearest reproduction of speech (foreign-language homework, sound-tracks for home movies, cocktail-party capers). An 1800-foot reel will play for 45 minutes—the length of a long-play record.

3½ ips is fine for background music and for most speech applications—dictating to your secretary and recording baby's first words. An 1800-foot reel will play for three hours.

15/16 ips is not recommended for anything but continuous monitoring. An 1800-foot reel will play for 6 full hours. Unless you do wire-tapping, you are probably not in the market for 15/16 ips and you're ready to try this:

Tricky Test Question.

Q: How do you get longer playing time per reel of tape?

A: You can do it in either of two ways. (1) At slow speed. The tape plays longer but sound fidelity is reduced. (2) On thin tape. You get more footage per reel but it costs proportionately more. (To put it another way, the same recording job can cost you a dime or a dollar, depending on the method you select. If you're clear in that, you've earned your diploma.)

Lesson 4 Post-Graduate Course.

Experienced tape recordists, with ears and equipment that are ultra-sensitive, can sometimes hear "echoes" caused by "print-through." Think of it as a leakage of sound from layer to layer when very thin tape is wound on the reel. When you achieve that kind of expertise, you'll want special "low-print" coatings...as well as "low-noise" coatings which eliminate the barely perceptible tape-hiss that only the most expensive amplifiers can pick up anyway.

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Performance: Good
Recording: Good
Stereo Quality: Attractive
Speed and Playing Time: 7½ ips; 89'08"

Hearing the tape version of this performance of the Bruckner Fourth confirms my original impression of a very solid reading lacking something in expressive and spiritual depth. The highlights of the tape, as of the discs, are the extremely beautiful choral performances. The tape transfers of these works are successful. The orchestral sound is comparable to the original, but the hiss level is disturbingly high.

IVES: Variations on "America" (orchestrated by W. Schuman); Symphony No. 1, in D Minor; Three Places in New England—No. 2; Putnam's Camp, Redding, Connecticut; The Unanswered Question; Orchestral Set No. 2; Robert Browning Overture. Chicago Symphony Orchestra, Morton Gould cond. RCA VICTOR ® TR3 5011 $10.95.

Performance: Good sequence A, fair sequence B
Recording: Good
Stereo Quality: Fine
Speed and Playing Time: 3¾ ips; 77'54"

Not long ago, I reviewed an all-Ives tape issued by Columbia called "The World of Charles Ives." Since it was released at 7½ ips, the "World" was not yet outsized, even though three important pieces—Washington's Birthday, the Robert Browning Overture, and Three Places in New England—were heard before the tape was finished.

Today, I have just pushed the panic—or "stop"—button on another all-Ives tape put out by RCA Victor at 3¾ ips. Since I am a little puncheon from the experience, I can only hope that my calculated playing time of 77'54" is correct. And I can only offer my thanks to RCA Victor for throwing in the Revolutionary and visionary music of Ives has a tendency to resemble itself—or so I have been theorizing. After a straight run-through of The Unanswered Question, Orchestral Set No. 2, and the Robert Browning Overture, I am theorizing no longer—I'm just stating it. For, although it may very well have been Ives' intention to break down the barriers between art and total life-experience, one has to ask: "Did he have to do it all the time? Or even most of the time? Wouldn't just once-in-a-while have been enough?"

The trouble with my repetition of this theme, in opposition to the current apotheos of Charles Ives, is that everyone must be concluding that I hate Charles Ives and refuse to admit it. It isn't in the least true; I love every piece on this giant tape. I am merely suggesting that Ives is in danger of being mistaken for the composer's work believable as abstract musical theater.

Antal Dorati

The Blue Danube doesn't just slip by

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MAHLER: Symphony No. 2, in C Minor ("Resurrection"); Helen Harper (soprano); London Symphony Chorus and Orchestra, Georg Solti cond. LONDON LCK 80187 $11.95.

Performance: Superb
Recording: Spectacular
Stereo Quality: Unbeatable
Speed and Playing Time: 7½ ips; 80'53"

Before hearing this tape of Mahler's Symphony No. 2, I would have sworn I would never hear a recording of it to approach Bernstein's. And while I'm not prepared to concede Solti's supremacy even now—Bernstein's sense of the shape of the work and his singularly intense identification with its sentiments are, for me, unique—Solti's version has a lot going for it.

The performance, for one thing, is a miracle of technical precision. If the London Symphony Orchestra has ever played better on records, I haven't heard it do so. And Solti himself imbues the work with a driving intensity that, in London's spectacular recorded sound and stereo, can be hair-raising. Strictly speaking, his performance is rather more disciplined than Bernstein's, but the latter has a gift for making what some might view as excesses in this composer's work believable as abstract musical theater.

Solti's performance comes closest to matching Bernstein's in the finale. It is held under control, the choral work is unbelievably lucid in both musical and textual detail, and the conductor's restraint and sense of timing make the closing pages uncommonly moving. Helen Watts sings the "Magical Horn" movement nicely, but here I find Jennie Tourel's collaboration with Bernstein unforgettable.

Taken in sum, Solti's recording is a live wire—good enough to make one almost regret the fact that there is a superior one available. The stereo effects, by the way, are as effective as any I have ever heard. W. F.

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Performance: Top-notch
Recording: Brilliant
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Speed and Playing Time: 7½ ips; 52'29"

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E. S.

COLLECTIONS


Performance: Horowitz
Recording: Good
Stereo Quality: Good
Speed and Playing Time: 7 1/2 ips; 80'90".

The "Horowitz" adjective as applied here refers not merely to this artist's phenomenal command of velocity and dynamics, but more specifically to what I have always felt to be his flair for exquisitely shaping the simplest legato melodic line. The Schumann Blumenstück as played here provides a prime example. The Haydn comes off as cool and crisp as new-fallen snow. The late Scriabin Sonata, given the Horowitz touch, becomes not only palatable, but altogether fascinating. The Debussy L'Île joyeuse is endowed with more glitter than sensuality, and the famous alla Turca movement of the Mozart gets surprisingly deliberate treatment here. The Chopin Nocturne and Mazurka are things of beauty both, but I wonder, along with my colleague Eric Salzman (see page 88 of the August, 1967, issue of this magazine), whether the omission of two main-theme repetitions was deliberate or a memory lapse. And, as Mr. Salzman points out, for once the Horowitz technical wizardry comes something of a cropper at the end of the lengthy and often fascinating Lisztwork. This gets a bit scrambled here in the quest for achievement of the ultimate in kinetic excitement, and the end result is to destroy the absorbing tone-poetry that came before.

The recorded sound to my ears is wholly satisfying, even in its live concert locale of Carnegie Hall in 1966; but I do wish that the applause had been electronically suppressed instead of being exploited to the point of becoming a nuisance.

D. H.


in (piano). ANGEL © YIS 36418 $7.95.

Performance: The twain doesn't quite meet
Recording: First-rate
Stereo Quality: Very good
Speed and Playing Time: 3 1/2 ips; 48'23''.

Long an informed advocate of classical Indian music, Yehudih Menuhin tries on two tracks of this collection to join with Indian musicians (Alla Rakha on tabla in Prak- šetti and Ravi Shankar in Yehuda-Kali). These are interesting experiments, but only that, because the differences in background

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and conception between Menuhin and the Indian musicians are so pronounced that the fact of the twain trying to meet is more noticeable than the music. Shankar's own track, R.1ga Puripi Kalyan, having no such distractions, is wholly absorbing as an example of spontaneous composition within the classical Indian tradition. On the second side, Menuhin and his sister play the Enesco Sonata No. 3, in A Minor, "in the popular Rumanian style," with entirely apt and convincing rhapsodic intensity. It is here that the link in spirit between Menuhin and the "rapture," as he puts it, of Indian music is clear. But the language of Indian music takes much, much more time to really learn than the otherwise brilliantly occupied Menuhin has to give.

N. H.

ENTERTAINMENT

HARRY BELAFONTE: Belafonte on Campus; Calypso in Brass. Harry Belafonte (vocals); orchestra, Bill Eaton and Howard Roberts cond. Roll On, Buddy; The Jack-Ass Song; The Hands I Love; Delia; The Far Side of the Hill; The Dog Song; Coconut Woman; and seventeen others. RCA Victor $9.95.

Performance: Static
Recording: Good
Stereo Quality: Good
Speed and Playing Time: 33 1/3 ips; 83'15"

When I was in college, I bought Belafonte records like they were going out of style. His music was happy, he was branching out in a lot of new directions at once, and he never failed to amuse or sadden or titillate. The intervening years have taught me more about life and (I hope) about music. The world is simply too complicated now to go back and get all that innocence again. So, unfortunately, the calypso songs about donkeys and monkeys and cocoanut women seem no more refaced to the reality I know than polar bears to Beekman Place.

Times have changed for me, but Belafonte's style has stayed the same. His songs, sung as gently as if he were rocking a baby in a cradle, seem duffer now. Uninspired. I just can't get with him. But if I were 18 again, this double-disc tape would be fun. Belafonte never sounded better, and his work never seemed more assured. One side features an assortment of folk songs he usually sings on his college tours—songs by Gordon Lighthart, Tom Paxton, Pete Seeger, and Ewan McColl, among others. The flip side is more calypso—a grab bag of tongue-clicking, bird-gurgling sounds re-upholstered in brassy arrangements. It's all very harmless, very musical, and very uninvolving emotionally. The fraternity house will dig it. But more developed thirsts are not likely to be quenched so easily.

R. R.

MARIA LUISA BUCHINO: Music of Chile; Music of Argentina. Maria Luisa Buchino and Her Llameros (vocals and instrumental accompaniment). Yo tengo unos ojos negros; Nieva, nieva y sol; El picador; Lloro, llora corazón; and fourteen others. Monitor $7.95.

Performance: Smart but too smooth
Recording: Excellent
Stereo Quality: Fine
Speed and Playing Time: 33 1/3 ips; 71'06"

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Despite the presence of the Araucanian Indians, there is little native influence on the music of Chile; it is all European and Spanish in flavor—with a couple of hot peppers thrown in for Chilean seasoning. The songs have strong dance rhythms, and the usual sentimental Latin American lyrics about festa day, moonlight, love on the pampas, and the colors of the local flag ("the azure of the sky, the snow of the mountains, the red of the Araucanian flower, and Araucanian blood..."). In Argentina the sounds of European violins, guitars, and harps are spiced with the pipings of wild native instruments, and vigorous dances—circle dances, couple dances. Andean chacareras and candombés, as well as pregones, or street cries, are popular. Schorira Buchino and her "llameros" offer generous helpings of the Chilean music and a dozen types of the Argentinian dances on this tape. Her band is smooth and sweet and somewhat commercial in sound for this material, which needs a bit more color. Still, the program adds up to a pleasant encounter with the songs and dances of both countries. Henrietta Yarchenco's notes are informative and entertaining.

**BILL EVANS/SHELLY MANNE/EDDIE GOMEZ: A Simple Matter of Conviction.** Bill Evans (piano), Shelly Manne (drums), Eddie Gomez (bass). Stella by Starlight; Later, Star Eyes; These Things Called Changes; and four others. VERVE® VVIC 8675. $7.95.

Performance: Skilled, flowing
Recording: Excellent
Stereo Quality: Very good
Speed and Playing Time: 7½ ips; 37"32n

In previous encounters, Bill Evans and Shelly Manne have proved well matched in their skills and expressive vocals. Both are concerned with keeping lines of melody and time supple, and sensitized to shifting dimensions of feeling through careful attention to dynamics. In Eddie Gomez, they have found a bassist of similar preoccupations and discipline and virtuosity. Had it been possible for this trio to stay together, rather than meet only on a recording date, the results might have paralleled the evolution of the Modern Jazz Quartet into the most precise and lithely dimensioned of jazz chamber units. In any case, the results of this meeting should be durably satisfying to those who prefer their jazz eminently civilized. My own tastes usually veer toward bolder and more visceral improvisation, but there are times when a session like this is a calming—though still challenging—respite.

N. H.

**JEFFERSON AIRPLANE: Surrealistic Pillow.** Jefferson Airplane Takes Off. Marty Balin (guitar, vocals); Alex "Skip" Spence (percussion); Jack Casady (bass); Jorma Luwik Kaukonen (lead and rhythm guitar, vocals). Paul Kantner (guitar, vocals); Grace Slick (piano, organ, vocals). She Has Funny Cars; Blues from an Airplane; Tobacco Road; Let's Go; And I Like It; White Rabbit; Plastic, Fantastic Lover; and fifteen others. RCA Victor® (SP) TP 3027. $9.95.

Performance: New sound, old sentiments
Recording: Very good
Stereo Quality: Excellent
Speed and Playing Time: 3½ ips; 63"56n

The Jefferson Airplane indeed takes off here, and the sudden ascent left this listener's ears popping. Once one gets used to the noise level, however, there is to be detected beneath the stylish psychedelic hubbub of guitar, piano, organ, and percussion the good old throb of romantic sentiment. As the liner notes put it about this group, "through the sound of the electronic age, you can still hear the age-old phenomenon of love." Such numbers as Somebody to Love, My Best Friend, and Comin' Back to Me trade in the same dreamy subject matter that brought lumps into the throats of lovers long before the coming of rock-and-roll. In out songs like Today they are tender and gentle by any standard, and one number for guitar called Embryonic Journey is downright serene. The address of the "Jefferson Airplane Fan Club" in San Francisco is thoughtfully provided along with the tape.

**STEVE LAWRENCE AND EYDIE GORMÉ: Steve and Eydie Together on Broadway.** Steve Lawrence and Eydie Gormé (vocals); orchestra, Joe Guercio cond. Mame; Walking Happy; Cabaret; Old Fashioned Wedding; The Honeymoon is Over; I Believe in You; Sunrise, Sunset; Come Back; Custard Pie; Together Forever. COLUMBIA® EQ 925 $7.95.

Performance: Too much vitamin C
Recording: Good
Stereo Quality: Good
Speed and Playing Time: 7½ ips; 26"01n

I like the Lawrences, but I prefer them both on ballads and I prefer them separately, without the "bully-chic" cheerleading and the gimmicky accents and rib-punching. Still, on its own terms, this is a pleasant collection of bouncy stuff from recent shows. Highlights include Irving Berlin's new duet from the Lincoln Center revival of Annie Get Your Gun, called Old Fashioned Wedding, and The Honeymoon is Over, the Mary Martin-Robert Preston song from I Do! I Do! Their high-altitude tag on Come Back to Me is only a further demonstration of how really neat both of these performers are. But an entire disc of out-shouting one other is an exhausting exercise for the listener.

R. R.

**JOHNNY MATHIS:** Johnny Mathis Sings. Johnny Mathis (vocals); orchestra, Saturday Sunshine; Lovers in New York; Eleanor Rigby; Yesterday; Who Can I Turn To?; Strangers in the Night; There's Always Something to Remind Me; Somewhere, My Love; and four others. MERCURY® MEC 61070 $7.95.

Performance: Smooth
Recording: Excellent
Stereo Quality: Excessive
Speed and Playing Time: 7½ ips; 39"27n

The voice of Johnny Mathis has a quality like the nap of velvet, and he uses it expertly on this tape to sing of sunshine after the rain, tranquil Saturdays, lovers in the park, and the noise level, however, the pleasant moods of the sour-sweet drenching. He also projects a mood of loneliness, as in Who Can I Turn To?, with a somber sincerity that could bring tears to the eyes of a turtle. There is a hint of hidden power, too, in his approach, and when he turns it on full, as in such a lament for parting lovers as Who Can Say?, the results are electrifying. His arrangements almost swamp his voice at times in the lushness of
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when you think high fidelity, think acetate. No other film base has taken the place of acetate for fidelity of reproduction... resistance to stretch... freedom from print through. With all these advantages, acetate based tapes cost less.

Celanese does not manufacture recording tape. It produces and supplies acetate film for this purpose to leading tape manufacturers.
HI-FI/STEREO REVIEW CLASSIFIED

COMMERCIAL RATE: For firms or individuals offering commercial products or services. 75¢ per word (including name and address). Minimum order $7.50. Payment must accompany copy except when ads are placed by accredited advertising agencies. Frequency discount: 5% for 6 months; 10% for 1 year. Ads paid in advance.

READER RATE: For individuals with a personal item to buy or sell. 45¢ per word (including name and address). No minimum! Payment must accompany copy.

GENERAL INFORMATION: First word in all ads set in bold caps at no extra charge. Additional words may be set in bold caps at 10¢ per word. All copy subject to publisher’s approval. Closing Date: 1st of the 2nd preceding month (for example, March issue closes January 1st). Send order and remittance to: Hal Gynes, HIFI/STEREO REVIEW, One Park Avenue, New York, New York 10016.

EQUIPMENT

WRITE for quotation on any Hi Fi components: Sound Reproduction Inc. 34 New St., Newark, N.J. 07102. Michael’s HiFi Components,承接"Will We Not Be Undersold" prices, 15-day money-back guarantee. Two year warranty. No Catalog. Quotations Free. Hi-Fidelity Center, 239 (HC) East 149th St., New York 10451.

FREE! Send for money-saving stereo catalog at HIFI/STEREO REVIEW. 1st of the 2nd preceding month (for example, March issue closes January 1st). Send order and remittance to: Hal Gynes, HIFI/STEREO REVIEW, One Park Avenue, New York, New York 10016.

TAPE AND RECORDERS


SURVEILLANCE COUNTERMEASURES BROCHURE $1.00. ENGINEERING LABORATORIES, BOX 1036, ANDERSON, IOWA 46015.

TAPE RECODERS

BEFORE RENTING Stereo Tapes try us. Postpaid both ways—no deposit—immediate delivery. Reliability—Service—Satisfaction—prevail here. If you’ve been dissatisfied in the past, your initial order will prove this is no idle boast. Free brochure write: Librid, Box 2262, Palm Village Station, Hialeah, Fla. 33012.

RENT 4-TRACK STEREOTAPES—Dependable service our keynote—ALL MAJOR LABELS—FREE CATALOG [48 States]—TRIMOR COMPANY, P.O. BOX 748, FLUSHING, N.Y. 11352.

Hi-Fi Components Tape Recorders, at guaran- teed “We Will Not Be Undersold” prices. 15-day money-back guarantee. Two year warranty. No Catalog. Quotations Free. Hi-Fidelity Center, 239 (HC) East 149th St., New York 10451.

TAPE RECORDERS


RENT RECODER SALE. Brand new, nationally advertised brands, $10.00 above cost. Special prices on Hi-Fi Components and color television. Arlak Sales, 1837 Commonwealth Avenue, Boston, Mass. 02215.

RENT STEREOTAPES—75¢ week. Catalog, Art’s Tape Service, 1613 South Mariposa Ave., Hollywood, Calif. 90028.

TAPEMATES makes available to you ALL 4- TRACK STEREOTAPES—ALL LABELS—postpaid to your door—at tremendous savings. For free brochure write: TAPEMATES, 5727 W. Jefferson Blvd., Los Angeles, California 90016.


RENT STEREOTAPES—75¢ week. Catalog, Art’s Tape Service, 1613 South Mariposa Ave., Hollywood, Calif. 90028.

CASH for your unwanted prerecorded tapes. Fieder, 81 Forshay Road, Monsey, New York 10952.

RENT Stereo Tapes—over 2,500 different—all major labels—free brochure. Stereo Parti, 1616-G Peachtree Road, Atlanta, Ga. 30309.


STEREO TAPES, Save 30% and up; no member- ship or fees required; postpaid anywhere U.S.A. Free 70-page catalog. We discount batteries, tape/recorders, tape/accessories. Beware of slogans, "not undersold," as the discount information you supply our competitor is invariably reported to the factory. SAXITONE, 1776 Columbia Road, N.W., Washington, D.C. 20009.

TALKING Cat Recording: Tape 95¢, 15¢. “Record $2.95. 3½ Minutes. Live cats that talk! William Herman, Thordale, Pa. 19372.

BLANK CARTRIDGE STRIPS—34 minute 4 or 8 track—60 minute cassette—$1.50 each. Douglas Sales, Dept. Q, P.O. Box 5009, Chicago, Illinois 60605.

BELTS For Grundig, Telefunken, Akai. Give Model Number, Public Sound, 9385 Bird Road, Miami, Florida.

RADIO YESTERDAY. Complete broadcasts of all the old favorites. One Hour sample tape $5. Catalogue $1 (refundable). B. Charmer, Box 11, N.J. 07402, High Bridge Station, Bronx, New York 10452.

SCOTCH RECORDING TAPE, lowest prices. TAPE CENTER, Box 4305, Washington, D.C. 20012.

WHOLESALE—4-Track STEREOTAPES—Car- boys, Copies—CB, Reel to reel Scosco, Box 2705, Montgomery, Alabama 36105.

RECORDS

HARD to find collectors LPs, like new, Lists 25¢. Records, Hillburn, New York 10931.

PROTECT YOUR LPs: Heavy poly sleeves for jackets $5; poly lined paper sleeves for LPs $10; round bottom inner sleeves 3½¢. Minimum order $5.00. Record Supplies, Hillburn P.O., New York 10931.


SPECIAL INTEREST RECORDS AVAILABLE, PRODUCED BY THE EDITORS OF THE WORLD’S LEADING SPEAKER MARKETS. Write for lowest price. SEND FOR FREE CATALOG, RECORD CATALOG, H.F., ZIFF-DAVIS PUBLISHING COMPANY, ONE PARK AVENUE, NEW YORK, N.Y. 10016.

RARE 78’s. State Catalog. Write Record-Lists, P.O. Box 2122, Riverside, California 92506.

“Hard To Get” records—all speeds. Record Ex- change, 812 Seventh Avenue, New York, N.Y. 10019.


FREE CATALOGS, Broadcasts, Sound Tracks of TUNES, 341 Cooper Station, New York City 10003.

PROTECT YOUR RECORDS, Pure white, cart- board replacement covers, plastic lined inner sleeves with window, 78 and 45 covers, adjustable record holders. Free catalog, samples 50¢. Cabco, Dept. 120, 89 East Woodruff, Columbus, Ohio 43201.

$25 BRINGS You 33 1/3 RPM funny-voice narra- tion of "Unlikely Story No. 1!" Make a Fun Dis- cover! Tek Method, 600 South Michigan, Chi- cago 60605.

CUSTOM RECORDING

CUSTOM Recording—Monaural. Stereo, Tapes, Discs, Mastering—all speeds—reasonable quo- tations; Son-Deane Records, Hartsdale, N.Y. 10530.

TUBES

DON’T BUY TUBES—Radio, TV-Xmitting, spe- cial-purpose types unless you get your price list. Lowest prices in U.S.A. 5,000 types—Guar- anteed Brand New. Send postcard for TV—Special Purpose TUBES—$1.00. Send order and remittance to: Hal Cymes, HiFi/STEREO REVIEW, One Park Avenue, New York, New York 10016.

REPAIRS AND SERVICES


SPEAKER REPAIR, Hi-Fi, guitar, organ speakers recored good as new at fraction of new speaker price. For details write: Magnetic Electronics, Dept. SR, 4625 W. 53rd St., Chicago, Ill. 60632.

MAGNETIC Heads refurbished at fraction of cost. Distorted sound in your tape recorder? Write: Micro-Magnetics, Box 1294, Cam- den, New Jersey 08105.

RUBBER STAMPS

RUBBER ADDRESS STAMP $1.50. SIGNATURE $3.50. FREE CATALOG, JACKSON, P.O. BOX 443-G, FRANKLIN PARK, ILL. 60131.
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The X in the new Pickering XV-15 stands for the numerical solution for correct "Engineered Application." We call it the Dynamic Coupling Factor (DCF).\textsuperscript{1}

DCF is an index of maximum stylus performance when a cartridge is related to a particular type of playback equipment. This resultant number is derived from a Dimensional Analysis of all the parameters involved.

For an ordinary record changer, the DCF is 100. For a transcription quality tonearm the DCF is 400. Like other complex engineering problems, such as the egg, the end result can be presented quite simply. So can the superior performance of the XV-15 series. Its linear response assures 100% music power at all frequencies.

Lab measurements aside, this means all your favorite records, not just test records, will sound much cleaner and more open than ever before.

All five DCF-rated XV-15 models include the patented V-Guard stylus assembly and the Dustamatic brush.

For free literature, write to Pickering & Co., Plainview, L.I., N.Y.

\textsuperscript{1} Dynamic Coupling Factor and DCF are service marks of Pickering & Co.
For Tough Recording Jobs
Choose The Only Microphone With Backbone!

The backbone of the Electro-Voice Model 676 is no mere decoration. It's visible proof of the most exciting idea in directional microphones—Continuously Variable-D (CV-D)*.

And it takes a directional microphone to solve your tough recording problems: bad acoustics, audience noise, poor balance between performers.

Here's how CV-D works. We attach a very special tapered tube to the back of the microphone element. This tube automatically varies in effective acoustic length with frequency. It's a long tube for lows—a short tube for highs. All this with no moving parts! The tube is always optimum length to most effectively cancel sound arriving from the back of the microphone, regardless of frequency.

This ingenious solution* is years ahead of the common fixed-path designs found in most cardioid microphones. The 676 offers significantly smoother response at every point—on or off axis—plus more uniform cancellation to the rear. It is also less sensitive to wind and shock. There is almost no "proximity effect"...no boosted bass when performers work extra close.

Long life and smooth response are guaranteed by the exclusive E-V Acoustalloy® Diaphragm. And the 676 has unusually high output for a microphone so small. Of course you get dual output impedances, high efficiency dust and magnetic filters—all of the hallmarks of Electro-Voice design that have made E-V a leader for years.

But that's not all. The 676 has an exclusive bass control switch built in. Choose flat response (from 40 to 15,000 cps) or tilt off the bass 5 or 10 db at 100 cps to control reverberation, reduce low frequency feedback and room rumble.

Write today for complete specifications, or visit your E-V sound specialist's to see this remarkable new microphone. And when difficult recording problems must be faced squarely, stand up and fight back with the microphone with a backbone (and CV-D)—the new Electro-Voice 676 dynamic cardioid!

Model 676 Satin Chrome or TV Grey, $100.00 list; in Gold, $110.00 list. Shown on Model 420 Desk Stand, $20.00 list. Model 674 identical except stud-mounted with On-Off switch, $70.00 list. (Less normal trade discounts.)

ELECTRO-VOICE, INC.
Dept. 382F, 618 Cecil Street
Buchanan, Michigan 49107

*Pat. No. 3,115,207