SPECIAL TAPE RECORDER ISSUE
Buyers' Guides to Portable and Home Tape Recorders
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(a)

(b)

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(b) long—for intermix automatic play when desired.
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COVER PHOTO: HEBE'S FUNDAMENTION
The pace of scientific discovery and technological development in our day has become so rapid, we are so regularly assaulted with news of advancements and achievements, that we seem sometimes to have lost completely the capacity for wonder and, more, the faculty of appreciating the accomplishments of the human mind. In less hectic days, there was time to acknowledge the genius that in Edison produced the first recording machine, in Bell the telephone, and in de Forest the triode vacuum tube. But who, this Eighth Annual Tape Recorder issue prompts me to ask, invented the tape recorder? Roughly speaking, these modern marvels are the perfected fruits of scientific labors over the last quarter century, so useful and so ubiquitous that we now take them completely for granted, as if they had always been around. They haven’t.

The idea of the first tape recorder sprang complete, like Athena from the head of Zeus, from the inventive genius of a Dane, Valdemar Poulsen, in 1898. His machine was a wire (later steel tape) recorder, cumbersome, low in output, and limited in frequency response, but still amazingly like the recorders of today. As early as 1912 Lee de Forest applied his tube amplifier to the problem of increasing the Poulsen machine’s output signal, and in 1935 the first magnetic recording tape (paper backed) was exhibited at the German Annual Radio Exposition in Berlin.

Developments during and since World War II have made the tape recorder an indispensable tool of our space program, computer technology, and both commercial and private recording. Ingenious new applications in business, in the home, and in the laboratory seem to grow almost exponentially, and manufacturers continue to respond with machines of greater complexity, utility, and economy. The younger generation, in particular, seems to have assimilated the idea of recording as naturally as perhaps their grandparents took to the Kodak. It may very well be, in fact, that the demands of the young, with their insistence as perhaps their grandparents took to the Kodak. It may very well be, in fact, that the demands of the young, with their insistence on music everywhere and all the time, are the principal engine behind the success of the most recent addition to the audio arsenal: the tape cartridge. The cartridge concept (and cartridge machines, for that matter—RCA, Revere) has been around for some time, but it took off like a big-bottomed Thunderbird only when it found its way onto the nation’s dashboards. The next step was a logical one, and a number of manufacturers (see cover and the article "Car Cartridges Come Home" in this issue) are already making tape-cartridge units, either complete or integrable, for use in the home.

Obsolescence is a word in the grand old American tradition. It is celebrated with enthusiastic impartiality by icemen, movie-house pianists, and buggy-whip manufacturers, and some worthy pundits see them being joined by the purveyors of phonograph discs, turntables, and reel-to-reel recorders. Not quite yet. Tape cartridge technology still has a way to go before it can compete successfully with either disc or reel-to-reel tape in the most critical area of all—fidelity. Furthermore, the minimo-jumbo of four-track/eight-track/cassette formats is ripe for a shakeout, and the question of playing time (complicated by tape thickness, oxide formulations, and tape speed itself) will become serious as soon as tape-cartridge manufacturers approach the classical-music catalog seriously. And when the short-pants period is outgrown, the tape cartridge machine will take its place as an adjunct to, not a replacement for, existing audio systems.
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MARCH 1967
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Letters to the Editor

Stephen Foster

The article on Stephen Foster by Wiley Hitchcock (January) was interesting and informative. In the context, the quotation from Aaron Copland that Foster was a songwriter and not a composer has supercilious implications. Yet Hilaire Belloc said, "The making of songs is the best of all trades, and the second best is to sing them." I was especially interested in Professor Hitchcock's analysis of the nostalgic theme of Foster's lyrics. He ascribes this to a frontier milieu. I can think of another reason, quite as plausible: Foster's Celtic forebears would have had this trait. To such a degree as to be characteristic, nostalgia appears in Irish and Scottish songs and literature, and anyone familiar with these folk knows it forms a large part of their day-to-day sociable conversation.

Ever since Rome conquered Gaul, the submerged culture of the Celts, when it surfaced to commingle with that of the dominant nations which overlay it, voiced itself in a longing for Tir nan Og (The Land of the Young).

Thomas O'Malley
Brooklyn, N. Y.

Lehár

I read George Jellinek's article on Franz Lehár in the January issue with great interest. It brought to my attention many interesting points about Lehár that I had never before been aware of. It is another public service, in addition to the article, that you have compiled the Lehár discography.

Walter Swoope, Jr.

I have just finished reading George Jellinek's wonderful article on Franz Lehár. It is typical of his work: I loved it. I am a senior in high school, and first became curious about opera from reading his articles. The issue of HiFi/Stereo Review with the beautiful recording of "Mi chiamano Mimi" by Mirella Freni in it gave me the impetus to investigate. What a thrilling medium opera is!

I have a library of back issues of your magazine. I study Mr. Jellinek's articles very closely and use them as guides for my purchases. Like all teen-agers, I don't have much extra money, but I use all of it for opera records. Mr. Jellinek's suggestions are my only guidelines. He is never wrong!

John Shea
Lathrup Village, Mich.

Martin Luther, Musician

I was most impressed with the article "Martin Luther, Musician" (December) by William Kimmel. It was very informative and enlightening, helping to uncover an important aspect of Luther the man. As a recent purchaser of stereo components I found the rest of the issue interesting, too.

John H. Tietjen
Executive Secretary
National Lutheran Council
New York, N. Y.

Mr. William Kimmel, author of "Martin Luther, Musician," is to be commended for his perceptive, sensitive, and relevant treatment of this very significant aspect of Luther's being.

Dale E. Griffin, Co-ordinator
450th Reformation Anniversary
St. Louis, Mo.

World Tapes for Education

We at World Tapes for Education are grateful for the Tape Horizons column about this organization in the December issue. It has given a shot in the arm to our inquiries, and already several people have become members of WTE who previously had not heard of it. And we are also grateful to Alan Broder for supplying the information for the column.

For the record, WTE was founded in 1952 and operates under a U.S. Treasury Department ruling which declares it to be a "charitable educational corporation"; all donations are tax deductible.

Harry B. Matthews
Executive Director
World Tapes for Education
Dallas, Tex.

Reviewers, New and Old

I would like to make a few comments about your new reviewers of popular records, as of the January issue. Judging from their choices of the best records of the year, you are batting fifty percent. Rex Reed's choices are excellent, and seem to be based on sound musical intelligence. As for Peter Reilly, his
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CIRCLE NO. 59 ON READER SERVICE CARD

HIFI/STEREO REVIEW

We read with interest your excellent article "Making Real Music with Three-Year-Olds" by Richard Freed (December). In the charming picture on page 64, Mr. Suzuki is with his son, John Edward. We are happy to note that HIFI/STEREO REVIEW is publishing comment on this type of music.

STEVE RINDSKER Scarsdale, N. Y.

The Suzuki Method

We hope that the January issue of your magazine is not typical of things to come in the entertainment section. If it is, you can't expect me to renew my subscription.

Who is this Peter Reilly? Where did he get the idea, stated in his review of the Jefferson Airplane's new album, that rock 'music' just happened? Is he too young to remember payola? Does he think rock music just happened?

I dislike rock 'music' because it is a lowest-common-denominator phenomenon. Witness the level of musical skill shown by rock bands. I thought that your magazine stood for good music. Now a doubt has crept in.

LEO FOX
Columbia, S. C.

Joe Goldberg's review of the Blues Project's disc "Live at the Cafe au Go Go" (November) was obviously written by one who either does not appreciate or fails to understand the goals which today's rhythm-and-blues groups are trying to achieve. I can only assume that his proposed new name for the Blues Project, "Tommy Flanders and the Ecclectics," is meant to be derogatory. Mr. Goldberg, however, has unwittingly paid the Blues Project a compliment, in that it is the goal of this kind of group to present as varied a program of music as possible, while stamping each number with the mark of its individual style. This is evidenced by the versatility of such groups as the Beatles, the Lovin' Spoonful, Mitch Ryder and the Detroit Wheels, and numerous others.

While I agree with Mr. Goldberg on the neo-Dylanism of Donovan's and Eric Andersen's compositions and the quality of Tommy Flanders' voice, I don't feel it is fair to avoid mentioning that Tommy Flanders and the Blues Project have gone their separate ways since shortly after the cutting of this disc. Nor do I feel it just to ignore Danny Kalb's electrifying guitar leads or Andy Kulberg's powerful bass figures, both of which add greatly to the excitement of the record. Furthermore, Mr. Goldberg neglects to mention that the audience at this performance at the Cafe au Go Go was rather dead. Through personal experience as a member of a rhythm-and-blues band, I am aware of the hazard an unresponsive audience can present to a good performance.

Regardless of my feelings toward this particular review, I was happy to note that HIFI/STEREO REVIEW is publishing comment on this type of music.

STEVE RINDSKER Scarsdale, N. Y.

HIFI/STEREO REVIEW

The Suzuki Method

We read with interest your excellent article "Making Real Music with Three-Year-Olds" by Richard Freed (December). In the charming picture on page 64, Mr. Suzuki is with his son, John Edward. For Mr. Suzuki's technique we have the highest praise, and have been thrilled by our son's progress under the guidance of his (Continued on page 10)
What is Project 3 Total Sound?

Project 3 Total Sound is the result of a year of research by Enoch Light. It is full impact... distortion-free sound. You can play a Project 3 record or tape or cartridge at full volume or at lowest volume, and you will consistently enjoy the pleasure of complete musical definition of instruments, natural presence, and perfect musical balance.

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MRS. WILLIAM L. JARVIS, JR.
Rochester, N. Y.

Bang! Bang!
I am writing this letter in response to Rex Reed's review of the Beatles' album "Revolver" (January). I am appalled at his insensitivity to the music on this album. Whether or not he enjoys this music is not my concern. I am merely stating that he shows no awareness of the musical creativity on "Revolver." He seems to have missed entirely the use of unusual rhythmic patterns, dissonance, atonality, Eastern music, and string quartet in what is classified a "rock-and-roll" album. His personal taste is irrelevant to me, what concerns me is his inability to understand, and accordingly report on, what is there. His function as a music critic is therefore vitiated.

I am impressed that he knows that "yellow submarine" is a reference to LSD. That American teen-agers went around naively singing this is indeed humorous. But Mr. Reed is not employed as a sociologist; he is paid for his musical knowledge, and, in my opinion, he is overpaid.

Let me state that I am not a fourteen-year-old fan-club president; I am a twenty-five-year-old doctoral candidate in psychology.

HANK DAVIS
Greenbelt, Md.

Mr. Reed replies: "Reader Davis is absolutely correct when he points out the use of dissonance, atonality, Eastern music, and string quartet in the 'Revolver' album. However, may I say that it is not my duty to waste a reader's time pointing out how creatively music is written if it is performed badly. I will not go into how brilliant Leonard Bernstein's score from West Side Story is if it is played on a comb on the disc I am reviewing. Nor, if Guy Lombardo recorded Beethoven's Fifth Symphony, would I be concerned with the fact that he knows such music exists if he made it sound like Baby, It's Cold Outside."

"The Beatles are, as I pointed out, marvelous composers of popular 'now' music that contains important musical patterns and ideas. They still do not know how to perform it well. They will be remembered by future generations as songwriters of the Sixties, not performers of the Sixties."

"How much is a critic's review worth? In your January-issue article "Best Recordings of 1966," Joe Goldberg acclaims the Beatles' "Revolver" as "their best record so far." In the same issue, Rex Reed calls "Revolver" a " tiresome" performance. Mr. Reed also criticizes their appearance ( "fat") and their talents ( "flat"). It is quite evident that Mr. Goldberg listens for different qualities in a recording than does Mr. Reed. May I suggest that, in future issues, all of your critics express their opinions in one concise, diversified report?"

MYLES H. MARKS
Pittsburgh, Pa.

(Continued on page 12)
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☐ Send C.O.D. (I'll pay freight and C.O.D. charges.)

---

Magnetic Ships

In "Hi-Fi Q & A" for September, a fellow Californian, Mr. Peter A. Bechtold, seemed concerned about carrying prerecorded tapes in ships and airplanes, apparently fearing a strong magnetic field would erase the tape. As a pilot, I believe I can dispel that fear completely. For reliable operation, our delicate navigational equipment demands the absence of any magnetic field greater than that of the earth. A lot of time and money goes into the design of shields for aircraft electronic gear to prevent damage to other communication and navigation equipment. I have carried quite a few tapes aboard my aircraft without any problem, and I have never heard of any problems from other crew members.

---

Record Costs

James Goodfriend's article in the September issue regarding record costs prompts me to take up my ballpoint.

As a sales executive in another field, I am well acquainted with pricing and distribution problems and their attendant costs. I also firmly believe that any company has the right to make money in business. My engineering training in logic and analysis makes me shake my head in bewilderment over the rather haphazard and illogical pricing and distribution patterns which seem to exist in the field of records and tapes. Apparently there exists in this industry an almost absolute lack of understanding as to why (outside of the large teen-age market) high-fidelity fans will invest large sums of money in records and tape. The record companies obviously are victims of insufficient information feedback.

A high-fidelity enthusiast of some thirty years' standing, I recently acquired a really good stereo tape recorder and reproducer. It was not really much of a surprise to find this same "public be damned" attitude in the sales of stereo tape recordings. To have to pay $5.69 or more per reel for perhaps 40c worth of plastic reel and perhaps 30c worth of magnetic tape of doubtful quality would make my Scotch ancestors turn over in their graves. I was recently in the Los Angeles area shopping tape-reproducing plant of one of the major recording labels, where tapes are printed several thousand at a shot. With this wholesale reproducing method, the finished tapes were probably turned out at a cost of no more than 10c for each tape.

In the past fifteen years, 98 per cent of all record "masters" have been made on magnetic tape. But in most modern cost accounting systems, this tape master is written off across the basic costs of the production of the records. So the same master tape can then be used absolutely free to make the prerecorded tapes. And this is why I

(Continued on page 14)
For the clearest, strongest FM stereo:

MOSFET

What's the ultimate goal in tuner design? To pull in the clearest, strongest signal from distant and nearby stations—with minimum noise, cross-modulation, and distortion.

You may recall that, in the early 1960's, the nuvistor triode, first used in Harman-Kardon's Citation III tuner, represented the state of the art in low-noise, ultra-sensitive front-end designs. Then, a few years later, we were first to discard the nuvistor tube in favor of an all-transistor FM front end of outstanding performance.

Since that first all-solid-state front end, you've heard a lot about newer transistors (field-effect transistors) that further improve FM reception. While early FET's were satisfactory in comparison with previous devices, the difference in over-all FM performance wasn't dramatic. But a few months ago the MOSFET (metal-oxide silicon field-effect transistor) came on the scene, and has literally created new standards in FM front-end technology.

The MOSFET, used in every new Harman-Kardon Nocturne receiver, has proved itself without a doubt the most effective device for increasing FM sensitivity, reducing unwanted signals, and isolating the antenna circuit to assure an improved antenna match under all reception conditions. It is truly the answer to superior FM stereo performance, with none of the disadvantages of tube, transistor, and earlier FET front-end designs.

Sure, the MOSFET costs us more than any other kind of front-end component. But it brings you the satisfaction of spinning the Nocturne dial and feeling those stations lock into place, sure and crisp. Before deciding on any stereo receiver, be sure you listen to Nocturne at your Harman-Kardon dealer's. Harman-Kardon, Inc., 401 Walnut St., Philadelphia, Pa. 19105.

A subsidiary of The Jerrold Corporation

ORIGINATOR OF THE HIGH-FIDELITY RECEIVER

harman|kardon
strongly object to paying so much for a prerecorded tape.

Until such time as the record-company marketing people go to the consumer for information, their market will be in chaos.

William J. TrenBeth
Los Angeles, Cal.

Unkindest Cut?

It is good news to learn upon reading David Hall's review (December) that the magnificent Leningrad Symphony-Sanderling performance of the Rachmaninoff Second Symphony is once again available on records. Its eloquence is such that no other recording of the work can be considered competitive, even discounting this recording's advantage of being "without cuts," as Mr. Hall states.

My Decca disc of this performance, however, has a stuttering cut at a point 137 bars from the end, right after the recapitulation section of the finale. The twenty-eight bars eliminated here are played on all "cut" recordings, and exist in the miniature score. Is it possible that Mr. Hall is mistaken, or is the new Heliodor version truly complete?

William S. Hayes
Tustin, Cal.

Mr. Hall replies: "Mr. Hayes is correct-the Sanderling performance as issued on the Heliodor label is without the last movement bars eliminated here. They are a most curious omission, considering that for this performance Sanderling has apparently used the Gutheil score of 1908, the original publication of the symphony in Russia, which of course contains those bars, as well as a great deal more music that, as I stated in my review, is not to be found in the abridged version made later by the composer-the version on which the standard miniature score is based. The difference may be inferred from the fact that, with an equal number of bars of music to the page, the abridged version of the score is 194 pages long and the Gutheil score is 230. So, tossing semantic parity to the winds, I'm going to say that although the Sanderling performance is not absolutely complete, it is more complete than any other I know of on record!"

Bands

William Flanagan seems to imply, in his review of the Gustav Holst Band Suites (December), that the pieces are transcribed from orchestral scores, and furthermore may be inferior because of the absence of a string section. In fact, the compositions are all classics in the repertoire of music originally scored for the concert band.

Jesse A. Rydenski
Northampton, Mass.

Mr. Flanagan replies: "Rereading my review, I find it difficult to see how Mr. Rydenski could conclude that I had mistaken the Holst suites for transcriptions, since I used the specific phrase 'the band repertoire of Gustav Holst.' In a subsequent phrase-"band transcriptions even of music of some substance immediately seem to lessen the quality of the music for me'-I was suggesting both that the Holst pieces for band seem to be of less substance than, say, the overture to The Marriage of Figaro, which is often performed in band transcription, and yet that the Holst works may be of more substance than I am able to discern because (as I concede in my review) I have a block where the charms of the concert band are concerned."

William Flanagan's review of some of the finest recorded band music was a welcome change of pace. The Central Band of the Royal Air Force, a true virtuoso ensemble, is generally considered to be Britain's premier military (brass-and-reeds) band. But sharing the honors in these recordings, in which, as Mr. Flanagan says, the playing is "a marvel," is the British Motor Corporation (B.M.C.) Band, one of Britain's pure brass (no reeds) amateur industrial bands.

Mr. Flanagan omitted to mention that Gustav Holst composed A Morriside Suite especially for the National Brass Bands Championships of Great Britain, and in this connection, I was present on the occasion of its first public performance, at the old Crystal Palace in London in 1928 or 1929 (the year eludes me: I was a lad still in short pants, attending my first brass-band contest). The suite was a test piece and was played through by each of some two dozen bands. The Nocturne is a particularly fine piece of scoring for pure brass. As Mr. Flanagan observes, Holst's instrumentation is superb. He was the first composer of truly great renown to descend from the grand traditions of the amateur brass band, and in doing so helped to establish standards of sophistication and skill that permanently enhanced its musical dignity and led other outstanding composers to follow his example.

William J. Weeks
Los Angeles, Cal.
Now you can play auto tapes at home

...with two new RCA Victor Mark 8 Stereo Tape Players. Each offers up to 80 minutes of uninterrupted stereo music! Now RCA Victor innovation brings you two new Mark 8 Stereo Tape Players that let you double the pleasure from your stereo library. Model YHD 38 has a built-in Solid State Stereo amplifier and two 7" speakers. Model MHC 60 plays through a separate speaker system. Each offers up to 80 minutes of the great new sound of pre-recorded 8-track stereo cartridges. And each is a quality performer. See them at your dealer.
NEW PRODUCTS
A ROUNDUP OF THE LATEST HIGH-FIDELITY EQUIPMENT

ISC is introducing a speaker system, named the Plus III, for which an entirely new approach has been developed to obtain 360-degree high-frequency dispersion. Two 12-inch drivers with inverted cones and with their apexes facing each other are used to achieve a radiation pattern approximating that of an ideal pulsating sphere. The power-handling capacity of this high-efficiency system is 35 watts maximum program material, and impedance is a nominal 8 ohms. The wood paneling is of oiled walnut. Price: $189.95.

Circle 172 on reader service card

Tandberg has announced the Model 12, a fully transistorized, three-speed (17/8, 3 3/4, 7 1/2 ips), completely self-contained four-track stereo tape recorder. The Model 12 has a 20-watt amplifier and stereo speakers built-in. The specifications at 7 1/2 ips include a record/playback response of 40 to 16,000 Hz ±2 db, a signal-to-noise ratio of 55 db, and wow and flutter better than 0.1 per cent. The Model 12 measures approximately 15 1/2 x 11 1/2 x 6 3/4 inches and weighs 20 1/2 pounds. It comes in a teakwood cabinet, and has a carrying case. Price $498.

Three matching speaker systems designed specifically for the Model 12 tape recorder are available. Speaker system Model 113 has a 6 1/2-inch woofer and a 2-inch tweeter; Model 112 has a 10 x 6-inch woofer and a 2-inch tweeter, and the Model 114 speaker system has a 10-inch woofer and a 2 1/4-inch tweeter. Prices of the three speakers are, respectively: $49.50, $75.50, and $99.50.

Circle 173 on reader service card

KLH's Model Five is a three-way, four-speaker bookshelf-size speaker system using the acoustic-suspension principle for the bass range. The four speakers of the Model Five are a 12-inch woofer, a pair of small-cone mid-range drivers, and a 1 1/4-inch tweeter. Each speaker is used conservatively to cover a range much narrower than its actual upper and/or lower frequency limits. The nominal crossover points are 500 and 4,000 Hz. A switched control provides adjustment of the very high frequency range. All Model Fives are matched within 1.5 db across their frequency range. The system is housed in an oiled walnut cabinet measuring 26 x 13 3/4 x 11 1/2 inches. Nominal impedance is 8 ohms. Price: $180.

Circle 174 on reader service card

Pioneer's SX-1000TA is a solid-state 90-watt AM/FM stereo receiver. Operating controls include: power on-off, tuning, volume, balance, low- and high-frequency filters, and loudness compensation on-off. There are separate bass and treble controls for each channel, a speaker on-off switch (for use with the front-panel stereo-headphone jack), a seven-position input selector, and lever switches for loudness compensation and tape monitoring. Stereo inputs are provided for tape head, auxiliary, and phono cartridge (magnetic, crystal, or ceramic). Specifications include a power output of 90 watts (45 watts music-power per channel), 40 watts (rms) at 0.5 per cent harmonic distortion with 8-ohm loads, and a response of 20 to 60,000 Hz ±1 db. Power bandwidth is 15 to 40,000 Hz. The hum and noise level at the high-level inputs is better than -85 db. Noise at the magnetic-phono input is -70 db. The tuner section's FM sensitivity is 2.2 microvolts (VHF), and stereo separation is 38 db. The size of the SX-1000TA in its oiled walnut case is 16 x 13 3/4 x 5 1/2 inches. Price: $360.

Circle 175 on reader service card

Viking has introduced the Model 4400, a self-energized stereo speaker system. It consists of two walnut speaker enclosures of bookshelf size. Each contains an 8-inch woofer and 3 3/4-inch tweeter with a crossover network. The enclosures are acoustically matched to the speakers, and a 60-watt solid-state stereo power amplifier is built into one of the enclosures. The amplifier feeds both speakers and includes an on-off volume control, bass-boost switch, and stereo headphone jack. The 44000 stereo speaker system will work with any tape deck and is intended to provide high-quality monitoring speakers for those recorders that lack such a facility. Each speaker enclosure measures 16 x 14 inches and is 5 inches deep. The complete Viking 4400 stereo speaker system, including the 60-watt amplifier, retails for $119.

Circle 176 on reader service card

Scott has announced a new stereo console line for 1967 designed to provide hi-fi component quality in a single piece of furniture. The electronic system used in the consoles includes a silver-plated front end with field-effect transistors (FET's) for elimination of cross-modulation effects and for high FM sensitivity, and 72- to 80-watt all-silicon transistor power-output stages. The record players in all units are mounted on two-stage mechanical filters to eliminate acoustic feedback and other extraneous vibrations. All speakers built into the consoles use the air-suspension principle. A variety of furniture styles are available in each of the designs at each price level. Included (Continued on page 20)
Introducing the remarkable new UNIDYNE A ... in the Quality tradition of the Unidyne Family
UNIDIRECTIONAL DYNAMIC MICROPHONES

Now... eliminate background noise pickup at a new low price

SHURE UNIDYNE A
UNIDIRECTIONAL PROBLEM-SOLVING ABILITY AT AN OMNIDIRECTIONAL PRICE

Never before such quality at so low a price! Controls background noise confusion, "thumping" sound from percussion instruments, and "hollow" sound associated with omnidirectional microphones. You'll be amazed and impressed by the clear, life-like tapes you can make with the new Shure Unidyne A ... a low-cost, fine quality, wide-response unidirectional microphone with a truly symmetrical pickup pattern that picks up sound from the front only, at all frequencies. Only $35.40 net.

Unidyne A pairs (matched in both frequency and output) detect the subtle differences that "localize" sound for realistic, spatially-correct stereo tapes. Only $70.80 net for the factory-matched pair, complete with plugs attached. (Note: The famed Unidyne II & III are also available in matched pairs).

SEND FOR LITERATURE: SHURE BROTHERS, INC.
222 HARTREY AVENUE, EVANSTON, ILL.

MATCHED PAIRS FOR STEREO RECORDINGS, TOO

SHURE MICROPHONES - WORLD STANDARD WHEREVER SOUND PERFORMANCE AND RELIABILITY ARE PARAMOUNT
are: contemporary oiled walnut, Italian provincial, early American, oriental, Spanish, and so forth. All cabinets provide dust-free storage space for 150 records, or for the installation of an optional tape recorder. Prices: $500 to $1,500 for the basic models.

Circle 177 on reader service card

- Frazier has announced the latest addition to its line of loudspeaker systems, the Espanier II. Styled in a contemporary dark oak cabinet with a Spanish fretwork grille, the Espanier may be installed on its optional base (shown) or used as a bookshelf unit. The system incorporates a 10-inch heavy-duty bass speaker and two 3-inch cone tweeters. A control is included for adjustment of the system's treble response. The Espanier II has a frequency response of 30 to 18,000 Hz and an input impedance of 8 ohms. Dimensions are 24 x 14 x 12 inches. Price: $129.95. The base is $10 additional.

Circle 178 on reader service card

- Kenwood has added to its line the Model TK-140, a 130-watt, solid-state, AM/stereo-FM receiver. A front-end tuning section that uses field-effect transistors and a four-gang tuning condenser achieves a 2-microvolt IHF sensitivity. Five i.f. stages with four limiters and a wide-band ratio detector provide 45 db alternate-channel selectivity and a 2.5 db capture ratio. Stereo separation is 38 db. Other features of the tuner section include an automatic stereo-mono switching circuit with stereo-indicator light, and an interstation-noise muting circuit.

The all-silicon transistor amplifier section has a power bandwidth of 20 to 50,000 Hz and intermodulation distortion of less than 0.5 per cent at any level below rated power. A control-panel area at the right side of the receiver has lever switches that control tape monitoring, muting, and high- and low-frequency filters. There are provisions for handling two sets of stereo speaker systems. A front-panel speaker-selector switch permits use of either or both sets, and there is an off position for use with the front-panel stereo headphone jack. There is a five-position mode switch for left, right, stereo, stereo-reverse, and mono, and a five-position program source selector for AM, FM, FM-auto, phono, and tape head. Price, in a walnut-mode switch or both sets, and there is an off position for use with the

Circle 179 on reader service card

- Jerrold is offering a solid-state high-gain FM/TV preamplifier for single-channel use. Designated "De-Snower" Model DSS, the unit provides 30-db gain at the chosen frequencies. The preamplifier unit is weatherized for mast or indoor mounting. Its power supply, Model 105, is installed indoors and provides operating voltages to the preamplifier. Models are available tuned to cover the full FM band or specific TV channels. Price: $123.

Circle 180 on reader service card

- Ampex has released a new closed-circuit video tape recorder/television receiver combination. The recorder and 21-inch television receiver combination, called the VR-6175, is designed for commercial, industrial, and home use. The helical-scan VR-6175 operates at a tape speed of 9.6 inches per second, and a writing speed of 1,000 ips. The television receiver, Model TR-821, is manufactured by Motorola and modified by Ampex so that, when used with a recorder, no additional equipment or professional installation is required to record and play back television programs. An accessory video camera, the CC-6450, permits the user to make his own live recordings. The camera is especially adapted to permit remote-control operation of the recorder. The CC-6450 sells for $579.95 and includes tripod, cable, and standard lens.

Circle 186 on reader service card
We didn't invent stereo.
(We just widened its scope.)

In 1933, Bell Laboratories transmitted the first public stereo concert. The Philadelphia Orchestra performed this concert in the Philadelphia Academy of Music using three microphones. It was received over three speaker systems set up at the Constitution Hall in Washington, D.C.*

We had absolutely nothing to do with it.

In 1963, Empire created the Grenadier. The first speaker system designed and engineered for stereophonic reproduction.

It contained a mass loaded woofer, four inch voice coil, and the world's largest ceramic magnet structure. (By placing the woofer downward, feeding through a front loaded horn we were able to create a 360 degree dispersion of sound.)

The next step was the revolutionary wide angle acoustic lens, for fuller frequency and phenomenal stereo separation.

By enclosing these features in a flawless hand-rubbed walnut finish with perfect symmetry of design, (crowned with an imported marble top) we achieved the first speaker system that lets you sit anywhere—hear everything, naturally.

Alexander Graham Bell—move over.

**Empire Grenadier.**
**One of the great firsts.**

Great new 16 page color catalog is now available, write:
Empire Scientific Corp., 945 Stewart Ave., Garden City, N.Y.

*Audio Magazine, June, 1957
Tape Recording Level

Q. The point has been made numerous times that the proper recording level is the most critical aspect of tape recording. The level must be high enough to override noise and yet not so high that it causes distortion. I'm curious to know what factors limit the amount of signal that can be recorded on a tape.

A. The two factors that limit the amount of signal that can be put on a tape are: (1) the tape head, and (2) the tape itself. It's easy to see how the head, whose job it is to translate the audio electrical voltage into a varying magnetizing field at its pole pieces can be overloaded. Overload of the head means that so much audio signal is being fed to the head that a further increase in the signal is no longer able to cause a corresponding increase in the magnetic flux at the head's pole pieces.

The magnetic tape has a similar problem. Here, there is a limit to the amount of magnetism that can be placed upon the tape, and once that limit is reached, an increase in the magnetizing field produced by the record head causes no further increase in the strength of the magnetic track on the tape. Both of these phenomena, in the head and in the tape, are known as saturation, and when it occurs, distortion increases tremendously.

FM-Mixer Noise

Q. I do a lot of taping of FM broadcasts. Everything works fine until my neighbor begins using her electric mixer at that point, a horrible buzz intrudes on my recording. I've tried plugging an inexpensive noise filter between my unit and the wall socket, but it has no effect. Any suggestions?

A. The best place to tackle your problems, if that is possible, is at your neighbor's mixer rather than at your FM receiver. A filter, if it is to be most effective, should be installed at the source of the noise rather than the point of its reception. And an expensive, rather than inexpensive, noise filter may be required to do the job properly.

It could be that your neighbor's mixer requires new capacitors at the brushes—or new brushes—to eliminate the sparking that is indirectly the cause of the noise. It may also help to run a separate ground wire from the mixer to an external ground. One last thought: a tube check and/or alignment of your tuner might help the situation also, since if your tuner is not in good condition, or is not a quality unit to start with, its noise-rejecting properties will not be up to snuff.

The Perfect Amplifier

Q. On WABC-FM's audiophile radio program Men of Hi-Fi Edgar Villchur mentioned a "simulated perfect amplifier" that Acoustic Research uses in comparison testing of amplifiers. How does one simulate a perfect amplifier?

A. The method to which Mr. Villchur was referring is similar to a method which David Hafner of Dynaco has described for testing preamplifiers. The channels of the amplifiers to be tested (Amp. 1 and Amp. 2 in the diagram) are each adjusted for a gain of 1, which means that their output-signal voltage is exactly the same as their input-signal voltage. Amp. 1 and Amp. 2 are then fed in turn by the output of a third "reference" amplifier. The signal levels are adjusted so that the output of each of the amplifiers under test (and the reference amplifier) is sufficient to drive a loudspeaker at some normal listening level.

Each of the amplifiers under test (Amp. 1 and Amp. 2) may be thought of as an imperfect amplifier with a gain of 1. A pair of copper wires serves as a simulated "perfect" amplifier, also with a gain of 1. Any difference in speaker sound between the signal coming from Amp. 1 or Amp. 2 and the signal coming through the copper wire is by definition an imperfection. The virtue of this test is that the listener is not required to express a preference for a particular amplifier's sound quality, but simply to indicate whether he bears a difference between the "perfect amplifier" (the wire) and the amplifiers under test.

While it requires a trained ear to make valid and repeatable judgments of sonic quality (Continued on page 28)
A modestly priced loudspeaker revisited.

Two years ago, we introduced a new loudspeaker system, the KLH* Model Seventeen. We designed it to be the first modestly priced loudspeaker system that had wide range, low distortion (even at the lowest frequencies), and the ability to handle enough power to fill the largest living rooms. We also designed it, like all other KLH loudspeaker systems, to have an octave-to-octave musical balance that permits prolonged listening to all kinds of musical material without fatigue.

Two years ago, we said that the Model Seventeen brought a new distinction to speakers costing under $100. It still does.

* A trademark of KLH Research and Development Corp.
These are the facts. We leave the advertising superlatives to others.
Shown above are the principal features of the Fisher 220-T AM/FM all-solid-state 55-watt stereo receiver.

But even these facts aren’t enough for you to determine the sound quality of the 220-T. You have to compare it directly with other stereo receivers in its category.

Take your favorite record to the hi-fi stores and play some familiar passages through as many AM/FM stereo receivers as you can. Compare. Then listen carefully to a music broadcast on FM. Also count the number of stations you can tune in clearly on the FM dial. And see if the fidelity on AM is almost as good as on FM mono. It should be.

By following this simple test procedure, you'll hear the difference between hi-fi advertising superlatives and hi-fi itself.

(For more information, plus a free copy of the 80-page Fisher reference guide to hi-fi and stereo, use coupon on page 28.)

The Fisher 220-T

No ad man can do it justice.
Anyone else introducing a product like the new Fisher XP-9B would probably call it the finest loudspeaker ever made.

We can't.

5-inch upper midrange.

1½-inch soft-dome tweeter.

Resonance-free, high density particle board.

6-inch lower midrange.

12-inch woofer.

4-way LC-type network with air-core coils (behind woofer)
We already make the XP-15.

Several months ago, we introduced the XP-15 4-way console loudspeaker as the largest and most costly speaker system Fisher has ever produced. It still is. And it is still our proudest effort in loudspeaker design. But again, at $299.50, it is costly. And even though it is moderate in size for a true 4-way system, it may still be a bit large for some living rooms.

So now, we introduce the XP-9B. Fisher’s first 4-way bookshelf loudspeaker. The XP-9B is based on the design of the XP-15. But instead of seven drivers, the XP-9B has four: a 12-inch woofer with six-pound magnet structure; a 6-inch lower midrange unit and a 5-inch upper midrange unit; and Fisher’s exclusive 1½-inch soft-dome tweeter. It also incorporates a 4-way LC-type crossover network.

At $199.50, it is the most ambitious bookshelf loudspeaker we have ever built.

Whether or not it is better than any other bookshelf system is a decision you must make by listening and comparing.

And if cost and size are no object, listen to the XP-15. The only loudspeaker that prevents us from calling the XP-9B our finest.

(For more information, plus a free copy of the 80-page Fisher reference guide to hi-fi and stereo, use coupon on page 28.)

Clevite Stereo Headphones
...you never heard it so good.

FREE! $2.00 VALUE! Send for your free copy of the new 1967 edition of The Fisher Handbook. This revised and enlarged version of the famous Fisher high fidelity reference guide is a full-sized 80-page book. Detailed information on all Fisher components is included.

Stereo Records, Mono Player?
Q. Can you tell me why stereo records can be played only on a stereo record player?
KURT WEIS
Santa Fe, N.M.
A. Stereo records can be played on a mono record player, but you risk damaging the groove walls by doing so. A mono cartridge is not usually designed to have much stylus compliance in the vertical direction, and hence the vertical modulations of the record groove are apt to be damaged by the vertically unyielding stylus. There is no reason, however, why the record should not continue to perform satisfactorily, though certainly not with full fidelity, in the mono mode. But once a stereo record has been played with a low-quality mono cartridge it will probably no longer sound good in stereo.
Six ways to go stereo, Sony-style...

1 - Model 200 Portable Solid-State Stereo Tape System. Under $199.50
2 - Model 660 E.S.P. - Reverse Solid-State Stereo Tape System. Under $375
3 - Model 260 Radial Sound Solid-State Stereo Tape System. Under $249.50
4 - Model 350 Three-Head Solid-State Stereo Tape Recorder. Under $199.50
5 - Model 250-A Perfect Playmate Solid-State Stereo Tape Deck Recorder. Under $149.50
6 - Model 530 Quadrilateral Sound Solid-State Stereo Tape System. Under $399.50
The ideal of the phono-cartridge designer is a unit that yields to guidance from the record groove in a purely passive manner. But real-life cartridges invariably fall somewhat short of this ideal. Like all bodies acted upon by external forces, the moving parts of a cartridge are beset by inherent resonances that interact and interfere with the musical signals the cartridge must reproduce.

Trouble arises when the music, or some of its overtones, happens to hit the frequencies at which the moving parts of the cartridge resonate. The cartridge then makes its own special spurious contribution, and the resulting sound is often unpleasantly shrill. Violins, for example, mishandled by a resonance-ridden cartridge, seem to be made of stainless steel instead of wood.

Audio engineers refer to this type of sound as “peaky” because it is caused by frequency-response peaks (exaggerated response) at those points in the frequency spectrum where the music coincides with the cartridge's own resonance. These same resonant peaks cause the cartridge's channel separation to drop considerably. Since the sound structure of music covers a broad range of overtones, chances are that nearly every note contains some harmonic component that will "excite" some resonance within a poorly designed cartridge.

Cartridge designers have lately been quite successful in suppressing unwanted resonances or moving them out of the audible range—by employing new materials and techniques to make the moving parts of the cartridge extremely light. The lighter a vibrating body, the higher (in frequency) its resonance—other factors being equal. Thanks to the lightness of their moving masses, the main resonance of the best modern cartridges has been pushed up beyond the audible range, that is to say beyond the limits of the recorded signal. As a result, recent top-quality cartridges are virtually free of spurious sound coloration and their stereo separation remains excellent over the frequency range of the recorded material.

Few manufacturers specifically state cartridge-stylus resonance as part of their specifications. In any case, the proof of this particular pudding lies in the uniformity (smoothness) of the cartridge's overall frequency response. Any listing of frequency-response limits (for example, 30 to 18,000 Hz) should be accompanied by a statement of how many decibels (db) the cartridge deviates from uniform—or flat—response within the range. The deviation should be as small as possible. In the case of the top-price cartridges, the frequency-response deviation (above or below the signal-output level at 1,000 Hz) should not exceed about 2 db. Square-wave test records are also valuable for detecting ringing and other resonance-related instabilities.

Some manufacturers include a frequency-response graph with their cartridges, and the test reports published in this magazine always present such curves. The thing to watch for is an elevated portion of the curve covering a fairly broad part of the spectrum, particularly in the 8,000 to 15,000 Hz region. This is the mark by which resonance problems and a possible harshness of sound can be spotted.

Copies of the Basic Audio Vocabulary booklet are still available. To get yours, just circle number 181 on the Reader Service Card, page 17.
There are so many Miracord 50H features to talk about: Papst hysteresis motor, anti-skate, cueing, push buttons, and others. Why pick on a measly little screw?

As any expert can tell you, one of the most flagrant causes of record playback distortion and record wear is tracking error. But how come tracking error if the tonearm is properly designed, and its geometry correctly calculated? It has to do with stylus position.

The distance between the stylus and the tonearm pivot, sometimes called stylus overhang, is an integral part of the arm's design and a critical factor in its performance. A deviation in that distance by as little as 1/16th inch can throw the tracking geometry and the performance entirely out of kilter. Result: distortion and excessive record wear.

How can you be sure about this distance? There aren't two make cartridges physically alike. Where do you measure from, and how? Seems an almost impossible task.

Yet, amazing how easy it is with the Miracord 50H! There's a retractable pointer on the turntable deck which shows the exact position for the stylus, no matter what cartridge make. You insert a screwdriver in the slotted leadscrew at the front of the tonearm, and turn it until the stylus lines up precisely over this pointer. That's all there is to it.

A little thing, to be sure, but what a big difference it makes in performance. And it shows how much attention is paid by Miracord to even the littlest details.

At $149.50, less cartridge and base, the Miracord 50H is probably the most expensive automatic available. But this is entirely understandable, when you consider that is also the finest. Your hi-fi dealer will be glad to show you. For descriptive literature containing further details, write: Benjamin Electronic Sound Corp., Farmingdale, N.Y. 11736.
How To Have Fun While You Save...

NEW Harmony-By-Heathkit Electric Guitars & Heathkit Guitar Amplifier

NEW Heathkit Transistor Guitar Amplifier — Compare It To Units Costing Several Times As Much
60 watts peak power; two channels — one for accompaniment, accordion, organ or mike — the other for special effects ... with both variable reverb and tremolo; two 12" heavy-duty speakers; line bypass reversing switch for hum reduction; one easy-to-wire circuit with 13 transistors, 6 diodes; 28" W x 9" D x 19" H leather-textured black vinyl cabinet of ¾" stock; 120 v. or 240 v. AC operation; extruded aluminum front panel. 52 lbs.

Famous American Made Harmony-By-Heathkit Guitars
All wood parts factory assembled, finished and polished ... you just mount the trim, pickups and controls in predrilled holes and install the strings ... finish in one evening.

These Valuable Accessories Included With Every Guitar Kit
Each guitar includes vinylized chipboard carrying case, cushioned red leather neck strap, connecting cord, Vu-Tuneeb visual tuning aid, tuning record, instruction book and pick ... worth $19.50 to $31.50 depending on model.

Enjoy Hi-Fi FM Anywhere With This Deluxe 10-Band AM/FM/Shortwave Transistor Portable
10 bands tune Longwave, Standard Broadcast, FM and 2-22.5 MHz shortwave. FM tuner and IF strip are same components used in deluxe Heathkit Hi-Fi equipment. 16 transistors, 6 diodes and 44 factory assembled and prewired circuits for cool, rock-steady performance. Separate AM & FM tuners and IF strips. 2 built-in antennas. Battery saver switch cuts current drain up to 35%. Rotating tuning dial. Dial light. 4 simple controls for tuning, volume, tone, AFC and band switching. 4" x 6" PM speaker. Earphone and built-in jack. Optional 117 v. AC converter/charger available at $6.95. Plays anywhere on 7 flashlight batteries. Man size: 13½" W x 5¾" D x 10½" H. 19 lbs.

Deluxe Guitar ... 3 Pickups ... Hollow Body Design
Double-cutaway for easy fingering of 16 frets; ultra-slim fingerboard — 24½" scale; ultra-slim "uniform-feel" neck with adjustable Torque-Lok reinforcing rod; 3 pickups with individually adjustable pole-pieces under each string for emphasis and balance; 3 silent switches select 7 pickup combinations; 6 controls for pickup tone and volume; professional Bigsby vibrato tail-piece; curly maple arched body — 2" rim — shaded cherry red. 17 lbs.

Silhouette Solid-Body Guitar ... 2 Pickups
Modified double cutaway leaves 15 frets clear of body; ultra-slim fingerboard — 24½" scale; ultra-slim neck for "uniform-feel"; Torque-Lok adjustable reinforcing rod; 2 pickups with individually adjustable pole-pieces under each string; 4 controls for tone and volume; Harmony type "W" vibrato tailpiece; hardwood solid body, 1½" rim, shaded cherry red. 13 lbs.

"Rocket" Guitar ... 2 Pickups ... Hollow Body Design
Single cutaway style; ultra-slim fingerboard; ultra-slim neck, steel rod reinforced; 2 pickups with individually adjustable pole-pieces for each string; silent switch selects 3 combinations of pickups; 4 controls for tone and volume; Harmony type "W" vibrato tailpiece; laminated maple arched body, 2" rim, shaded cherry red. 17 lbs.

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Color-Glo Key Lights Show You the correct notes and chords ... you play melody, harmony and bass notes instantly ... even if you've never played an organ before! When you're finished, just flip a switch and the key lights disappear, leaving a beautiful spinet organ. Includes 10 voices, repeat percussion, 13-note bass pedals, two 37-note keyboards, assembled walnut cabinet & bench and more. Fully transistorized. Builds in around 50 hours and you save up to $150! 172 lbs.
NEW Heathkit®/Magnecord® 1020 Professional 4-Track Stereo Tape Recorder Kit... Save $170

Assembles Easily In Around 25 Hours... and you enjoy the $170 savings. Features all solid-state circuitry; 4-track stereo or mono playback and record at 7½ & 3½ ips; sound-on-sound, sound-with-sound and echo capabilities; 3 separate motors; solenoid operation; die-cast top-plate, flywheel and capstan shaft housing; all push-button controls; automatic shut-off at end of reel; two VU meters; digital counter with push button zero reset; stereo microphone inputs and headphone outputs... front panel mounted for easy access; individual gain controls for each channel; vertical or horizontal operation, plus a host of other professional features. Requires speakers and amplifier for playback. 45 lbs. Optional walnut base $19.95, adapter ring for custom or cabinet installation $4.75

66-Watt Solid-State AM/FM/FM Stereo Receiver

Just Add 2 Speakers For A Complete Stereo System. Boasts AM, FM and FM stereo tuning; 46 transistor, 17 diode circuit for cool, instant operation and natural transistor sound; 66 watts IHF music power (40 watts RMS) at ± 1 db from 15 to 30,000 Hz; automatic switching to stereo; preassembled & aligned "front-end" & AM-FM IF strip; walnut cabinet. 35 lbs.

30-Watt Solid-State FM/FM Stereo Receiver

World's Best Buy In Stereo Receivers. Features 31 transistors, 10 diodes for cool, natural transistor sound; 20 watts RMS, 30 watts IHF music power @ ± 1 db, 15 to 30,000 Hz; wideband FM/FM stereo tuner; plus two pre-amplifiers; front panel stereo headphone jack; compact 3¾" H x 15¼" W x 12" D size. Custom mount it in a wall, (less cabinet) or either Heath cabinets (walnut $9.95, beige metal $3.95). 16 lbs.

NEW! Deluxe Solid-State FM/FM Stereo Table Radio

Tuner and IF section same as used in deluxe Heathkit transistor stereo components. Other features include automatic switching to stereo; fixed AFC; adjustable phase for best stereo; two 5¼" PM speakers; clutched volume control for individual channel adjustment; compact 19" W x 6½" D x 9¼" H size; preassembled, prealigned "front-end"; walnut cabinet; simple 10-hour assembly. 24 lbs.

NEW! Compact 2-Way 2 Speaker System With Acoustic Suspension Design

Handles 10 to 25 watts of program material. Features wide 45 to 20,000 Hz response; 8" acoustic suspension woofer with 6.8 oz. magnet; 3½" tweeter with 4.8 oz. magnet; high frequency level control; 8 ohm impedance; 1500 Hz crossover frequency; assembled walnut veneer cabinet has scratch-proof clear vinyl covering for easy cleaning. Measures 10" H x 19" W x 8½" D. Speakers are already mounted, just wire the crossover and connect cables — complete in one or two hours! 17 lbs.

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MARCH 1967

CIRCLE NO. 46 ON READER SERVICE CARD
Wharfedale's diminutive new Achromatic W20 represents an achievement in sound, above all ... with dimensions and cost a secondary consideration. Instead of the usual 4" or even 6" woofer, it uses a high compliance, low resonance full 8" speaker with exclusive Flexiprene cone suspension. And, this is topped off with a new highly advanced mylar-domed pressure tweeter having excellent omni-directional dispersion characteristics. Both speaker components have heavy magnet assemblies for controlled transient response. Network and voice coil values have been carefully designed to perform excellently with either vacuum tube or transistor amplifiers and receivers. Even a continuously variable acoustic compensation control is included. Listen to the W20 at any of these authorized Wharfedale dealers. 

Because our competitors' speakers are very good... we had to work very hard. We're glad we did. You'll be too!
SOME BONES TO PICK: The Institute of High Fidelity (IHF) is an association of high-fidelity component manufacturers, dedicated to the advancement of the industry. Various IHF technical committees, over a period of years, have generated excellent standards defining performance measurements on amplifiers and tuners. With all manufacturers using the same basis for rating their products, the consumer needs only to read the specifications to make an informed choice. Sounds fine, doesn't it?

Unfortunately, this happy situation simply doesn't exist. For one thing, both the old and the new IHF amplifier standards contained a joker in the form of a so-called "music-power" or "dynamic-power" rating. I do not propose to discuss the problem at this time, except to indicate that I suspect that many of the published music-power ratings originated in the advertising rather than the engineering departments. Music-power ratings are not easily verified, and in the Hirsch-Houck Laboratory tests, we do not attempt to do so.

The current IHF amplifier standard clearly states that both channels of a stereo amplifier must be driven when measuring power output and distortion. Some manufacturers, including at least one whose engineers participated in the preparation of the IHF standard, rate their amplifiers with only one channel driven. This can easily result in a 10 to 15 per cent increase in output power—apparently an important merchandising consideration in this highly competitive field.

To make matters worse, published ratings are sometimes misleading. A recent example is an amplifier rated at "40/40 watts r.m.s. power output." To me, this implies that both channels can be simultaneously driven to 40-watts output. However, the best I could measure was 35 watts per channel (at rated distortion) on this amplifier. The chief engineer of the company admitted that my figures were correct if both channels were driven. He went on to say that the reason his company did not adhere to the IHF standard was because that would put them in a poor competitive position (specification-wise) when the ratings were compared with those of some other companies—who were also rating their products in a misleading manner.

In this case, why not come out and state that the 40-watt figure applies to one channel only? There are a number of manufacturers who do adhere to the IHF standard with regard to one channel vs. two channels driven, and it seems unfair to penalize them.

While I am airing my gripes, what about the recent trend toward designing amplifiers and receivers with built-in loudness compensation that cannot be switched off? The subject of loudness compensation is controversial, and has been so for at least seventeen years, to my knowledge. It is a fact that human hearing is less sensitive to low- and high-frequency tones than to the middle frequencies—and this loss of sensitivity becomes greater at low volume levels. Since music is usually reproduced in the home at a much lower level than the original program, the home listener therefore does not experience the same frequency balance as the concert-goer. It has been claimed that boosting low and high frequencies will restore some of the natural quality to music played at less-than-natural levels. While the high and low boost can be done with tone controls, it is possible to design a volume control that, as it is turned down, reduces middle-frequency levels to a greater extent than the low frequencies (and the high frequencies, if this is desired). Ideally, such a "loudness control" would preserve for the listener a natural sonic balance at all listening levels.

Well, it doesn't—at least for me. I have never heard a loudness control that even approached this ideal. This is not to say that they are useless, or even undesirable. Personally, I find loudness compensation quite pleasing when listening to background music. Pleasing—but certainly not natural!

Until recently, if loudness compensation was provided, the user was able to turn it on or off at will with a front-panel switch of some sort. Several new receivers, however, do not provide any means, short of wire cutters, for disabling the loudness compensation. And for some reason, the instruction manuals for some of these receivers do not even mention the presence of the loudness compensation. I wonder why? In any case, such a receiver almost invariably sounds unnaturally bass-heavy with almost any good-quality loudspeaker—and it can...
therefore be expected to come off sonically second best in comparison with a receiver with a flat frequency response. I simply cannot understand the rationale for this type of design. When I first encountered it on Brand "X" receiver, I attributed it to an unthinking design approach. Then I found it on Brand "Y" and Brand "Z" products, so I assume it is intentional. If the purpose is to make the units sound better with bass-shy speakers, then the receiver and speakers should be sold as a package. It doesn’t make sense to degrade the sound of any otherwise perfectly good unit on the off-chance that the speakers matched to it by the hi-fi dealer will need bass assistance.

To switch subjects again, I have been wishing for years that phono-cartridge manufacturers would standardize on pin diameters, lengths, and locations, so that the left-channel ground, for example, on one cartridge would be brought out to the same pin as the left-channel ground on another cartridge of different make, and so forth. This may be of minor importance to the average user who installs a cartridge once and forgets it, but to someone who will—or must—install many cartridges of different types during the year, standardization is particularly attractive.

I recognize that the variation in cartridge designs makes complete physical uniformity unlikely. However, there is no reason why a universal color code cannot be adopted, including color-coded leads in tone-arm heads, so that one can simply connect each lead to the correspondingly colored cartridge terminal, without worrying about channel or phase reversals.

To end on a happy note, I see welcome signs of such standardization in recent record changers and some popular cartridges, which have matching color codes. I do not know if there is any formal industry agreement on the matter at this time, but my congratulations and thanks go to those manufacturers who are leading the way.

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**EQUIPMENT TEST REPORTS**

By Hirsch-Houck Laboratories

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UTC MAXIMUS 5 SPEAKER SYSTEM

UTC-Sound, a division of TRW, Inc., manufactures a comprehensive line of compact speaker systems that span a range of sizes and prices from the diminutive Maximus 1 at $59.50 to the three-way Maximus 7 at $189. We tested the Maximus 5, which is midway in the group.

The Maximus 5 is a conventional-appearing bookshelf-style system, measuring 24 x 14 x 12 inches and finished on all six sides in oiled walnut. Its 12-inch woofer, designed with what UTC terms a “Cushioned Air Pneumatic Suspension,” has a rigid cone, apparently impregnated with a plastic material for added stiffness. It has a 5-pound ceramic magnet assembly and operates in a completely sealed enclosure that presumably uses the compliance of the trapped air to supply a part of the restoring force for the moving cone.

A built-in three-way network crosses over to a mid-range speaker at 1,800 Hz, and to a tweeter at 5,000 Hz. These speakers are each approximately 3 inches in diameter and are acoustically isolated from the woofer cavity. They face into acoustic-lens structures to enhance their polar-dispersion characteristics. A level control for the mid- and high-frequency speakers is located on the front of the enclosure, behind the easily removable grille-cloth frame. This frame is an interesting feature of the Maximus 5; it snaps into place and is easy to remove for adjusting the high-frequency level control or for changing the grille cloth itself if necessary to suit decorating requirements.

The Hirsch-Houck Laboratories indoor frequency-response measurements (averaged from seven different on- and off-axis microphone positions) showed a strong bass output, slightly elevated in the 30- to 100-Hz region compared with the mid-range response. Harmonic distortion was very low (under 1.5 per cent at a 1-watt drive level) down to 50 Hz, rising to 10 per cent at 30 Hz, which we would consider the effective lower limit of the speaker’s response. UTC, with an objectivity rarely found in the speaker business, also rates the system down to 30 Hz.

Between 80 and 1,500 Hz, the output varied only ±2.5 db, which is a very smooth response for any loudspeaker. The mid-range response was even smoother, within ±1 db from 1,500 to 8,500 Hz. With the high-frequency control set at maximum, there was a peak in the tweeter response of about 7 db (relative to the output at 5,000 Hz). A 5-db reduction in the control setting (about 30 degrees below maximum) provided a very uniform response over the entire audible frequency range. The tone-burst response of the Maximus 5 was excellent throughout. Most of the residual (Continued on page 38)
The sound of AR speakers is the next best thing to live music—

The Civic Ballet of Greenville, S. C. presents classics of the ballet repertoire to music reproduced from tape. AR-3 loudspeakers were chosen for use on the stage because of their lifelike, non-electronic sound. Inset shows the McAlister Auditorium before a performance of Delibes’ Sylvia, part of the 1965 Ballet Festival.

or small ones.

Control room at radio station WHDH in Boston, one of the country’s leading FM stereo stations (associated with TV Channel 5). WHDH, like many other stations, uses AR-3 speakers in the control room to monitor broadcast quality.

AR-3's were chosen in order to provide a sound check of maximum accuracy. WHDH can afford to buy loudspeakers of any price or size—tens of thousands of dollars are spent on the control room, and there is plenty of unused space under the AR-3's—but the station cannot afford to use speakers that color the sound.

AR speakers are often used professionally, but they were designed primarily for the home. The price range is $51 to $225. A catalog of AR products—speakers and turntables—is free on request.
component field, Sony set their sights high and aimed at high-fidelity components should rank among the very receivers, and transistor radios that the new line of Sony with the quality of Sony tape recorders, television re-

STEREO AMPLIFIER

quality 40 -watt fier. On the other hand, it handled the full output of a driven successfully by any good 15- to 20 -watt ampli-

output at any frequency.

of room resonances. We found no "birdies" or spurious ringing between bursts could be attributed to excitation of clean overall sound of this speaker make it especially room resonances. We found no "birdies" or spurious ringing between bursts could be attributed to excitation of clean overall sound of this speaker make it especially suitable for use in live rooms that have difficulty sustaining bass tones. We used it for some time in a rather hard-sounding basement playroom and were very pleased with its performance. The UTC Maximus 5 sells for $129.

For more information, circle 187 on reader service card

IT SHOULD come as no surprise to anyone familiar with the quality of Sony tape recorders, television receivers, and transistor radios that the new line of Sony high-fidelity components should rank among the very best available. Having decided to enter the high-fidelity component field, Sony set their sights high and aimed at the elite market that demands superior performance.

The keystone of the new Sony audio-component line is the TA-1120 integrated stereo amplifier. The TA-1120 is rated at 50 watts per channel continuous output into 8-ohm loads, or 35 watts into 16 ohms. Distortion at 1,000 Hz is rated at 0.1 per cent or less at full power and below, and distortion at full power is rated as less than 0.5 per cent from 20 to 80,000 Hz. The Sony TA-1120 amplifier uses forty-six silicon transistors and twenty-three diodes. Because of the stringent requirements placed on the output transistors, and the need for low-noise input transistors, the Sony semiconductor-manufacturing division developed special transistors to be used in various sections of the TA-1120.

All equalization, filtering, and tone-control functions are performed by passive resistance-capacitance networks, with feedback-stabilized two-transistor amplifiers between them for isolation and gain. This costly and little-used technique insures lowest possible distortion under all conditions of operation.

The volume and balance controls have the silky smoothness and noise-free operation found in only a few of the most expensive amplifiers. The tone controls are of the step-switch type, boosting or cutting the response in 2-db steps at 100 and 10,000 Hz. A tone-control cancel switch on the front panel can be used to bypass the tone-control circuits for flattest overall response and minimum phase shift.

The high- and low-cut filters have 12-db per octave slopes at about 9,000 Hz and below 50 Hz. All switches are positive-action lever types that in normal operation are in the upward position, thereby simplifying operation of the amplifier by an unskilled user. The mode-selector rotary switch has positions for stereo, reversed-channel stereo, either channel (through both speakers), and both channels "summed" for mono operation. The input selector is a unique combination of a three-position lever switch and a four-position rotary switch. In its upper and lower settings, the lever switch selects the tuner or a medium-sensitivity magnetic-phono input. In the lever switch's center position, the rotary switch comes into action, making it possible to choose between a microphone, tape-head, high-sensitivity magnetic-phono, or high-level auxiliary input. By presetting the rotary switch to a commonly used source, the lever switch makes it possible to choose any one of three input sources rapidly.

In the rear of the amplifier are level adjustments for the tuner and auxiliary inputs that are intended to match the signal level of a tuner or other signal source to that of the phono. Underneath the amplifier are adjustments to trim the tape-head equalization to match the requirements of a particular tape head on a tape player that lacks preamplifiers. The preamplifier and power-amplifier sections are electrically separated, with the interconnections between them made by short jumper cables in the rear. This gives the user the option of connecting the preamplifiers to other power amplifiers, the power amplifiers to other preamplifiers, driving an external electronic crossover network, or deriving a high-level center-channel output.

Recognizing the weakness of many transistor units that are subject to driver- or output-transistor damage by speaker-lead shorts or by overdriving, Sony engineers have built into the TA-1120 a completely effective protection circuit. A silicon control rectifier (SCR) detects excessive current through the output transistors and instantly disconnects the speakers and the drive

(Continued on page 40)

CIRCLE NO. 86 ON READER SERVICE CARD — 4.
HIFI/STereo REVIEW
Dual makes the world's finest turntables. Both of them.

One is the Dual 1009SK. Unexcelled for sheer precision and performance by any turntable in the world. Which is only natural. Because it's a Dual. The dynamically balanced tonearm of the 1009SK tracks flawlessly as low as 1/2 gram. The accuracy of its continuously variable stylus force assures that any cartridge will track exactly at the force you set. And the accuracy of its Tracking Balance Control (anti-skating) also assures that the stylus will track with equal force on each wall of the stereo groove. Exactly as its manufacturer designed it to trace.

With Dual's versatile Cue-Control, you can not only lift and lower the 1009SK tonearm anywhere on the record, but also take full advantage of its ultra-gentle descent (0.5 cm/sec) when you start automatically. Most valuable with today's ultra-sensitive high compliance cartridges.

Dual's powerful, utterly silent Continuous-Pole motor rotates the record at constant speed, regardless of voltage variations or the number of records on the platter. And its rotating single play spindle, still another Dual exclusive, eliminates record binding, slippage and center hole wear.

These are some of the identical features that have earned the incomparable Dual 1019 the ultimate endorsement . . . selection by virtually all the leading audio critics for use in their own personal and professional systems.

Clearly, if you take record playback seriously, your only choice is a Dual. Your only question: which one.

For the answer, just visit any franchised United Audio dealer.
signal to the power amplifiers. A green safety light on the panel goes out when this happens. The user must shut off the amplifier for a few seconds to return the circuits to normal operation. In addition, a time-delay relay circuit connects the speakers only after the capacitors in the amplifier are fully charged, thereby eliminating the warm-up 'thumps' produced by many solid-state amplifiers.

Testing the Sony TA-1120 was a challenging and fascinating procedure. The amplifier's harmonic distortion with 8-ohm loads was below the residual level of our test instruments (under 0.1 per cent) up to about 45 watts output per channel. Between 55 and 60 watts, it rose sharply, with 60 watts being the clipping level. At half power or less, there was no measurable distortion at any frequency from 20 to 20,000 Hz.

The preamplifiers have twin-T low-frequency filters at their outputs, cutting off below 30 Hz. This is a wise move to prevent speaker damage from subsonic overload, since the amplifiers themselves are potentially capable of delivering their full power down to 10 Hz. Our frequency-response curve therefore showed an insignificant 2 db down at 30 Hz, but became absolutely flat by about 100 Hz. The characteristics of the switched high- and low-frequency filters were ideal for modern records. The filters had practically no effect on program material, but achieved a reasonable reduction of turntable or record rumble and/or hiss.

The RIAA phono equalization was virtually perfect, within ±0.5 db. The NAB tape-head equalization was perfectly flat above 100 Hz, and had an insignificant broad rise of 1.5 db below 60 Hz.

Hum and noise were 63 db below 10 watts on the phono input, and about 80 db below 10 watts on the high-level inputs. These are both totally inaudible levels. Crosstalk between inputs and between channels was unmeasurably low. Phono sensitivity was better than 0.7 millivolt on the low-level phono, and 1.8 millivolts on the medium-level phono input, for 10 watts output.

Into 16-ohm loads, power output was slightly over 30 watts per channel. Although Sony does not rate the TA-1120 for operation with 4-ohm loads, we measured about 60 watts per channel at 1 per cent distortion. In normal operation there should be no difficulty driving 4-ohm speakers, although there is a possibility that the protective circuit will trip on very high-level operation. Electrostatic speakers require insertion of a 2-ohm resistor in series with each speaker to prevent drawing excessive current on high-frequency signals.

We tripped the protective circuit dozens of times by deliberately shorting the speaker terminals at full power output. There was absolutely no damage to the amplifier or to its transistors. Furthermore, we operated the amplifier in a severely saturated condition (with about 100 watts per channel of square-wave output) for at least fifteen minutes without any sign of distress on its part, although its case became uncomfortably hot to the touch. The conclusion is obvious—the Sony TA-1120 is as nearly indestructible and foolproof as any amplifier we have seen, tube or transistor.

Worthy of mention also is the fine instruction manual, handsomely printed and leaving nothing to the user's imagination as regards the specifications, operation, and installation of the unit.

In use tests, the TA-1120 was as outstanding as the measurements would suggest. Naturally, it has no sound or coloration of its own. It is silent in operation, with no switching transients, clicks, or thumps, to say nothing of a complete absence of hiss or hum under any conceivable listening situation. The smooth-working controls are a pleasure to use. The ambitious target set up by its designers has been hit squarely, for this is truly a "state-of-the-art" amplifier. The Sony TA-1120 sells for $399.50, a price amply justified by its performance. The stereo power-amplifier section of the TA-1120 is available separately as the TA-3120 at $249.50.

For more information, circle 188 on reader service card

(Continued on page 42)
NOW YOU CAN GET $100.00 WORTH OF STEREO TAPES FOR ONLY $39.95... but there's a catch!

You have to buy an Ampex recorder. But since Ampex is the unquestioned leader in performance, that's hardly a penalty. The offer is good on any Ampex recorder, from the model 850 tape deck shown above at $199.95, up through the new Ampex Music Center at $599.95. Choose 10 selections from more than 75 of the fastest selling tapes, and, in addition, get two reels of Ampex blank tape for your own recording.

Speaking of tapes, did you know Ampex offers more than 1,600 albums under 47 different labels? But that's the kind of choice you expect from Ampex. (Want a free tape catalog? Write to the address below.)

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Circle No. 5 on Reader Service Card
Stimulated by intense competition, the manufacturers of record changers (or "automatic turntables," if you prefer the current "in" phrase) have added numerous refinements to that basic, though once looked-down-upon, component. For some time now, it has been apparent that the better automatic players meet all the requirements for uncompromised record reproduction.

With their featherweight tracking forces (in the 1-gram-and-under region), balanced low-friction arms, anti-skating compensation, pneumatically damped cuing levers, and similar operating conveniences, the current generation of record players has acquired price tags comparable to the better manual turntables. The music lover on a limited budget has had to settle for second best, at least, if he preferred the convenience of automatic operation.

Now, the large British record-player manufacturer BSR has introduced into this country their McDonald 500 automatic turntable. It is heralded as offering the features and performance of the $75-class turntables for about $25 less. And, we are happy to note, it does just that.

The McDonald 500 is a four-speed machine, driven by a four-pole induction motor. There are removable center spindles for automatic and manual operation, plus an optional spindle for 45-rpm records. The low-mass tubular aluminum arm is balanced in the horizontal and vertical planes and a tracking-force dial is directly calibrated from 0 to 6 grams, with click stops at 1/4-gram intervals.

There is a cuing (or pause) lever, which raises the arm from the record at any point and lowers it again at the user's discretion. This is usable in manual or automatic operation. The cuing lacks the slow-motion damped operation found on the most deluxe players, but nevertheless it works well. A unique and worthwhile feature of the McDonald 500 is the automatic arm lock. In the off position the arm is automatically locked to its rest, thus preventing accidental damage to the stylus if the player is jostled or lifted. When playing is started, the lock automatically releases the arm, and after the record is finished the arm is again locked on its rest without attention from the operator.

We tested the BSR McDonald 500 with a typical, good-quality cartridge, tracking at approximately 2 grams. The arm resonance was about 20 Hz, and the damped counter-weight on the arm reduced the amplitude of the resonant peak to about 3 db. Tracking error was a maximum of 1 degree per inch at a 3-inch radius, but was nearly zero at most other points on the record.

The tracking-force calibration was accurate to within 0.2 gram up to 4 grams indicated force, with larger errors at higher settings (which should never be used with stereo pickups anyway). The wow and flutter were 0.1 and 0.025 per cent, respectively, at the three higher speeds, and 0.15 and 0.04 per cent at 16⅔ rpm. These figures compare favorably with those of the more expensive turntables.

The rumble, including vertical and lateral components, was -23 db referred to 1.4 cm/sec at 100 Hz, the standard NAB method for rumble measurement. With the vertical rumble components cancelled out by paralleling the cartridge outputs, the rumble was -28 db. These figures are comparable to most moderate-priced record changers, and the rumble is quite inaudible at usual listening levels with medium-priced speakers.

In summation, the BSR McDonald 500 brings a very satisfactory level of performance to the lowest priced record-changer field. Not only is it difficult under most circumstances to distinguish sonically from much more costly players, but it incorporates some of their most useful design features. At $49.95 it is a very good buy. Bases are available for $6 and under, and an accessory dust cover sells for $5. The McDonald 500 can also be purchased ready to play—with base, dust cover, and an Empire 808 cartridge installed—for $74.45.

For more information, circle 189 on reader service card.
Remember those days?

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*Recorded on archival 15-mil acetate Audiotape, at 35 inches per second.

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CIRCLE NO. 37 ON READER SERVICE CARD

THE COLLECTORS ORGANIZE

IN FORMING THE ASSOCIATION FOR RECORDED SOUND COLLECTIONS, RECORD LIBRARIANS AND PRIVATE COLLECTORS AIM TO PRESERVE AND KEEP ACCESSIBLE THE WORLD'S VAST TREASURES OF RECORDED SOUND

By DAVID HALL

RECORD COLLECTING has proved to have a way of growing beyond its fundamental purpose of providing pleasure or satisfying curiosity about matters musical, historical, documentary, and literary. It one stays at it long enough, the result can become not just a home library, but a repository that reflects the personality of its owner and the growth of his taste. An extensive record library may cover early jazz and late Baroque, avant-garde experiment and Golden Age opera, Shakespeare plays and country blues, sounds of steam locomotives or bird calls, and the complete recordings of Artur Schnabel. Motives for collecting vary widely, too; one can become a serious collector out of sheer insatiable curiosity, out of an overweening urge to possess recorded rarities or even for the purpose of monetary speculation in such rarities. Thus, what may have begun as a rather simple matter of individual satisfaction can burgeon into a multifaceted activity of international scope. In this age of the tape recorder, the collecting urge has found an additional avenue of satisfaction: the making of rare discs and of "live" performances off the air (legality aside, this is a major fact of life in today's milieu of private collecting). Meanwhile, within the past decade, the vast institutional repositories of recorded sound material at the New York Public Library, the Library of Congress, Yale University, Stanford University, and the John Edwards Memorial Foundation at Los Angeles have all instituted service facilities affording audition of recorded materials on the premises and, to a limited extent, loan or purchase availability of such materials.

By last year it had become obvious to the Association's initial major purpose of monetary speculation in such rarities. Thus, what may have begun as a rather simple matter of individual satisfaction can burgeon into a multifaceted activity of international scope. In this age of the tape recorder, the collecting urge has found an additional avenue of satisfaction: the making of rare discs and of "live" performances off the air (legality aside, this is a major fact of life in today's milieu of private collecting). Meanwhile, within the past decade, the vast institutional repositories of recorded sound material at the New York Public Library, the Library of Congress, Yale University, Stanford University, and the John Edwards Memorial Foundation at Los Angeles have all instituted service facilities affording audition of recorded materials on the premises and, to a limited extent, loan or purchase availability of such materials.

By last year it had become obvious to those engaged in institutional archive work and large-scale private collecting that the need for proper coordination, exchange, and dissemination of information regarding significant holdings of recorded sound materials was now a matter of prime urgency. So it was that a group of distinguished record librarians and private collectors, headed by Philip L. Miller, Chief (now retired) of the New York Public Library's Music Division, met at Syracuse University, N.Y., in February, 1966. The purpose of the convention was to explore the possibilities of establishing an organization of record librarians and serious private collectors which would (a) draw together all existing information regarding holdings in record libraries and collections throughout the world; (b) make such information available to scholars and collectors by means of a computerized union catalog; (c) help make recorded materials available to interested listeners through a variety of channels including commercial record companies and audition facilities on library premises; and (d) in certain special instances, tape rare materials to be made available to scholars within the "fair use" provisions of the copyright law.

This past October, I was present at the official meeting to organize the Association for Recorded Sound Collections, held at the Library of Congress in Washington and presided over by Mr. Miller. The initial Syracuse University gathering had given the direction, the purpose of the meeting was to develop a functioning membership organization, nonprofit and tax exempt. Among the major archives represented were the Rodgers and Hammerstein Archives of the Library-Museum of the Performing Arts at Lincoln Center, New York; the Stanford Archive of Recorded Sound at Stanford University; the Yale University Archive of Recorded Sound; the John Edwards Memorial Foundation (devoted to American country music); and the Syracuse University Audio Archives. At least half of the forty-odd persons on hand, however, were private collectors interested in the basic aims of the Association and eager to cooperate in their realization.

Although most of the two-day meeting was taken up with voting on constitution and by-laws, election of officers (Philip Miller was renamed President), and discussion of the need for foundation assistance, there was much interesting talk about the Association's initial major project: a Directory listing important institutional and private record archives

(Continued on page 46)

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Here's a compact, 3-way speaker system Aztec designed to give concert hall sound from bookshelf spaces. Aztec builds in a heavy duty 10" linear suspension woofer for bass frequencies, then adds two 3" columnar direct radiator tweeters for improved dispersion of the mid range and treble frequencies with advanced 3-way electronic crossover over network. Frequency response: 35 to 20,000 cycles. Power handling capacity: 30 watts. Impedance: 8 ohms. Measures 22" x 12" x 9½" in hand rubbed oiled walnut finish.

New low net price: $89.95

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Dramatic styling in solid walnut or oak

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Before you buy, be sure you hear the incomparable Aztec sound from the finest speaker systems ever built to satisfy the most discriminating ear. Nine different Aztec models, the truly complete speaker line, offer you wide choice to fit any decor. Quality controlled volume production has lowered costs many dollars to bring you improved sound at modest prices from $39.95.

See and hear Aztec wherever fine sound systems are sold or write for details.

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MEMBERSHIP in ARSC is open to all serious record collectors at the nominal fee of $5.00 annually. Applications should be made to Donald L. Leavitt, Music Division—Recorded Sound Section, Library of Congress, Washington, D.C. 20540. Members of ARSC have full voting rights and may attend all membership meetings, the next scheduled to be held at Indiana University from March 9 to March 11.

The establishment of the Association for Recorded Sound Collections marks another milestone in the gradual building up of a group of related organizations which collectively can serve both as the conscience of the commercial record industry and as a means of keeping its finest products permanently accessible. There remains yet one major link to be forged in this organizational chain—namely, an association of university presses that will, with foundation help, assume responsibility for the production, manufacture, and distribution of new material and reissues alike—which are not commercially viable in a mass-market context. The winds of change in this area of endeavor are beginning to assume gale proportions, and the result will be, I hope, the eventual stabilization—in terms of accessibility for audition and/or purchase—of the market built around the culturally unique aspects of the world heritage of recorded sound, as opposed to the merely fashionable or commercially profitable.

For his services over the years to Finnish music, David Hall, senior classical record critic of HiFi/Stereo Review, was made a Knight First Class of the Order of the Finnish Lion in a ceremony held at the Consulate-General of Finland December 12, 1966.
Just add speakers, dial your pleasure and relax. Enjoy the magnificent sound that comes from the most advanced design in audio today.

The all-silicon solid state TR100X combines a sixty-watt (IHF) amplifier (flat from 20 to 50,000 Hz.) and a super-sensitive, easy-dialing am/fm-stereo tuner. It offers automatic stereo switching, a Stereo Minder signal light that alerts you to stereo broadcasts, and an oversize meter for precise tuning. Plus four speaker outputs and a speaker selector switch that lets you listen to stereo in either or both of two rooms... or through headphones, with speakers silent.

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The striking styling of the TR100X... its rich satin gold and warm walnut grain... will grace and harmonize with any home.

Best of all, the TR100X is easy to come home with. Only $249.95.* (The TF100, identical to the TR100X, less AM, is only $234.95*)

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PASSAIC, NEW JERSEY

MARCH 1967

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2. This is the BSR McDonald 500...


4. So perfectly counter-balanced

5. ...it will play upside down!

6. Here’s proof...you see it...

7. turning over to a complete...

8. upside-down position. Still playing.


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CIRCLE NO. 13 ON READER SERVICE CARD
In the first days of September, 1850, Robert and Clara Schumann moved from Dresden to the Rhineland city of Dusseldorf, where Robert was to assume the post of municipal music director. The move was not undertaken without considerable apprehension, for Schumann had been warned by his friend Felix Mendelssohn that the musicians in Dusseldorf were a pretty shoddy bunch. Nevertheless, the post's duties appealed to Schumann and seemed to present no serious threat to his fragile health. Therefore, the Schumanns established themselves in Dusseldorf. The musical community there welcomed them with a serenade, a concert of Robert's works, a supper, and a ball. At first things went well enough. Schumann threw himself into his new position with extraordinary enthusiasm. He conducted the subscription concerts of the orchestra, rehearsed and conducted the local choir, led performances of church music, gave private music lessons, and organized a chamber music society. He was everywhere at once, and to every project he brought great energy and vitality.

His creativity as a composer flowered too. On the twenty-ninth of September he visited the city of Cologne and its majestic cathedral, a visit whose echoes are to be heard in the fourth movement of the "Rhenish" Symphony, composed just a few weeks later. In addition, during the early period of his Dusseldorf residence, Schumann composed many songs, the scenes from Goethe's Faust, the overture to Schiller's drama The Bride of Messina, and several other works.

In the week between the tenth and the sixteenth of October he sketched out a cello concerto, and by the twenty-fourth of the month the full score was completed. In a diary entry dated November 16, Clara wrote, "Last month [Robert] composed a concerto for violoncello that pleased me very much. It seems to me to be written in true violoncello style." A year later (October 11, 1851) there is another reference to the cello concerto in Clara's diary: "I have played Robert's Violoncello Concerto again, and thus gave to myself a truly musical and happy hour. The romantic quality, the vivacity, the freshness and the humor, and also the highly interesting interweaving of violoncello and orchestra are indeed wholly ravishing, and what euphony and deep feeling there are in all the melodic passages!" (Continued overleaf)
The Düsseldorf idyll was short-lived, however. There soon arose friction between Schumann and the orchestra's personnel and management. Charges of mental instability were leveled against him, and finally the orchestra committee instituted proceedings to relieve him of his position. Schumann complained to Clara that he was being cruelly vilified; she must have known that he was perilously close to a mental breakdown.

The Cello Concerto seems to have given Schumann some post-composition problems. It was more than two years after he completed it that he wrote to the publisher Härtel saying that the score was finally ready for publication. He was still correcting proofs of the printed music some fifteen months later, in February, 1854, just a few days before the desperate act that led to his being confined in an asylum: half-dressed, he ran out into the rain and leaped into the river Rhine. He was rescued by some boatmen and shortly thereafter was taken, at his own request, to a private asylum at Endenich. For more than two years Schumann remained at Endenich, hopelessly mad. Death came the night of July 29, 1856.

Schumann had already been confined to the Endenich asylum when the Cello Concerto was finally published, in August, 1854. What seems to have been the first performance did not take place until nearly four years after Schumann died, at a concert given at the Leipzig Conservatory to celebrate the fiftieth anniversary of his birth. Despite such inauspicious beginnings, however, the Concerto has grown in popularity over the past hundred years until it now rivals the Dvořák concerto for the position of the most frequently performed concerto for cello and orchestra in the entire literature.

Apparently the Schumann concerto is second only to the Dvořák concerto in the number of available recordings. Seven different performances of the score are listed in the current Schwann catalog, but only four cellists are involved. The reason for this mathematical discrepancy is the availability of three different recordings by Mstislav Rostropovich and two by Janos Starker. The other two cellists, with one current recording each, are Pablo Casals and Leonard Rose. Two of the three Rostropovich performances (Period SHO ST 2334, SHO 334 and Deutsche Grammophon 138674, 18674) and both the Starker versions (Angel S 35598, 35598 and Mercury SR 90347, MG 50347) are available in either stereo or mono form, as is the Rose recording (Columbia MS 6253, ML 5653). The Casals recording is mono only (Columbia 4926, and also just re-released on Columbia's low-price Odyssey label—32 16 0027).

By and large the recordings of the Schumann Cello Concerto serve the music well. Rostropovich is perhaps the most subtle artist of the cellists who have recorded the score. The Deutsche Grammophon recording is unquestionably the finest of his three available performances, both musically and technically, above all because of the rapport between the soloist and the conductor and orchestra, Gennadi Rozhdestvensky and the Leningrad Philharmonic. In phrase after phrase Rostropovich reveals a matchless sensitivity for nuance, shading, and dynamic contrast. This performance, in short, places emphasis upon the "Eusebius" side of Schumann's nature, the poetic aspect. The "Florestan" side—the rebellious reformer—comes alive in the collaboration between the two Leonards, Rose and Bernstein. Theirs is an impassioned, dramatic reading that is quite stunning in its virtuosic impact. The two Starker performances represent something like a middle ground between the two poles of the Rostropovich and Rose performances. Surprisingly, it is the earlier of Starker's recordings, the one on Angel, that seems to be the more successful fulfillment of this artist's intentions.

The most capricious of all recordings of this work is that made by Pablo Casals nearly fifteen years ago, when he was past his seventy-fifth birthday. At the time of the recording, Casals' technical command was not nearly as secure as it is now, when he is past ninety! The conductor of the Prades Festival Orchestra (he is unnamed on the Columbia jacket) is Eugene Ormandy. As a curiosity, this version is well worth owning.

Tape buffs have a choice between the Rose and Rostropovich performances (Columbia MQ 422 and Deutsche Grammophon C 8674, respectively). The processing of both is first-rate.
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the S-8800 did not let us down. The tuner section, with its high sensitivity and very low distortion, is among the best in the business—clean and responsive. FM Stereo comes in loud and clear and, as the curves plotted at CBS Labs show, with very ample separation. The usual increase in distortion, when switching from mono to stereo in receivers, was in this set just about negligible. We would say that Sherwood has come up here with another typically 'hot' front end that makes FM listening a sheer joy.

"As for the amplifier . . . comparing the results with the specifications, it is apparent that the S-8800 does provide the power it claims, and this—for a popularly priced combination set—is considerable. A glance at the IM curves, for instance, shows how much power the S-8800 will furnish before it runs into any serious distortion problem at all three impedances. . . . For rated power bandwidth distortion of 1%, the curve ran below and above the normal 20 to 20 kHz band; and the 1-watt frequency response was virtually a straight line in this area, being down by 2.5db at 40 kHz—fine figures for a receiver . . . "Those heavy percussion and crisp castanets will come through with just about all the con brio the performers have put into them.

*Sherwood Electronic Laboratories, Inc., 4300 North California Avenue, Chicago, Illinois 60618. Write Dept. 3R

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MARCH 1967

CIRCLE NO. 74 ON READER SERVICE CARD
Leonard Bernstein Plays
Favorite American Classics
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Eugene Ormandy—Tchaikovsky:
Capriccio Italian/Rimsky-Korsakov: Capriccio Español
Tony Bennett—I Left My Heart in San Francisco

Dave Brubeck—Time Out
Johnny Cash—I Walk the Line
Ray Conniff—Somewhere
Percy Faith—Themes for Young Lovers
Simon and Garfunkel—Parsley, Sage, Rosemary and Thyme

Robert Goulet—On Broadway
Barbra Streisand—Je m'appelle
Andy Williams—The Shadow of Your Smile

TC8 Continuous Loop 8-Track Stereo Tape Cartridges
From COLUMBIA RECORDS®
CAR CARTRIDGES COME HOME

Manufacturers have been quick to see the logic of making the phenomenally successful automotive tape-cartridge machines a convenient part of home audio systems.

By FRANK PETERS

Having already been the target of a barrage of newspaper and TV advertising and of articles in this and other publications, readers of HiFi/STereo Review should by now be pretty well acquainted with automobile stereo tape cartridge players. The manu-
facturers have made their points with such slogans as "Put stereo on wheels," "Spend happier hours in your car... equip it with stereo," and other variations on the theme of enjoying music in stereo in the comfort of your car. The public in some areas—such as the West Coast and Texas—has accepted the idea, bought the equipment, and is generally happy about mobile tape players. And the same seems to be taking place in other parts of the country.

Since at least one of today's car cartridges (Fidelipac) was originally designed for fixed—rather than mobile—operation for such purposes as broadcast programming and background music, a logical next step was to adapt the car-carridge player for home use. The primary appeal of the new approach is the possible double use of the cartridge. In other words—"Enjoy stereo tapes in your car, and play them in your living room." As the chewing-gum ad says, "Double your pleasure."

Customers who bought four-track machines of the Fidelipac type in the early days of auto stereo can now find home players for their tapes. And owners of eight-track Lear-type car sets have an even wider choice. A third available system, using the Philips twin-hub cassette (cartridge), also holds much promise.

For current owners of automobile cartridge players, the choice is clear. If they want to hear their cartridge tapes indoors, they simply buy a home player designed for the particular type of cartridge they own. The players may take the form of a self-contained "luggage" portable, a "component-type" three-piece ensemble (player plus two speaker systems), or a deck (with pre-amplifiers) for plugging into an existing stereo outfit (component stereo music set-up or console with tape-player input jacks). There are also de luxe console or table-top combination tape-carridge players that include a stereo tuner and phonograph.

In cases where the auto player is a double-duty, self-contained type that includes speakers (such as certain SJB sets—from Martel's Automotive Division) it is merely a matter of toting it from car to house and plugging in an appropriate power-supply unit, generally a converter which changes 120-volt a.c. to 12-volt d.c.

The home players are operated in more or less the same way as the auto-stereo units. Slip in a cartridge (and possibly pull a lever) and presto—music! Like their auto counterparts, they offer a certain degree of program selection (press a button and the program on an adjoining set of tracks comes into play). Some models indicate which set of tracks is in operation by means of an illuminated track indicator. All except the decks have volume, tone, and balance controls (or should have!).

Owners of a good stereo outfit—either in component or console form—can add a home-player deck that involves a minimum of fuss and only a small amount of space. The units are generally slim and fit into what might otherwise be regarded as waste space. Some units are advertised as capable of operation in a vertical position, attached to the back or side of a console, for example. The home player decks are considerably less expensive than auto players since they play through the existing stereo amplifier and its speakers, and are therefore fairly simple mechanisms.

But there are some rather elaborate units too, such as the Bogen MSC Compact, which is a full music system comprising an AM/FM stereo receiver, a record player, and an eight-track tape-carridge player in one handy—if not portable—walnut package, plus a pair of optional speaker systems.

Lear Jet Corp. has an 80-watt AM/stereo FM receiver with integrated eight-track cartridge player in a metal cabinet with walnut-grained vinyl finish. Matched speaker systems are optional.

SJB, in its Portamount series, offers ensembles consisting of four-, eight- or four/eight-track decks with either mono or stereo FM tuners, complete with chrome-housed speakers. These sets operate in the auto, and, in conjunction with an a.c. converter, they can also be used in the home.

Capitol is marketing a combination eight-track tape
player and automatic record changer in a wood table-top base with clear plastic cover. The amplifier has connections for a stereo tuner, and matching speaker systems are included.

The above are but a few examples of the types of equipment that are available. Other companies are developing similar instruments that have a cartridge player in combination with a tuner, phonograph, reel-to-reel tape recorder, and so forth.

The self-contained luggage-type portables cost more than the straight decks. The higher price covers the necessary amplifiers and speakers, plus the housings. The self-contained component ensembles, in turn, are generally more costly than the luggage type because they usually come in furniture-wood cabinets.

The quality of sound produced by the home players is determined by (1) the quality and frequency range of the prerecorded tapes; (2) the quality of the player on which the tapes are played; and (3) the overall quality of the amplifier and speakers (either built-in or separate). Most cartridges of the four- and eight-track variety are potentially capable of perhaps 50 to 12,000 Hz response or better. However, almost all limit their high-frequency response to a much lower figure to minimize tape hiss. When one listens for the first time to a home player reproducing tapes that he has previously heard only in his car, he may be somewhat disappointed. He will be aware of more tape hiss, which in an automobile is usually masked by motor and road noise. (However, because of the absence of motor and road noise and perhaps because of better speakers in the home units, he is likely to hear a wider range of frequencies.) He may also observe a diminution of stereo effect. This results from the wide difference between the acoustics of the more open home surroundings and those of the intimate, closed-space environment of the auto. The difference in acoustic values will be similar to that between stereo headphones and speaker systems.

The new home-player owner will probably be aghast at the wide variations—even among the tapes of one given brand—in frequency response, volume level, and signal-to-noise ratio of the cartridges when played on a home machine. (The variations were there in the car also, but were obscured by the other special conditions.) And although there are thousands of popular-music tapes, the number of classical items is still appallingly small. And many of these are, at best, the ”pop” or light classics.

(Continued overleaf)
All of the above is not meant to deter prospective home-player purchasers. It is merely a matter of recognizing the possible deficiencies of cartridge tapes and making allowances for present conditions which, given both industry and public acceptance of this latest hi-fi component, cannot be expected to endure for long. Overriding the possible drawbacks is the big factor of convenience. This alone, for many people, is justification enough for tape cartridges.

The foregoing has been addressed to those up-to-the-minute people with auto players who want a home player for their existing cartridges. But what about the newcomer to the world of tape cartridges who plans to start with either an auto or home player and to buy the second unit at a later time? Which system should he buy—four-track, eight-track, or neither?

Let's take a look first at the debit side of the question. With only a few exceptions, the four- and eight-track cartridge machines do not offer recording capability. None of the current crop of players has fast forward or rewind capability for relative ease in locating favorite songs or portions of a tape. In the few available cartridge recordings of symphonies and concertos, the works are punctuated with pauses and clicks at varying intervals, negating one of the basic virtues of the tape medium—its potential for long uninterrupted programs.

In trying to time musical selections to coincide with the proper switching points in a continuous-loop tape, producers often have to take liberties with the music. This they do by such hardly orthodox methods as shortening some works and padding out others by dubbing in repeats of certain passages. Although this may not be apparent to the average listener, purists will certainly object.

If higher cartridge prices (higher than discs, that is), lack of recording capability on the majority of units, and the other shortcomings of cartridge machines are of little concern, then it is a matter of deciding which kind of player to buy—four- or eight-track, or the "compatible" four/eight-track type. An important fact to consider is that four-track players are generally lower priced than the eight-track units. But four-track players require manual track change at the halfway point, whereas eight-track systems play all the way through with no attention. Although there are more four-track tapes available right now, eventually they will be outnumbered by the eight-track cartridges. And there are more top-name popular artists on eight-track tapes.

For the do-it-yourself tape enthusiast who likes to create his own program material rather than buy pre-recorded continuous-loop tape cartridges, there are several home machines on the market that enable him to do so, including three Fidelipac-type units. The latest is a recorder only, from Telephone Dynamics Corp., North Bellmore, N.Y. The instrument, operable on 120-volt a.c. current or on 6 volts d.c., is designed to record on a four-track stereo tape cartridge from a tuner, phonograph, or a reel-to-reel tape recorder, and conceivably from another cartridge player. It is list-priced at $299.95. Another four-track recorder/player comes from Muntz. Designated Audio-Stereo Model AR300,
the unit (newly priced at $249.95) contains a record changer that makes it possible for the user to put his favorite records into cartridge-tape form. A third Fidelipac-type recorder/player is Craig Panorama’s Model C516, priced at $229.95. It is housed in a walnut cabinet and records from a microphone, tuner, or phonograph source.

For those wanting to record their own eight-track continuous-loop cartridges, there is Roberts’ Model 1725-8L, list priced at $389.95. This unusual machine is a combination reel-to-reel stereo recorder with a built-in eight-track recorder/playback mechanism. It enables the user to dub program material onto a tape cartridge from regular prerecorded tapes or from an external tuner or phonograph.

A PROSPECTIVE PURCHASER who wants the convenience of the cartridge plus some of the flexibility of the reel-to-reel tape recorder might weigh the merits of the Philips cassette system. The cassette is a cartridge which uses tape one-eighth of an inch wide (instead of the quarter-inch in the other systems) and runs at 17/8 ips (instead of 33 1/2 ips as in the other systems). The Philips cartridge is approximately one-quarter the cubic size of the four- or eight-track continuous cartridges, but it offers as much (or more) playing time as the average loop cartridge. The machines all have fast-forward and rewind capabilities, and some have digital counters for fast program location.

Prerecorded stereo tapes are being sold in cassette form at $5.95 by one major brand (Mercury), and blank tapes are available in lengths of one hour ($2.65) and ninety minutes ($3.50). In operation, the tape moves from one hub to the other. When one side is completed, a sensing mechanism is triggered, and the tape stops. The cartridge must then be turned over to play the second side. In relation to the eight-track continuous cartridges (and to a lesser degree in relation to four-track cartridges), the Philips-type machines are at a disadvantage because of the necessity of turning the cartridge over at the halfway point. (The eight-track cartridges play all the way through with no attention; the four-track require the push of a lever or button at the halfway point.) However, this is a minor flaw in an otherwise attractive approach.

Philips-type machines, available under more than forty different brand names around the world, provide recording capability in either mono or stereo. Further, mono tapes made on one Philips-type recorder can be played back on a Philips-type stereo machine because of the unusual track layout. Or, stereo tapes made on one Philips-type stereo instrument can be played back monophonically on another mono Philips-style recorder.

Philips-type machines—introduced in America under the Norelco brand name—come in a variety of forms. The first was the Norelco battery-operated Carry-Corder Model 150, a coat-pocket-size mono recorder for all-around use. Similar units are available under possibly a dozen brand names. Scheduled for delivery later this year is a Philips-style stereo playback-only model made specifically for auto use by Norelco. It is expected to sell for about $150. It will feature a “letterbox” feed slot; inserting the cassette into the slot activates the tape drive mechanism and electronics. This model will also feature an automatic “eject” to disengage the cartridge at the end of each side’s play. As with other car tape players, speakers can be mounted in the dashboard or elsewhere.

Also available for the Philips cassettes are desk-top mono and stereo miniature recorder/players (with built-in or external speakers), FM-radio recorder/players, and a variety of table-top and portable self-contained units, plus component-type ensembles in various wood finishes and cabinets. One combination, made in England, features a cassette player built into the side of a reel-to-reel tape recorder.

How do the Philips-style cartridges compare sonically with the more widely distributed four- and eight-track forms? Quite favorably. Frequency response is given as 60 to 12,000 Hz for some of Norelco’s sets, as an example (and my ears tell me these specs are attained)! Signal-to-noise ratio and wow and flutter characteristics are excellent—particularly considering the slow speed at which Philips cassettes operate.

However, despite certain basic quality requirements set by Philips for its licensees, there will inevitably be some variation in overall quality of the units made by the forty-plus manufacturers. The best bet is to check the specs of the particular machines being considered—and then to listen to them, if you can.

As we go to press, only a handful of companies are providing prerecorded tapes in Philips cassette form. They include Mercury and Musicapes. A firm appropriately called Dubbings Electronics (which prerecords the Mercury tapes) is also providing prerecorded cassettes under a variety of brand names. Other companies are weighing the matter, and it is conceivable that by mid-year some of the larger ones will offer their recorded music for dubbing into cassette form. The number of tapes by well-known performing artists available in cassette form is limited, but then again you can dub them yourself from discs, off the air, or from reel tapes. When the big recording companies decide to “go cassette,” the Philips approach is likely to give the continuous-loop units a real run for their money.

Frank Peters’ regular coverage of home-entertainment equipment for an industry publication enables him to keep his knowledge of developments in the tape-cartridge field right up to the minute.
Mind
By
Charles Rodrigues
Although the art of music reproduction has made tremendous strides since the days of the morning-glory speaker horn, progress in most aspects of the field today, though steady, is generally of the inching kind—except in tape recorders. When it comes to tape recorders, it seems that the only thing measurable in inches is tape speed—everything else goes by leaps and bounds. The latest leap is the reversible (bi-directional, if you insist) tape machine. True, the first of the breed appeared on the market some half-dozen years ago, but the trend has now taken firm hold. At least six manufacturers are currently offering reversible recorders to the American home market.

Despite their unity of intent, however, manufacturers have found more than one way to reverse a machine, and there is great diversity in their approaches to other aspects of design as well. For the prospective purchaser of one of the newer tape machines, it is important to understand how they vary in their features, flexibility, and convenience.

As it records or plays, the conventional tape machine moves the tape in a direction (usually from left to right) that we may term forward. But the reversible machine is also able to play with the tape moving in the reverse direction (right to left), thus doing away with the tiresome business of exchanging reels on the supply and takeup spindles. Some machines (such as the Ampex 2100; Concertone 803 and 804; Concord 300, 350, and 776; and Sony 660ESP) can record in reverse as well as play. Others (the Ampex 1100; Roberts 400-X, 7000RX, 5000, and 3190; the Teac R1000, R1100, A4010, and A4000) are designed only for playback in the reverse mode—if one wishes to record in the reverse direction, the usual reel interchange is required.

Designing a machine for bi-directional operation is no simple matter. In order to reverse tape direction, it is necessary to change the direction of the capstan motor, change the relative torques of the supply- and takeup-reel drives, and transfer the recorder's preamplifier connections from the head(s) used in forward to the head(s) used in reverse. To minimize the need for the personal attentions of the operator, most reversibles offer not only manual but also automatic reversal. At the end of the reel, some type of sensing device actuates a sole-
noid, which in turn operates switches and performs the other mechanical actions needed to make the required changes. The devices that sense the approaching end of a tape reel and actuate the solenoid are varied and imaginative:

- **Foil-sensing** (Concord, Concertone, and Roberts) is the most popular method. Metal-foil leader tape is attached to the end of the playing tape, or a pressure-sensitive foil strip is pressed in place. As the foil passes over a sensing device, it completes an electrical circuit within the tape recorder, thus activating the reversing mechanism.

- **Silence sensing** (Sony) requires no added foil or special preparation of the tape. The playback signals from all four tracks of the recorded tape are continuously monitored to produce a "guard" voltage that keeps the reversing mechanism inactive. If there is no signal on all four tracks for a number of seconds (as presumably happens only at the end of the tape), the guard voltage drops to zero, and reversal takes place.

- **Pressure sensing** (Teac) requires the user to tie a loop at the end of the tape so that it cannot slip out of the reel. Thus, at the end of the reel, the extra tape tension throws a sensitive lever that initiates the reversing process.

- **Tone sensing** (Ampex) depends upon a subsonic tone, at about a 20-Hz frequency, which the user can record at any point on the tape simply by depressing a button on the Ampex machine. In playback, the same tuned circuit that generated the tone serves as a band-pass filter that responds to the subsonic signal, using it to actuate the reversing solenoid. In recording, one is unlikely to encounter audio tones sustained enough and low enough to impress a false reversing signal on the tape; in playback, the reversing signal is inaudible on most equipment. (Incidentally, all prerecorded tapes manufactured by Ampex have the subsonic reversing signal already prerecorded at the end of each side.)

- **Time sensing** (Roberts) employs an index dial that can be pre-set to a point corresponding to desired elapsed time, which of course must be predetermined. As the tape moves, the dial rotates, and when the dial pointer comes around opposite the index mark, an electrical circuit is completed to produce reversal. Roberts...
also gives the user of its reversible machines the option of foil sensing.

As noted above, some machines are capable of recording as well as playing in the reverse mode, while others only play. Of those that record in reverse, some (Concertone’s 803 and 804 and Concord’s 350 and 776) can automatically reverse in the record mode as well as in the play mode. Others (Ampex 2100 and Sony 660ESP) automatically reverse only in the play mode.

In a number of machines, automatic reversal is confined to one change of direction—from forward to reverse. Some others (Ampex, Concertone, and Roberts) offer the “repeat” feature—meaning that they can also automatically switch from reverse back to forward again. Of the three companies just named, only Concertone offers repeatability for recording as well as playback. The rest limit repeatability to playback, presumably because of the danger of accidentally erasing a desired recording.

It has long been dogma among tape-recorder designers that, for minimum wow and flutter, the drive capstan (in conjunction with the pressure roller, of course) should pull tape, not push it. Thus, in a conventional tape machine, we find that the tape always passes over the heads before it reaches the capstan; the capstan, in effect, pulls the tape past the heads against the drag of the supply reel or pressure pads. Accordingly, a number of reversible machines (Concertone, Concord, and Sony) have extra “reverse” heads installed on the opposite side of the capstan so that in reverse the capstan is still pulling tape over the heads. This is known as symmetrical operation. But other machines (the Teac and Roberts) defy the rules and employ asymmetrical operation. Here all the heads are on the same side of the capstan, so that in reverse mode the capstan is actually pushing the tape.

Concertone, a manufacturer that has produced machines with both symmetrical and asymmetrical transports, holds that pushing tape does not necessarily give inferior results; the primary consideration in designing a transport that will push tape across the heads in the reverse mode is simply the number of heads involved. In the “pushing” mode, the tape tension required for proper head-to-tape contact is being supplied by the acting takeup reel, and every element that causes friction in the tape’s path will reduce tape tension. In a unit designed for reverse playback only, the single playback head in the tape path causes no difficulty, but when multiple heads are required for forward and reverse erase, record, and play functions, tape-to-head contact may be completely lost near the capstan despite any reasonable amount of torque supplied by the takeup reel, according to Concertone. The use of pressure pads further complicates the problems.

Tape-designer ingenuity has also given us some machines (Ampex, Sony 460) that will let us have our cake and eat it too: they are designed so that the tape is pulled in either direction, which reduces the total number of heads. The heads are centrally mounted between separate right and left capstans. In the forward mode, the tape is engaged by one capstan; in reverse by the other.

One important advantage of the repeat feature in the late-model recorders is the opportunity it offers for sequential mono operation. With suitable switching, a tape machine could record or play all four mono tracks in sequence. At the time of writing, sequential operation was offered by only one special-purpose machine, the Viking 225, designed solely for mono playback at 1\(\frac{7}{8}\) ips. Intended for background music and similar continuous programming, the machine will play for 16 hours (with \(\frac{1}{2}\)-mil tape) before repeating itself.

It is difficult to predict what changes will be wrought by tomorrow’s technology in the highly competitive, fast-moving tape field, but it appears that tape-reversal, at least, is here to stay and may shortly be expected as a standard feature on all home-entertainment machines.

Herman Burstein, a frequent contributor to these pages, has written several books on various aspects of sound reproduction, and is particularly concerned with the field of tape recording.

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(R) A full six-head arrangement that permits recording and monitoring directly from the tape in both forward and reverse. Note that tape is pulled in both directions.
KNOWING THE ANSWERS TO TWO SIMPLE QUESTIONS WILL SIMPLIFY YOUR DECISION-MAKING WHEN BUYING A TAPE RECORDER

By BENNETT EVANS

BEFORE you open a catalog, visit a dealer, or make any other moves remotely resembling shopping for a tape recorder, you had best ask yourself two serious and interrelated questions—to wit: (1) What do I want a recorder for? and (2) How will I use it? Knowing the answers to even these simple queries will be an enormous help in getting a machine at least somewhat tailored to your purposes—and will probably save you money in the bargain.

Let's see what's involved in these questions. If you mean to roam about the city and countryside making candid recordings of anything from subways to songbirds, you'll want a battery-powered recorder. Not one of those toys the drugstore gives away practically free with every malted, but something perhaps in the $75-and-up range designed for serious recording. The minimum hallmark of quality in a battery portable is capstan drive, which propels the tape at a steady speed.
between a rotating metal shaft and a rubber idler wheel. The toys use "rim drive," with the takeup reel pulling the tape through the machine at a speed that varies according to the amount of tape on the reel at any given moment.

Battery machines, especially those that record at 7 1/2 ips (inches per second) make recordings anywhere from adequate to excellent, but none, because of the minute dimensions of their speakers, play back nearly as well as they record. Almost all, however, have output jacks that can be used to feed external hi-fi systems for a considerable improvement in sound. And for even better results, tapes made on the battery-operated portables can be played back on full-size, full-fidelity machines. (See Ken Gilmore's article elsewhere in this issue for a discussion in depth on the battery-powered machines.)

When we come to the full-size machines, we find that there are three basic types: the tape transport, the tape deck, and the complete recorder (see accompanying illustrations). If your only interest is in playing pre-recorded tapes through your audio system, you can save a good deal by buying a tape transport that (by definition) consists simply of a tape-handling mechanism and a playback head (no record or playback electronics) whose output must be fed into the tape-head inputs of your amplifier—assuming that your amplifier has such inputs. Some transport manufacturers also sell playback-only preamplifiers that feed the tape inputs of amplifiers lacking tape-head facilities. These preamps usually give better sound, since they provide an exact electrical match for the playback head of their companion transport and usually offer different playback equalizations for different speeds (a feature which most audio-system tape-head inputs lack). However, if your amplifier does not have tape-head inputs, your best bet is a deck with built-in preamps.

If you want to record, you'll want at least a tape deck, and possibly a full recorder. Both include tape transport and record and playback preamplifiers, and the full recorder also has amplifiers (usually between 1 and 10 watts per channel) and speakers as well.

Before you decide between the lighter, more compact tape deck and the complete recorder, ask yourself whether you'll be using your machine only as part of your home audio system (in which case you'll want the deck), or whether you'll be recording and playing in more than one place (in which case you'll want the full recorder with speakers). You may prefer the lighter, smaller deck for remote recordings, too, if you're content to listen only through headphones to what you're recording. Considering the relatively small difference in cost, even if at present you don't intend to make recordings, the deck with preamps is almost always a better bet than the transport without electronics.

Reel capacity and speeds are other basics to consider. Virtually all recorders except the battery-powered or very cheap ones take reels in all sizes up to 7 inches in diameter. The 7-inch reel is the standard for pre-recorded tape and pretty much a necessity for making recordings of reasonable length at 7 1/2 ips. Those few a.c.-powered recorders that take only 5-inch reels usually have only their low cost to recommend them. Professional-size, 10 1/2-inch reels are a luxury, but a handy one if you need to make very long recordings at 7 1/2 ips and/or prefer not to use thin tapes.

Virtually all full-size tape machines can be run at both 7 1/2 and 3 3/4 inches per second, and these two tape speeds are standard for prerecorded tapes. With today's better home recorders, the 15-ips speed has no sonic advantage unless you plan to make—or play—professional master tapes or do much critical editing.
The two graphs above are typical of those that appear in technical reports on tape recorders. The bottom graph charts the playback response of a recorder to a test tape that is recorded to conform to the National Association of Broadcasters (NAB) recommended playback curve for pre-recorded tapes. A flat line on the 0-dB axis would be a perfect response within the 50- to 15,000-Hz range specified by the NAB standard. The top graph shows a machine's playback response (at two speeds) to a test-tone series recorded on the same machine.

(Sounds on the tape are spread twice as far apart at 15 ips, making them easier to find and splice in or out). A low speed of 1⅛ ips provides double the recording time of 3⅛ ips and is handy for long recordings of spoken material, where the lower fidelity isn't too bothersome. The very slow speed of 1⅝ ips (found on few machines) is twice again as economical—but offers still lower fidelity.

Once you've made a decision on the type of machine you want, you next need to consider the recorder's basic performance specifications: its frequency response and freedom from wow, flutter, noise, and distortion. Wow and flutter are stated in specification sheets as percentages—the lower the percentage, the better. If an appropriate prerecorded tape is available, a good test is to listen to long-drawn-out piano tones. "Wow" manifests itself as a slow see-sawing of pitch; flutter is a faster, gargly variation (which, on a machine that is out of adjustment, may make everything sound as if it were underwater).

Noise is usually stated either as "so many decibels below zero recording level" (for example, "—60 db") or as a signal-to-noise ratio without the minus sign (60 db). Either way, the larger the number's absolute value—disregarding the presence or absence of minus signs—the quieter the machine: —60 db is better than —50, and the equivalent 60-db signal-to-noise ratio is substantially better than 50 db. Most tape-recorder noise consists of hiss, but hum may also be present. Since noise is referenced to a given signal level (0 db), which in turn is referenced to a given distortion level, one manufacturer's rated signal-to-noise level of —50 db may be more or less noisy than another manufacturer's —50 db.

Distortion is seldom stated on recorder specification sheets, though sometimes the 0-db (or maximum recording-level) point is defined as the level producing 1 per cent or 3 per cent distortion on the tape. The "standard" distortion level at which 0 db is established is 3 per cent, but any given manufacturer may be using a higher or lower figure.

If you can hear wow and flutter—or distortion below the 0-db recording level—then there is too much of it in the machine you're testing. Noise, however, seems to be prevalent in home tape recorders, and the best way to judge the noise level of a recorder is to compare it with that of the best recorder in the showroom. Bear in mind, though, that a recorder with limited bass and treble response may seem to have less hum and hiss than a full-range recorder—play back the same tape on several machines and compare their overall performance.
sound qualities for frequency range and smoothness as well as for wow, flutter, noise, and distortion.

When you've settled on the type of tape machine you want and have narrowed down your choice to those with adequate sound for your purposes, you may find that the machines you've selected differ radically in both the number and the kinds of extra features they offer. Among the differences you're likely to encounter are variations in the type of recording-level indicator, sound-on-sound facilities, and mixing inputs; in the number of inputs, heads, and motors; and in the provision for automatic reverse.

Unless you're doing radio-broadcast work with a recorder whose VU meter must conform to standard professional specifications, you'll probably find a green-glowing "magic eye" tube just as useful as a recording-level indicator. It responds quickly to sound peaks, has a carefully designed built-in time lag, and makes it easy for you to prevent the distortion that comes from recording at too high a level—or the noise that comes from recording at too low a level. However, more and more new machines feature VU "type" meters that have little advantage other than that they look professional and that recorder designers find them easier to use with transistor circuits. The neon-bulb indicator is too imprecise for professionals and makes it difficult to get good recordings.

Almost any stereo recorder can be used, somehow, for trick "sound-on-sound" recordings that can make you sound like a one-man trio, quartet, or even a massed chorus. Some recorders require special external connections for this, while others do it internally, with a flick of a switch or two. Don't reject a machine for lack of sound-on-sound facilities unless you're sure you'll use those facilities (most people never do). But if you do intend to use them, you should have no trouble finding a satisfactorily equipped machine.

Input-mixing facilities let you record and adjust independently the levels of a live voice and recorded music simultaneously on the same track—which is handy for slide-show narrations and the like. They also make it easier to do sound-on-sound recording if your machine lacks specific internal switching for it.

Several new tape recorders are designed to serve as a temporary or permanent nucleus for a complete hi-fi system. Such recorders have flexible input facilities and some even have built-in tuners. But if you already have a hi-fi system, this may be superfluous.

The presence of three heads in a recorder is usually a sign of quality—and expense. Most tape machines use the same head for recording and playback, connecting it to the record and playback electronics according to whichever function is in use. By separating the record and playback heads, three-head systems gain two important advantages: each head can be optimally designed for its particular job, and one can listen to recorded material via the playback head an instant after it has been put on tape by the record head. This, of course, provides a constant check so that you can monitor the quality of the recording while it is being made.

Three motors in a tape machine usually signify quality and cost. By using separate motors for the capstan and both reels, a recorder can achieve simpler, more reliable construction (fewer cams, levers, and push-rods required for changing modes) and will usually wind and rewind tape faster than (though seldom quite as gently as) a one- or two-motor machine. But reliability and simplicity are the main three-motor advantages, for while winding and rewinding speed is not too important in home use, gentle tape handling is. Check any machine, regardless of how many motors it has, for controls that operate smoothly and rapidly without jamming or breaking the tape, and for a smooth, even wind of tape upon the reel.

**Automatic reverse** is a great convenience with four-track machines, eliminating the need to get up and interchange reels when one pair of tracks has played through. Most auto-reversing machines play in both directions but record in only one. Two-way recording may, however, be a boon worth its extra cost to those who tape long works and events which they are not free to interrupt, such as radio programs; it is less important when dubbing from other tapes or phonograph records. (The reversing machines are discussed in depth by Herman Burstein elsewhere in this issue.)

One final word of advice: pick your machine on the basis of quality first, features second. And spend enough to ensure your satisfaction. With few exceptions, you will find both good fidelity and the most important features in machines from about $150 to $250, and little worth your notice below that range. Machines above $250 offer more quality and usually more features (such as three heads). In the $450 to $600 bracket, the main improvement is likely to be superior construction, long-term reliability, and perhaps such "professional" features as a 10½-inch reel capacity. Three heads and three motors are also common in this range. Beyond $600 lie only a few 10½-inch reel machines and a number of totally professional units that offer greater reliability than any home machine—greater than the average home user may ever need—but often fewer features. Whatever your recording needs or inclinations, you can probably find a tape machine that fits them to a "T"—provided you are clear on what your needs are, and keep them firmly in mind while shopping for your unit.

*Bennett Evans, an audiophile with long experience in the technical aspects of hi-fi, writes regularly for HiFi/Stereo Review.*
For Ken Collins, of Warren, Michigan, neither shelves, cabinets, nor consoles provided the proper combination of the aesthetic and the practical in his particular approach to a hi-fi component installation. He says that one of the main tools employed in planning his system was a tape measure. Repeated visits to the local hi-fi showrooms and constant consultation of the catalogs established for him the maximum dimensions of the components that he was considering. Allowing an inch or two for future expansion, Mr. Collins realized his plans in the home-built desk/console pictured above.

The amplifier and tuner spaces at the upper right of the hutch section of the cabinet house a Harman-Kardon A30K integrated amplifier which Mr. Collins constructed from a kit. The tuner is a Dyna Model FM3 also purchased in kit form. The turntable in the section immediately below is an Acoustic Research Model XA with an Empire 880P cartridge installed. Sony's Model 600 tape recorder is mounted vertically (center) for maximum operating convenience. To the left of the Sony is a Garrard Auto-Slim automatic turntable with a Shure M7D cartridge. The changer is intended primarily for the use of the Collins children.

Each of the speaker systems flanking the desk console contains an Electro-Voice SP12B full-range speaker, and the cabinets themselves were built by Mr. Collins from plans supplied by Electro-Voice. Shortly, Mr. Collins expects to add a pair of E-V T35 high-frequency drivers.

The various compartments and drawers built into the console house a variety of accessories, mostly adjuncts to the Sony tape recorder. In among the splicers, erasers, and head demagnetizers are found a pair of Sony stereo headphones and two Sony F87 microphones. The bottom two pedestals house Mr. Collins' record collection, which is somewhat eclectic. But it has a strong jazz element because of the weekly two-hour jazz program he conducts on WHFI-FM, Birmingham, Michigan. The title of the show is Jazz from Britain (Mr. Collins' native country), and it features, in Mr. Collins' words—"the good music from Britain, i.e. Heath, Keating, etc."

—L.K.
LIKE almost all of the world’s great violists, virtuoso Emanuel Vardi is a man of considerable strength, and has a long reach. The nature and size of the instrument ask more physically from the player than does the smaller violin.

The VIOLA

By IRVING GODT

At a symphony concert, it is easier to spot the violas (usually twelve of them) from the balcony than from any place else in the hall. From a distance, viola players all look like violinists with small heads. The viola’s body is two to three inches longer than the violin’s, and one to two inches wider—a fairly subtle difference to observe directly, but one just big enough to create this peculiar visual effect.

The four strings of the viola are tuned C, G, D, A. The three upper strings are tuned to the same notes as the violin’s lower strings. In other words, the viola adds a lower C to the violin’s tuning (G, D, A, E) and gives up the high E. Actually, it happened the other way around: the viola was the first member of the violin family to emerge in the sixteenth century. We like to call the viola a large violin, but historically, we should think of the violin as a
small viola. *Violino* means small viola, viola simply means viol—and on that peg hang all the historical confusions in the terminology of the sixteenth and seventeenth centuries, some of which are still with us.

The Germans call the viola *Bratsche*, a Teutonic compromise with the last word of its early full name: *viola da braccio*. *Braccio* is the Italian word for “arm,” and it distinguished the newer “arm viols” from those played “at the leg” (the true viol was held on or between the knees and bowed across its body). The English, uncomfortable with the foreign term “viola,” sometimes substitute the equally Latinate “tenor.” Unfortunately for this term, the viola is not the tenor of the violin family, but its alto. However, it does occupy the tenor range in the string quartet. The logical French call it the *alto*.

**I**n the name of simplicity, then, the viola is just a big violin—but it is a violin with a heart. Whatever its size has cost it in technical flexibility, it has repaid in tonal warmth. The darker, mellower sound of the viola seldom rises above the surrounding orchestral commotion, but when it does, it sings with a full-throated tone that will make even a violinist envious.

To celebrate his acquisition of “a wonderful viola ... an admirable Stradivari,” Nicolò Paganini once requested a new work from Hector Berlioz. Although this commission came from one of the greatest virtuosos of all time, the composer did not supply the usual concerto, the expected vehicle for pyrotechnic display. Instead, his unrivaled ear for instrumental color chose to celebrate the viola—indeed, the viola itself, not the violinist—in the symphony *Harold in Italy*. The moody Harold of Lord Byron’s imagination, personified by the viola, seems to be projected against the orchestral background like a figure in a landscape rather than as a star soloist. From the solo viola’s first entry (accompanied only by a harp) its lyrical role is unmistakable, and before much of the movement has passed, it has demonstrated its melancholy low, its passionate middle, and its anguish high registers.

In Mozart’s *Sinfonia concertante* in E-flat, the solo viola sounds a little brighter and tighter than in *Harold*. Mozart required the violist to tune the strings a semitone higher than usual, and the increased string tension produces a tenser tone quality under the bow. Would Mozart have demanded this tuning today? The modern viola has changed since his day: its neck is now slightly longer and its strings are both longer and thicker. Moreover, our modern standard pitch is higher than that of the eighteenth century. As a result, our viola uses more tension in normal tuning than his did in the higher than normal tuning. But, if this makes our viola sound a bit shrewish in the *Sinfonia*, it does suit its prima donna role. The viola here is no “second fiddle” but an equal partner.

Beyond these major works, the viola fan has only a small literature of infrequently heard concertos from which to choose. There is a lovely Telemann Concerto in G, another by Carl Stamitz in D, and three that bear the name of Handel, at least one of which he didn’t write. There is also a Dittersdorf Concerto for Viola and Double-Bass. All of these have been recorded. Paul Hindemith, a gifted violist as well as a composer, wrote four works for viola and orchestra, and William Walton and Béla Bartók each wrote a major concerto for the instrument (Bartók’s was completed after his death by Tibor Serly).

The viola’s lot in chamber music is much brighter. Its permanent seat in the string quartet gives it an important, if not always spectacular, role in some of the most significant music of the last two centuries. In the quartets of the Romantic period (for example, the very opening of Dvořák’s “American” Quartet) it finds many opportunities to deliver telling strokes.

In the orchestra of the eighteenth century, the viola, like the double bass, was a captive of the cello part. But it escaped, in the nineteenth century, to participate freely in the shaping of the harmony. The sound of massed violas can still be heard, alas, in those thick orchestral readings of Bach’s Brandenburg Concerto No. 6—the two highest string parts are violas. In Tchaikovsky’s Sixth Symphony, violas close the slow introduction and begin the Allegro theme that follows. Hector Berlioz’s *Roman Carnival Overture* displays the violas in a more characteristic style: right after the English horn solo (near the very beginning) the violas take up the melody with a concentrated ardor. They are accompanied by a boister of “da-dits” in most of the orchestra, compounded by an important counter melody in the flutes. Their leading melody, therefore, seems like a kind of dark inlay in a brilliant surface.

Occasionally, the viola is assigned a comic role, as in Richard Strauss’ *Don Quixote*, where the solo viola plays Sancho Panza to the cello’s Don. But the viola’s best mood is its melancholy. Perhaps that is because it has to toil so long before an important melody comes its way.

*A direct comparison of violin and viola makes clear the difference in size not otherwise easily noticeable: the deeper instrument is approximately one-seventh larger than the higher one.*

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IN last year's special tape issue, I discussed battery-powered tape machines primarily as voice recorders. While surveying the machines for that article, I found that many of the pack-em-up-and-sling-em-over-the-shoulder machines were also surprisingly fine for recording—and at least fair for playing back—music. This year, I've taken a number of leading machines, including several that weren't available last year at this time, and have put them through their paces as music reproducers.

Portable tape recorders are, of course, quite definitely special-purpose machines, particularly when it comes to making music. The best of the portables record magnificently; they're as good as the best a.c.-operated home machines and equal to some professional equipment in their ability to get a good, clean, wide-range, low-distortion signal on tape. They do have limitations, however, the primary ones being the output power of the playback amplifier and the size of the built-in loudspeaker it drives.

The playback system of a portable, in fact, must really be considered simply an on-the-spot monitor—a device with which you make sure you have approximately what you hope you have on the tape. The sound produced by the built-in playback system of even the best portables might be compared to that of a good table radio. It can be clean and pleasant—nice to listen to as background music on a picnic or to fill the void during a blackout when your regular equipment is out of service. But it is not to be confused with high-fidelity sound. For full-fidelity playback, the tape must be reproduced on an a.c.-operated home machine. Another approach that achieves results almost as good is to play the tape on the portable recorder, but to feed the signal from the portable (using a patch cord) to a hi-fi system.

With the foregoing in mind, I put this year's crop of portables through a series of recording and playback tests designed to show just what the machines at the various price levels can do. Unless otherwise stated, all the recorders take 5-inch reels, and have recording-level meters that also serve as battery-condition indicators.

This was my test technique: First, I recorded all material at a tape speed of 3 3/4 inches per second (ips) for comparative purposes, except on the few machines that record and playback only at 1 7/8 ips. (Machines that can operate at 7 1/2 ips have better high-frequency response and wow and flutter characteristics at the higher speed, but I did not use it for my comparative tests because so few portables have it.) To standardize results as much as possible, I used Scotch 150 1-mil tape on all except the cartridge models, which come with their own tape—whatever it is—already enclosed in the cartridge.

I recorded a voice passage on each machine using its own microphone, to check general quality and to make sure that everything was working properly. With stereo recorders, the voice check also gave a quick indication of stereo effectiveness. I then recorded musical excerpts of three different records: Gilbert and Sullivan's H.M.S. Pinafore, performed by the D'Oyly Carte Opera Company (London OSA 1209), for full orchestra and chorus and male and female solo voices; Sibelius' Karelia Suite, played by Alexander Gibson and the London Symphony (RCA Victor LSC 2405), for full orchestra with brilliant brasses and also for sustained horn tones; Chopin's Concerto No. 1, played by Artur Rubinstein (RCA Victor LSC 2570), primarily for sustained piano tones in the slow movement.

Each selection was recorded in two ways: first, through the microphone input of the recorder under test. The microphone was mounted 12 inches from a
high-quality speaker system and centered on an axis between the woofer and tweeter. The second recording was made directly from the amplifier's tape-output jack with a patch cord to the recorder's auxiliary input. (In rare cases where a recorder did not have an auxiliary input, the signal was connected into the microphone input using a special patch cord with a built-in attenuator to avoid overload.) The amplifier was set to provide a monophonic signal for those tape recorders that required it. Finally, a sustained 3,000-Hz tone from an audio signal generator was recorded on each machine to provide a test signal that would easily show up any wow and flutter problems.

When all program material had been recorded on each machine, it was played back in three ways. First, each tape was simply played back on the machine on which it was recorded. This gave some indication of the machine's overall record-playback quality. Second, the tape was again played back on the same machine, but with the output signal fed into a 50-watt stereo amplifier and through two quality bookshelf-type speakers. And third, I played the tapes (except for those made on cartridge machines) through a high-quality home tape recorder connected to the hi-fi system.

This last test provided a check on how good the recording sounded when not limited by the portable's playback electronics. In addition, wow and flutter that was put on the tape during the recording process was not reinforced by being played back on the same portable machine. During each type of playback, I constantly made A-B comparisons of one machine against another, so that their relative strengths and weaknesses became clear. Finally, as I played back the 3,000-Hz tone, I not only listened to it, but observed it on an oscilloscope to get a clearer picture of the machine's wow and flutter characteristics.

When all of the testing was completed, I had gained several impressions. Among them were the following:

- Music reproduction obviously is a tougher test of a machine's quality than voice reproduction, at least in one important respect. While a machine used strictly for voice can get away with a reasonable amount of wow and flutter, one used for recording or playing back music cannot—unless you like singers with excessive vibrato and instrumentalists who sound as though they can't quite decide where each note is.

- Two other desirable recorder characteristics—low distortion and wide frequency range—are important for both voice and music. Although a voice recorded and played back under good conditions will be intelligible on practically any kind of machine, the same is not true under difficult conditions. In a noisy environment, or when taping a subject who doesn't speak clearly or directly into the microphone, it's difficult to get an under-
standable tape unless the machine has both good response and low distortion.

In practice, this requirement for good frequency response and low distortion makes the question of speed stability more or less academic. A machine with the first two characteristics is likely to have overall high quality. That means its speed regulation will probably be pretty good, too. Thus, a machine that passes one test with flying colors will tend to perform well on the other tests also. However, there is one rather gray area. Some machines have reasonably good frequency response and distortion figures, and therefore make quite good voice recorders. They even sound good—for portables—on most music. But they fail when it comes to what I found was the toughest single test for portable recorders: wow and flutter on sustained piano (or guitar, or harp) tones. While most of the recorders I tested performed at least moderately well on most program material, audibly disturbing wow and flutter showed up on some of the sustained-tone tests. These machines would be fine for voice and even okay for most music—but stay away from piano concertos and similar sustained-tone material.

- Some recorders are exceptionally sensitive to overload. Some are particularly sensitive to low battery voltage. In either case, the trouble is likely to show up as distortion (and, in the case of low voltage, as speed fluctuation). Moral: Make sure the level is not too high when you record. It pays to be conservative in your gain-control settings, keeping the record-level meter needles well within the specified area. This, of course, will vary from machine to machine. A little experimentation to determine the actual overload level is always worthwhile with any new recorder. And always record with fresh batteries, a full charge if your machine is rechargeable, or power from the a.c. line if convenient.

If a portable tape recorder can be called a special-purpose device, a stereo portable tape recorder is a special special-purpose machine. Both of the two machines I had—the Concertone 727 and the Martel T-410—operated well and would be useful as recording machines. Since speakers are mounted on opposite sides of a small case, the stereo effect in playback is present, but not striking.
Placed at an angle in a corner, the machine produces somewhat more widespread stereo, but the relatively limited amount of power available still restricts results when compared to most home a.c.-operated stereo machines. Incidentally, there is more and more prerecorded material becoming available on 5-inch reels—and without too much trouble you'll find that you can respool a lot of your 7-inch prerecorded tapes onto 5-inchers.

- Quality, in general, correlates with price. But there are exceptions. I came across at least one machine in the $100 price range that is at least as good as one that costs twice as much.

**Before** you buy, you can do a great deal to ensure that you get your money's worth. Here are some do's, don't's, and assorted hints for your buying expedition:

1. Don't depend on the demonstration tapes that come with various machines as a quality check. These tapes represent masterpieces of programming: some make really inferior machines sound quite acceptable. In one extreme case (a recorder not included in this article) the demonstration tape contained nothing but ricky-ticky and cha-cha music. The beat is spirited and gay—ideal music to sign checks by. But here's the problem. The machine had so much flutter and wow that it gave a brilliant vibrato even to a piano. And the frequency response was terrible. The tape was carefully designed to sidestep these problems. It was a fascinating demonstration—but only of the recordist's skill, not of the quality of the recorder.

2. Do use your own prerecorded tapes—four-track for stereo machines, two-track for mono. Make sure your tape has clean, wide-range sound. It's a good idea to have a variety of program material—full orchestra and chorus; male and female solo voices; and something slow, preferably with sustained piano tones. Play the tape on various machines, comparing the same selection on different units. You'll find pronounced differences.

3. If you have no prerecorded tape, make some recordings right in the store—assuming that you can. (Even if you use prerecorded tape, do a little recording in the store anyway to check out the machine thoroughly.)
The prerecorded tape will save time, though.) You can use a microphone held in front of a high-quality speaker, but you'd be better off eliminating store noises and room acoustics by connecting the recorder to the amplifier playing the music. (In my experience, the microphone is rarely a limiting factor in the overall quality of the machine. Manufacturers try to furnish a microphone whose frequency response includes essentially the entire range the recorder is capable of recording. In a few cases, manufacturers offer better microphones at extra cost. These microphones will usually improve quality somewhat, but the differences will not be large.)

You shouldn't rule out a recorder if you hear a small amount of flutter or wow on sustained piano tones, if the unit meets your requirements in other respects. Generally it will reproduce anything but this extremely difficult program material satisfactorily. Check with some moderately slow orchestral passages. If it sounds okay with those, chances are you'll be happy recording anything but piano concertos.

(4) Once you've made a choice, check the specific unit you expect to buy, not simply a demonstrator of the same model. Quality varies from one seemingly identical machine to another. One may have more wow or flutter than another, a third may have unbelievably loud motor noise.

(5) Shop for discounts. Except for a few brands, list prices are fiction.

Here's a general guide to what I found to be the best machines among those I checked in various price categories, and my impressions of each.

Expensive. The Uher 4000-L—at more than $400 it should be good, and it is. While it suffers somewhat from the same playback limitations as other machines—small power amplifier and speaker—few machines of any size equal or surpass it as a recording device. Also, in the expensive class, the Concertone 727 stereo machine has fine sound and excellent speed regulation at less than $500.

Moderate. Sony 800, Telefunken 300 and 301 (the latter is a four-track mono machine), Martel ST-410. Excellent machines in the $150-$200 price range with clean sound and good speed regulation. The Martel is the only stereo machine in the category.

Low-cost. The Channel Master 6464, in the vicinity of $100, is an excellent example of the quality available at this relatively low price. The Sony 900-A was the lowest priced machine tested, and it offers excellent value at $70. (The Sony 907, which is identical but without built-in a.c. operation, costs $50.)

Three special machines. Both the Concord F-100 and Norelco Carry-Corder 150 sell for under $100 each; they are the smallest machines tested (hardly bigger than a brick) and put out an amazing amount of sound for the size. That's really amazing, though, is the sound either produces when played back through an auxiliary amplifier and speaker system. The Norelco 101 recorder is a one-of-a-kind machine. Although using relatively small (4-inch) reels perched on top, it has one of the largest speakers to be found on any portable. Consequently, its sound is among the best available in this kind of machine. The price, surprisingly, is about $80.

Portable recorders, like other types of audio equipment, come with a wide variety of features, some highly useful, others less so. Here are some of interest:

Automatic Volume Control (AVC). Several of the models tested have automatic volume control. Among them: the Sony 800, the Sony 900 (a 3-inch-reel machine), the Channel Master 6464, and the Concord 300. AVC is dandy for recording voices and telephone conversations, since it tends to level out the hills and valleys and make all voices of nearly equal volume. It does the same thing for music, which is bad, since the ups and downs in volume help to make music interesting. If you're planning to record music, make sure the machine you're considering has an AVC defeat switch.

Automatic/manual reverse. When you reach the end of the reel with the Concord 300 (a 4-inch reel machine), simply throw a lever and the tape instantly runs at recording speed in the opposite direction. A separate recording head puts another track on the bottom of the tape. This saves lifting off both reels and turning them over, a ritual necessary with most machines. The Concord 350 does the whole business automatically—during either record or playback—provided you've pasted a small strip of metallic sensing tape near the end of the reel or are using a tape that comes with the foil already on it.

Multiple speeds. The Concertone 727 and the Uher 4000-L run at 7 1/2, 3 3/4, 17/8, and 1 1/2 inches per second. The Sony 800 has three speeds—7 1/2, 3 3/4, and 17/8. Other machines are equipped for both 3 3/4 and 17/8 operation. Exceptions are the Norelco 101 and 150 and the Concord F-100 with 17/8 only and the Telefunken 300 and 301 with 3 3/4 only.

Digital counter. Handy for finding selected parts of musical programs or conversations if you can remember to put labels on the reels and mark the position of selections (which I have trouble doing consistently). If you want one, you'll find it on the Martel T-410, Sony 800, Uher 4000-L, Channel Master 6464, Concord 350, and Concertone 727, among others.

Above all, my tests demonstrated that there are many excellent machines on the market. Whatever your needs and whatever the state of your bank account, you're sure to find at least one to do the job.

Ken Gilmore, who writes frequently for HiFi/Stereo Review, brings years of experience, including a stint as a broadcast station engineer, to the task of evaluating portable recorders.
UNLESS you like lots of them around, I suggest that you rid yourself of any recorded performances of the Prokofiev First and Third Piano Concertos that you might own and replace them at once with Columbia’s brilliant new composite release starring pianist Gary Graffman with George Szell and the Cleveland Orchestra.

Running through the available versions in the Schwann catalog—such names as Richter and Gilels meet my eye—I realize that readers might conceivably ask, en masse, that I be relieved of my job, or be sent down for a long rest at the very least. But I will risk it, because the present performers have done something for this composer that many another redoubtable musician has been mitigating against—or so it seems to me. (And I don’t care how much personal coaching Richter has had with Prokofiev himself!) Graffman, Szell, and company have plainly and simply restored Prokofiev to the twentieth century—which is, after all, where he really belongs.

For Prokofiev—Bartók is another case—is an extremely popular twentieth-century composer whose chronological status has been gradually slipping away in recent years because of the application of an insidious Grand Manner performance style seemingly designed to push him back into the nineteenth century. I am, of course, as aware as the next man of the big tunes, the traditional forms, the virtuoso piano writing in his works. But I had almost forgotten about the rhythmic incisiveness, the percussive drive, the lucid textures, the clean, plain lines, the acidic harmonies that characterize the best of this man’s music until I heard this new Columbia release. Listen, if you will, to the purposeful understatement with which Szell introduces the first subject of the Third Concerto; and listen further to the biting sharpness of attack on Graffman’s first entrance. All the way through the movement—all the way through the concerto, for that matter—listen to both pianist and conductor restore the metronomic parody to the composer’s jokes about rhythmic symmetry. And, above all, listen for the utter lucidity of orchestral detail that has, for some time now, been in the process of being swallowed up in a thickening, post-Romantic interpretive style.

If I have emphasized the Graffman-Szell achievement in the Third Concerto, it is because it is the most popular of the five that Prokofiev wrote, and, in general, it is the one that has suffered most in recent performances. If the characteristics restored on this disc are less revelatory in the First Concerto, it is because the composer’s style was itself less formed at the time of composition, the characteristics themselves less apparent in the music. It is nonetheless a brilliant, sharply articulated performance of a lesser work.

Curiously enough, it is difficult to decide who deserves the greater credit here, Graffman or Szell. Although it is pretty equal going, my guess would be that the balance is on the conductor’s side. Any music that needs greater precision, a cleaning up, or a re-
furbishing—a bit of cobweb-dusting, in short—almost always does nicely when turned over to this organization and its conductor.

Graffman’s sharply honed yet richly expressive playing of the Third Piano Sonata is perhaps a little too impressive to be called a bonus, but here it is anyway. Columbia has risen to the occasion with its best recorded sound and its most imaginative use of stereo. William Flanagan


ANGEL’S DISTINGUISHED NEW DON GIOVANNI

Nicolai Ghiaurov’s commanding power makes him the Don Giovanni of our times

Was another recorded Don Giovanni necessary? Apparently the presence on its active roster of conductor Otto Klemperer and bass Nicolai Ghiaurov led EMI, parent company of Angel Records, to believe so, and to produce a new stereo version of the opera to compete with its own earlier recording (S 3605, with Carlo Maria Giulini as conductor). By and large, I must agree with the decision. To say, after so many distinguished predecessors, that this new Angel set is a revelation would be overstating the case, but it affords so much pleasure and so much illumination of Mozart’s score that its release rates a happy welcome.

One of this opera’s countless magical attributes is its universality, the ease with which it yields to different approaches while retaining its basic strength. In this new set, the comic elements are decidedly understated by Klemperer, whose conductional touch is far from light; he bows to levity only when it is explicitly demanded by the score—for example, Leporello’s carryings-on in the banquet scene. On the other hand, he brings out in a masterly way the power and passion of the music—it rises to a really hair-raising climax in the final scene. And as usual Klemperer’s leadership radiates its familiar characteristics: massive and sumptuous orchestral tone, absolute control, logic, and clarity. His is unquestionably an exciting and memorable achievement, but a Don Giovanni who was merely good and thus did not assume the commanding position in the drama that this role should be. By contrast, Nicolai Ghiaurov here takes charge from the first line on, and never relinquishes his hold on the listener while he is “on stage.” His solid, bronze-colored basso cantante pours out limitless, and its breathtaking richness is no more admirable than its pliancy and expressiveness. In the recitatives Ghiaurov makes every word count; he carries his full weight in the ensembles; in short, he creates an unforgettable impression. If his beautiful, technically polished singing is matched by a galvanizing stage presence—and this recording suggests that it is—Ghiaurov is certain to become the Don Giovanni of our times.

The Leporello of Walter Berry is not a clown but a strong-willed and rebellious individual who is more outraged than outrageous. In addition to creating a distinct personality, Berry is also in excellent vocal form, a worthy match for his padrone. Nicolai Gedda offers a steady, assured, and elegantly vocalized Don Ottavio, a considerable improvement over his earlier recorded interpretation (Vox 162). Paolo Montarsolo’s singing of Masetto is solidly competent, but a lighter timbre would have been preferable alongside the dark-toned voices of Ghiaurov and Berry. Franz Crass is simply the best Commendatore to be heard on discs: his flowing cantante tones sustain the statue’s majestic pronouncements with inexhaustible power.

The ladies’ laurels are of somewhat lesser magnitude. Christa Ludwig is always admirably in character as the outraged, abandoned, yet forever vulnerable Elvira. A very special mezzo-soprano, she finds no problem in the role’s highest tessitura and, of course, makes more of the lower range than her soprano counterparts. But her tone is too fluttery at times, and her vocal agility does not equal that of Elisabeth Schwarzkopf, the Elvira on the Giulini recording. Claire Watson’s Anna is respectable but in no way outstanding, and Klemperer’s tame leadership of “Or sai” hardly helps her to make a big impression. Her way of attacking the high A’s of this aria piano and gradually swelling the tone to forte is also rather ineffective. Mirella Freni’s Zerlina is neat
and straightforward, but not irresistible, which the portraits of Hilde Gueden and Graziella Sciutti in earlier recordings certainly are.

Except for Ottavio's brief and anti-climactic recitative following "Non mi dir," which is very often omitted in performance, this recording is complete. The voices seem close upon the listener, at times overpowering the orchestra, but the overall sound is rich, and the balances are generally judicious. Happily, there are several good recorded versions of this glorious opera, and so we are past the time when any single set can be designated the unchallenged best. The present release is a distinguished performance, and I, for one, shall not part with it.

George Jellinek

3. MOZART: Don Giovanni. Nicolai Ghiaurov (bass), Don Giovanni; Claire Watson (soprano), Donna Anna; Nicolai Gedda (tenor), Don Ottavio; Christa Ludwig (mezzo-soprano), Donna Elvira; Walter Berry (bass), Leporello; Mireille Freni (soprano), Zerlina; Paolo Montarsolo (bass), Masetto; Franz Crass (bass), Commendatore; New Philharmonia Orchestra and Chorus, Otto Klemperer cond. ANGEL SDL 3700 four discs $23.16, DL 3700* $19.16.

ENTERTAINMENT

MIREILLE MATHIEU: A BRIGHT NEW STAR IS BORN

Her introductory American release for Atlantic reveals a vibrant and haunting natural talent

Mireille Mathieu may well be the most enchanting French export since son et lumiere. She has a wonderful voice, fresh, young, and vibrant with a haunting timbre. The material in Atlantic's just-released album (her introductory recording on this side of the water) seems to have been chosen for her with an unerring ear for what she can do well and easily at the present moment. Although the similarities to Edith Piaf are too often stressed, she possesses a distinct sound of her own. It is a happier sound than Piaf's (as well it might be, since Mlle. Mathieu is only nineteen years old), and it communicates a much different experience from Piaf's dark visions.

Born in Avignon in the south of France, where until recently she worked in an office and helped her parents care for her twelve younger brothers, Mireille Mathieu in the last year has become one of the biggest stars in France. She is managed by Johnny Stark, who is the French equivalent of Elvis Presley's Colonel Parker, and who also guided the career of that most indifferent of French rock singers, Johnny Hallyday. Stark has an international star in Mlle. Mathieu, and I hope he realizes it. The word is that he is guiding her away from the Piaf material; I hope this is true, because she deserves a long creative career of her own.

This release contains the four songs that have propelled Mlle. Mathieu to the top in such a short space of time: Mon Credo, Qu'elle est belle, C'est ton mon, and Pourquoi mon amour. Listen to any one of them and you'll find out why she made it. The girl is exciting: there is a rough-hewn naturalness to her performances, and she gives the lyrics the kind of driving concentration that good singers seem to be born with.

The musical arrangements of Paul Mauriat and François Rauber admirably support Mlle. Mathieu, and the recording has been beautifully produced for Atlantic by Barclay Records in Paris. This is an album I am sure everyone, with or without a knowledge of French, will enjoy.

Peter Reilly

5. MIREILLE MATHIEU: Mireille Mathieu. Mireille Mathieu (vocals); orchestra, François Rauber and Paul Mauriat cond. Mon Credo, Pourquoi mon amour; Qu'elle est belle; Je suis la; and eight others. ATLANTIC SD 8127 $4.79, D 8127 $5.79.

MARCH 1967
"I have now heard your new recording of my First Symphony and am absolutely delighted with it."—Walton

André Previn, recently appointed conductor of the Houston Symphony, a position previously occupied by such distinguished men of music as Stokowski, Beecham and Barbirolli, is heard here in his fourth Red Seal recording with the London Symphony. Although the work of Sir William Walton has long been a staple item in the L.S.O.'s repertoire, it is significant that the musicians themselves were unanimous in their feeling that Previn was the first conductor to really capture the "message" of Walton's magnificent Symphony No. 1, written during the composer's most vital period. Music lovers will certainly concur. Recorded in brilliant Dynagroove sound in London's famed Walthamstow Town Hall.

La Mortella
Pozzo di Ischia
Proc. di Napoli
Italy

17 November 1965

Mr. Peter Dellemhein
Musical Director
R.C.A. Victor
155 East 26th Street
New York 21, N.Y.
U.S.A.

Dear Mr. Dellemhein:

I have now heard your new recording of my First Symphony and am absolutely delighted with it. Please tell Mr. Previn that I shall do my utmost to be in London when he conducts the work at the Royal Festival Hall next February and I much look forward to seeing him then.

Yours sincerely,

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changes of pace and phrasing employed in the Italian Concerto. Oddly enough, the most dazzling impression produced by any piece on the disc stems not from the harpsichord pieces but from Kipnis’s playing on the clavichord of the rhapsodic A Minor Fantasia from Bach’s early Wemser period. Here, in short, is another fine disc to add to one’s libraries alongside the earlier and equally stimulating programs of French, English, and Italian keyboard music Igor Kipnis, has made for the Epic label. D.H.

BACH: Violin Concerto No. 1, in A Minor (see MOZART)

A fascinating harpsichord-clavichord disc

BARTOK: Sonata for Two Pianos and Percussion (see JANACEK)

BASSFTT: Variations for Orchestra (see DONOVAN)

BRAHMS (orch. Schoenberg): Piano Quartet in G Minor (see SCHOENBERG)

DALLAPIECCOLA: Cantil di Allegoria; Due Capi di Michelangelo Buonarroti (see PERAGALLO)

Review:

Recording: Stylish and vital
Stereo Quality: Good enough

Even in this (almost) all-Bach keyboard program, Igor Kipnis manages to bring to the recital some off-beat wrinkles that open the listener’s ears to new aspects of the music and its composer. Not only do we have here a fascinating study in tonal contrast between the plucked harpsichord and the gently stroked clavichord (the Little Prelude No. 1 is played on both instruments), but we are offered a number of relatively familiar works in new guises. Thus the Adagio in G Major turns out to be a keyboard version of the opening movement of the solo Violin Sonata in G Major, and the Prelude and Fugue in A Minor (BWV 912), Kipnis makes the most of every coloristic possibility. His playing of the G Major Adagio is of special interest because the characteristically “vibrato” technique (called, in German, ‘Bebung’) of clavichord playing is readily apparent to the ear. The inconstant and clangorous harpsichord comes into its own superbly in such virtuoso pieces as the Italian Concerto and A Minor English Suite. Kipnis makes the most of every coloristic possibility in his own tasteful manner, and improves ornamental repeat sections for the two final movements of the English Suite. Interesting, too, is the contrast between the motor drive that characterizes his reading of the Suite, as against the subtly “romantic”

Explanation of symbols:
® = stereophonic recording
= monophonic recording
= mono or stereo version not received for review

COLUMBIA M2S 753 two discs $11.59, M2L 353 $9.59

Performance: Musically superb
Stereo Quality: First-rate

This is the first recording of Debussy’s The Martyrdom of St. Sebastian in English, and it features a new translation by Leonard Bernstein who, according to Alfred Frankenstein’s album notes, “has not only translated d’Annunzio but paraphrased him in order to clarify obscurities. Bernstein has also provided the work with an entirely new verbal prologue.

In spite of a score of considerable if uneven quality, it is a work that I have never been much taken by in its concert form. I don’t like the text (in French or in anybody’s English translation), and I find myself consistently wanting more music downstage front and less talking. The score has radiant moments, particularly in the choral and vocal-solo sections, and I always dislike hearing it interrupted by the extensive narrations. And, at least when I am listening to a recording in my living room, I dislike the spoken text even more when it is ‘acted’ to death, as it is here.

As my regular readers must surely know by now, I am no Bernstein-baiter. I think him one of the most talented composers in the United States, the best native conductor we have yet produced, and one of the best authorities of twentieth-century music that any country has produced.

But, literate man that he is, he is no writer. His own “Kaddish” Symphony would be an infinitely more impressive work if Bernstein’s original text were translated into some terrifically obscure or, preferably, stone-dead language. And his translation and/or “realization” of the d’Annunzio Sebastian, complete with a prologue of his own invention, would go over so nicely back into French for at least one listener.

Turn him loose on the music, however, and Bernstein is, quite as one would expect, absolutely superb. The Philharmonic makes radiant sounds, and Bernstein’s sense of Debussy’s meticulously controlled intuitional style creates at least the illusion of being second only to the composer’s own. The singing, as well, is lovely—particularly the exquisite work of soprano Adele Addison. Musically, this is the best Sebastian we are likely to have on records for some time to come.

Columbia has lavished a superb electronic production on the release, and the stereo treatment seems to me to be particularly sensitive, illuminating, and intelligent. W.F.

(Continued on next page)
Hi Fi/Stereo Review

Record and Tape Service

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Next month in HiFi/Stereo Review

St. Cecilia: Patron Saint of Music
by H. C. Robbins Landon

Alexander Borodin: The "Sunday" Composer
by William B. Ober

Pop Goes Paris
by Didier Delannoy

PLUS:
A Review of Transistor Amplifiers

Richard Donovan’s Epos (1963) is, according to its composer, “planned in terms (Continued on page 82)
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of an extended three-part structure." Which ought to make it very clear and, presumably, sharply profiled. Yet, its materials are more functional than distinguished, its freely chromatic dissonant style somehow diffuse and arbitrary. The shortcoming may be mine rather than the composer's, but I can't really figure out what he is after—either as musical expression or pure style.

The same composer's Passacaglia on Vermont Folk Tunes (1949) seems, oddly enough, to suffer from very similar problems. The very choice of a variational form like the passacaglia would seem to dictate—even treated freely—a certain sharply motivated structural design. Yet, once again, the piece seems diffuse stylistically—it seems to wander with a curious lack of either stylistic or expressive urgency through its essential clarity of design.

The performances seem to me variable. It is quite possible that the Donovan works lack definition at least in part because of interpretive shortcomings, but the Bassett comes across most compellingly. CRI's recorded sound and stereo get closer and closer to the highest current professional level. H. P.

(e) DVORAK: Symphony No. 8, in G Major, Op. 88. Berlin Philharmonic Orchestra, Rafael Kubelik cond. DEUTSCHE GRAMMOPHON SLPM 139181 $5.79, LPM 19181 $5.79.

Performance: Fascinating
Recording: Lovely
Stereo Quality: Excellent

In common with the late Bruno Walter, whose New York Philharmonic recording of this music is a gem of its kind, Rafael Kubelik seeks to do justice to both the sentiment and the brilliance of Dvořák's lovely G Major Symphony.

Without question, given the superbly refined yet virile playing of the Berlin Philharmonic and the handsome DGG recorded sound, this recorded performance belongs among the top three or four of the more than half a dozen stereo versions available. Price and taste are the main considerations in determining final choice between this disc and those of Barbirolli, Kertész, Giulini, and Walter. All offer an extra piece as filler —Walter the Brahms Academic Festival Overture, the others Dvořák's splendid Scherzo Capriccioso.

(f) FALLA: El amor brujo. RAVEL: Rapsodie espagnole; Pavane pour une infante défunte. Victoria de los Angeles (soprano); New Philharmonia Orchestra, Carlo Maria Giulini cond. ANGEL S 36385 $5.79, 36385* $4.79.

Performance: First-rate
Recording: Good with a reservation
Stereo Quality: Good

The two large Spanish pieces, written within a few years of each other, make an interesting comparison. The French influence on Falla is quite clear, but the differences are equally notable. Ravel's Rapsodie espagnole is the older work (1907 as against 1915), and it is also obviously the more brilliant and original. There is no single note in it that could have been predicted—indeed part of the play here lies in the interaction between the most totally traditional source material and the uniqueness of the (Continued on page 86)
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CIRCLE NO. 25 ON READER SERVICE CARD
**BEETHOVEN: THREE MORE NINTHS**

By ERIC SALZMAN

RECENT releases include a remarkable number of Beethoven symphonic recordings: no less than three Ninths as well as a pair of Eighths, and one acepse of the other seven in care of Eugene Ormandy and the Philadelphians. Just in case you didn't think that Beethoven was a popular composer, it might be pointed out that, by a recent count, the Ormandy collection is the ninth complete set of The Nine on the market; and, although the Ninth Symphony is one of the most difficult works in the repertoire by many standards, the above recordings constitute the nineteenth, twentieth and twenty-first versions currently available. The mind boggles.

First, the Ninths. The most striking of the three is certainly the London version. It may seem curious to build a recording of Beethoven's Ninth around four famous opera singers when, apart from the big bass recitative and the tenor part in the *Alta Marca* of the finale, they have, comparatively, so little to do in the giant scheme of things. Some may even doubt the appropriateness of an all-star operatic quartet in the context. But the fact is that it would be difficult—if not impossible—today to assemble a more impressive group of soloists, and they do really count here. Special mention should be made of the Finnish bass Martti Talvela. He is not always a great interpretive artist in the theater; his difficulty is that he seems able to produce only a single kind of sound. But what a sound it is! Here (and granting the single addition of an unwritten appoggiatura), the magnificent declamatory resonance of his voice is superbly appropriate.

Obviously London is counting on the names to sell the merchandise; but certainly there has to be more to it than that. And fortunately, there is. Hans Schmidt-Isserstedt is not an especially brilliant or profound conductor, but he is an extremely able one, and he has excellent material to work with. The Vienna musicians—the Vienna State Opera Chorus and the Vienna Philharmonic—are precise and vigorous, and the performance has, above all, the great virtues of clarity and cracking tension, achieved through a sense of big line, some careful, crisp ensemble articulation and phrasing, and an attractive, clean, clear recorded sound. The first movement in particular has, for once, a really clear, strong span.

Another advantage to the potential buyer is that London gets it all in on a single disc (although in a fancy box, which makes it look like a multiple record set). I was not aware of any distortion at the end of the packed grooves, but there is some pre-echo, and, to make everything fit, important repeats in the Scherzo had to be eliminated. Also in the drawback category are a couple of passages in the performance: for example, the difficult last-movement transition that leads to the return of the opening Presto (just before the bass recitative) is poorly managed.

By contrast, the Ormandy performance is on a much more even keel. In spite of the fact that his tempos are generally faster, his overall sense of the piece is less vigorous if occasionally richer and even grander. A great deal of emphasis is placed on the glorious sound of the orchestra and, most particularly, on the rich Philadelphia string ensemble. All this is further highlighted by the elegant and resonant Columbia recording quality. Still, although this resonance is

by no means overwhelming, I prefer the clearer Schmidt-Isserstedt approach on London; Ormandy and the Columbia engineers do not, for example, succeed nearly as well in elucidating the sonically difficult-to-clarify first movement. Ormandy and the orchestra are most effective in the slow movement, notably in the very beautifully managed contrast between the *adagio* and *andante* themes. Except for one or two surprisingly out-of-tune wind passages, the playing is of a very high order. The Mormon Tabernacle Choir is first-rate and the soloists, if a tiny bit less prestigious than their London opposite numbers, quite hold their own—only the cedenza-like solo quartet just before the final dash to the finish is a bit less effective. John Macurdy is quite impressive in the bass recitative. Ormandy, by the way, is the only one of the three conductors to give us the complete text with all the repeats; oddly enough his total time (67'55") is identical with that of Schmidt-Isserstedt, the discrepancy being accounted for by the difference in tempos.

William Steinberg's Ninth, interpretively speaking the one with perhaps the most possibilities, is disappointingly the weakest overall. Although one can sort out many interesting and potentially important details, they do not come through or add up. The biggest problem is the flush sound, which, whatever its aesthetic value may be in the abstract, tends consistently to cover up where it should reveal. Alas, it is generally the excellent wind playing that is submerged. The strings dominate but—especially considering the competition—they are only moderately effective; the chorus is, in this set-up, far too light and weak. All this is a pity, since Steinberg's conception may be (if one could only really hear it) the grandest and most probing of the three. (Interestingly enough, even with the elimination of a repeat or two in the Scherzo, his reading is the longest of three.)

A small footnote: all three conductors diddle with the original orchestration. Everybody does it, no doubt, and these changes are undoubtedly matters of detail and, in part, traditional. But are they really always so necessary?

In the all-Pennsylvania Beethoven Eighth competition, Ormandy again emerges with an edge. The reasons are much the same as given above: the heavy Command sound is an even greater disadvantage here.

A final word about the Ormandy Ninth. Most, if not all of these performances seem to be new (strangely enough, Ormandy has had only two or three Beethoven symphonies in the catalog recently) and, although they are uneven, they generally have quality. I much prefer Ormandy's honesty to Karajan's anti-Beethoven showmanship, but I would recommend Szell for brilliance and clarity or (in spite of some terribly slow tempos) Klemperer for profundity.

© BEETHOVEN: Symphony No. 9, in D Minor, Op. 125 (*'Choral*). Joan Sutherland (soprano); Marilyn Horne (contralto); James King (tenor); Martti Talvela (bass); Vienna State Opera Chorus, Vienna Philharmonic Orchestra, Hans Schmidt-Isserstedt cond. LONDON OSA 1159 $5.79, A 4198 $4.79.

© BEETHOVEN: The Nine Symphonies. Lucine Amara (soprano); Lilli Chookasian (contralto); John Alexander (tenor); John Macurdy (bass); Mormon Tabernacle Choir; Philadelphia Orchestra, Eugene Ormandy cond. COLUMBIA D7S 745 seven discs $28.70, D7L 345* $23.70.

© BEETHOVEN: Symphony No. 8, in F, Op. 93: Symphony No. 9, in D Minor, Op. 125 (*'Choral*). Ella Lee (soprano); Joanna Simon (mezzo-soprano); Richard Kress (tenor); Thomas Paul (bass); Mendelssohn Choir of Pittsburgh, Pittsburgh Symphony Orchestra, William Steinberg cond. COMMAND CC 1201 2SD two discs $11.58, CC 33 1201* $9.58.
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James Goodfriend

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London Records

(Continued on page 90)
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Syphony (1962) was taped from a live performance at Tanglewood, but much more is heard more than they have any business being under such conditions. The two shorter works, in which Leinsdorf takes over under carefully supervised engineering techniques, seem to me to be almost all one could ask in the way of performance, recorded sound, and stereo quality.

W. F.

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GROSSI: Concerto in D Major; No. 59, in A Major ("Fire"). E. S. Schneider's reading of the Franck Symphony. This Seraphim disc represents the first U.S. release of that reading.

The British baronet had a way of letting himself get carried away with the music to the point of whipping up the tempo to dramatic climaxes—and more often than not not carrying his audience along with him. There is a certain amount of this in the first movement of the Franck, which is to say that his treatment is freewheeling, in contrast to the steady forward momentum of the Monteverdi manner. Beecham allows no undue lingering in the slow movement, and the finale moves at a good clip to its conclusion. The recorded sound is warm and spacious, as befits the nature of the music. Though Pierre Monteux's Chicago Symphony performance (RCA Victor's reproduction) is well controlled and impressive as an ensemble work, but I would assume all that remains is a quality that is far too exaggerated.

Johann Sebastian copied out one of Stolzel's keyboard partitas for the use of his son Wenzinger, or Redel sets. Musicological considerations (such as the more authentically conceived Menuhin, Wenzinger, or Redel sets). However, the playing itself is by far the most inspired and exciting piece. Gottfried Heinrich Stölzel, a Kapellmeister at Götha, was admired by Bach, even to the extent that Johann Sebastian copied out one of Stölzel's keyboard partitas for the use of his son Wilhelm Friedemann Bach. Johann Georg Pisendel, who worked in Dresden, studied with Vivaldi, and his violin concerto shows many characteristics of the Italian composer, not least in the virtuosity demanded of the solo performer. Christoph Graupner, who worked in Hamburg and was also Kapellmeister to the Landgrave Ernst Ludwig of Hesse-Darmstadt, the officials of St. Thomas in Leipzig, actually elected himcantor of that institution before Bach, but because of various complications he never took the job. His is the least interesting work on the record.

All the performances are excellent; the festive Stölzel with its trumpets and winds receives a far more stylish reading than in its previous recordings, and the violin soloist, in spite of not having the most attractive tone, plays his concerto with considerable flair and a great understanding of the stylistic requirements (there are embellishments galore). The recorded sound is up to Archive's usual high standard.

I. K.
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Never before has the Soviet Union granted such rights on an exclusive basis to an American company. These new Melodiya/Angel recordings constitute a unique treasury of contemporary Soviet musical life.

Since music is the only language common to both nations, Angel hopes this significant new program will create opportunities for greater understanding as well as for cultural enrichment.

Leading the Melodiya/Angel release is the world premiere recording of Shostakovich's explosive cantata, The Execution of Stepan Razin, based on a poem by young Yevgeny Yevtushenko about the Cossack rebel hero — coupled with Shostakovich's Ninth Symphony. Two great "Fifths," of Shostakovich and Prokofiev, are played by the magnificent Moscow Philharmonic. The Prokofiev work is conducted by violin virtuoso David Oistrakh in his symphonic conducting debut on records in America! Oistrakh also conducts Berlioz' Harold in Italy with Rudolf Barshai as viola soloist and plays Khachaturian's Violin Concerto with composer Aram Khachaturian conducting.

Stravinsky's suite from L'Histoire du soldat and Prokofiev's Quintet for woodwinds and strings is played by ensembles led by Gennady Rozhdestvensky, young maestro of the Bolshoi Opera and Symphony.

Complete / Original Instrumentation

"There is no reason why 'Messiah' should be more appropriate at Christmas than any other time of year, for the story and music are for all seasons."

—The New York Times


Only Stereo Recording of Wagner's Masterpiece

Winner of Grand Prix Du Disque

Hans Knappertsbusch conducts the Bayreuth Orchestra, David Zimm and VANGUARD VSD 7161 $5.79, VRS 1161 $4.79.

Performance: Lively

Recording: Flowing

Stereo Quality: Fine

For my taste this Haydn coupling is a beauty, in terms of both musical content and legible performance. Symphony No. 70 offers a pair of joyful end movements, an enchanting Minuet, and a somber, fascinatingly textured slow movement. The "Fire" Symphony, composed more than a decade before, is notable for its brilliant opening movement and the extraordinarily demanding horn writing in the finale.

David Blum's performance of No. 70 is a stunner—stylish, yet full of both fun and feeling. The touch of string portamento—glistening—glimmering—that he brings to the recorded sound is a joy to the ears in every way—clean, yet with just enough room tone to lend warmth to the strings of Blum's modest orchestral forces.

In the "Fire" Symphony, Blum emphasizes contrast in tempo and dynamics to a greater degree than Antal Dorati in his Mercury disc issued last January. Blum takes his opening movement at a real pace, Dorati adopts a more moderate tempo, presumably in the interest of cleaner articulation of the rapid repeated-note opening figure. I must confess that I am more convinced by Blum's clearly theatrical approach to this music (it is believed to have served originally as an incidental music to a play). The Firebrunn, given at Esterhaza in the 1760s.

The recorded sound is bright and rather reverberant, but not annoyingly so. The sonic glow of these. In their own right, however, as soloists—and the American performances of all the works considered here—including the American performances of both children and adults. Furthermore, Janáček intended that cartoon lantern slides be shown during the performance of the pieces, and Desto has had the wit to include the original, altogether charming illustrations on the album insert containing the texts. The lovely "Youth" Wind Sextet makes a fine companion piece to the Nursery Rhymes. The Concertino has not only an exciting solo piano part, but none too easy horn and clarinet parts as well. Animal sounds, nature sounds, and passionate human reaction are evoked in its four movements. In the Capriccio we encounter a far more somber world of feeling, one evoked by World War I. In scoring this affecting work, Janáček wrote the solo part for a one-armed pianist, Otakar Hollmann, who had been maimed in that conflict. The iron-gray wind coloration contrasted with the percussive quality of the piano creates a cumulative effect of defiance, the title Janacek originally had in mind for the Capriccio. As in the opera House of the Dead, Janacek's last completed work, the prevalingly somber quality of the music makes it less accessible than works like 'Youth' or the Sonfnetta.

All of the performances on the Desto discs grew out of an all-Janacek concert given last summer at the Caramoor Festival at Katonah, N.Y., with Hilde Somer as piano soloist and selected New York City musicians under the direction of New York City opera conductor Julius Rudel. Miss Somer, something of a specialist in twentieth-century music, plays with great vivacity and fire, and Rudel manages nicely the tricky business of maintaining the rhythmic impact of Janacek's gnomic motives, while keeping the music in a state of continuous linear and dynamic flow.

I have heard Czech recorded performances of all the works considered here—including one of the Capriccio with Otakar Hollmann as soloist—and the American performances don't quite match the precision, force, and glow of these. In their own right, however, they stand as readings of high excellence. The recorded sound is bright and rather reverberant, but not annoyingly so. The sonic quality of the stereo is perhaps a bit exaggerated on the Concertino and Wind Sextet sides—more so in the former.

It is hardly right to describe the Crossroads Czech performance of the Concertino as directly competitive to the Desto disc, since it is priced at $2.49 (making it a

(Continued on page 94)
introduces 75 ohm FM Antennas
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splendid buy) and coupled with Bartók's Sonata for Two Pianos and Percussion. Besides these two works, we have the bonus of a highly dramatic two-movement piano sonata subtitled "October 1, 1905," beautifully played by veteran Czech pianist Josef Páleníček. Written as a memorial to a Czech worker killed in a Brno street demonstration, its two episodes, "Foreboding" and "Death," juxtapose recitative-like and lyrical elements in a terse and effective manner that makes of the piano something of a folk bard.

In truth, this is an absolutely first-rate disc in every way, with the finest and most exciting performance of the Janáček Concertino I have encountered thus far coupled with an equally vital one of the Bartók. Only the Cambridge recording of the latter, at a considerably higher price, offers serious competition to the Crossroads performance. The recorded sound is bright and rather reverberant, but the instrumental presence is more than adequate.

All three of these discs are recommended most enthusiastically for those who wish to make the acquaintance, or reacquaintance, of some of the finest between-the-wars Central European musical masterpieces. D. H.

© © MOZART: Divertimento No. 17, in D Major (K. 334). Rafael Druian (violin); Cleveland Orchestra, Louis Lane cond. COLUMBIA MS 6294 $7.79, ML 6324 $4.79.

Performance: A bit strait-laced
Recording: A bit dry
Stereo Quality: Good

This D Major Divertimento has always been my personal favorite among Mozart's works in the form, particularly for its lovely variation movement with its marked contrasts between the virtuosic and the poignantly expressive.

The scoring calls for two violins, viola, bass, and two horns, which would seem to indicate a chamber music performance. Among the currently available recordings, only the Westminster mono disc with the Vienna Konzerthaus Quartet follows this practice. On the recent DGG disc Karajan used a moderate-sized string body, and to lovely effect, though the reading became fussily mannered at times.

Louis Lane in this new Epic recording takes yet another alternative, allotting most of the first violin line to concertmaster Rafael Druian as soloist. The result in terms of tonal contrast is both effective and pleasing, and Druian's technique and musicianship are impeccable, as always. I wish, however, that Lane had chosen to phrase the music with just a little more "give" and warmth, especially in the first minuet and variations. The close miking and resulting "tight" sound of the recording only add to the strait-laced effect of the whole. This reaction represents one man's taste, of course, but I still hope for a recorded performance of K. 334 that will steer a middle course between Lane's stark integrity and Karajan's hedonism. D. H.

MOZART: Don Giovanni (see Best of the Month, page 76)
Anyone who walks into a store and asks for a reel of tape deserves what he gets.

Chances are he'll walk out with a square peg for a round hole. Buying tapes is a lot like buying film. Lots of brands, types, sizes. Confusing? Not if you read further.

For one thing, don't buy a "white box" off-brand to save pennies. If it's worth recording, it's worth recording on a proven brand, like Reeves Soundcraft,... supplied on all reel sizes from the 2%-inch size for miniature portables, on up to the 14-inch reel. Professionals and home recordists prefer Reeves Soundcraft Tapes for their reliability and performance qualities.

But—in asking for tape, you should say more than just the words "Reeves Soundcraft." You should ask for the Reeves Soundcraft Tape best suited to your recording needs.

An economical all-purpose tape like Reeves Soundcraft STANDARD, can probably answer most of your requirements. It gives you professional mastering quality with low print characteristics for any material that requires only normal playing time, (1200 ft. on a 7-inch reel).

If, however, you are a school concerned with rough handling or an archive recording for posterity, you should be using Reeves Soundcraft LIFETIME—the only tape with a lifetime guarantee! Its rugged DuPont Mylar base makes the big difference. Virtually unbreakable. Never flakes or dries, regardless of temperature or humidity extremes. Both Standard and Lifetime offer normal playing time—1200 ft. on a 7-inch reel.

On the other hand, if you want to record long symphonies on a reel, Reeves Soundcraft PLUS 50 should then be your choice. It provides 1800 ft. on a 7-inch reel to give you 50% more playing time! For example, over 6 hours of recording at 3% ips. Excellent dynamic range and rugged 1 mil Mylar base make Plus 50 the preferred extended-play tape.

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Write for Bulletin RS-64-12A.
I intend no slight to the other composers involved when I suggest that this recording of contemporary Italian choral music is pretty much Luigi Dallapiccola's show. The Prison Songs are as big, as dramatic, as an evening in the theater, and strikingly written for the voices and limited instrumental forces. Composed in Dallapiccola's rather unrefined, but deeply expressive, contemporary chromatic manner, the pieces—Italian as they are in theatrical flair—more than once bring Mussorgsky's Boris to mind, although I would be hard pressed to spell out the exact resemblance. Perfectly good and appropriate old tune as it is, I wish the composer hadn't used Dies irae as a unifying thematic device, however. It makes me think of Rachmaninoff all the time, but I suppose that's my hangup.

The same composer's a cappella Due Cori di Michelangelo Buonarroti show us a sunny, lyrical, light side of Dallapiccola's disposition, and the bright contrast they make to the Prison Songs is as pretty as the pieces themselves. Petrassi's Nonsense is one of those pieces that has to resemble its texts—five verses from The Book of Nonsense—by getting funny and cute about the choral writing. Still, he's inventive about it, and the pieces move by easily and pleasantly. The program opens with Peragallo's De Profundis clamavi ad te, which could serve as a textbook model for contemporary a cappella choral writing. As a matter of fact, short number that it is, I've listened to it several times just from that point of view. There is absolutely nothing the matter with the piece, except that, for all its outlining of traditionally expressive vocal shapes, it never seems to rise above the level of expressive tracery.

I am, in practice, unfamiliar with all of this music, but I do know that even the easiest of it isn't easy to perform—particularly the a cappella numbers. But even not knowing the music, I'll wager that the performances are just about impeccable in terms of the notes themselves. If they're not, I will promise you that you have never heard wrong notes sung more cleanly and on pitch, or with greater dynamic variations and understated expressivity. We could do with a couple of dozen choral groups like this one on these shores.

The recorded sound is clean and tasteful, and it does the singers justice, although the stereo treatment may be inordinately subdued in the Dallapiccola Canti di Prigionia.

HIFI/STEREO REVIEW
Who would you put in the box?

“Dizzy”?  

Shakespeare?  

Beethoven?  

Uncle Louie singing “Danny Boy”?  

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MARCH 1967
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Jubilees, Op. 50a; De Profundis, Op. 50b
HINDEMITH: Mass (1965), The Whitehart Chorale, Lewis E. Whitehart cond.
Lyricon 7161 $5.98, LL 161 $4.98

Performance: All commendable
Recording: Varied but all adequate
Stereo Quality: Also varied

Volume 5 in the continuing Columbia-Craft Schoenberg series is a most attractive musical documentation of some of Schoenberg's firm links with tradition. The Opus 8 orchestral songs and the a cappella chorus Friede auf Erden show Schoenberg's evolution out of late Wagnerianism toward something new. The Brahms orchestration and the "American" Suite for Strings show the retrospective links in the form of rather self-conscious but extraordinary homages to Brahms and to the Romantic-classicist tradition—so important an element in Schoenberg's own makeup and music.

The Suite for Strings was written—at the suggestion of Schoenberg's American publisher, G. Schirmer—shortly after the composer's arrival in the United States, and it was intended for American student orchestras. The point about the piece is that it is intentionally traditional. To be sure, it generally proceeds in eight-part counterpoint, and it bristles with chromatics, but these are only details. This is, in a deep as well as a superficial sense, a piece in G Major, and you might—just might, for a moment—confuse it with Britten or somebody. It has an Overture, an Adagio, a Minuet and Trio, a Gavotte and Trio, and a final Gigue, some of it very bouncy, all of it tonal. It has string writing of considerable complexity, covering virtually every kind of articulation, color, and attack known to the instruments. It has big scope (nearly thirty minutes) and plenty of ideas—Schoenberg flexing his musical muscles and showing the unbelievers a thing or two. He shows 'em, too; it is quite a remarkable piece.

Performances of the Suite often get bogged down in details. Craft's reading, while not ideal in many respects, really clarifies the piece on its long lines and makes it work.

Craft has a much more limited success with the Brahms G Minor Quartet transcription, although the orchestra is not a studio group but the Chicago Symphony. What Schoenberg once called the Brahms Fifth needs exactly what the first four need—big scale and big gesture. But Craft does understand certain aspects of the music quite well.

The most astonishing discovery in this album is Op. 8, a set of orchestral songs written in 1904 in the ripest kind of late Romantic style. Until this recording, these songs were among the most obscure of Schoenberg's works—the scores for three of them remain unpublished, and the others appeared years ago only in manuscript reproduction. The reasons for this are really hard to fathom. This is gorgeous, full-blooded, expressive music—the Wagnerian tradition at its end. Irene Jordan sings the notes, but while her accuracy and purity are commendable up to a point, they are not enough.

Friede auf Erden is several rosy steps down the primrose path. Written in 1907, it is based on a kind of expanded chromatic tonality that has been the despair of choruses (Continued on page 100)
When you're doing your famous imitation of Enrico Caruso will your next tape recorder be kind enough not to hiss?

Panasonic invents a tiny cartridge tape recorder with a motor you can't hear.

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No big deal. Just a cartridge tape recorder that has sense enough to keep quiet when you're making noise.

The Panasonic 3100 is made by the same people who make professional FM studio equipment.

Now since you're reading this type of magazine you're obviously not a neophyte in the recording field. So we'll just simply list a few features about the 3100 and let you decide if this is the cartridge machine for you.

First of all, you get the convenience of a cartridge. Your hands never touch tape. All you touch is a button.

You get a capstan-drive, battery-powered recorder with 11 Solid State devices. One hour playing time at 1 3/4 ips. Fast forward and rewind. AC adaptable. Remote pencil mike that's button controlled to save you tape. 2 1/2" PM Dynamic speaker. VU meter and tape viewer. Long-life batteries. Carrying and microphone cases. And the whole kit and kaboodle costs just $79.95* (suggested list price) and weighs just 3 1/4 lbs.

Panasonic also makes a Solid State stereo tape recorder that should be right down your alley. It's the RS-755.

It has 4-track stereo recording and playback. Two Pencil-type Dynamic Microphones. Separate volume and tone controls for each channel. Two built-in 4" x 6" PM speakers. Two professional VU meters. Pause level and automatic shut-off. Sound on sound and Pan-A-Trak sound with sound in case you want a Toscanini symphony orchestra playing behind you when you're Caruso. It's got everything a stereo system should have except a high price. It's only $199.95* (suggested list price). At this point the only question that should be on your mind is, "Who is Panasonic and can I trust them?" A good question.

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Every time I am about to review a Telemann disc I am reminded of Martin Bookspan’s comment comparing him to the little girl who could be very, very good, but when she was bad... Here, Telemann is very, very good indeed. Both works are large-scale choral motets, grand in their impact and interesting in their mixture of the German Baroque polyphonic tradition (à la Bach) and the newer tendencies of the galant. Especially intriguing is an aria for two basses with timpani (which describes thunder) in the first of these motets.

The performances are as invigorating as the music, and the soloists, instrumental as well as vocal, are all most satisfactory. Ristenpart, as usual, is remarkably reliable in this kind of repertoire, and the disc can be recommended especially to those who tend to denigrate this composer. The reproduction is very good in both versions.

The Guarneri Quartet, with reinforcements from the Budapest Quartet, turns in an absolutely stunning performance—one that makes the music sound better than it is. The mixing is close, but the resulting sound packs plenty of wallap.

D.H.

Maurice Abravanel: Superb readings of Vaughan Williams works stereo is well used, but no texts or translations are supplied.

I. K.

VAUGHAN WILLIAMS: Symphony No. 6 in E Minor; Five Variants of "Dives and Lazarus." Utah Symphony Orchestra, Maurice Abravanel cond. Vanguard VSD 71160 $5.79, VRS 1160 $4.79.

Performance: Excellent
Recording: Superior
Stereo Quality: Fine

The Vaughan Williams Sixth Symphony is a piece I’ve known for a long time—I heard its first American performance, but when it was in the late Forties—and I’ve never quite known how I feel about it. As many regular readers of these columns know, I admire Vaughan Williams quite specially. But I blow hot and cold on this piece—currently a little cool, I guess. I am again aware of the coarseness of some of its materials, the excessive weight of much of its orchestration, and the curious sensation that I am about to review a Telemann disc. I am reminded of Martin Bookspan’s comment comparing him to the little girl who could be very, very good, but when she was bad... Here, Telemann is very, very good indeed. Both works are large-scale choral motets, grand in their impact and interesting in their mixture of the German Baroque polyphonic tradition (à la Bach) and the newer tendencies of the galant. Especially intriguing is an aria for two basses with timpani (which describes thunder) in the first of these motets.

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D.H.

RECORDING OF SPECIAL MERIT

TELEMANN: Motets, “Wie ist dem Name so gross” ("Ode to Thunder"), "Dies ist die Viteigung" (Psalms 46:9), Edith Selig (soprano); Jeanne Collard (alto); Peter Witsch (tenor); Barry McDaniels, Jakob Stumpfli (basses); instrumentalists; Philippe Caillard Chorale; Saar Radio Chamber Orchestra, Karl Ristenpart cond. Westminster WST 17109 $4.79, XWN 19109 $4.79.

Performance: Strong
Recording: Very good
Stereo Quality: Fine

The performances are as invigorating as the music, and the soloists, instrumental as well as vocal, are all most satisfactory. Ristenpart, as usual, is remarkably reliable in this kind of repertoire, and the disc can be recommended especially to those who tend to denigrate this composer. The reproduction is very good in both versions.

The Guarneri Quartet, with reinforcements from the Budapest Quartet, turns in an absolutely stunning performance—one that makes the music sound better than it is. The mixing is close, but the resulting sound packs plenty of wallap.

D.H.
How much do you have to spend for a really good stereo system?

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Equipment reviews rarely single out one product as the best of its kind without ifs, ands, or buts. Reviews of the AR-4x speaker and of the AR turntable did. HiFi/Stereo Review wrote of the AR-4x: "We know of no competitively priced speaker that can compare with it." La Revue des Disques wrote: "There has been nothing like it... this speaker is astonishing." And other reports went even further, rating the AR-4x as one of the great speakers at any price.

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CIRCLE NO. 71 ON READER SERVICE CARD

on the excellent performance that has been given it by Maurice Abravanel and the Utah Symphony Orchestra. And they do the Fire Variants of "Divisi and Lazzarini" with lots of warmth, lots of breadth, yet lots of sensitivity. As ever for this orchestra, Vanguard has provided rich, spacious recorded sound and good stereo effects. WP F.

5 @ VIVALDI: La Fida Ninfa (highlights). Alfredo Giacomonti (bass), Oratorio Carmen Repetto (soprano), Moretto; Antonio Constantini (tenor), Narette, Renna, Gary Fazuch (soprano), Lici; Matilda Musini (soprano), Elpino; others. Chamber Orchestra and Members of the Opera, Milan, Raffaele Montessori cond. TURNABOUT TV 34066S $2.50, TV 3-1066 $2.50.

Performance: Enjoyable
Recording: Good
Stereo Quality: Good

In opera, as in nearly every other musical form, Antonio Vivaldi was an astonishingly productive creator. His influence on its development, however, was so negligible that his name barely rates mention in the standard operatic reference books. La Fida Ninfa, a work written in 1732 and probably typical of the composer's forty-odd operas, displays his effective writing for voices, his always appealing melodic invention, and his characteristic vigorous style—but virtually no individuality beyond well-explored Baroque formulas. Baroque specialists and opera connoisseurs with a historical bent will nevertheless find the present disc—drawn from a complete recording available on Vox—eminently worth owning. A generous amount of music (fifty-two minutes) is offered here, well recorded, and at an exceedingly attractive price. Two of the singers, Alfredo Giacomonti and Renna, Gary Fazuch, are far above average.

G. J.

COLLECTIONS


Performance: Competent
Recording: Very good
Stereo Quality: Fine

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**RECORDING OF SPECIAL MERIT**

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Tartini: Sinfonia in 6 Major, Zurich Chamber Orchestra, Edmond de Souza cond. VAN-GUARD EVERYMAN SRV 212SD $1.98, SRV 212* $1.98.

Performance: Unusually accomplished
Recording: Excellent
Stereo Quality: Wide separation

Nonesuch's album represents a fairly extensive range of late Baroque music in Italy, which is conveniently divided into groups of composers connected with three principal music centers. It is a survey of chamber music and keyboard pieces that runs through eighteen composers, some, such as Vivaldi, Locatelli, and Tartini, and the Scarlatts, quite familiar and others more obscure. There are some gems in this repertoire; on the other hand, there are also some mediocrities, the kind of run-of-the-mill piece with endless sewing-machine rhythms that have little attraction even for the ardent Baroquist. Since this material overall is fairly similar in style, I would suggest listening to the works in small batches. Concerning the performances, they are nowhere less than accomplished, although the stately nities of Baroque performance practice such as cadential trills and embellished slow movements are almost totally lacking. There is an annoying edginess to the violins, and the harpsichord selections are recorded at too high a volume in relation to the chamber pieces, but otherwise the sound is satisfactory. Perhaps the most impressive aspect of this collection is the unusual choice of music.

Columbia's second recording by the Southern Venet, a chamber orchestra much like The Mozart except that it employs a conductor, is an improvement over the first disc, an all-Vivaldi collection released some months ago. In the previous album, I was distracted by a certain rhythmic waywardness which gave the effect of Baroque works in Romantic clothing. Here, there are a few reminders of that mannerism but only a few. Most of the playing is very competent indeed, although the solo fiddling of the Vivaldi Concerto for Four Violins is not up to standard. The reproduction is unusually vivid, and the stereo is excellent.

Musically, I found the Everyman collection of chamber-orchestra pieces even more entertaining than the Columbia, with the Tartini Sinfonies and the charming Locatelli "Theater Introduction" (actually an early symphony) among the highlights. The Zurich ensemble impresses me more

(Continued on page 109)
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see like a dare-devilish kind of a challenge for a relatively new artist—the likes of Birgit Nilsson, Maria Callas, and Eileen Farrell being her current recorded competitors—it is a pleasure to report that the signs point to the arrival of an artist who is definitely of star caliper.

Her voice is that of a true dramatic soprano, not only in its richness and power, but also in its innate dramatic excitement. It shows evidence of sound schooling and a finished technique, and it soars in the high tessitura with uncommon freedom. Miss Jones also displays a strong dramatic temperament; her intonation is very secure, and she has a most impressive way of attacking notes separated by wide intervals with a direct thrust, without any sliding whatever, and landing on dead tonal center. (Senta's Ballad offers the most remarkable examples of this quality, but it is displayed also in "Ah, perfido!" and "Dei tuoi figli.") Only her "Abendslieber," is a shade below the outstanding overall level of her recital. Here the voice shows a trace of intrusive vibrato, but somewhat over-resonant. If Miss Jones sounds as thrilling in the theater as she does on this disc, she will have a sensational career.

G. J.

RECORDING OF SPECIAL MERIT

6 MAHAPURUSH MISRA: Indian Drums, Mahapurush Misra (tabla), unidentified sarod and tambura. Roopak-tal, Slow Tintal, Dadral-tal, Kathaur-tal; Clothal, Composite Society CS 1466 $7.79, CM 1466 $4.79.

Performance: Excellent
Recording: Excellent
Stereo Quality: Good

This is next door to being an instruction or demonstration record, but it is one of the most delightful I have heard. Mahapurush Misra, playing the two-piece Indian drum called the tabla, demonstrates the rhythmic structure of Indian music. A piece's basic rhythmic structure is called the tal, and seven of them are played here. Twice, familiar Western melodies (Greensleeves and Au Clair de la lune) are used to provide a kind of home base.

The record is marvelously pleasant, intimate, and relaxing. The Indian rhythms are so much more complex than what even our most advanced jazzmen have arrived at that it is no wonder some of our avant-garde look to this music for inspiration. And it is true, the pulse is inescapable. But the result, unlike much jazz, is not frenzied, but the kind of peace you get by soaking in a hot tub. This record will unwind you better than any Rajasthan.

JOAN SUTHERLAND: Joan Sutherland Sings Noel Coward (see Entertainment, page 117)
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CIRCLE NO. 55 ON READER SERVICE CARD
T \ TIM BUCKLEY: Tim Buckley, Tim Buckley (vocals and guitar); Lee Underwood (guitar); James Fielder (bass); Billy Mundi (drums and percussion); Van Dyke Parks (harpsichord, piano, celeste); strings, Jack Nitzsche arr. Wings; I Can’t See You; She Is; Song Slowly Song; Song for Jainie; and seven others. ELEKTRA EKS 74004 $4.79, EKL 4004* $3.79.

Performance: At odds with the material
Stereo Quality: Good

On the back of what I believe is his debut album, singer Tim Buckley is introduced, in words better suited to the Harper’s Bazaar spring fashion issue, as “a kind of quintessence of nouvelle.” Well! The songs are all his, eight of the twelve having been written in collaboration with someone identified only as Beckett. (The copywriter was probably too busy with descriptions of “the magic of Japanese water colors” to include any further information.)

The lyrics are surrealistic, a mélangé of private symbols never made public, reminiscent of Bob Dylan at his most obscure. I think the several Dylanesque lyrics are sincere about this in a kind of conformity of sensitivity, just as more than ten years ago everybody had a friend who was “just like Holden Caulfield.” The strange thing about this album is that Buckley sings in a rather high, pure, sweet voice that might belong to the kind of fellow who sings I Believe on the Ted Mack Show and wins if there are not received for review

RECORDING OF SPECIAL MERIT

5 BUTTERFIELD BLUES BAND: East-West. Paul Butterfield (harmonica and vocals); Mike Bloomfield, Elvin Bishop (guitars); Jerome Arnold (bass); Mark Natafni (organ and piano); Billy Davidson (drums). All These Blues; Blues, Blues; Two Trains Running; Walkin’ Blues; East-West; and four others. ELEKTRA EKS 7315 $5.79, EKL 315* $4.79.

Performance: Very good
Stereo Quality: Good

The Butterfield Blues Band has caused a lot of stir and also a lot of controversy. The boys are, in a way, revivalists, but also thoroughly modern, using electronics and new musical techniques. They actually have their own nameless style, which I would characterize as what John Hammond, Jr. is always trying for and never gets, and which I find completely delightful.

The best things are Get Out of My Life, Woman; the vocal on Never Say No; and the superb guitar and harmonica work on Work Song. And best of all is the title track, which lasts thirteen minutes and ten seconds, has a really incredible guitar solo by Elvin Bishop, and is the best east-west instrumental blues record ever recorded. I have heard it at least a year.

JUDY COLLINS: Judy Collins (vocals); orchestra, Joshua Rifkin cond. Liverpool Lullaby; La Colombe (The Dove); In My Life; Suzanne; Pirate Jenny; Marat/Sade; and five others. ELEKTRA EKS 7520 $5.79, EKL 320* $4.79.

Performance: Excellent
Stereo Quality: Good

In the past, Judy Collins has been regarded primarily as one of the best of the new young folk-singers who stand rather impatiently behind Joan Baez, waiting their turn. This new album is a striking departure from that image, obviously intended as such, and for the most part highly successful. "In My Life" is the most arresting vocal album I’ve heard in at least a year.

The reasons lie in Miss Collins’ lovely voice and sensitive interpretive skills, and in the inclusion of several remarkable songs. I could do without Richard Farina’s Hard Lacin’ Lover, and I doubt that anyone can sing Pirate Jenny without leaning on Lenya’s interpretation, but much of the rest is extraordinary. The title song, beautifully done, is from the Beatles’ Rubber Soul album. Bob Dylan’s Tom Thumb’s Blues is successful despite arranger Joshua Rifkin’s attempts to chop it up into several different fragments. Donovan’s Sunny Goolge Street is indeed sunny and warm, in a version far superior to the composer’s. I Think It’s Going to Rain Today is a small poem of complete resignation. There are others less exciting to me, such as the songs from Marat/Sade and one by Jacques Brel.

But, most important, the album contains two songs by a young Canadian poet named

(Continued on page 114)
The Arrival of LIZA MINNELLI

By REX REED

It's a warm and wonderful thing when a lovable child learns, after a series of stumbles and falls, to walk on her own two feet. Liza Minnelli is probably the best-loved child show business has produced since her mom Judy Garland was sipping sodas in the MGM malt shop. Now Judy's little girl is all grown up and singing for her own supper. After three albums (four, if you count that nightmare she recorded with her mother at the London Palladium), Liza has fashioned herself into one of the most brilliant performers of the century.

Not that it could have been any other way. Having Judy for a mother and movie director Vincente Minnelli for a father counts for something. When Liza was a baby, she didn't hear lullabies, she heard Harold Arlen playing the piano in the living room. And when she became a teenager, she didn't dance the monkey with the other stringy-haired, awkward teen-agers, she danced with Gene Kelly and Fred Astaire. While all the other girls her age were sharpening their voices on inferior songs for teen-age markets, Liza was belting out songs by Stephen Sondheim and Truman Capote and Rodgers and Hart in the Plaza's Persian Room. She couldn't help it. That's what she was brought up on.

WELL, now it's paying off. As this new Capitol album demonstrates, the heartbreak of growing up in a back stage trunk has turned her into a mature young woman with more knowledge about how to sing beautiful songs than half the old-timers in the business thrown together. Charles Aznavour, one of her international admirers, has written a poem to her on the record jacket, calling her a "wild flower who blossomed between the floorboards of the stage." She still doesn't seem to be cultivating her own age group, and the hippies who will pay the outrageous cover and entertainment charges in the clubs where she appears are not the types that buy records. So it seems to me Liza will just have to find her own special seat in a throne room already ruled by the much more mannered and much less musically exciting Barbra Streisand. There are bound to be comparisons: both girls are young and possess staggering talents; both use Peter Matz and Ray Ellis to fashion gossamer arrangements of the songs they sing; neither has ever succumbed to singing rock-and-roll trash; both have wide ranges and wild musical approaches to songs that tell stories; and both are actresses.

But Liza is less of a manufactured gem than Streisand. She is a rough-cut diamond, not a synthetic emerald. At her tender age, there is already a sense of having really lived through a lifetime of tragedy. Nobody can manufacture that for a performer. Liza inherited a monstrous background, but it has enriched her work with a vibrancy that makes the listener want to reach out and take care of her. I can't imagine anyone wanting to reach out and take care of Streisand.

Anyone who cares about hearing a serious performer totally revealing her life through her music is urged to investigate this new album. In it, Liza has graduated from the confines of Tin Pan Alley and ripened in the spotlight of the more sophisticated world-weary troubadours like Jacques Brel and Aznavour. There isn't one hackneyed moment, because to each song she brings a new balance and a new control that were sadly lacking before. She makes Edith Piaf's M'lord a more universal tragedy than even Piaf meant it to be. I defy anyone to listen carefully to a magnificent song called I Who Am Nothing without brushing a tear from the eyelashes (or at least swallowing hard). She leaves nothing to the imagination, which is one of the touchstones of her artistry. When she sings lyrics like "She can take you any place she wants, to fancy clubs and restaurants, but I can only watch you with my nose pressed against the glass," her life seems to pass through the amplifier with her voice.

There is one really heartbreaking song, See the Old Man, written for her by her old friends Fred Ebb and John Kander (composers of Cabaret). And two other songs—Jacques Brel's The Days of the Waltz and Aznavour's Love at Last You Had Passed Me—strike me as a couple of the most intelligent musical compositions in recent history. Ray Ellis' arrangements are stunningly brilliant, backing up Liza's uncanny phrasing (she knows more about that than most discuses twice her age).

My heart lies in Liza Minnelli's lap. I played this new album ten times before I was able to summon any kind of decorum that would allow me to write about it without total hysteria. With each successive hearing, I gain a new personal value from it. What Liza gives to her audience is the best in herself and, for those conscious enough to listen closely, the best in themselves, too. For a little girl who didn't know who she was until very recently, that is a colossal triumph.

LIZA MINNELLI: There Is a Time. Liza Minnelli (vocals); orchestra, Ray Ellis cond. I Who Am Nothing; Days of the Waltz, Stairway to Paradise; See the Old Man, The Parisians; M'lord; Theme from "The Umbrellas of Cherbourg"; and four others. CAPITOL ST 2448 $3.79, T 2448* $3.79.
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CIRCLE NO. 51 ON READER SERVICE CARD
Leonard Cohen. On the basis of these two songs alone—which are the only ones of Cohen's I have heard, and which I am told are the only ones so far recorded—he seems to me to have the potential to be a kind of new-folk Burt Howard and of becoming the most important composer in this genre since Dylan. Suzanne is a gentle, mystical love song, Dress Rehearsal Rag is the most chilling reification of total defeat I have ever heard, more frightening in its way than even Gloomy Sunday. I eagerly await more from Leonard Cohen and from the newly triumphant Judy Collins.

J. G.

5. **RICHARD "GROOVE" HOLMES:** A Bowl of Soul. Richard "Groove" Holmes (organ); unidentified accompanyment, Onzy Matthews cond., arr. Night Train; Roll 'em Pete; I'm Gonna Move to the Outskirts of Town; A Bowl of Soul; and three others. LOMA LS 5902 $4.79, 5902* $3.79.

   *Performance:* Subtly pleasing
   *Recording:* Good
   *Stereo Quality:* Good

Hiding behind the pop art cover and the tough-hippy notes ("The group has bite. It sings in just the right places. Strings like blues oughta.") is a pleasantly unusual album. There are two originals—the title track and one whose title you will find either joyous or ominous, depending on your political views, R.F.K. Flies Home. The remaining five are classic blues-based pieces. Aside from the ones listed above, there are How Long Blues and In the Dark, sometimes called Romance in the Dark.

Onzy Matthews' arrangements stay out of the way, and Holmes exudes most of the flashy tricks of funk-rock-pop organists and comes up with a quietly swinging, competent, unobtrusive blues set. If I had to label this, I think I would call it late-night, slow-smothing background music. I've never heard a modestly charming organ record quite like this before, and am surprised to find myself quite so pleased with it. Perhaps you will, too.

J. G.

5. **JONAH JONES:** Sweet with a Beat. Jonah Jones (trumpet and vocals); Dave Martini and Andre Persiani (piano); John Brown (bass); Jimmie Crawford and Danny Farat (drums). Strangers in the Night; Sweet Georgia Brown; Begin the Beguine; Green Grass; Limehouse Blues; and seven others. DECCA DL 74800 $4.79, DL 4800* $3.79.

   *Performance:* Smooth
   *Recording:* Okay
   *Stereo Quality:* Okay

By now most people should be familiar with the little groove that trumpeter Jonah Jones has cut out for himself: a Louis Armstrong-style trumpet over a Ray Connett shuffle rhythm, applied to standards, pop hits, and Broadway show tunes. A comfortable groove both for Jones and his listeners, it provides light, pleasant music and still allows Jones' latitude for improvisation and, presumably, the chance to please himself on occasion.

This latest essay in the format is composed primarily of standards, with the current hit Strangers in the Night as a sort of loss leader. It is very much in the style of his previous discs—just as pleasant and ultimately just as forgettable. Fans of Jones will want it, and will find it reassuringly familiar.

J. G.

MIREILLE MATHIEU: Mireille Mathieu
(see Best of the Month, page 77)

RECORDING OF SPECIAL MERIT

5. **CHAD MITCHELL:** Chad Mitchell Himself! Chad Mitchell (vocals); orchestra, Walter Raim cond. Quiet Room; Over the Rainbow; Brother, Can You Spare a Dime; Hallelujah! A Crown; Violets of Dawn; and five others. WARNER BROS W 1667 $4.79, W 1667* $3.79.

   *Performance:* Varies
   *Recording:* Good
   *Stereo Quality:* Good

Slight of build, lean of face, with a boyish grin, and the look of a bruised Borticelli angel, Chad Mitchell is a powerful performer whose appearance belies his ability to set songs on fire. He established an almost fanatical following during his college tours with the Chad Mitchell Trio. Now he throws off the shackles of ensemble folk music and branches out in his first album as a soloist. Like more sophisticated singers on the order of Rod McKuen and Mark Murphy, Mitchell sings from inside the lyrics, but he makes them sound less distorted, less manipulated than most intellectual interpreters of pop music. He can thunder with juicy passion like Frankie Laine on Merle Travis' old coal mining song Dark as a Dungeon (sounding more controlled, of course, than Laine ever did with all of his echo chambers), and then turn right around and gently moan an after-hours improvisation of Over the Rainbow in a way it's never been sung before.

He has a tendency to croon, but time and a fair degree of the self-confidence that is sure to come will take care of that. The important thing about Mitchell is his ability to turn songs into personal statements for all generations of listeners. Listen, for example, to what he does with the old Depression song Brother, Can You Spare a Dime? It is totally unlike the insipid burlesque Streisand made out of the same tune in a recent album of hers. Mitchell turns it into a song for all seasons, all troubled times. More of the same, and Chad Mitchell might just become the entertainer for all seasons. R. R.

5. **MONKEES:** Meet the Monkees. David Jones, Mike Nesmith, Peter Tork (vocals and guitar); Mickey Dolenz (vocals and drums). Saturday's Child; I Wanna Be Free; Sweet Young Thing; Papa Jean's Blues; Let's Dance On; and seven others. COLGEMS COS 101 $4.79, COS 101* $3.79.

   *Performance:* In the genre
   *Recording:* Okay
   *Stereo Quality:* Okay

Here are the Monkees to ask the musical question: Can a rock-and-roll group be made to order? The proposition is fascinating. Paced with the phenomenal success of the Beatles and the audience brilliance of their first film, A Hard Day's Night, a company auditions kids until they find four, unknown to one another who can constitute a group, and then puts them into a weekly television series that could be called A Hard Day's Monday Night Every Week. Well, it must (Continued on page 116)
The man with the golden ear

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If I Buy a Benjamin Miracord PW 40H, PW 50H, MIO, MICH, MIOF, I Use a Shure V-15 Type II or M75E or M55E or M75-6 or M44-5 or M44-7 or M7/N21D Cartridge

He working to some extent because Last Train to Clarksdale, included here, is reported a hit, and the TV series looks as though it's going to be renewed.

All the elements are here: rage, psychedelic lyrics, Stones-Dylan-Byrds-Beatles takes (most songs are written by Tommy Boyce and Bobby Hart, who produced many of these tracks). But the whole enterprise is slightly quasie, and it shows itself up on the track called Gonna Buy Me a Dog. Now, there have been releases where the vocalist momentarily cracks up (Dylan's Rainy Day Women), and sometimes this adds a bit of spontaneity and charm. But here the vocalist is obviously cracking up on cue, and he does so throughout the entire track. It is a kind of capsule of the whole enterprise, not knowing how far to go in imitating an inimitable original by the computer system.

**RECORDING OF SPECIAL MERIT**

© @ ZERO MOSTEL: Songs My Mother Never Sang. Zero Mostel (vocals); orchestra and chorus, Sol Kaplan cond. and arr. Show Me a Rose; Hold Me Tightly; God Bless Everything in the U.S.A.; He's Not an Aristocrat; and eight others. Vanguard VSD 79229 $4.79, VRS 9229 $3.79.

Performance: Masterly
Recording: Excellent
Stereo Quality: Excellent

When any record company gets Dorothy Parker to write liner notes, I'm impressed. And when the liner notes are as funny and touching as these are, I'm doubly impressed. When the album turns out to be as good as it looks and reads, my only impulse is to suggest that you buy it as soon as possible. In general I shy away from comedy albums because most often they are not only not funny, but actually grate upon one with each re-hearing. All of these songs are by Harry Ruby, and since Vanguard has had the sense and taste to give them a first-rate production, they are. Take for example It's Not an Aristocrat, which is marvelously performed by Mostel and a small assisting cast. Done as a Baroque opera, it is at once a parody of that form, an impressive display of Mostel's comic gifts, and a quite bitter social comment. Other songs such as Show Me a Rose ("or leave me alone") have a less pungent idea behind them, but they are urbanely sassy enough to satisfy even the souls who find recorded humor of any kind distressing. There's a Girl in the Heart of Wheeling, West Virginia ("with a watch that belongs to me") is a snappish little tribute to the girl next door, delivered with bruised grandeur by the incomparable Mr. Mostel. That Mostel is a superbly gifted clown on stage and on screen is known to everyone, but that he is equally funny on records came as a happy surprise to me. Listen to this one, and I think you'll agree it is a direct hit on all counts. P. R.

**RECORDING OF SPECIAL MERIT**


Performance: Exciting
Recording: Superb
Stereo Quality: Superb

Nashville, I'm told, is Liverpool with black-eyed peas on the side. No wonder, then, that Peter and Gordon packed up all their Cannabry Street hip-huggers and hit the high seas bound for Tennessee to see what it's all about. The result, I'm happy to reveal, is surprisingly musical and inventive. This album is so filled with the sound of music that the worst of both worlds disappears, and the remains are light and groovy.

Singing songs by Buck Owens and his Buckaroos, Hank Williams, Faron Young, and other scions of country-and-western mu-
self-narrated biography of Snow and "tells the inspiring story of his climb to stardom." Depending on how you look at it, that story is either heartwarming or grotesque. Probably a little of both.

The album opens with Snow, who has a speaking voice that sounds like an instructor on one of those old exercise records, saying a childhood that would keep a battery of psychiatrists busy for a month. Against a country-hula musical background, he depicts early years of deprivation, poverty, and rejection, full of "sound thrashings" by his father, "warm love and consolation" from a distant mother who worked as a domestic while he lived with unloving and unlovable grandparents. After being treated "like a dog" by a new stepfather, he eventually set out on his own, and, from what he intimates, things got a bit worse before they got even vaguely better. If all this sounds like over-heated Dickens, I guess it is. But that does not nullify the fact that it all makes for rather painful listening—even though Snow sounds as if he is reading from a prepared script of sorts, and the orchestra keeps twanging away dismally in the background.

It is difficult, I submit, to suppress a snicker when Snow describes his courtship of his wife Min, who was a chocolate dipper in a candy factory, and their first meeting at a Hallowe'en party. I did snicker at some of the things on these records, but then I guess that is more my problem than anyone else's.

Snow does have courage, I will admit. He is willing to make his life public—his life and his feelings, and I am sure he could more care less about the reaction of New York types such as myself. Our approval is the last thing I think he would want or care about. He has had his Number One Nation-wide Hit, so I am sure he feels he has proved his point on a large enough scale not to have to apologize to anyone.

The point would seem to be that Snow, along with many of his country-and-western colleagues, is in the communications business in a big way. His audience, special though they might be, understand them, and he understands them—thoroughly. When he utters such earnest statements as "he was a great engineer, and the life of all parties' his audience comprehends immediately, and better syntax or different words would alter the meaning for them. They understand what he says and sings, and he and they seem to be in mutual agreement that they are doing just fine—as they are.

The music in the album is standard Snow, and some of the excerpts from recordings made early in his career may be of special interest to fans. The two-record set also contains a picture scrapbook of snapshots of Snow at various times in his life. After what he tells us about all those long and bitter years of struggle, I was struck by the fact that from the earliest photograph, taken when he was five, to the latest one in which he is shown signing a new contract to run some of the biggest names in entertainment, he is shown a picture of a man who has spent at least a bit more of his life than the others. Some things never change.

5 M. JOAN SUTHERLAND: Joan Sutherland Sings Noel Coward. Joan Sutherland (vocals); Noel Coward (guest artist); orchestra and chorus, Richard Bonynge cond.; Douglas Gamley arr. Dearest Love; I'll Follow My Secret Heart; Zigeuner; I'll See
Between the wars those two eminenties gri-saries, Ivor Novello and Noel Coward, ruled serenely in the kingdom of English operetta. There was seldom a season in the West End when either Novello, with one of his Ruritanian romances, or Coward, with his rather more stylish plays with music, was not in evidence. Well, all that glittery time is gone now, and in its place we have operettas about nuns and children, or plays with music about neighborhood gangs. Today Novello’s music sounds like a damp dream of Vienna, while Coward’s music and words retain a genuine charm and elegance.

Charm and elegance are exactly the two things most lacking in this album. For charm Sutherland substitutes camp, and in place of elegance she substitutes her near-perfect coloratura in all its machine-like accuracy. Requested by John Wakefield, her tenor in the music lesson prelude to ‘I’ll See You Again,’ to ‘sing a scale for me,’ she responds with a volley of notes that suggests that she just wandered in from an overheated rehearsal of Lucia, stringy wig and all. Another Coward classic, ‘I’ll Follow My Secret Heart,’ receives similarly literary treatment.

Anyone who has ever heard the old Victor recording of Yvonne Printemps and Coward performing this song remembers, I am sure, the brazen but disarming coquettetria of Printemps as she simmered to Coward, “Eer doun feel laike my birthday any more,” and as she swooped, after an acrobatic pause, into the chorus of the song in her thin, nasal, but completely seductive voice. The Coward-Printemps collaboration is racy, oddly glamorous, and completely theatrical. The Coward-Sutherland collaboration sounds like Dr. No sclolding the Daughter of the Regiment.

Miss Sutherland’s complaint about her birthday is uttered in the resigned and placid tone that might be used for “Damn, the mail is late again.” Coward sounds decades younger when he sings this with Sutherland, in ‘Dearest Love.’ No change in Sutherland, though; she sounds just as intent on singing the hell out of everything, intelligibility notwithstanding. By actual count, on most bands I understood one word in twenty.

I can listen to this album benignly enough, thinking that maybe it really is not terribly important whether I understand all the words or not, that Sutherland really does an exquisite job on Zigeuner, and that Boynage’s accompaniments have most of the elegance that I miss in the vocal interpretation—in fact, that for a few glorious orchestral bars in the middle of Charming, Charming when the orchestra sweeps into the Dance, dancer refrain this album seems to me to offer the best orchestral treatment of Coward music that I have ever heard. Besides, I know most of the lyrics, and Sutherland does hit the notes—every last one of them.

But great voices are tangible and perishable. Theatrical charm, that much underrated and so difficultly cultivated talent, is as elusive as it is unforgettable. And charm is the whole point of Coward’s theater music, as it is of Printemps’ performances. I somehow feel that Miss Sutherland misses that point completely.

P. R.
RECORDING OF SPECIAL MERIT

5  * COUNT BASIE: *Broadway Basie's Way.* Count Basie (piano); orchestra. *A Lot of Livin' to Do; Mame; Here's That Rainy Day; Everything's Coming Up Roses; Hello Young Lovers; Just in Time; It's All Right with Me; On the Street Where You Live; and four others.* COMMAND 905 SD $5.79, 905* $4.79.

Performance: Robust and swinging
Recording: Very good except for echo
Stereo Quality: Excellent

Made up of a set of songs from Broadway musicals in arrangements by Chico O'Farrill that are precisely tailored to the Basie band style, this album should last considerably longer than most of the jazz-visits-Broadway projects. For collectors, the occasion is somewhat of a rarity: to my knowledge, this is the only Basie album on which Ed Shaughnessy is the drummer. Even more important, the collection was recorded during the relatively brief period during which Roy Eldridge was with the band, and there are four intensely expressive solos by the trumpeter. There are also spirited improvisations by Eddie "Lockjaw" Davis, Al Grey, and Al Aarons. The quality of sound is marvelously clear, but a bit too much echo was added for my taste.

N. H.

5  * ART BLAKEY: *Indestructible!* Lee Morgan (trumpet), Curtis Fuller (trombone), Wayne Shorter (tenor saxophone), Cedar Walton (piano), Reginald Workman (bass), Art Blakey (drums). *The Egyptian; Sortie; Calling Miss Khadija; When Love is New; Mr. Finn.* BLUE NOTE ST 84193 $5.79, 4193* $4.79.

Performance: Better than usual
Recording: Good
Stereo Quality: Okay

It is difficult to tell exactly when any Art Blakey record was made unless that information appears on the record jacket. He is given to switching back and forth among record companies, and his musicians take, leave, and resume the field with the bewildering speed of professional football players. This recording is of a sextet (the Jazz Messengers are usually five in number), and the best clue to when the group was active is that annotator Leonard Feather employs for descriptive purposes a *Down Beat* assessment by Don De Michael which he says is four years old.

At any rate, with the exception of the heaviness added by the trombone, the mix is pretty much as usual: modes grafted onto hard bop, and solos which can range from poor to excellent, but which are mostly just functional. The high point here is Blakey's own solo on "Miss Khadija," and the performance of Cedar Walton's "When Love is..."
New, which indicates that this group, unlike most editions of the Messengers, was learning how to play ballads. J. G.

Doc Evans, Paul Barbarin, Others: Jazz: Bayou to Bay/Out of the Blues, Vol. 2. Doc Evans (cornet), Paul Barbarin (drums), John "Knocky" Parker (piano), Edmond Souchon (guitar, vocals), Raymond Burke (clarinet), Munn Ware (tenor saxophone), Shermund Mangiapane (bass, vocals), Julie Wilson (vocals). Yellow Dog Blues; If I Could Be with You One Hour Tonight; Basin Street Blues; Bourbon Street Parade; and eight others. HHP MHLP 1028 $4.00 (available from H and H Productions, 114 E. Euclid Avenue, Tampa, Florida 33602).

Performance: Amiable and devoted
Recording: Good

Recorded at the Curtis Hixon Convention Center in Tampa, this disc is proof that Dixieland is not dead yet. It has lost its attraction for creative younger players, but there are still jazz elders who love the language and have not exhausted their ability to keep it viable. Of the players in this recording, the most accomplished and continually absorbing is clarinetist Raymond Burke. Not far behind is Doc Evans, whose style is built in large part on that of Bix Beiderbecke. Paul Barbarin, a veteran New Orleans drummer, is a third stalwart. The others are competent and committed, and the result is an honest, pleasant session: no gimmicks, just the pungent polyphony of a Dixieland front line and soloists who don't have to worry about not being able to go home again stylistically simply because they never left. The vocals by Souchon and Mangiapane are homey and gruff, and Miss Wilson's are sensual though somewhat overdone. The vocals by Souchon and Mangiapane are homey and gruff, and Miss Wilson's are sentimental though somewhat over-dramatic in places. Proceeds from the record go to the Hillsborough County (Fla.) Association for Mental Health. N. H.

Dizzy Gillespie, Roy Eldridge: Soul Mates. Dizzy Gillespie, Roy Eldridge (trumpets); Flip Phillips, Ben Webster (tenor saxophones); Bill Harris (trombone); Oscar Peterson (piano); Herb Ellis (guitar); Ray Brown (bass); Louie Bellson (drums). The Challenges; I'm Through with Love; If I Had You; I Found a New Baby; Limehouse Blues. VSP/Verve VSIP 28 $2.49, VSIP 26a $2.49.

Performance: Varies
Recording: Okay
Stereo: Okay

VSP is the new Verve bargain line. Since it appears to be made up of cutouts from various enterprises of jazz entrepreneur Norman Granz, it bears watching. There's an enormous catalog involved, some of it splendid.

First, a word about personnel: Phillips, Webster and Harris appear only on The Challenges, preserved from one of those jazz at the Philharmonic concerts where the hornmen come out like weary, aged wrestlers and pretend to want to vanquish each other for a while. It is especially depressing to hear the wonderful Webster honking for the gallery. Love and You are ballad features for, respectively, Dix and Roy, and each man is at the top of his form. I find Gillespie superb, but someone who prefers Eldridge might think the opposite.

The second side features both trumpeters, which might be of particular interest to students of stylistic declension. Baby, with its Sing Sing Sing opening, supposedly has Eldridge first; the first listener to prove it isn't Dizzy is welcome to my copy of the record. In sum, there is a small amount of superb music and a lot of wasted space on these 1954 sessions. J. G.

Bobby Hutcherson: Compounds. Bobby Hutcherson (vibes, marimba), Freddie Hubbard (trumpet), James Spaulding (alto saxophone, flute), Herbie Hancock (piano), Ron Carter (bass), Joe Chambers (drums). Components; Tranquility; Movement; Juba Dance; and four others. Blue Note ST 8413 $5.79, 4213 $4.79.

Performance: Committed
Recording: Good
Stereo Quality: Good

Bobby Hutcherson, not too rapidly but quite surely, has become the leading vibraphonist among the younger players connected with the "new thing." His latest album is divided neatly into two parts: his own compositions on one side, those of drummer Joe Chambers on the other. Chambers, who has studied with Hall Overton, and whose older brother is a composer, writes pieces more complex and more advanced than Hutcherson. Most notable are the thickly textured Movements, and Air, on which Hutcherson gets eerie electronic sounds from his instrument. The most striking soloist is the ever-maturing Freddie Hubbard, whose clear, brilliant open-horn work seems to fit any style. The rhythm section is cohesive and attentive, helping to make this one of the best expositions of current happenings. J. G.

Django Reinhardt: Unique and exotic jazz guitar

Recording of Special Merit

Django Reinhardt: The Legendary Django. Django Reinhardt (guitar); various small combos including Stephane Grappelly (violin), and Hubert Rostaing (clarinet). Sweet Georgia Brown; Napoléon; Echoes of Spain; Rythme Fantais; and ten others. Odeon CLP 1817 $4.79.

Performance: Nonpareil
Recording: Good
Containing performance recorded between 1937 and 1940, these tracks again reveal how unique and exotic was the jazz of Django Reinhardt. A gypsy, he played with a strong, singing sound and a conception that could be rhapsodically romantic (My Serenade) or introspective and impressionistic (Echoes of Spain). His harmonies and his sense of time could not be traced firmly to any of the major jazz influences, and yet he was of jazz. He had the jazzman's spontaneity and flow of beat, though the way it flowed was sui generis. And while he played his own kind of gypsy-textured blues, they were not out of context in a jazz milieu. This is a characteristic collection, and while the other musicians are competent, it will last only because of Django.

I first heard trombonist Roswell Rudd a few years ago as a member of the Steve Lacy Quartet that played only Thelonious Monk songs, and I thought him a remarkable musician. His style had the speech-like quality of the newest music, but it was as old as Tricky Sam Nanton too, and had a quality rare in the new music—humor. This is Rudd's first album as a leader, and I find him just as good as ever, but the group loses me after the title track, an homage to Bill Harris.

Much of the discussion in Nat Hentoff's liner notes deals with the group sound of the new jazz, a kind of free-form polyphony, and this sound is what defeats me here, as it does in the most recent Coltrane recordings. From the melange I can pick out a superb bass solo in Yankee, an excellent rhythm section in Respect, and a strong Ornette Coleman influence in Giuseppe Logan's Satan's Dance, but the rest leaves me more confused than satisfied. This may be my problem, though, and Rudd is a wonderful musician who should be heard under any circumstances whatever.

I have written unkind things about blues singer Joe Williams in these pages more times than I care to think about, and now here is this new Joe Williams record with a new orchestra on a new label, and I love it! The orchestra is the one Thad Jones and Mel Lewis have been bringing into New York's Village Vanguard on Monday nights, and the group reveals its orientation to be Basie/Mulligan/McFarland/New York studio. The label is the all-transistorized Solid State, and the sound on this recording is bright and clean.

But mostly there is Williams. It may be the excellence of the band, or the neat precision of the Manny Albam arrangements, but he sounds better to me than he ever did with Basie. He has a great deep voice, somewhat like actor Lee Marvin's, and like Marvin, he is limited by his superb natural equipment—the subtleties are not for him. A good example of what I mean is the contrast between his Nobody Knows the Way I Feel This Morning and Dinah Washington's version. But there is a new melodic virtuosity in Williams, close to that of Ella Fitzgerald, and although he still can't get emotion out of a song the way a Ray Charles can, I find his new blues-based program delightful.

(Continued on next page)
THEATER • FILMS

5. M THE APPLE TREE (Jerry Bock-Sheldon Harnick). Original-cast recording. Barbara Harris, Alan Alda, Larry Bryden (vocals); orchestra, Elliot Lawrence cond. COLUMBIA KOS 3020 $6.79, KOL 6620 $5.79.

Performance: Soucy
Recording: Superb
Stereo Quality: Superb

For some peculiar reason, perhaps understood best by the kind of people who follow crowds to fires and earthquakes and public hangings, The Apple Tree is a big financial success on Broadway. It received severe blows from the critics, but the crowds keep coming. Perhaps it has something to do with the current vogue for Mike Nichols' gimmicky way of making mundane comedy look like more than it really is. Nichols is the director of Apple Tree, and his name on the marquee means almost as much as a big-name star's.

The real reason, I suspect, is not Mike Nichols at all, but Barbara Harris, a marvelous rubber-faced schmoo who is a cross between Sarah Bernhardt and Little Lulu. Miss Harris is, in short, a genius who can do no wrong. She is also one of the funniest creatures who ever wiggled across the stage in an inflatable bra, and The Apple Tree is almost worth the high price of an orchestra seat just to watch her come out on top of such inferior material.

The original-cast disc Columbia has just released from the show is almost as dreary as the show itself, but not quite. On the record, the listener is spared an amalgam of shiftless, aimless, clumsy book ideas strung together with an occasional gag about the conquest of man by woman from Adam and Eve down through the rock era. Therefore, the score sounds better on the record than it does on stage. The vast emulsion of styles and themes that make up the evening of three one-act stories about the Garden of Eden, the Princess and the Tiger, and the movie star Passionella results in a hodgepodge of numbers that are self-conscious and of no particular distinction.

Still, the score is pleasant when taken out of context. It is a show with no hit songs, indeed without any song I can imagine anyone wanting to hear twice (although Beautiful World from the Adam and Eve segment has been nicely recorded by Peggy Lee and seems bound for some kind of future). The only moments on the album when things get heated up beyond the point of mere percolation occur in the third section, when Miss Harris lights up the record, as she lights up the stage, with a symphony of comic invention about a chimney sweep who daydreams about becoming a sexy movie star. She sounds like a parody of Shirley Temple as she does a tap dance, moos like a cow on the word "moo00ovie," and barks like a dog on the word "starrrruff!" Much of the comedy is lost without the visual fireworks of watching her grow an Olympian bosom and a cotton candy wig, but even a casual meeting with Miss Harris is better than not meeting her at all.

R. R.

RECORDING OF SPECIAL MERIT


Performance: Stunning
Recording: Superb
Stereo Quality: Superb

This original-cast album of Cabaret is a breath-taking event and a vital addition to every basic library of music from the theater. The sound balance is marvelously distinct, and the stereo separation is so clear that things really seem to be happening the way they do on stage.

Cabaret is one of the few show albums that do not require a synopsis. The score is that good. Based on Christopher Isherwood's stories about Sally Bowles, a sort of Holly Golightly character who later took dramatic form in I Am a Camera, the show has been expanded into a spectacular explosion of bawdy, brassy entertainment similar to what you might have found in a Berlin night spot in the early 1930's, when Hitler and the Nazis were coming to power. It was an era of dancing gorillas, female impersonators, jazz bands, and lipstick-slashed frieulins in monkey fur. Brecht was writing sour little Communistic diatribes, and Kurt Weill and Lotte Lenya were turning the yeast and desperation into brilliant musical indictments of the time.

All of this is captured, in one of the most brilliant scores in recent seasons, by the talented young team of Fred Ebb and John Kander, who have previously supplied the scores for various revues and for Liza Minnelli's Broadway debut in Flora the Red Menace. Woven into the smokey violence of the cabaret numbers, so subtly that you are
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The action is kept moving by a narration that is a model of brevity and clarity, written by the author of the show's book. Mr. Bernardi, who was playing ethnic types out of Sholem Aleichem at little theaters in Hollywood long years before Tevye the Dairyman became the darling of Broadway, is so entirely at home as Tevye that it seems only fair he should have a record of his own in the part he took over so successfully from Zero Mostel. Here he performs, with his own kind of charm and a positively evangelistic fervor, not only Tevye's numbers but everybody else's—practically the entire score, in fact, including two dubious items sensibly omitted from the current Broadway production.

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5. THE BLUES PROJECT: Projections. Al Kooper (piano, electric piano, electric organ, turban, vocals), Andy Kuhlberg (bass, flute), Roy Blumenfeld (drums), Danny Kalb (lead guitar, vocals), Steve Katz (rhythm guitar, harmonica, vocals). I Can't Keep from Crying; You Can't Catch Me; 'rake Me, Shake Me; Fly Away; and five others. VERVE/FOLKWAYS FTS 3008 $5.79, FT 3008* $4.79.

Performance: Stronger instrumentally
Recording: Good
Stereo Quality: Very good

The five members of the Blues Project are creating a distinctive and sometimes almost mesmeric style, but much more so as instrumentalists than as vocalists. Almost invariably, the most effective mood-setting in this album occurs during instrumental passages (as in the dark, brooding Two Trains Running and the delightfully airy yet wistful instrumental Flute Thing). One problem with the vocal sections is that no one in the Blues Project yet has sufficient vocal range and strength of color to sound authoritative as a singer. Another flaw is that, in the blues, the group has not found a way to transmute the Negro blues language to fit its identities. Taken as a whole, however, the Blues Project is worth your time. This is one group that will continue, I expect, to surprise both us and themselves.

N. H.

6. MAHALIA JACKSON: Garden of Prayer. Mahalia Jackson (vocals), unidentified accompaniment. My Desire; I'm Glad About It; City Called Heaven; Nobody but Jesus; I Love the Lord; and six others. COLUMBIA CS 9346 $4.79, CL 2546* $3.79.

Performance: Varies
Recording: Good
Stereo Quality: Good

In the notes to the Juan Serrano album, Evaristo González writes: "Racial makeup and personality account for differences in guitar playing. For instance, the gypsy form of playing is moody and relies on the freedom of sudden inspiration; it is intricate and exciting. The player's attention is concentrated mainly on the bass chords, searching for the sound that gives depth to his playing. Non-gypsy players use the highly pitched chords, the sound produced always in accord with the theme and less open to creative surprise. This does not mean, however, that their playing is less effective; it is simply different." Manitas de Plata is a gypsy; Juan Serrano is not. When I add that the Serrano album consists of twelve tracks, featuring different singers, and that there are only half as many tracks on the Manitas album, though the two are comparable in playing time, the reader should have no difficulty determining which kind of flamenco he prefers.

For myself, Manitas' technical brilliance and fierce daring are far more exciting than the fairly placid work of Serrano.

J. G.
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MARCH 1967
The first release of Enoch Light’s new label, Project 3, is made up of the four albums listed below. Mr. Light made sales history with Command, the company he previously directed and, in the course of things, raised some rather sharp controversy about his preferred recording techniques. The controversy, I should point out, was always within the recording and critical fraternities; the albums’ success with the public was unquestioned. Command albums continue to sell astonishingly well, even since Mr. Light severed his relations with the company, and Project 3, on the basis of this sampling, appears to have an equally happy commercial future. It is also likely to raise some controversy once again.

**Project 3**

**A new record label makes its debut**

By Peter Reilly

What many might find disturbing in these new recordings, and what has previously been disturbing to some in all recordings produced by Light, is that the sound that comes off the record is not intended to be a replica of the sound one would hear in a concert hall or auditorium. The sound that comes off the record is not intended to be a replica of the sound one would hear in a concert hall or auditorium. Light’s recording approach is different from that of the major record companies. The controversy, I should point out, was always within the recording and critical fraternities; the albums’ success with the public was unquestioned. Command albums continue to sell astonishingly well, even since Mr. Light severed his relations with the company, and Project 3, on the basis of this sampling, appears to have an equally happy commercial future. It is also likely to raise some controversy once again.

No amount of recording technique will salvage “The Kissin’ Cousins Sing,” however. Proclaimed as “The New Group... The New Beat... LIKE NOW... LIKE BIG,” they work over a collection of dusty standards that make them sound about as much now as The Ice Capades of 1943.

I hope that I have not made my admiration for Light’s work seem grudging, because I think he has contributed a great deal to recording. But as everyone has his own tastes in audio equipment and his own reasons for withholding complete approval from this or that piece of equipment, I find one major lack in these first products of Project 3. That missing ingredient is sensitive a-to-y direction. Light has proved that there is a vast number of people who want to buy his records. But I feel that they are responding to the extraordinary sound and not to the musical content. A willingness to experiment musically—as in the Renaissance record here and the series of recordings that Light made for Command with the Pittsburgh Symphony under William Steinberg—is as vital to the image of a new record company as all its technological know-how. More adventurous repertoire is necessary, both popular as well as classical, if Project 3 is to have not merely a successful sound but one that is musically significant.

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**PROJECT 3 PR 5000 SD $5.79, PR 5000 SD $5.79.**

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**THE KISSIN’ COUSINS:** The “Kissin’ Cousins” Sing, The “Kissin’ Cousins” (vocals); orchestra, Lew Davies cond. and arr. *Hold Me; A Tower of Strength; It Was a Very Good Year; It Had its Faith; and eight others. Project 3 PR 5001 SD $5.79, Project 3 M* $4.79.**
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SPOKEN WORD

CHORUS


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Performance: Virtuoso
Recording: Excellent
Stereo Quality Vivid

 Been feeling unpatriotic lately? Let Senator Everett McKinley Dirksen insinuate the velvet iron of his voice into your ear, by jingo, and straighten you out. The Senator, in an obvious attempt to get even with those members of the Screen Actors Guild and the American Federation of TV and Radio Artists who seem to be taking over his field of endeavor, offers virtuoso performances (to suitably inspirational music) of such sacred texts as the Mayflower Compact, Lincoln's Gettysburg Address, the words of The Star-Spangled Banner, the pledge of allegiance to the flag, and Emma Lazarus' poem "The New Colossus," which is engraved on the base of the Statue of Liberty. Senator Dirksen does not exactly enjoin the listener either to support our war effort in Vietnam or to consider himself subversive; he simply reminds the potential pacifist, in the passage here called "Gallant Men" (it has been released separately on a 45-rpm single and is reportedly making a mint), that "down through the years there have been men who have died that others might be free.

Leaving aside the formidable implications of this project for the future of government, not to mention the entertainment industry, and the unspeakable banality of the musical score and sound effects (such as those simulating the bombs bursting in air at Fort McHenry). The Senator's own performance is surprisingly uneven. When he is pedagogical and talks to the listener as though to a slow-witted drop-out (or upstart interviewer)—in his reading of the Gettysburg speech, for example—he is pretty insufferable. On the other hand, he reads Miss Lazarus' overquoted lines about the "huddled masses yearning to breathe free" most persuasively, and even manages to make the whole poem sound as it must have before it was done to death by elocutionists. It only remains to be seen what the political opposition will come up with by way of retaliation. Can Wayne Morse sing?

P. K.


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Performance: Virtuoso
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CIRCLE NO. 32 ON READER SERVICE CARD
handed parody and offers a free-wheeling, if modernized, dialect performance of Sam, You Made the Pants Too Long, he is a little more bearable, but not much. The songs are spaced out with entirely disposable dollops of cozy homespun philosophy.

P. K.

David Wagoner has a fine contemporary mind, a nimble wit, a resilient style, a disarming ability to weave the vernacular and the familiar into polished, classic patterns, and an agreeable platform delivery. He has published in all the right places: Poetry, Yale Review, Sewanee Review, New World Writing, Bottega Oscena, Harper's, Saturday Review, Hudson Review, and The New Yorker. His work has appeared in anthologies. He has held a Guggenheim fellowship and a Ford Foundation grant. He teaches at the University of Washington. In short, the very model of a modern minor poet! To listen to Mr. Wagoner read the jewelled measures of his verse in his level voice is an altogether pleasant experience. Yet, in his adroitness, elasticity, and ease in handling intellectual intricacies, it is possible to sense an unwillingness to emerge from the consoling shelter of good form and shout or cry or curse when there is occasion for it.

We are confronted at last with a voice that is too at home with irony, too content to settle for fashionable sideline comment. Perhaps one day Mr. Wagoner will be willing to step out from behind his stylish protective lectern and come out fighting.

P. K.


There are profoundly moving passages in this tribute to the late President of Israel—as when a concentration-camp survivor recalls the humiliation and slaughter of her innocent children, or when Weizmann himself is heard pleading with the UN to speed the partition of Palestine and not prolong our agony—but for the most part, the noble well-meaning effort suffers typically from overproduction and an unrelieved solemnity. The encomiums from friends and colleagues, as well as those recorded by world leaders including Robert Kennedy, Adlai Stevenson, Harry S Truman, and President Johnson, are piétric and humorless. The ordinarily quite eloquent Abba Eban (Israel's Minister for Foreign Affairs) sounds simply unctuous in an undistinguished narration that swamps the little insights into a great man's humanity by those who remembered him in a tide of funereal institutional prose, snippets from old news broadcasts and relentless propaganda, and winds up, predictably, with the Israeli national anthem Hatikvah.

P. K.

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CIRCLE NO. 4 ON READER SERVICE CARD
This performance of Bartók's moody one-act opera is quite extraordinary. In the first place it sounds marvelously idiomatic (it is sung in Hungarian). Second, the solo contributions are so sensitively conceived that the listener cannot help being totally absorbed in the drama. Last, the orchestral playing and conducting are on the most superior level, with recording that does full justice to the score. The tape processing is extremely well handled, and there is less tape hiss evident than on some previous 3¾ ips reels. As usual, no libretto is enclosed, but the full-sized disc booklet can be obtained at no charge. (When is Angel going to adopt the separate tape-box librettos?)

\[\text{Klemperer's treatment here, and again the sound is excellent.}\]

\[\text{The key of G Minor for Mozart, like that of C Minor for Beethoven, set the musical stage for terse and tense drama, and it is in the highly dramatic pages of the G Minor Piano Quartet that Serkin, Alexander Schneider (violin); Michael Tree (viola); David Soyer (cello). VANGUARD VTC 1714 $7.95.}\]

\[\text{While I would have preferred these performances at the 7½ ips speed, even at the extra $1 in cost. Angel's 3¾ ips sound as represented on the present tape shows great improvement over that company's initial releases at this speed, especially at the high-frequency end of the aural spectrum. D. H.}\]
Efrem Kurtz secures about as effective a performance of these ballet excerpts as one may hear on discs. If I am somewhat less happy about the sound, it is only because it compares unfavorably with the disc version, which boasts a very wide dynamic range. Although stereo separation is good, spaciousness is lacking in the tape sound; there is some hiss, and a slight flutter at the start of the first sequence. On the other hand, smoothness of the high end is minimally better than on most of the 3/4 tapes I have heard, and the overall sound, without reference to the disc version, would certainly be judged to be good.

I. K.

® PURCELL: Music for the Theatre. The Fairy Queen, The Indian Queen, and King Arthur (instrumental and vocal excerpts); Bonduca: Overture and Air; The Old Bachelor: Boureé; Abdelazer: Rondeau; Pavane: Sweeter Than Roses; The Married Beau: Jig; Distressed Innocence: Air; Amphytrion: Sarabande; The Double Dealer: Air. Joan Carlyle (soprano); Bath Festival Orchestra, Yehudi Menuhin cond. A Purcell Anthology, Four-Part Fantasies: No. 4, in G Minor; No. 7, in C Minor; No. 8, in D Minor; No. 11, in G Major; Five-Part Fantasia, in F Major (upon one note); Pavane in G Minor; Trio Sonatas: Set I—No. 6, in C Major; No. 8, in G Major; Set II—No. 6, in G Minor. Yehudi Meunin, Alberto Lyssy, Robert Masters (violins); Cecil Aronowitz, Walter Gerhard (violas); Derek Simpson (cello); Ambrose Gauntlett (viola da gamba); Roy Jesson (chamber organ, harpsichord); Yehudi Menuhin, director. ANGEL YZS 5685 $11.98.

Performance: Zestful and meticulous
Recording: Good
Stereo Quality: Good
Speed and Playing Time: 3 3/4 ips; 103' 13"

Except for London's Dido and Aeneas and Music Guild's The Indian Queen, this jam-packed Angel tape contains all the significant Purcell repertoir extant in four-track tape format. It comprises less than thirty-three theater-music bits and pieces, including such famous items as "I attempt from love's sickness to fly" from The Indian Queen and the Abdelazer Rondeau that served Benjamin Britten as the basis for his Young Person's Guide to the Orchestra. The performances are zestful and stylish, and soprano Joan Carlyle is heard to best effect in the celebrated "Fairest Isle" aria from King Arthur. Nevertheless, the effect of the theater-music sequence as a whole is rather scrappy, most of the excerpts being exceedingly short and following no genuine dramatic sequence. It is in the collection of fantasies and trio sonatas, together with the G Minor Pavan, that we have the finest musical substance and even more telling performances. Polyphonic in texture and sonorous in tone, the Purcell fantasies reveal both the expressive depth and the formal craft that the short-lived Restoration master had at his command. The great G Minor Chaconne (Trio Sonata No. 6 from the second set) is the noblest and most moving of all the instrumental music here. The other two trio sonatas, more Italianate in style, provide a lively and welcome contrast to the fantasies.

Menuhin and his confreres perform these works with singular care and thoughtful.

(Continued on page 134)
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RECORDING OF SPECIAL MERIT

D. H.

PETULA CLARK: I Couldn't Live Without Your Love. Petula Clark (vocals); orchestra, Tony Hatch and Johnny Harris cond. Bang Bang; Homeward Bound; Two Rivers; Elusive Butterfly; Rain; Strangers in the Night; and six others. WARNER BROS. WSTX 1645 $5.95.

Performance: Professional
Recording: Good
Stereo Quality: Good
Speed and Playing Time: 3½ ips; 35' 22"

Pet Clark does not fit today's style in British girl pop singers, most of whom are gushing, talentless, and utterly unappetizing. She combines a girlish vulnerability with a sophisticated chaste and genuine. She is much of a singer, but she does generate a certain natural spark. She looks like she brushes her teeth, her songs a much-needed change of pace from the screwball slush her rivals peddle, and sometimes—unexpectedly—out comes a Merman poit or a bit of Piaf passion.

This is a tape with a basic beat, better for dancing than listening. But there are some fine moments: Bang Bang is a riotous parody of pop music of the Bootsy variety, the ghastly Strangers in the Night and Paul Simon's overexposed Homeward Bound sound better than usual, and the soul-searching job she does on her own autobiographical composition Two Rivers is sleek and polished and

CIRCLE NO. 61 ON READER SERVICE CARD

Roy Ezel seems to me to be a very good trumpet player, but it takes a lot of searching to find it out on this tape. A collection of Spanish-flavored music might seem on first thought to be an excellent opportunity for any trumpeter to show his stuff, and on the rare occasions when the arranger, Gert Wilden, frees Ezel from the humming chorus, thumping organ, and twanging piano (which often seem to effectively) turn out to be quite impressive. On Audacia, for instance, Ezel floats long solo sections with a clean bright line. But too often, as in Ay, Ay, Ay, electronics take over, and it's difficult to know whether or not Ezel is playing one trumpet or two trumpets, or is indeed the whole brass section. The Germans seem particularly adept at this sort of thing. I still remember a thousand Caterina Valentes singing Malagueña. As a matter of fact, the oom-pah boisterousness of this tape is much closer to Munich where it was made, than to the Madrid it is meant to evoke.

P. R.

6 TENNESSEE ERNIE FORD: My Favorite Things. Tennessee Ernie Ford (vocals); orchestra, Jack Fascinato cond. Dear Heart; King of the Road; Love, Hello, Dolly!; I Left My Heart in San Francisco; and six others. CAPITOL YT 2444 $5.98.

This tape might well have been called "Tennessee Ernie Sings Other Folks' Hits." Of Ern generally sticks to hymns and spirituality, and has a Christmas album or two, but he usually stays away from the pop charts, except when he has gotten on them all by force. He usually stays away from the pop charts, but he has recorded what comes close to being a collection of the top hits of 1966. This tape could as well have been called "Tennessee Ernie Sings Other Folks' Hits." This tape might as well have been called "Tennessee Ernie Sings Other Folks' Hits." The longest selection on this tape runs three minutes and fifteen seconds. Most numbers last less than three minutes and several are under two minutes. And, as you will notice from the above listing, the complete tape runs well short of half an hour. Therein, I think, lies one of the secrets of the success of this group. What they do, which is an exceedingly sleek mixture of jazz, bossa nova, and Beatle-ism, is a very heady potation, and quite sensibly they offer small portions of it. I think that's smart: everybody loves musical carbohydrates, but quite often the vendor of these carbohydrates doesn't seem to realize that a little goes a long way.

This is an excellent group, helped enormously by Mendes' really inspired arrangements and the skill of Herb Alpert, who produced this tape with his usual super-professionalism.

P. R.

7 WES MONTGOMERY: Tequila. Wes Montgomery (guitar), Ray Barretto (conga), Ron Carter (bass), Grady Tate (drums), George Devens (vibes); string orchestra. Tequila; The Big Hurt; Bumpin' on Sunset; The Thumb; Midnight Mood; and five others. A & M AMX 88 116 $6.95.

Performance: Sleek  Recording: Good  Stereo Quality: Very good  Speed and Playing Time: 3 3/4 ips; 25'49".

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A COMPLETE 20 WATT HI-FI STEREO SOUND SYSTEM Featuring The

TANDERG MODEL 12 SOLID STATE TAPE RECORDER

DEFA ELECTRONICS CORP.

BROADWAY, N.Y., N.Y. 10024

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STEREO SYSTEMS - COMPONENTS

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Dealers and manufacturers welcomed.

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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.
MARCH 1967


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TV TUNERS Rebuilt and aligned per manufacturer specifications only $9.50. Any make UHF or VHF. We ship COD Ninety day written guarantee. Ship complete with tubes or write for free mailing kit and dealer brochure. JW Electronics, Box 51F, Bloomington, Ind.

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MILITARY SUPPLIES EQUIPMENT NEEDED: ARC-34, ARC-33, ARC-44,ARC 52, ARC 54, ARC-55, ARC-66, ARC-72, ARC-84, ALSO ARN-14C, ARN-54, ARN-59, ARL-59, 5IX-1, S1X-3, S1Y-3, S1R-3, 1L7-4, 1L7-8, 1BS-4, BENDIX-T2-1, RA-21, APR-14, PRC-25, RT-66 THRU RT-70/GRC, APN-22, APN-117, APN-133. TEST SETS WANTED WITH ARM, UPM, URM, USM, SG PREFIXES. TOP CASH DOLLAR PAID IMMEDIATELY. SLEP ELECTRONICS CO., DRAWER 178HF, ELLENTON, FLORIDA 33532, PHONE (813) 722-1843.

OLD MOVIE SOUNDTRACKS. Send lists. Dwight Hartsell, Oakboro, N.C. 28129.

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AUTHORS’ SERVICES

AUTHORS! Learn how to have your book published, promoted, distributed. Free booklet "2D," Vantage, 120 West 31 St., New York 1.


SONGWRITERS WANTED! Send song material for recording consideration. Tin Pan Alley, 1650 Broadway, New York 10036.

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HANDPAINTED PORTRAIT, LANDSCAPE: Canvas $12.95 (9"x11"); Silk $5.95 (8"x10"). Send photograph, or write colors. TOYO OIL PORTRAITS, Seijo, P.O. Box 2, Tokyo, Japan.

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HYPNOTISM

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MUSIC


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I MADE $40,000.00 Year by mail order! Helped others make money! Send with $10.00—Free Mail Order, Torry, Box 318-N, Ypsilanti, Michigan 48197.


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TRAINING INSTRUCTOR (ELECTRONICS) Immediate openings. Need at least 3 years electronic or electrical experience and pass electronics test. As civilian instructor of military electronics technicians. Flexible hours, liberal vacation, other civil service status, equal employment opportunity, good pay, and other liberal benefits. Navy Employment Center (CIRD), Building 3400, Great Lakes, Illinois 60088. Phone (312) 688-2222.

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As you Scan these Columns, more than 163,000 monthly buyers of Hi-FI/STEREO RECORDS are doing the same. These readers share with each other the satisfaction derived from active involvement in the enjoyment of recorded music and the stereoophile. If you are one of these readers, or if you are a new reader, why not add your name to the Classified Section of Stereo Review. You can add your name to the Classified Section of Stereo Review at a cost of $15.00 per year. This money goes to the expenses of the Stereo Review, and the Stereo Review is supported entirely by the classified advertising.

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HI FI/STereo REVIEW ADVERTISERS' INDEX

### HI FI/STereo REVIEW PRODUCT INDEX

As an additional reader service, we list below, by classifications, the products advertised in this issue. If there is a specific product you are shopping for, look for its listing and turn to the pages indicated for the advertisements of manufacturers supplying that equipment.

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For cleaner grooves.

For cleaner tracing.

New Pickering V-15/3 cartridge with Dynamic Coupling for minimum tracing distortion and maximum tracking ability, plus Dustamatic™ feature for dust-free grooves.

As stereo cartridges approach perfection, dust in the grooves becomes intolerable. The Pickering V-15/3 Micro-Magnetic™ cartridge has a new moving system that reduces tracing distortion close to the theoretical minimum, thanks to Dynamic Coupling of the stylus to the groove. But what good is perfect contact between the stylus tip and those high-velocity turns if dust particles get in the way?

That is why the Dustamatic brush assembly is an essential part of Pickering's total performance cartridge. It cleans the groove automatically before the stylus gets there.

The new moving system also provides a further refinement of Pickering's famous natural sound by extending peak-free response well beyond the audible range, and the patented V-Guard Floating Stylus continues to assure the ultimate in record protection.

There are four "application engineered" Pickering V-15/3 Dustamatic models with Dynamic Coupling, to match every possible installation from conventional record changers to ultrasophisticated low-mass transcription arms. Prices from $29.95 to $44.95.

For free literature complete with all details, write to Pickering & Co., Plainview, L. I., New York.
How does this 7 FOOT MONSTER help you to better tape recordings?

The giant microphone shown here is the biggest microphone in captivity! The Model 643 is also the most directional microphone sold today. It helped E-V win the first Academy Award for microphone design in 22 years.

But beyond this, the 643 has been one of our most effective field research tools, offering a far-reaching insight into the nature of directional microphones, and their applications.

An obvious result of 643 research is our unique Model 644. Same E-V Cardiline™ principle*, but only 16 inches long. It reaches up to twice as far as any other general purpose unidirectional microphone to give you better long distance pickups than were dreamed possible a few years ago.

And this same basic research stimulated the development of our new Model 676 cardioid microphone. It uses the Continuously Variable-D® cardioid principle (a creative development from our exclusive Variable-D patent*) to provide smoother cardioid action—in a smaller unit—than any other comparable model.

But let's not ignore the most popular cardioid microphone of all, the Model 664. Here's where the Variable-D principle got its start. And since the introduction of our seven foot laboratory, the 664 has been further refined to offer better value and performance than ever before.

From such startling microphones as the 643, come continuing basic improvements—and the tools you need to significantly improve your tape recordings. Only E-V provides this kind of design leadership. With an E-V microphone you have a big head start toward better sound. After all, we're at least seven feet ahead of everybody else!

Model 643, $145.00. Normal trade discounts apply on list prices shown.


ELECTRO-VOICE, INC.
Dept. 372F, 616 Cecil St., Buchanan, Michigan 49107

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