

# TAPE RECORDING



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Recording the Hi

May  
1958

35c

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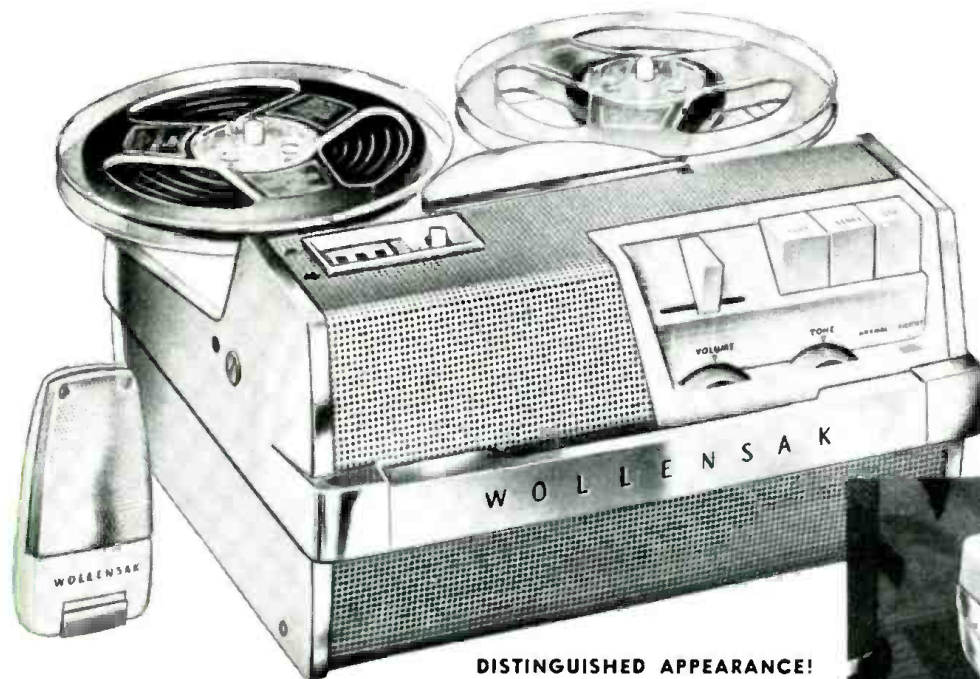




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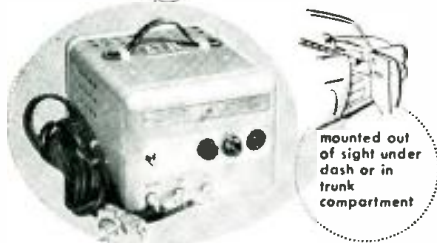


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# HI-FI

# TAPE RECORDING

VOL. 5 NO. 6

MAY 1958

MARK MOONEY, JR.  
Editor and Publisher

JOHN L. ALLEN  
Circulation Manager

JEAN COVER  
Assistant Editor

ROBERT W. LAPHAM  
Art Director

JAMES H. MILLS, SR.  
Technical Consultant

ANTHONY J. MORIN, JR.  
National Advertising Manager  
274 Madison Ave., New York 16, N. Y.

GEORGIE SIGSBEE  
Music Editor

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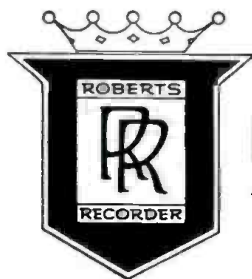
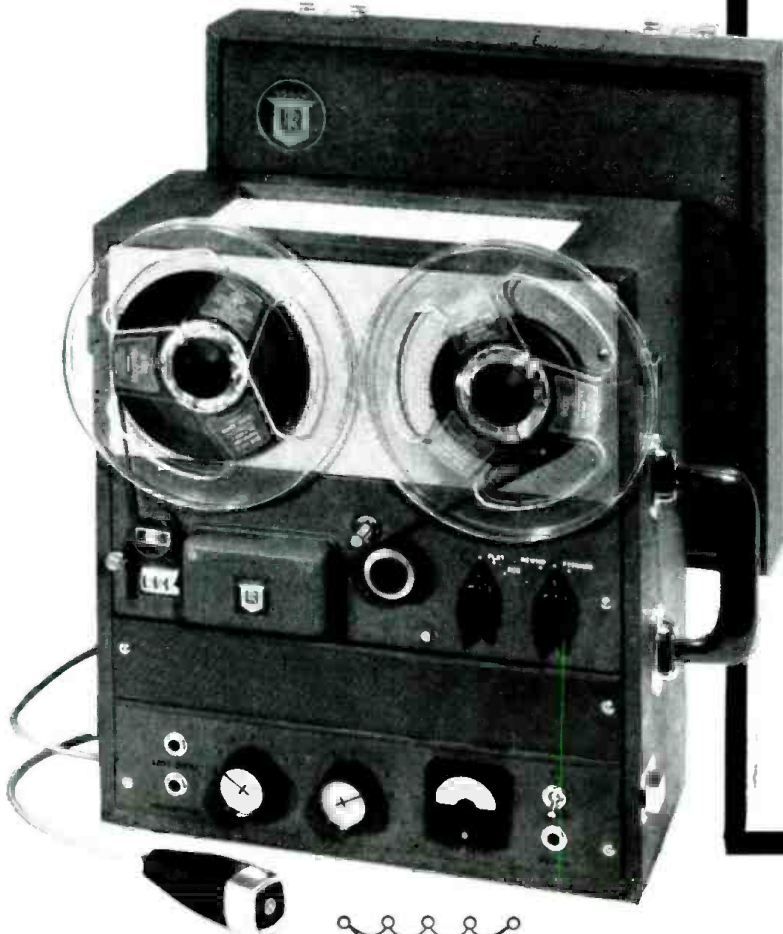
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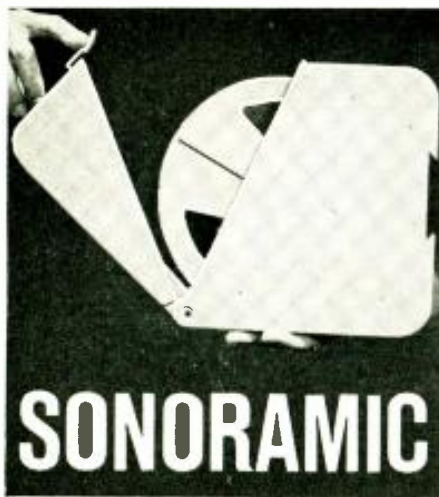
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Model HM-80 Price \$21.75



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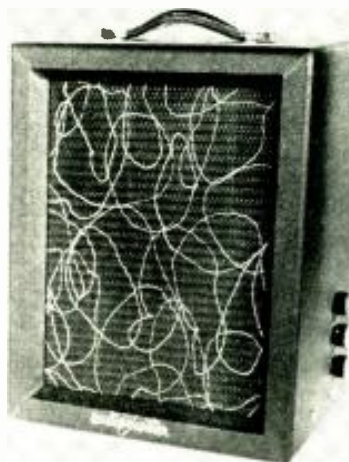
**NEW PRODUCTS**

**771 STEREOTONE**



Bell & Howell, 7100 McCormick Road, Chicago 45, Illinois, has introduced the 771 Stereotone portable recorder with companion speaker. It plays both stereo and monaural, and records monaurally. It has twin 5¼ inch speakers in the main recording unit and an 8 inch speaker in a separate auxiliary unit; Stop, Forward, Rewind, Play and Record pushbuttons; two input jacks and one output jack; and it features a handsome cloud gray and charcoal case. The recorder can be operated at 3¾ or 7½ inches per second, and location of any part of a tape is possible by a simplified program indicator guide at the top of the machine. The companion speaker is equipped with a bull's-eye pilot light and coaxial connecting cable. The 771 recorder retails for \$199.95, with the companion speaker selling for \$99.95. Contact the manufacturer for additional details.

**NEW SOUND SYSTEM**



The Audio-Master Corp., 17 East 45th St., New York City, is marketing a new sound system which contains a 5-watt, push-pull high gain amplifier, and dual speakers. The amplifier has inverse feedback and a frequency response of 60 to 12,000 cycles. The speakers are an 8" woofer and a 3" tweeter with crossover network. It also has base reflex baffle cabinets with plastic acoustic grill, full range variable bass, treble and tone controls, pilot lights, and a 10-foot shielded extension cord. This portable unit is available either in gray with gray-silver plastic grill, or

black with black-gold plastic grill. Audio-tone sells for \$79.50. For further information, contact Audio-Master.

**TANCORDEX STEREO**



Lafayette Radio, 165-08 Liberty Ave., Jamaica 33, N.Y., is now importing and distributing the Tancordex Model V stereo tape recorder. This machine features 3 smooth-running, balanced, heavy-duty condenser-type induction motors, 3 shielded heads (full track erase, stacked-inline record, stacked-inline playback), and simple pushbutton operation. Frequency response is 40 to 15,000 cps, signal-to-noise ratio is 60 db; and wow and flutter is less than 0.17%. The Model V is designed for 7½ ips speed and takes up to 7" reels. All facilities for dual-channel recording are provided with the exception of the recording preamplifier. The tape deck is of gleaming stainless steel. Available in a blonde or mahogany finished cabinet, the recorder sells for \$495. Write to Lafayette for details.

**ORRADIO SPLICER**



A splicer for magnetic recording tape has been added to the line of Irish brand products. It is designed for fast, precise tape editing and repairing. It is easy to handle and will make a neat professional splice in seconds; and it may be removed from its base and mounted directly on any tape recorder. The Irish splicer cuts two rounded indentations in the tape splice, giving the splice a narrow waist. This leaves the edges of the tape which contact parts of the recorder entirely free of adhesive. This splicer costs \$8.85. Write to ORRadio Industries, Inc., Shamrock Circle, Opelika, Alabama, for further details.

# TAPE CLUB NEWS

American Tape Exchange member Del Buttroughs has become thoroughly interested in sleep learning, and is enthusiastically searching for more information on the subject. Del tells us of a friend who passed the FCC exam for a general ham radio license with a score of 100, thanks to sleep study. This type learning is known as unconscious cerebration.

The general procedure is to put the desired intelligence on tape, rig a timer to turn on the recorder about three hours after bedtime, and play back through a flat under-the-pillow speaker. The message repeats endlessly to the unconscious mind, which in that state is susceptible to suggestion.

Any ATE members who have had experience along this line, or who might be prompted to experiment, are urged to contact Del.

Voicespondent John Coyle of Maryland deserves a well-earned round of applause for his fine interest and devotion to preparing tape recorded stories for play back in the children's wards of hospitals. The idea is very simple, and the resultant joy of the children is more than ample payment.

Lonesome unoccupied youngsters, and a scarcity of nurses who are already overworked, are the only incentives needed to interest folks in devoting a small part of their time to reading or telling stories on tape specifically for this purpose. A check with hospital authorities and you are all set. Many doctors even agree these tapes have a healing power all their own.

Unfortunately, John is being transferred to a new base and will be unable to keep up this good work in his home state. He would appreciate hearing from anyone in the Baltimore area who might be able to take over this charitable task.

British Amateur Tape Recording Society member Derek Payne, of 104 Peter St., Hamilton, Ontario, Canada, was appointed club representative in Canada. Derek asks that friends and members contact him on tape, using speeds of  $3\frac{3}{4}$  and  $7\frac{1}{2}$  ips. He is pleased to hear from those who live within 50 miles of his address.

Lee W. Holm of St. Cloud, Minnesota, was elected director of the T-R-I Tape Network for the year 1958 in the group's first annual worldwide election. Holm, who operates Tape Station TOLWH, nosed out his opponent, John A. Lupo, T8JAL, of Cleveland, Ohio, by one vote. He succeeds Nolan Porterfield, T5NAP, of Lamesa, Texas, who had served as director of the net during its organizational year upon appointment by Jim Greene, executive secretary of Tape-Respondents, International. Balloting for the Network directorship lasted over a period of one month, during which time votes came in from six countries. Serving as election judges were G. H. D. Moore, Jr., T5GHD, and Al and Vicky Johnston, T5DLJ, all of Jackson, Mississippi.

The Blind Services Committee of Tape-Respondents, International recently has been swamped with requests for high quality readers. Volunteers residing in the Bay Area of California may be expected to be assigned to blind students in that area. All others will be receiving assignments through T-R-I member Harold Carter of Springfield, Illinois.

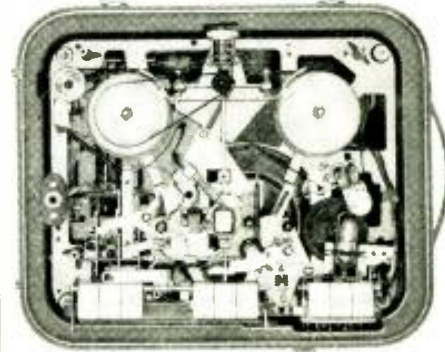
World Tape Pal Lee Waddell of California sent a reel of square dance music and instructions to Gordon Tunnicliffe, Ohura District High School, Ngarimu St., Ohura, New Zealand. "My school," Gordon says, "is one that, with its 250-odd primary and secondary children, is the real focal point for a number of smaller schools within 20 miles of us, all with rolls of 20 to 60 children. We have all made use of the tape, and my own group are in the way of becoming square dance enthusiasts." Thus, the great American pastime of square dancing is aiding in acquainting peoples of various countries with each other, through Lee's efforts.

A program for organizing a tape recording of the National Anthems of all the nations of the world has been outlined by Michael L. Byrd, 1107 Myrtle Ave., Inglewood, Calif. This project has been approved by the National People to People program and by two national tape correspondence clubs.

It is hoped that as many contributors as possible will make a recording of some local organization playing and singing their National Anthem. This will then be sent to a central assembly point where it will be held until all are gathered. These will then be made into a master recording. All who are interested are requested to drop a letter to Michael.



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Above is a technician's-eye view of the new Norelco 'Continental'. It is a reassuring picture to tape recorder mechanics—many are even calling the 'Continental' the most advanced machine of its type. But most of the readers of this magazine are not tape recorder mechanics—they are seekers of good sound. It is to these that we say—the specifications of the 'Continental' are great...but that's beside the point! We won't even tell you about them here—because we first want you to listen to the sound! Go to your dealer and ask for a demonstration. Then just listen. The Norelco 'Continental' will convince you with sound—not with cycle and decibel figures.



Engineered by Phillips of the Netherlands, world pioneers in electronics  
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### WORLD TAPE PALS, Inc.

Marjorie Matthews, Secretary  
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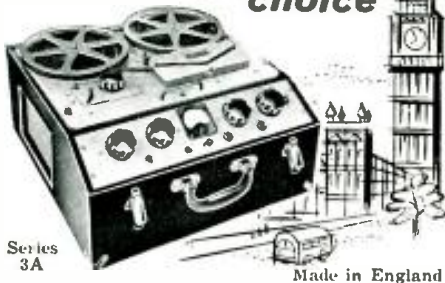
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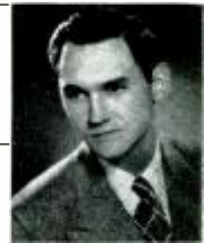
Frequency Response,  $\pm 1$  db, 20 to 20,000 cps.; Gain, 35 to 38 db; Input Impedance, 600 Ohms c.t.; Output Impedance, 600 Ohms c.t.; Signal-to-Noise Ratio, 60 db; Hum & Noise, -60 dbm; Rated Power Output, 6 Milliwatts; Gain Reduction Speed, Adjustable from 10 to 50 Milliseconds; Gain Increase Speed, Adjustable from 0.5 to 2 Seconds.

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## TAPE IN EDUCATION

BY JOHN J. GRADY, JR.



FOR the many readers who derive knowledge and pleasure from research, the Mark Mooney article, *The History Of Magnetic Recording*, in the February issue of HI-FI TAPE RECORDING, was really something. Note the deserved capital S. Such an authoritative article, with informative illustrations and captions, with statements by and about the pioneers who developed one of civilization's great products, and with an interesting chronology of the early years of magnetic recording, that's the kind of an inspirational article, in bulletin format, which should be in every school library. Publishers of encyclopedias, particularly, could benefit those referring to their volumes by digesting *The History Of Magnetic Recording*. The subject deserves more than sketchy treatment. In fact, each year's supplements should supply information on the certain widening usage of magnetic tape in the fields of communication, of industry, of entertainment, and of education.

If ever a product of industry had a romantic background, the tape recorder is that product. Reading the history mentioned above proves what a persistent group of matchmakers the pioneers of magnetic recording turned out to be. Surely, there's inspiration for ambitious students in that history of a modern electronic machine that finally met up with a smooth little quarter-inch tape sprinkled with oxide particles. That get-together was certainly a revolutionary event in the progress of civilization. Every youngster from the hill countries, who has thrilled to the echo of his voice resounding from the surrounding heights, will understand what's meant. For the paramount qualification of a tape recorder is the ability to trap all sounds—even the beat of the heart—then, instantaneously and with fidelity, to echo those sounds—not just once, but innumerable times—whenever the repetition of the sound is desired. Magnetic tape has proven it supplies the perfect echo.

Someday, there will be a history relative to the application of magnetic tape in the educational field. Definitely, it will tell of benefits to teachers, to students, to parents, and to the nation. Tape In Education has a firm conviction that scholars of the future will absorb knowledge more readily as soon as schools and colleges adopt systematic utilization of magnetic tape on a far more extensive scale than the present experimental installations. The carefully-planned, efficiently-functioning language laboratories are forerunners of a trend to tape procedures that will be adapted to numerous curricular subjects. We even predict the early demise of a traditional educational bugaboo—the ancient written thesis associated with candidacy for master and doctorate degrees. Soon, a vocal thesis on tape will supersede

that grand old relic of ivy covered halls—those pages and pages of wisdom demonstrating qualification for you-know-what. But the change is a natural. In these days of efficient communication, articulate masters and doctors are needed. So, congratulations to you degree-qualifiers of this new age. You're escaping a punishing ordeal. Or, are you? Perhaps you better practice your vocal delivery on your tape recorder.

One form of expansion in the use of educational tapes is proven in the 1958 edition of *Educators Guide To Free Tape Scripts and Transcriptions*. In this 4th edition of the Guide, there are 94 free tapes listed, 37 of them new this year. This excellent cross-indexed Guide is compiled and edited by Dr. Walter A. Wittich, Director of Audio-Visual Instruction, University of Wisconsin, and Gertie Hanson Halstead, formerly Director of Radio Workshop, Wisconsin State College. The Guide is available to Audio-Visual instructors, at Educators Progress Service, Randolph, Wisconsin.

Dr. Wittich, who is co-author of *Audio-Visual Materials*, as well as being A-V Editorial Consultant of *Nations Schools*, the educational monthly for Administrators, is a valued friend of magnetic recording. A page in the Guide lists the names and addresses of a number of manufacturers of tape recorders, together with approximate costs of various models. But he has an important analytical paragraph which contains a foresighted estimate of educational conditions leading up to his statement that teachers "must have at hand increasingly varied and effective and appropriate learning materials." We quote the paragraph, "The most exciting statistic in the above list is that which indicates the birth of 41,000,000 children in the last ten years. It is no news to any of us that the first part of this "bulge" has now appeared in our elementary schools or that the next four years will see its beginnings in high school. Even though teacher-training agencies are doing their best to attract and train new teachers, the inevitable results are apparent; namely, that class sizes are increasing and that the responsibilities of those teachers who must teach these groups are similarly on the increase. In short, the school teacher has more to do today, and for larger numbers of children than ever before."

Tape In Education recommends that educators get a copy of the Guide. The 94 free tapes, the 297 free scripts, which you may tape, and the 92 free discs, naturally, are objectively slanted. That's why they're free. But even sampling them for supplementary use will introduce you to professional educational Audio, and will help you to become adept in the preparation of your own magnetic tapes.



# TEEN TAPERS

BY JERRY HEISLER



We are often approached with the question, "How can I get rid of my present recorder so that I can get a new one?". This seems like a reasonable enough question and so I thought that we'd spend a few minutes on it since perhaps a lot of teens are not too adept at this sort of thing.

There are several good ways to dispose of a recorder. You can trade it in on a new one, sell it outright to a dealer, or find a private party to purchase it from you.

Let's take these one at a time starting with the trade-in. This would appear to be the easiest way but while it is easy you are likely not to get as good a price for the machine. A dealer has to make a certain figure above what he pays for a recorder in order to stay in business. When he accepts a trade against the purchase price of a new machine he must make up the difference between what you give him in cash and what he can get for your recorder. This makes it necessary for him to sell two machines, and of course he must guarantee them both. The extra services he must provide on your machine when he sells it cost him money. Usually too, your machine will have to be checked by a serviceman also raising the cost to the dealer. The higher the dealer's costs go in disposing of the machine accepted on trade, the lower will be the allowance you receive.

In telling you this we are not attempting to reveal the trade secrets. I have worked at selling recorders and we are the first to tell recordists, and especially teens, that they will do better to sell their machine themselves and buy a new machine with cash. Most dealers would be glad to give you a sale price on a recorder for cash if you would save them the bother of having to sell and service the used machine.

As for selling the machine outright to a dealer, you will do worse than a trade-in. Dealers are in business to sell, not to buy, and unless they're buying something from you, such as a trade-in, where they can subsequently sell you a new machine, they are not much interested in buying used machines unless they can do it at a very wholesale price.

And another important word on this topic. Many people are surprised when a dealer offers them half of what they paid for a recorder. Remember that a dealer buys new recorders at a wholesale price and therefore he is not interested in paying high prices for used recorders when he can buy new ones.

By far the best deal for everyone concerned is to sell your machine to a private party. Your recorder is worth, used, anywhere from 75% of the purchase price down. If you will glance at some used recorders for sale in a dealer's shop you will get an idea of what to ask. You can expect to get the same price as the dealer asks minus a small amount since you are a private party. Remember if a person can buy a used machine from a private individual or a well known dealer for the same price, he'll probably choose to buy from the dealer since he will have some recourse in the event of any trouble with the machine. A savings of \$10 under the price that the dealer charges would usually get you the sale.

The buyer is getting about the same value, but you as the seller have the advantage of getting for yourself the profit that the dealer would have to make.

As for how to reach the buyers, a newspaper ad is usually a very good method. I have sold several recorders through a 3 line want ad costing only a couple of dollars. An ad in TAPE RECORDING, in your school paper, or other source of reader contact

are all good methods.

Just one last comment before we leave this topic, and that's the fact that if your recorder is more than a few years old you will unquestionably do better to keep it than to sell it. You could only expect to get about 25% of what you paid for it and it should be worth that to you as a second unit to make copies with, etc.

We received a record recently from David Hersk, the Minneapolis teen who runs Gaity Recording Studios. You will recall reading about David some months back. David submitted a record which he made in his studio and it featured music recorded at 16 2/3 the "talking book" speed. The record sounded very good and David claims that it rivals some of those produced by the well known recording companies. At any rate Dave does a very professional job and I would claim off hand without the benefit of a survey, that David has more money invested in equipment than any other teen in the world. At last count the facilities of David Hersk's studio are valued at \$15,000, and David earned all of it himself and runs the studio single handed. He promised me a look at it in the near future and maybe we can get a couple of pictures of the set up.

As for the slow speed records, we're convinced that they're fine for voice but for music, we'll stick to tape.

We're on the lookout for some teens that have done some stereo recording. Please let us know if you have done this inasmuch as we're very anxious to see what use teens get from stereo.

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# QUESTIONS & ANSWERS

Questions for this department may be sent on tape or by means of a postcard or letter. Please address your queries to, "Questions and Answers," Hi-Fi TAPE RECORDING, Severna Park, Maryland. The most interesting and widely applicable questions will be used in this department and all inquiries will receive a tape or letter reply.

**Q**—This is so elementary as to seem silly, but my question is this, which is the oxide side of the tape, the shiny side or the dull side? Also, when splicing tape, should the splicing tape be put on the shiny side or the dull side?—F. P. K., Jackson Heights, N. Y.

**A**—Your question may be elementary but it certainly is not a silly one. The oxide side of the tape is the coated side, or dull side. The shiny side is the base material, which is cellulose acetate, more commonly known as cellophane. The splicing tape should be stuck to the shiny side. If placed on the dull side, which contacts the head, there would be a break in the continuity of the sound when the splice passed the head.

**Q**—How to prepare my tape recorder for automatic starting? Some time ago I read that many tape recording fans use an electric clock to start their set-up so that they will not miss recording a program or so that they might record an interesting program while they are not at home. I tried it, but as time went on my tape recorder (VM710) which operated very quietly began to sound like a boiler factory both when recording (using a clock-set-up) and when playing manually. I recently got a new recorder (VM714) and am afraid to use the clock set-up for fear of having the same trouble and ruining the

recorder. Can you tell me how I should prepare my recorder for auto operation?—E. C. F., Bayside, New York.

**A**—In order to have the recorder work from a clock control it must be left in the record position. This presses into contact the power transferring rollers and wheels which have rubber edges. The net result of this pressure on one spot for a long period of time is to flatten the rollers. You then get the thumping sound you mention.

The only solution is to install solenoid controls on the recorder so that it may be left in the off position until it is to be used. Some makes of recorders, such as the Revere, Ampro and Bell and Howell, are solenoid operated and these may be used for automatic starting and running without change.

The ideal system would involve turning on the amplifier a few minutes before the tape mechanism moves. To do this it would be necessary to put the motor control on a separate circuit.

**Q**—I would appreciate your advising whether it is bad practice to keep tapes which have been recorded in metal cans or containers. I have heard it said that such storage in metal tends to deteriorate the recordings.—P. E. J., New York, New York.

**A**—On the contrary, keeping tapes in metal cans, especially of steel or iron, will help to shield them from any stray magnetic fields. It is a good practice to keep the tapes in iron or steel containers.

**Q**—Can you tell me if tape recordings of original songs, stories, or poems, etc., can be copyrighted and tapes sold by recording services or music stores, etc., like a disc record? Or does the artist have to sing songs that are already copyrighted and recorded for sale? Can we record tapes of songs, stories, etc., for public use and entertainment, such as for hospitals, clubs, etc.? Do radio stations use or buy tape recordings of different subjects or do they tape their own? Can records be made of a tape recording for sale? When one is playing back recorded tape should an extra speaker be set up, would it be easier on the tape recorder? Hoping for a reply on the enclosed questions.—Mrs. V. K., New Brunswick, Canada.

**A**—You can record songs, stories, etc., that are your own material, copyright them and offer them for sale. If recordings are made of material already written and copyrighted by others then royalty fees must be paid and a license from the publisher secured to use the music. You can record any material for your own use and not for profit. Radio stations use tape very much and might be interested in purchasing material suitable for broadcast. You can query one of your local stations on this. All records are originally made from tape and you can have records made from your tapes by a number of firms. Setting up an extra speaker may make the music sound better, it will neither make it any easier or harder on the recorder.

**Q**—I have been a constant reader of your magazine for three years, but have

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failed to find out the answer to the following question. Perhaps it also has puzzled many of your readers as it has me. It has been said that tape recordings or tape recorded material will last permanently. This may be quite true for a period of time, but the oxide coatings of tape adhere to heads as well as other parts of the machine. This must definitely have some effect on whether or not recordings last indefinitely.—*F. L., Toronto, Ont., Canada.*

**A**—The amount of oxide that sheds from tape is very small indeed and with ordinary usage a tape should last indefinitely. Naturally, if a tape is played constantly, someday the oxide will wear through to the base and the recording will vanish. The same is true of anything. A recording made on a disc, if played repeatedly, will disappear much more rapidly than a tape recording.

**Q**—I enjoy your magazine very much and I wish to ask where I may buy monaural tapes of Jet Planes, Car Engines, etc. I am strictly a beginner in the recording field with a Webcor 2110 tape recorder. I am wondering if there is a non-technical explanation for recording of radio music by hooking my patch cord direct to the volume control on radio, also is it wrong to leave a partially played monaural tape on the machine—threaded and ready to go at the next playing or must it be wound through fully to the supply reel?—*V. W. P., Iowa City, Iowa.*

**A**—Rather than attempting to connect your patchcord to the volume control it might be better to make a connection using shielded wire and terminating in a jack mounted on the side of the radio. Then, when you wanted to record you need only plug in the cord in the radio and in the microphone jack on the recorder. To attempt to connect the alligator clamps to the volume control each time would be awkward. A serviceman can do the necessary wiring for you for a small charge if you cannot do it yourself.

Regarding car sounds, we would suggest that you contact Omegatape, 858 Vine Street, Hollywood, Cal., regarding their tape "Clear the Grid" and Concertapes, P. O. Box 88, Wilmette, Ill., regarding their tape "Sound in the Round." Vols. 1 and 2.

**Q**—There is something that I'm very interested in knowing. I'm sure that many of your readers would also be interested. I have looked high and low for a cabinet that is made for the specific purpose

of tape recording machines. For instance a cabinet where you can place your tape recorder on the top. In the cabinet itself there would be slotted grooves to store your individual tapes. If you cannot publish an answer to this question please be so kind as to let me know by return mail where I can purchase a cabinet for tape recorders.—*L. K., New York, N. Y.*

**A**—Edal, Inc., 8015 Forsyth Blvd., St. Louis 5, Mo., makes just such a cabinet as you are looking for. We would suggest you write to them for details and prices and the name of your nearest dealer.

**Q**—Before I ask you a couple of questions, may I say that I enjoy HI-FI TAPE RECORDING Magazine immensely, especially the Question and Answer section. Also some of the answers which I read do not apply to me personally, I find that my limited knowledge of electronics, tape-recording and tape recorders broadens with every issue. Many thanks to you. No. 1. I have a V-M Tape Recorder, Model 700, in which I installed the Binaural conversion kit. Up to now it has operated very satisfactorily. I now get a wow or continuous rise and lowering of sound frequency from music which I record at 7½ IPS, this is more noticeable in the higher frequency ranges especially when a musical note is held a little longer. It does not occur when I play back recorded tapes so therefore the fault lies somewhere in the recording. I have had my machine for over a year now and this is the first time that this is happening. I clean the heads, tape guides and capstan periodically, so I cannot attribute this to dirt. I have heard something about magnetized heads, but do not know whether this has anything to do with my problem. Nor do I know how to demagnetize them if they needed it. No. 2. I play a musical instrument and make multiple recordings with a tape playback unit (Pentron TP3). The problem in this case is that the Pentron speed is slightly faster than the VM, which means that I have to retune my instrument to the playback unit reproduction, in order to play a satisfactory second or third part. Is there any way I can slow down the Pentron TP3 or increase the speed of the VM, so that they will match in speed? Can I do this myself or will it involve a costly job? I am certain that you will be able to solve my two problems and wish to thank you in advance.—*H. B., Richmond Hill, L. I., New York.*

**A**—We would suggest you check the mechanism itself as wow is a mechanical fault. The payoff clutch may be too tight, you may have a bent reel which will rub the top of the machine or you may have a flat on one of the drive rollers. Why this should occur only on your own tapes and is not heard on recorded tapes is a real puzzler.

The best bet would be to increase the speed of the VM by slipping a sleeve over the capstan to increase its diameter. A small piece of rubber tubing might do the trick.



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# CROSSTALK

from the Editors

BACKGROUND MUSIC for the home has been developed by Livingston Audio Products, Caldwell, New Jersey. Using 1/2 mil Mylar tape and a speed of 1-7/8 inches per second speed they have put 8 hours of music on a standard 7 inch reel. Music is smooth, easy-going suitable for home use and the quality is equal to that of wired music. Norelco, Bell, Tandberg and the new Webcor recorders are among those which have the 1-7/8 inch speed.

\* \* \* \* \*

FOUR TRACK head described elsewhere in this issue may mean a rebirth for recorded monaural tape. With four tracks on one reel, price should come down. Head also makes possible dual track stereo. See page 32 for details.

\* \* \* \* \*

WASHINGTON DC Hi-Fi show drew 16,500 attendance. As with west coast show, stereo stole the spotlight. Next year's Washington show will be expanded into a festival.

\* \* \* \* \*

HERE WE GO AGAIN. Just as words "Hi-Fi" were pre-empted by Madison Avenue boys to advertise anything from lipstick to cheap record changers so "stereo" is beginning to appear in other guises. First evidence of switch is clever use by Vornado with their "Stereophanic Cooling." Looks like stereo has arrived in public's lexicon.

\* \* \* \* \*

HOME STEREO study was urged by Dr. John G. Frayne of Westrex, developers of 45-45 stereo disc. He told Audio Engineering Society that stereo recording techniques are based on findings of almost 30 years ago and in the acoustic perspective of large halls and auditoriums. Needed: research on best techniques geared to home living room. Question—who pays for research?

\* \* \* \* \*

TEEN AGE MARKET IS BIG ONE, keeps record industry bouncing. Long play feature of tapes not interesting to short-span attention of teenagers. Not content with half hour of one band or vocalist—why doesn't somebody make a real mixed-up reel . . . various bands and vocalists. Key to teen age purchasers of recorders is credit—kids pay off too, experience shows.

\* \* \* \* \*

HI-FI INDUSTRY keeps asking diskeries when stereo discs will be available so they can tie in with their equipment and promotion efforts. Disc firms haven't announced to date, with few exceptions. With dual track stereo on tape now possible and with admitted advantages of tape over disc, tape may move ahead much faster than expected. Biggest question is which will get nod from majors. Odds are both will but no announcements have been made.

\* \* \* \* \*

TRAPPED BY a tape recorder they stole, four youthful Philadelphia suspects talked about their robberies unaware that recorder was taking down every word. When police swooped in they had ready-made evidence on tape. When recording was played back to them at headquarters police say it "knocked them cold." Tape will be introduced in court.



# TAPES TO THE EDITOR

When sending tapes to the editor please use the 3" reel and indicate the speed at which it was recorded and whether it is dual or single track. We will listen to your tape, make notes from it for use in this column and then reply on your tape. Please keep tapes reasonably brief.

If you do not own a recorder, a letter will be acceptable. Address tapes or letters to: The Editor, Hi-Fi TAPE RECORDING, Severna Park, Md.

To the Editor:

A novel use for a tape recorder was brought to my attention recently. I thought you might like to hear of it.

A young married couple had their first quarrel and were not on speaking terms. Meanwhile, throughout the day the wife would record messages for the husband. He would turn on the recording machine when he came in evenings from work and hear what she had to say. Likewise, when he left for work mornings, he left messages for her.

As you may imagine, the quarrel did not last but a day or two. However, the tape recorder played an important part in effecting their reconciliation.

Significant, too, I believe, is the fact that they had considered a tape recorder a must, along with TV, etc. when they first set up their household. Many young marrieds are following this modern trend and it later comes in handy to record baby's first words, etc., as well as to preserve all important verbal memories of a lifetime.—*Opal E. Douthitt, Louisville, Ky.*

Thank you for passing along the suggestion. If any of our readers get in the doghouse I'm sure they'll thank you for this way out also.

To the Editor:

About a year ago I purchased a tape recording which had many features that appealed to me, plus the fact that it could be converted to stereo. (Bell RT75). Now, after months of assembling additional hi fi equipment some of which had to be changed for one reason or another, I finally came to stereo and naturally used the Bell conversion. Having made most of my purchases at one of New England's largest hi fi dealers, you can imagine my consternation when on inquiring for some staggered stereo tape, they politely informed me, "We don't handle stereo, staggered, its on the way out, and none of the big companies are making it." This didn't bother me too much, as New Haven has many other tape recording dealers, but believe it or not after scouring the city, there wasn't a roll of staggered tape in the whole bloomin' place and only four reels of monaural tape that had been used for demonstration. This is a fine state of affairs for an industry to be in. How many tape addicts have found themselves in the same predicament? All set up and no place to go. The heart of their equipment obsolete and valueless? Fortunately I received the Hack Swain tape you sponsored and now have one use for my stereo

conversion. Truly, I feel your magazine is partly responsible for my continuing to convert my Bell recorder, your ads and articles encouraged me no end. Why not an article in the near future telling us how to get out of this mess without it costing an arm and a leg.—*H. E. M., New Haven, Conn.*

It is true that the industry is going to the stacked head and those firms which put out staggered machines have also put out kits to enable the owner of an older model to convert his machine to stacked stereo. These kits are relatively inexpensive. Bell has such a kit for about \$25.

The Stereo Music Society, 303 Grand Avenue, Palisades Park, N. J., is specializing in servicing recorders which have staggered heads and carries a complete stock of all staggered tapes available. As a matter of fact, they even have some tapes which have been made specially for them, from companies which have gone out of the business. One by one we hope to cover each kind of recorder and how to convert it to stacked stereo.

To the Editor:

I have been reading tape recording magazine for the last 2½ years. I have been offered many subscriptions for all types of Hi-Fi magazines, but I have no use for any of them as long as I have TAPE RECORDING Magazine. There is a new stereo recorder on the market by the name of "Sony model" 555 Stereorecorder, made by Superscope, Inc. At present it is about the lowest priced stereo-recorder on the market. I would like to see a "New Products Report" on it as I have not been able to find it in any stores. I would also like to see plans for some components, such as an audio mixer, and inverter or a small pre-amp (for 2nd track of stereo) that we could build at home. Thank you for taking the time to read my card.—*M. H. S., Bronx, New York.*

We have a Sony Stereorecorder on order for a consumers report and will publish it as soon as we receive the machine and test it. We'll see what we can do about the articles you suggest.

To the Editor:

Thanks so much for "How to Close Edit" by Jack Bayha, page 16, vol. 5 # 3. Articles of this nature and also the "Questions and Answers" department are in my opinion, the top spots of T.R. Mag. Your whole staff is doing one fine job. Best of continued success to all.—*Harold S. Jones, Aurora, Illinois*

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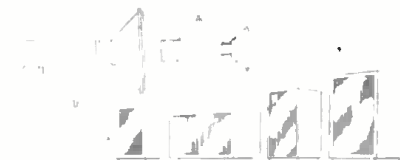
**LISTEN!**

Every time I bought a record, I used to set up the calibrated microphone, connect the oscilloscope, start the music with bated breath, and keep my eyes glued to the screen. If anything on the scope pattern looked suspicious (something always did), I would start checking tubes, voltages and crossover frequencies, and examine the record under a microscope.

Then, at the house of a musician friend, I heard a NORELCO loudspeaker. I was suddenly carried away by the sheer joy of listening! What lovely sound! Clean, tight bass; creamy smooth highs; crisply defined middles... it was music!

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# Party Fun by the Foot

by David and Diana Syme

... party time is recorder time—try these suggestions at your next get-together.

GEORGE hadn't been at our party ten minutes before he told everyone about his afternoon phone call. It was the Village Cleaners calling. They claimed that George had a long-outstanding debt of a dollar sixty-five for a grey suit he had had cleaned, and would he please pay it. George insisted he always paid cash, never kept receipts, and particularly remembered paying the \$1.65 for that suit. Words had flown thick and fast, and even now George was visibly shaken with fury.

"Can you imagine the cheapskate?" he said, "he even threatened to turn me in for a bad credit rating!"

David and I kept a straight face until the party was well under way, and then we casually turned on the tape recorder. Out poured the actual recording of George's phone call. For a moment, he was thunderstruck.

"That's me! That's *him!* What the . . . ?"

This party was not just an ordinary get-together. It was another of our experiments in using a tape recorder to spark a party. By now, a good many of our friends know that when they come to our house, funny things may happen, and it usually involves the little electronic marvel that's becoming more popular in homes every day—the tape recorder.

Some recording enthusiasts who are purists may look down their electronic noses at us, claiming, "A tape recorder is not a toy!" And so it is not. It is a complicated, highly sensitive piece of machinery. It is a player of beautiful music (having virtually replaced our phonograph for this purpose), a sender and receiver of "letter-tapes" to and from friends, a memory album of familiar voices, of broadcasted events, and of radio and television bits I've written. But in spite of what the purists say, our tape recorder is also our most delightful toy, and for parties, we think it's got Charades, Twenty Questions, and every other silly party game beat by miles. In fact, we have used literally miles of tape to prove it.

First experiences with a tape recorder in the home may be disappointing, and the experience is familiar to most everyone. We got ours on Christmas Eve, several years ago, and spent the rest of the evening passing the microphone from one person to the other. We expected them to pour gem-like phrases onto the tape, but the playback merely brought forth inane-sounding snatches of voice. It didn't take us long to find out that most people involuntarily dry up when confronted by a mike. They realize what they are about to say is going to be *recorded!* In the panic of wanting to say something really worthwhile, they're caught with their repartee down . . . unwitty, unprofound and unmemorable. They giggle, gesture and whisper, "What'll I say?" A whole party-full of exposures such as this, and the fact that you have a tape recorder goes over with a dull thud. We know. We did it!

It was the same first evening that we tried the obvious method of merely leaving the mike open to catch all our witty conversation. This is one way to find out how silly and aimless ordinary party-talk really sounds, especially when played back in the sunlit silence of the morning after. Of course, if you have some John Kiernans and Alexander Wolcott's among your guests, their verbal sparring might be very worthwhile on tape.



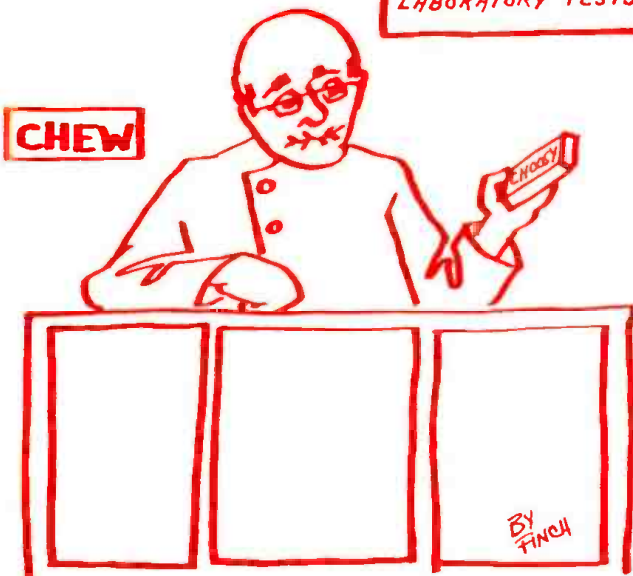
ROVING REPORTER: "Well, here we are, ladies and gentlemen, coming to you from the top of the Empire State Building. It's a beautiful clear night, and I see a young man impaled on the North railing over there. How did you happen to run the railing points through your middle, sir?"



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ROVING REPORTER: "... continuing our tour of the Choosey Chewing Gum Factory, we are now entering the official chewing room, where all Choosey Gum is pre-chewed for you. Here's one of the official chewers now ... Could you describe your job in a few words, sir?"

From these initial attempts, which were failures, emerged our determination to use our recorder henceforth with imagination ... to bring out the most in each guest and make them each the star performer of the evening. To our delight we've found that even the most retiring individual has more creativity than he is credited with. Opportunities for games, creative expression and practical jokes are limitless, with a tape recorder. The party is successful simply because there's nothing so fascinating to a person as the sound of his own voice.

Everybody can get into the act when we play "Roving Reporter." It's handled much like the typical street-corner interview you've heard on the radio, except that the people and situations must be make-believe. We set a definite locale for each "Roving Reporter" bit ... a crowded elevator, a Las Vegas casino, a passenger ship to Europe, or maybe the top of the Empire State Building. The locale can be pretty fantastic to begin with, and then we encourage our interviewees to assume far-fetched identities. Unconsciously, they say to themselves, "This really isn't me, so I can let go." We keep it light ... the wackier the better ... by feeding them ideas for lines. For instance, a typical reporter might start off like this:

"Well, here we are, ladies and gentlemen, coming to you from the top of the Empire State Building. It's a beautiful clear night, and I see a young man impaled on the North railing over there. How did you happen to run the railing point through your middle, sir?"

That's all it takes to establish a facerious mood, and we're off! The reporter may then move to the "bushy-haired Countess Maria, visiting the United States on a

good-will tour." She goes along with the idea, and even effects a foreign accent. As soon as people catch on, they start thinking up wild identities for *themselves*.

One of our best tapes along this line was done the night we toured "The Choosey Chewing Gum Factory."

"... continuing our tour of the Choosey Chewing Gum Factory, we are now entering the official chewing room, where all Choosey Gum is pre-chewed for you. Here's one of the official chewers now ... Could you describe your job in a few words, sir?"

Our guest had no recourse but to make loud smacking noises as he talked. Oddly enough, he was a rather reticent person ordinarily, but he came through as a first class character actor. Had we let him play "himself" into the microphone, he most surely would have whispered, "What'll I say?"

Feeding people ideas for lines is easy. Toss them a brief description of themselves, and they'll take it from there.

"I see you're surrounded by thousands of shoes here ... funny thing to have in a chewing gum factory ... Just what is it that you're scraping off the soles?"

and ...

"... from your uniform, sir, I surmise you are the company dentist. How is Choosey Chewing Gum on the teeth? In fact, do you *have* any teeth, sir?"

Being thus encouraged, he naturally sucked in his lips and whistled a toothless answer.

One idea leads to another. Because you're performing for *sound only*, anything is possible without elaborate staging. Guests delight in hearing themselves on this kind of a presentation, because it proves to each what he always suspected ... that he is witty, creative and scintillating!

Naturally, the public library is full of dramatic readings ... sometimes, even multiple copies. Frankly, we haven't found these to be very much fun. In the first place, even people with some dramatic ability can seldom sightread lines well. The average group reads lines even worse, and the playback can be a tedious bore.

What we've found to be a good deal more entertaining, is to make up our own little dramas, with spontaneous dialogue. We decide, for instance, on doing a murder-mystery, a soap opera, a Western, or even a parody of some recent movie or play the whole crowd has seen.

It's good to pepper the plays with sound effects: running water for a rainy night, door slams, footsteps, fire (made by crinkling cellophane near the mike), explosions (made by blowing up and bursting a paper bag), tom-toms (using an overturned box or wastebasket), horses, (clap the children's wooden blocks on a table). A destructive sound of perhaps buildings crashing in the distance, can be made by holding the mike inches from your mouth and blowing into it. Hold the mike sideways and blow, and you get a perfect lion's roar. For the lonely sound of a ship's foghorn, blow over the top of an empty pop bottle.

An electric mixer on the very lowest speed sounds like an old jalopy starting up. The bubbling beekers of a "mad scientist" come into dimension on tape simply by blowing through a straw into a glass of water, near the mike. A good gunshot sound can be effected if you roll up a newspaper and slap it sharply on a Formica-topped table. Once



"... and furthermore, while I realize there are various forms of appreciative art, I feel—and as an art teacher I am sure you will agree—teaching this sort of thing to my little Junior is highly impractical at his tender age, and also . . ."

we got eerie reality into a scene where a woman was supposed to be sawed in half, just by using an emery board about an inch from the microphone.

Proximity to the mike makes little everyday sounds into giant exaggerations of reality, perfect for the farcical tone of "dramatic" tapes. Combinations of sounds can be effective, too. We whipped up an evil-sounding storm one night by running water in the sink and blowing into the microphone (for thunder) several feet away.

A professional touch can be given a tape by fading background music in and out with the volume-control of the phonograph. Organ music makes a soap opera sound *exactly* like a soap opera, and what's a Western without the William Tell Overture faded in on top of the "horses"? A night-club atmosphere can be had with a pop tune on the turn-table, people chattering in the background and the occasional clink of glasses. These touches of sound give setting and polish to your play.

Not all our "experiments" have been attempts to see how funny everybody can be. One of our most memorable evenings with the recorder produced a softly-serious tape which we've enjoyed playing many times since then.

Three couples had been toying with two recorders at once, trying to sing harmony with ourselves, a la Les Paul and Mary Ford. We discovered a wonderful echo effect by placing one live mike eight or ten feet away from the one we were using. Eventually, when the hour grew late and mellow and the lights grew dim, we somehow decided to try a "free association" interpretation to music. We put not-too-familiar instrumental music on the phonograph, and took turns, mike in hand, sitting near the speaker, describing what the passage brought to mind. Then we moved the group to another room, and let each person do his interpretation in the recording room unheard by the others. It was revealing that the same passage suggested fields, airplanes, fishing, women and food to different individuals. Amateur psychoanalysts would probably have a heyday with this type of experiment.

Later we became so taken with the effect of background music on reading, that we tried reading to music something as unlikely as the day's livestock reports from the daily paper. Reading "with expression," it went something like this:

The music was "Forbidden Planet."

(INTRODUCTORY ARPEGGIO) "Friday's small supply of hogs sold readily on a sharply higher basis. (WITH EXCITEMENT) Barrows and gilts figured fully 50 cents higher, (SOFTER) while sows ranged from 25 to 50 cents up. (FORTE) U. S. 2, 3, and 190 pound barrows and gilts sold at (ARPEGGIO) \$18.50 and \$18.75 with some sales at (CODA) nineteen dollars."

On election eve, when most of the votes had been counted, and everyone was either jubilant or disappointed, we let each person play Drew Pearson and record their predictions for the 1960 election. That was one night when everyone had an opinion to voice. These will make good entertainment to play at our election party in 1960.

There's no end to the practical jokes that are possible with a tape recorder. One excellent little ice-breaker, for instance, is to record an hour or so of background music from the radio, prior to the party. Somewhere within this incidental music a startling statement is vocalized. The guests arrive at the appointed time, and the recorder is turned on, playing the soft music. About half an hour later, in the midst of all the faltering attempts at conversation, the music halts abruptly, and a shrill feminine voice says, "Gordon Murray, get your hand off my knee!" Gordon Murray may drop his drink in surprise, but the party is shaken into a congenial mood after that.

Another small trick we arrange is to extend the microphone, unnoticed, into another room. We pre-set the jack so the sound will come through the TV speaker. Some time during the party a wee small voice comes out of the TV, "Help, let me out of here . . . I'm trapped!" Of course, it's David who is missing from the room, but there are always several people who wonder for a moment, anyway, who we've scaled up in the TV set!

Telephone adapters for a tape recorder are so much fun they almost ought to be outlawed! The fact of the matter is, you could pull some really nasty tricks with a telephone adapter. The Federal Communications Commission requires that taped telephone calls to parties outside your own state have a "bleeper" hook-up (so named for a



"bleep" sound every few seconds.) In that way, they are aware that the conversation is being recorded.

Naturally, this would be no fun at all for our mischievous purposes, so we used an adapter without a bleeper. The calls were made the afternoon of the party. Not only did our friends not know their voices were being recorded—they hadn't the faintest idea that the calls originated with us! We enlisted the help of a glib acquaintance whose voice they did not know.

George, who received a call from his "cleaners" insisting he owed them \$1.65, was a perfect example. His face blanched in shock and disbelief when he heard the phone call played word for word on the recorder. Suddenly everyone in the room was shrieking with laughter, for each couple there had received a weird phone call of one variety or another that afternoon, and they knew now it had been a hoax. They could hardly wait to hear their own calls played back. George's case was particularly amusing, because he had previously described at length how he had "told the guy off," when actually the tape revealed that he was rather reticent and just politely defensive.

One girl had received a phone call from a man she supposedly had met at a convention several years ago. Of course she remembered him, she said. How is he now, and what's he doing? She chatted amiably about her recent wedding. "You remember Tony, don't you?" Of course, she had no idea to whom she was talking. She was quite coy until towards the end of the conversation, when her voice clearly betrayed that she wanted to get off the phone before this thing went any further.

One guest, an art teacher, had been called by an "irate

father of a student," who objected strongly to the charcoal studies of nudes his boy had brought home. Another friend, a rabid Democrat, had been solicited by the Young Republicans, and still another had been called by "Railway Express" and informed that someone had sent him two crates of live turkeys, which they proposed to deliver immediately. The whole thing came off as a perfect practical joke, but we were very careful not to lead anyone to say anything which would have been truly embarrassing when played for the group. It would have been poor, for instance, to announce that this is the bank, and "you're overdrawn." They might have gone into a complete discussion of their finances. However, any small remark they make that you feel should not be played for the group, can easily be spliced out.

Our friends are still talking about a sound party we gave which concerned a "seance." We borrowed an electronic foot control. This is a device you can place some distance from the recorder, which enables you to turn it off and on at will. We even hid the recorder back of the sofa, and hooked it up so that the sound came out of the TV speaker. This was to divert suspicion from the recorder, of course.

In our group of ten people, only Harry and his wife were in cahoots with us. Because "Bridey Murphy" was making headlines at that time, it was an easy thing to direct the conversation toward spiritualism, mediums and seances. Harry and his wife even went so far as to claim they had been to many seances, and they knew exactly how to conjure up a spirit. Naturally they were challenged, and as we had hoped, it was one of the unsuspecting guests who first said, "Let's try it!"

Now, what we had done was to have an actor friend of ours pre-record a set of vague answers in an ethereal voice, one right after the other on our tape recorder. David could "evoke" the answers by using the foot-control, which was hidden under the footstool in front of his chair.

Much ado was made, of course, about having the lights very soft, and everyone had to be very serious and quiet. After ten minutes or so of unsuccessful concentration, David touched the foot control, and a deep voice came out of our TV set saying, "What did you call me for?" David and I pretended to be the most skeptical of all, and I examined the TV set with alarm. Nobody went screaming from the room, but they were not altogether convincing when they said, "This is ridiculous . . . I don't believe it!" After they quieted down and wanted to hear more, the ghost repeated his question. Harry explained to the ghost that we were interested in what it was like "on the other side." The ghost talked slowly and hollowly about his existence, a la Bridey Murphy. Even though the skeptics insisted it was some sort of trick, the eerie interview had a good many of them shuddering for twenty or thirty minutes. Inevitably, our curious guests started to ask the ghost questions for which we hadn't recorded any appropriate answers. Then one of the boys discovered the wire from the TV set to the tape recorder behind the sofa, and the jig was up.

Recording stunts in which everyone participates are still the most fun, as we proved once at an office employee Christmas party. Here we called each individual into a private office prior to the party, to record a brief question-and-answer interview. After explaining that we wanted a sample of her voice, we asked the receptionist, for instance,



Original Question: "How is the temperature in your office?"

Edited Question: "You have a new secretary . . . how do you get along with her?"

Answer: "Well, you either end up putting on your overcoat or loosening up your tie!"

how a visitor might be impressed if everyone went out of their way to say hello to him. She replied, "Well, he'd probably be impressed with how friendly our company is." That was a nice, normal answer, but later we made up a *new* question to precede it. Using a second recorder, we dubbed in her innocent answer. At the party, the playback went something like this:

"Gloria, what do you think Mr. Druthers would say if he happened to catch you kissing the mailman?"

"Well, he'd probably be impressed with how friendly our company is."

Even Mr. Druthers himself fell victim to the game. At the party, the employees heard this:

"Mr. Druthers, someone has made the suggestion that we tighten upon rules around the office. No more arriving late, no more long coffee breaks, no lingering at the water cooler, no absenteeism. What do you think of these ideas?"

"I think it's a fine idea . . . not for me, though. I can see where others would enjoy them, but I'm not the type for that sort of thing."

The *real* question Mr. Druthers heard was, "What do you think of the idea of driving one of these small foreign cars?"

To Norman Zilch, we put the question, "How is the temperature in your office?" But on the final tape, the question was, "Norm, you have a new secretary . . . how do you get along with her?"

His reply: "Well, you either end up putting on your overcoat or loosening up your tie!"

I worked this "switch-question" game a little differently at a baby shower I gave recently. There was no time to pre-record and think up questions to fit the answers. So before the party, I prepared questions which I hoped would elicit certain answers. While the girls got acquainted, I called them one by one into another room for the taping. Between each girl, I had a few seconds alone to record the

question which they did *not* hear. I asked them the innocent question, and taped *only* their answer. It took about thirty minutes to complete a dozen little interviews, without splicing or dubbing. Then came the playback.

"How long do you think Jeanne's new baby will be . . . and how many pounds?"

"It's thirty-one stories tall . . . two thousand pounds." (To get this answer I had asked her how tall a certain building is and how many pounds in a ton.)

"Of all the people interested in this new baby, who do you think will be the most surprised when it arrives?"

"The milkman, of course." (I had asked this girl, who delivered things to her house more often . . . the milkman or the cleaners.)

The switch-question game can be used on any small or medium-sized group where people know one another fairly well. Just make sure the questions and answers are wildly improbable.

There are endless possibilities for party stunts with a tape recorder, and half the fun is thinking up new ones.

If you don't own a tape recorder now, rent one for your next party. In planning a "sound party," bring up all the inventiveness you have within you, and don't underestimate the imagination of your guests. Steer the conversation, but don't let your own voice dominate. No matter how clever your chatter, it doesn't give your friends the thrill that their own voices do. Use your recorder to extract from them spontaneity they never knew they had, voices they've never used, characters they've never been, and even opinions they've never voiced. A "live" mike creates the urgency to talk, to impersonate, to spiel off, to create. It forces each person to be more than just a spectator at your party. Every human being you know will find the playback of his voice as fascinating as a reassuring glance in the mirror. And you, thanks to the miracle of electronic recording, are the "host with the most."

## PROCESSING COLOR FILM VIA TAPED MUSIC

Anyone who has developed his own color films knows how, in addition to



Ray Cunningham's darkroom contains a built-in speaker for listening to a timed tape of music by which he develops color film.

being a clockwatcher or a timer-listener, he must also be a chart watcher so that all the steps in the 14 step process are performed in the correct sequence.

Ray Cunningham of Detroit, Michigan has solved the problem and provided background music at the same time.

He uses a timed tape to do the job. In this instance an 1800 foot Mylar tape is used. This runs approximately 93 minutes at the  $3\frac{3}{4}$  speed. The developing time of the film from start to finish runs 76 minutes.

To make the tape he made a dry-run of the developing process using a stopwatch and bell signals to time each step. Also on the tape are temperature and agitation announcements. In between are musical numbers recorded from records or the radio.

A built-in speaker in the darkroom eliminates having to move the recorder. With everything in readiness, the

tape is started and switched to the darkroom speaker and the whole process is completed without reference to the direction sheet. This makes it possible to develop to the strains of Montavane, wash to the "Blue Danube," second expose to "You are My Sunshine" and dry to "How Dry I Am."



A "dryrun" of the developing method was made first with the recorder running and an open mike to time the 14-step process.



# USING TWO RECORDERS

by Samuel P. Dick

. . . a simple, yet practical, method for editing dual-track tape.

EVERY user of tape sooner or later comes squarely up against the problem of editing. With single-track recorders the problem is easily handled, but up to now no one has offered a practical way to satisfactorily edit dual track recordings, and most home recorders are dual track. The trouble, of course, is that cutting the tape for one track destroys the continuity of the adjacent track, and when both tracks contain valuable recordings editing becomes impossible.

The idea, advanced some time ago—obviously in desperation—of slitting the tape lengthwise and thus separating the two tracks is not practical and has not been generally adopted. It really does not solve the problem at all, because you do not end up with a dual-track tape but merely a single-track tape of half the standard width. The difficulties of handling narrow tape make it impractical.

When making important recordings some tape users have resigned themselves to using their dual track machines as if they were single track, recording only on one half of the tape. There is nothing wrong with this method, except that it defeats the purpose of dual track recording, which is the utilization of twice the recording time for any given length of tape over single track.

There is a very simple and practical way to edit dual track recordings, and that is by using a second tape recorder. In brief, the tape is not cut and spliced at all, but the editing is accomplished by transferring electronically in any order and sequence desired the material wanted from the original tape or tapes to another tape.

This transfer, or copying, of the original tape in no way affects the other track on the same tape. Also, the track being edited is still available for further editing or corrections, deletions or additions, or any other changes that you may want to make, because it is not physically cut or altered by being copied.

In conjunction with this principle of editing my copying, other advantages immediately become possible. The idea is to use for the new recording just enough tape to cover it, and to place this length of tape on a reel of suitable size for it. For instance, if you have recorded a fifteen minute talk from the radio at  $3\frac{3}{4}$  i.p.s., you could transfer the recording to a tape on a four inch reel. This reel will then contain on this track just this talk and nothing else.

Later, after you have accumulated (from copying and editing the originals) several recordings on three, four, five, and seven inch reels you can use the other track on these same reels for other recordings of similar tape length. Thus both tracks are used, and each track contains just one recording. You can now label the reel and immediately have available for playing any particular recording you want, without having to hunt through a reel for it.

One of the advantages (probably the only one) of discs over tape has been the relative ease with which the particular disc containing the recording you want could be selected and played. With tape, much of the recorded material you want is tucked away somewhere in the middle of a seven inch reel. While the footage-counters and elapsed-time indicators presently found on many of the

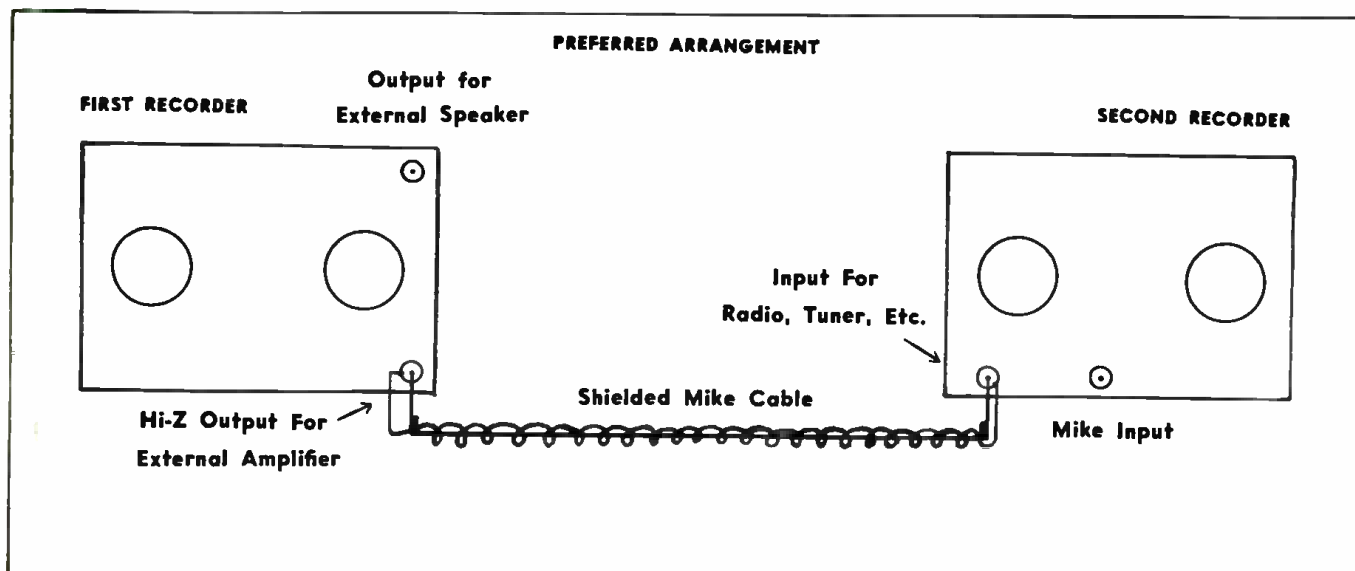


Figure 1: the tape to be copied is placed on one recorder and the blank tape on the second machine. The preferred connection is to take a shielded cable from the output marked "External Amplifier" on the first machine to the Radio, Tuner input on the second. Keep cord short as possible and be sure shield is grounded to chassis of each recorder through the connecting jack.

machines do help to locate these hidden recordings (provided accurate notations of their position have been written down somewhere) it still remains a nuisance to get the reel set precisely for the beginning of the part wanted. It means using the fast forward, then playing a section to see where you are, then probably rewinding some, checking again, etc. until you hit the start of what you want.

Beginners in tape recording almost invariably prefer to use the largest size reel their machine will accommodate, usually seven inch, for everything. It is inevitable that many precious recordings will be sandwiched in the middle of the tape, and it will subsequently be tedious to locate them promptly. Often, they are finally found on the other track on the opposite side of the tape from which you expected it. The method described above, enabling you to use the proper size reel for the particular recording avoids all this trouble and irritation. It makes possible for you, like the users of discs, to play precisely what you want without any fuss or bother.

The recording originally should be made on a seven or ten and a half inch reel, whichever your machine takes, and it can be started anywhere that is convenient on this "master" reel. The copied version is the one that is to be put on the proper sized reel. It might be just one song or dance number, similar to one side of a 78 rpm 10-inch disc, or it might include a medley of songs or dances for three-quarters of an hour playing time. It could be a five-minute talk or an hour speech. The idea is to have as one track the material that you want to hear played through at one time for the particular size reel being used.

The ability to edit tapes easily will greatly increase your enjoyment of tape recording. It opens up a vast new field for you. If you have a favorite popular singer you can record his or her voice from the radio whenever the singer happens to be on the air, disregarding what else is on the "master" tape at the time. Later, you can abstract these

individual recordings and keep them as separate numbers, or make an album of them on one large reel. The same idea can be used for dance music, Latin rhythms, operatic singers, instrumental virtuosos, etc.

You can make up your own demonstration tapes, including spectacular bits from things that you have recorded. If your talents include humor you can, by clever editing, produce hilarious recordings for party use. The limitless commercials heard on the air offer a wealth of material for strategic insertion. By editing electronically the same material can be dubbed in over and over again at different places, and the results are limited only by your imagination and ingenuity.

Recordings of young children and other members of the family, which are frequently short in length, can be transferred to a tape permanently reserved for such a purpose. As the years go by these family recordings, especially of growing children, become invaluable. It is much more practical to build up such a tape this way than try to retain these isolated original recordings.

Some readers are probably thinking that even though using two recorders offers many advantages the cost of a second machine is an unwarranted luxury.

It may be, if you have recently purchased your first tape recorder. However, many people have had their first recorder for four or five years, and they are now ready for a new machine. Instead of using your old recorder as a trade-in keep it, and use it for editing in conjunction with your new one. There is, today, a lot of interest in stereophonic sound. If you have a second recorder you can also use it as the second amplifier channel necessary for stereo playback.

At the very worst, you surely have some friend who, like you, has a tape recorder. You can make mutual arrangements to occasionally have the use of each other's machine for editing purposes, and thus avoid the need of

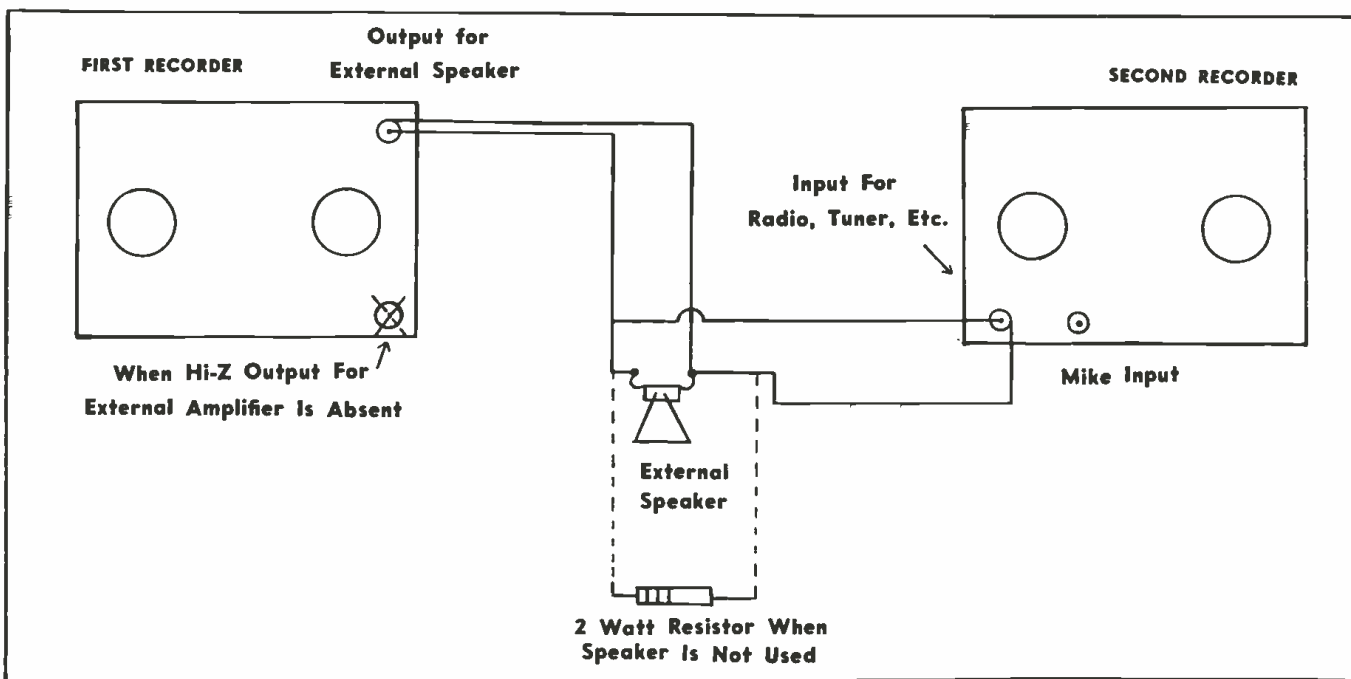


Figure 2: if the machine does not have an output for external amplifier then the pickup may be made from the external speaker output. Shielded cable is not necessary in this case. If the external speaker is not connected as shown a 2-watt resistor can be substituted. The strength of the signal is regulated by the first recorder's volume control. The volume control of the second recorder should be set at average level.



a new purchase. The chances are, however, that after you have experienced the advantages of being able to edit your recordings you will each want your own second recorder. Editing also results in a significant saving of tape, if you are a fairly prolific recorder.

There are other advantages to the use of two recorders, but the ability to edit easily is the most important. Two recorders can be used to advantage to record material that exceeds the recording time of the largest reel the machines will take. You simply use the machines alternately, starting to record from the second one when the playing time of the first machine is nearly exhausted, selecting a natural momentary pause in the material for the switch. While this second machine is recording, the first machine can be made ready again for use.

Now let us consider the methods of copying tape. To simplify the discussion, suppose we call the recorder that is going to be used to *play* the tape to be copied the "first recorder," and the machine that will be used to *record* this material on the new tape the "second recorder."

If the first recorder has a high impedance output, usually around .75 volts, rms, which is intended to be used with an external amplifier or P.A. system, then that output is what you use to feed the signal to the second recorder. Use a connecting cord of shielded, single conductor microphone cable, preferably not over six feet long, and with suitable shielded plugs at each end to match the jacks or sockets of the recorders. The shield of the cable connects the grounds of each machine, and the inner conductor connects the "live" sides. See Figure 1.

If the recorder does not provide this output it almost certainly has an output for an external speaker, and the necessary signal can be taken from the terminals of this speaker. A two-watt resistor can be substituted for the speaker if desired, its resistance matching the impedance of the missing speaker. Ordinary speaker extension cord, or even common lamp wire, can be used to connect the output from the external speaker arrangement, and its length, within reason, is not important. Alligator clips can be used to pick up the signal. The signal strength here will be controlled by the first recorder's volume control, and it should be so set that the second recorder's recording level indicator will show full modulation at about the average gain setting of *its* volume control. If you have a V.T.V.M. or a good AC voltmeter the signal from the first recorder should average about 1 volt, rms. See Figure 2.

The signal from this first recorder, whether from the high impedance or external speaker output, should be fed into the input of the second recorder which is intended for recording from a radio or tuner. If the second recorder does not have such an input, and that is unlikely, the signal can be put into the microphone input, after proper attenuation. A voltage divider arrangement can easily be provided by placing the two leads from the first recorder across a 1 megohm potentiometer, linear taper, and continuing the ground side to the ground of the input plug, and connecting the sliding arm contact of the potentiometer to the "live" side of the plug. See Figure 3. Once the potentiometer has been set so that a signal of suitable strength is provided for the second recorder it need not subsequently be moved. Further control of the recording level should be made with the second recorder's own volume control.

It is necessary that some form of monitoring for the

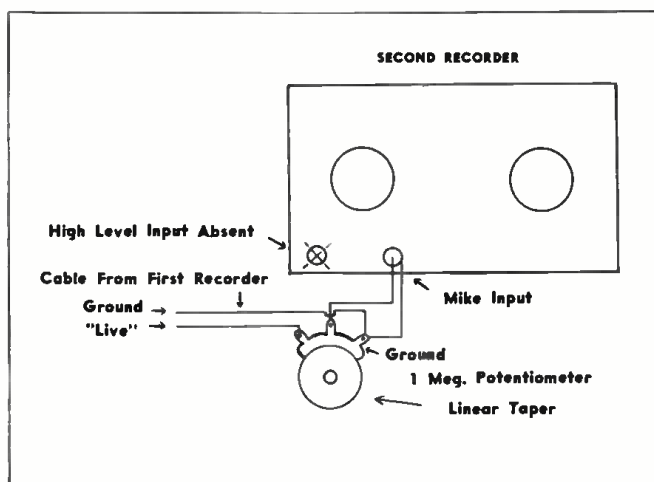


Figure 3: if the recorder lacks a radio tuner input the current may be fed through a 1 megohm potentiometer into the microphone input of the second recorder. The "pot" reduces the signal to controllable level.

material being edited or copied be available from either machine. If you are taking the signal from the external speaker you automatically will be hearing the recording. Some recorders have switching arrangements so that the set's internal speaker can be used when the high impedance output is in use. Others permit the internal speaker to be activated while recording from a source other than a microphone. Still others have jacks for the use of headphones for monitoring. It is extremely unlikely that, between the two recorders, some method of monitoring would be unavailable.

While theoretically there is some loss in fidelity when tapes are copied, in actual experience the quality of the copy, from a listening point of view, is equal to the original. With reasonably good recording technique the copy will be indistinguishable from the original, even when using very moderately priced recorders. The equalization curves, of course, should be the same for both machines, but since all present recorders conform to the NARTB standard that should be no problem. With very early recorders, if distortion is noticeable in the copy, it might be wise to check the equalization.

Experience is important in anything, and copying tapes is no exception. You have to become familiar with your equipment, and be willing to do some experimenting until you attain an easy proficiency. Once you have done so, and it is not only easy but lots of fun, you will find yourself doing more recording and enjoying it more than you ever did before.

Recording Time in Minutes	Reel Size in Inches	
	7½ ips	3¾ ips
0-4	3	3
4-8	4	3
8-15	5	4
15-30	7	5
30-60	—	7
30-45	7*	—
60-90	—	7*
*-1 mil mylar tape		

Figure 4: the table shows the amount of recording which can be done on currently available reels. For ½ mil Mylar tape double the figures given for the 1 mil tapes marked with an asterisk.

# Visataping Britain

by Erik Lindgren

. . . . it started as a trip to seek education, and became more enjoyable with every sound recorded.



Above: A chat with the "unemployed artists" painting on the pavements of London makes an interesting addition to a sound library.

Left: Among our recorded sounds of Britain we captured the changing of the Guard at St. James' Palace in London.

**A**FTER some hesitation I decided to go to school again at the age of 31 and went to Britain in the middle of March to start a three months' cruise with the view of taking a Diploma in English. Beside a lot of voluntary leisure work in the shape of pen pal club material, my luggage also included a spring driven recorder which turned out to be a very useful companion in many respects. An evil fate compelled me suddenly to interrupt my stay in Britain, but the few weeks I was there, were filled with adventure.

One of the many nice London spots to go to when you have a few hours to spare, is the Imperial Institute, not very far from South Kensington Station. The long subway itself that links the Science Museum with the underground station is even worth a visit, and I had the opportunity to record some tomb-like sounds and echoed steps as people were passing. One day a disabled man stood there playing his mouth organ, which of course added to my collection of London sounds, as did also the shots I took another day in Oxford street of people selling plastic bags, worthless jewelery and other rubbish on the pavements.

Back to the Imperial Institute. My reason for bringing the recorder there was that I wanted to dub some oriental music and sounds from "The Last Candle" and a few other



films in the Institute Cinema, where educational films are displayed with a new programme every week. Admission is free, by the way.

I was in the middle of recording a religious ceremony at a village not far from Kuching in Sarawak, when some most unusual sounds were heard at the back of the theatre. The ceiling was falling down all of a sudden, and then came the screams of a great many children belonging to the school-class that happened to sit underneath the damaged part of the roof. Luckily nobody was injured, but the panic was great, and the incident made me feel rather sad. When I went to the Imperial Institute next day, there was a signboard saying that the cinema had been temporarily closed. I took a photo of the signboard to be projected on the screen when I play back this unusual recording.

The main object of my stay in Britain was to study the language, and it might be apt to say a few words about this as well. I went to Davies' College, where all the students are foreign, and it was very interesting to note what different difficulties in pronunciation and intonation the students of different nations have. Recording equipment was used to some extent in certain classes. Some teachers were very skilled and could by careful listening to the intonation given by even advanced students, decide which were their respective mother tongues. I recorded the voice of my teacher, as he explained about my special intonation difficulties to take home with me, and before I resume my course next year, I intend to repeat these lessons by listening to these educational tapes.

One week-end I went to Bristol to see a friend who is a member of the same tape club as I belong to. We travelled a lot by his Hillman car in the West Country and made several interesting recordings and took many colour and black and white photos. An interesting visit was paid to the Cheddar Caves, where a guide let us go back to pre-historic time. His echoing voice made a good addition to the sound effects, when wonderful pictures of the various stone formations of the inner caves are shown on the screen in my home.

At the height of 1400 feet above sea level we had an interview with an Automobile Association Patrolman who carefully declared that he was not allowed to speak publicly. Reassured that the recording was for private use only, he started to speak very freely, and we got a most interesting and detailed story on the tape of his work



Interviewing an Automobile Association Patrol. Notice the sheep in background whose bleating gave a natural effect to the recording. While talking with him, we also picked up the chiming of a church bell on our tape.

helping motorists in trouble, with the chiming of a church bell and sheep bleating in the background.

Recording inside the car when climbing up the steep road at Porlock Hill was very thrilling. My friend is a skillful driver and did not have to go into the escape road at any spot, so we were very safe in his car.

A chat with a café owner in the little town of Lynmouth about the disaster five years earlier, when the flood burst downhill taking with it masses of rocks which destroyed a good many houses and killed some forty people, was followed by recordings of miniature mouth organ music during a picnic. In the evening a visit to the Churchill Guild House for handicapped persons added another very interesting experience to my collection. We were introduced to a strange gathering of people. Every one had some handicap—one was blind and deaf, some had only one leg, some suffered badly from rheumatism, and not one was completely fit. But strangely enough it was still a happy gathering. They sang, they chatted and laughed, sharing in a real enjoyment of the evening, and my little spring-driven job recorded its happiness.

Back in London I was rung up by my friend Peter Jennings, who is a journalist. He wanted to make a feature for a magazine about my hunting for the various



Recording atop a bus can mean a lot of taped surprises. As you travel through a town, it is a good idea to record what you are observing visually, as well as talking with various passengers.



Many characteristic London sounds, such as the shouting of a newspaper agent, now also add to the writer's sound library. Most people respond enthusiastically when they are being recorded.

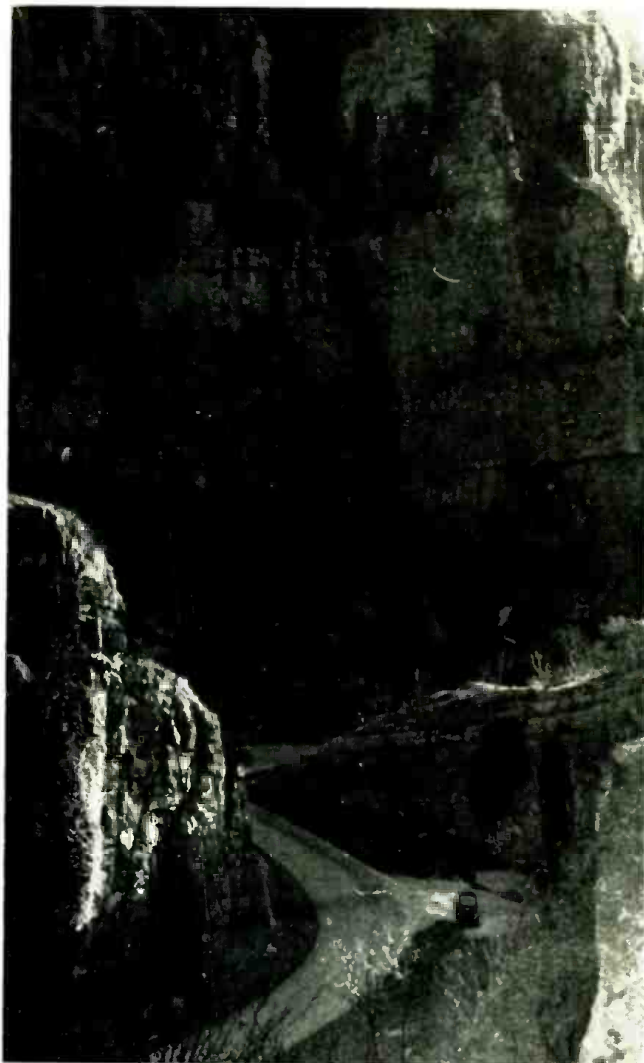
sounds of the gigantic city. We arranged to meet at Hyde Park Corner next morning, just some hours before I had to make my sudden departure from Britain because of a nasty accident to my wife. When getting to know about this by a letter from my mother-in-law, I was not very keen on going to Hyde Park Corner, but I had some hours to spare before the boat left, so I could as well spend them out as I could spend them with my landlady, contemplating the problems of life and the different fates of different people.

And I do not regret going. Peter's plans were to make a series of photos of myself while I was recording the sounds of the House Hold Cavalry as they passed through the arch on their way to Whitehall. Before they came, I also met Geoffrey Gillett with whom I had voicesponded for some time, and Peter took a picture of us talking to each other in the mike.

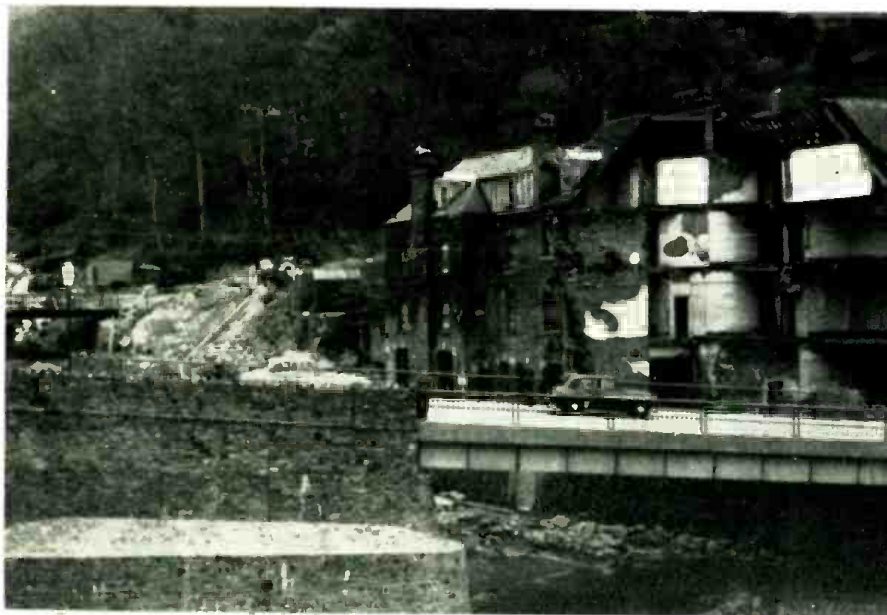
The horses came along, and to start with it was quite an ordinary scene, but then it suddenly happened. One of the horses behaved badly and threw its rider off. Peter got up at full speed and next time I saw him, he was in the middle of the traffic, taking some fine photos of the unusual incident for the papers. Geoff and I followed his example and rushed over to a refuge, where Geoff made his comments on the incident as things were actually happening—a real on-the-spot recording. I admired the way Geoff did this "job," but he said that he had "voicespondence" to thank for being able to speak so fluently. If any reader is interested in a dubbing of this unusual recording, I shall be pleased to assist, if tape and return postage are sent with the request.

On my way home I used the spring-driven recorder a couple of times, in and at the side of the trains. The recording of the customs clearance in the train compartment after passing the German town of Bentheim made a new and interesting addition to my sound library. The official did not know that his voice was recorded, nor did the "clients," so their conversation is most natural.

Once my wife has recovered completely I shall continue editing the many tapes from this interesting visit abroad, and if everything goes right, I shall be allowed to resume my interrupted course next year, when I shall take every opportunity to increase my sound library.



The West Country of Bristol is extremely rocky, with incredibly steep roads winding through it. We paid a visit to the Cheddar Caves, where echoing voices were recorded. These make excellent accompanying sound effects for the slide photos we took.



In the town of Lynmouth, much of which had been destroyed some five or six years ago by a flood, we chatted with a cafe owner about the disaster. Here we also recorded some miniature mouth organ music during a picnic.



# NEW PRODUCT REPORT



## NEW RIBBON AND CONTROLLED MAGNETIC MICROPHONES

*... Shure Models 330 and Commando Series can be used in various ways.*

**T**HE model 330 "Unitron" microphone is a high quality, low impedance mike that is suitable for professional use. It has a frequency response of 30 to 15,000 cycles, plus or minus 2½ db.

It is a ribbon microphone with a super cardioid pattern with unidirectional characteristics that effectively reduce background noise. The metallic ribbon is suspended between the poles of the magnetic structure and this, combined with the use of highly efficient magnetic circuits gives maximum operating efficiency in a small microphone.

The unit has three impedances, 50, 150 and 250 ohms. These are selected by turning a screw on the face of the base.

Where unusually long cable lengths are required, the lower values should be used. The permissible cable length is practically unlimited since neither response nor level is appreciably affected. Shure makes extension cables (A26C) 25 feet in length, with connectors, that can be strung together.

For use with high impedance inputs such as amplifiers and tape recorders, an A86A cable type transformer should be used. Either the 50 ohm line or the 250 ohm line may be used.

Because the output level of the mike

is so low, preamplification will be needed when used with an ordinary recorder. This low output is a characteristic of all ribbon mikes.

The unit is impervious to temperature and humidity changes and the only precaution necessary is to avoid mechanical shock.

Because of its unidirectional characteristics it is suitable for public address use with good amplifiers. With the back of the mike toward the audience, random noise is reduced as much as 20 db. The same applies to radio or TV studio use.

Our tests of the unit showed that it lived up to the specifications claimed for it both as to quality and frequency response.

The "Commando" series of microphones are low priced mikes of the controlled magnetic variety. There are three of them, the Model 415, 420 and 430. The frequency response characteristics of all are the same, 60 to 16,000 cycles per second plus or minus 3 db.

All have omnidirectional pickup patterns. The Model 415 is a high impedance mike, the Models 420 and 430 have both high and 150-250 taps on them. Impedance can be changed by removing the case and changing the position of one of the pins in the ter-

S T A **F** O K S T E D

**Product: Model 330 Ribbon Microphone, Model 430 Controlled Magnetic Microphone.**

**Distributor: Shure Bros., 222 Hartrey Ave., Evanston, Ill.**

**Price: Model 330—\$120 list  
Model 430—\$38.50 list**

terminal block.

The 430 and 415 may be used in the hand, on a desk stand or on a conventional mike stand. The Model 420 is more specifically built as a lavelier mike. The output of the mikes is about the same in all three models, 55 db down. By contrast, the 330 model is 87 db down open circuit voltage level.

The Commando series uses a balanced armature magnetic principle. These mikes have high output, smooth response and can withstand extremes of humidity and temperature.

The microphone which we subjected to test was the Model 430 and it met the specifications as outlined by the company. This mike and its companions are suitable for use with tape recorder PA systems, amateur communications and similar purposes. When used in the vertical position a cast may be grouped around the mike for even pickup of all voices.

The model 415 and 430 have switches incorporated in the handle. It is a press to talk locking, or non-locking switch. If a switch is not required a cover plate is furnished which



Impedance adjustment on the 330 is made by turning the screw mounted on the shock-proof base mount of the microphone.

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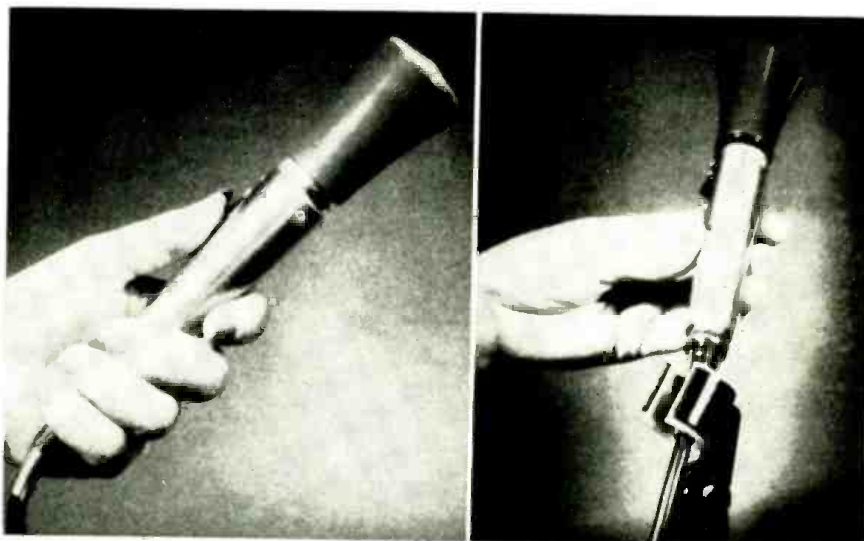


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Left: the Model 430 is shown being held in the hand; note switch button under thumb. This controls the microphone circuit. Right: the unit fits into the swivel adapter for stand operation.

may be put over the switch, locking it in the on position.

Models 415 and 430 are furnished with the swivel adapter shown in the photos which permits the mike to be used on a stand and to be placed in any position.

The 420 and 430 mikes may be connected directly to a 50-250 ohm line. This is useful where long cable runs are necessary or where difficulty may be encountered from hum. If the low

impedance is used, then a line transformer should be connected close to the recorder to match the recorder input.

Depending upon how much you wish to spend for a microphone and the range of your recorder, we found these mikes worthy of your consideration. The results obtained with them were good and, as has been mentioned previously, they met the specifications set for them by the manufacturer.

Below: connecting the Model 330 mike to high and low impedance inputs. If a high impedance input is used, such as a tape recorder, then a microphone cable transformer is necessary.

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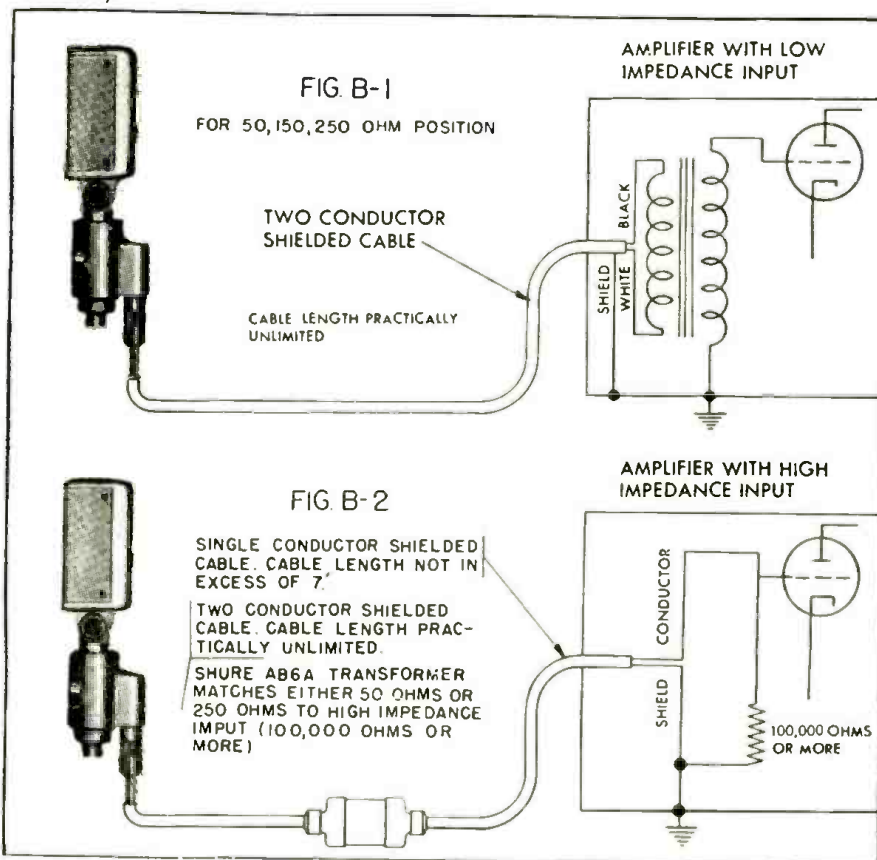


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# STEREO SECTION

## NEW TAPES

By Georgie Sigsbee

### SYMPHONY-CONCERTO

HAYDN

Symphonie Concertante in B Flat, Op. 84  
Hamburg Chamber Orchestra  
Hans J. Walther, Conductor

CONCERT HALL SOCIETY EX-57

Stereo . . . \$8.95 . . . 22 mins.

Haydn composed this unusual work while on a triumphant tour of England. It is not a symphony, but essentially a concerto for four solo instruments, accompanied ably by a chamber orchestra. This is a superb recording under a master conductor of 18th century style. The soloists, heard most often as two pairs; oboe and bassoon, vs. violin and cello; play with a musical feeling and beautiful tone that match their technical accomplishment.

As a gem of 18th century rococo music, this piece, given the added glitter of stereo, is highly recommended. You will undoubtedly find increased enjoyment with each hearing.—D.S.W.

### OPERA

PUCCINI

La Boheme (Concert Version)

Marilyn Tyler, Soprano . . . . . Mimi  
David Garen, Tenor . . . . . Rodolfo  
Leonardo Wolovsky, Bass . . . . . Colline  
Corry Bijster, Soprano . . . . . Musetta  
Gerard Molthaus, Baritone . . . . . Schaunard  
Henk Angenent, Bass . . . . . Alcindoro

Concert Hall Symphony Orchestra and Chorus  
Carl Bamberger, Conductor

CONCERT HALL CHT/BN-9

Stereo . . . \$23.90 . . . 90 mins.

Bamberger does a competent piece of work, the soloists sing their roles in an able fashion but are not particularly in-

spired, the chorus adds some color and the fidelity is good.

The recording engineers and/or directors did not take full advantage of stereo reproduction as the soloists are grouped on one side and the only "realistic" effect comes from the short bits of chorus work and the spread of the orchestra. Also the orchestra seems to be back . . . or down in the pit . . . while the soloists are in front of the orchestra . . . too intimate miking on the singers.

This is certainly not a definitive reading. The only lasting gift is the splendid music of Puccini which lingers on in the mind for days after hearing it played.

Background notes pertaining to the four acts are supplied by *Concert Hall* . . . no libretto.

### CONCERTO

BEETHOVEN

Concerto No. 5 in E-Flat, Op. 73  
("Emperor")

Artur Schnabel, Pianist

Symphony of the Air

Josef Krips, Conductor

RCA FCS-61

Stereo . . . \$16.95 . . . 38 mins.

In this concerto the orchestra does not defer to the solo instrument but works with the soloist on equal terms and commands long passages on its own. There is considerable musical dialogue between all the artists, by-play between soloist and horn, etc. All work together with complete rapport . . . a very fine reading, all told.

As to the reproduction . . . one is more conscious in this recording of the imbalance between orchestra and piano. The piano, while not too closely miked, is nonetheless upstage from the orchestra . . . the latter sounding spread and back in the auditorium. This, incidentally, is always more noticeable during full fortissimo passages.

In the more poetic, pianissimo Beethoven 4th Concerto (Rubinstein, RCA FCS-60, rev. March '58) the piano dominates the musical scene. Rarely does the orchestra raise its voice, rather it assumes a supportive role, so that this lack of technical perfection is not too disturbing. Both of these recordings are performed with great artistry.

### OVERTURE— ORCHESTRAL

WAGNER

Tannhauser: Overture and Venusberg Music

Boston Symphony Orchestra  
Charles Munch, Conductor

RCA BCS-55

Stereo . . . \$8.95 . . . 21 mins.

The "Tannhauser" overtures, with its "Salvation by Grace" theme and sensuous Horselberg revelries, is coupled with the deliriously passionate music of the "Bacchanale" (Venusburg) in a power-packed, high-fidelity recording by the Bostonians.

Wagner, himself, would undoubtedly be impressed with the vivid stereo reproduction accorded this music.

The overture has also been recorded by Gui on Livingstone label. (BN 702, Aug. '57)

BEETHOVEN

Leonore Overture No. 3, Op. 72a

Coriolan Overture, Op. 62

Boston Symphony Orchestra

Charles Munch, Conductor

RCA BCS-48

Stereo \$8.95 . . . 18.5 mins.

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FUN LOVIN' JAZZ .....EM75F  
**Marty Grosz Honors**  
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HOORAY FOR BIX! .....EM76F  
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First-rate performances of both of these familiar items, beautifully displaying in the breadth of stereophonic recording the rich sonority of the Bostonians. The Von Beinum disc version of these selections has long been my favorite, and although it possessed a degree of expressiveness and dynamic range unmatched in the present recording, it cannot compare with it for sound quality. Definitely a fine tape.—J.L.

## OFFENBACH

The Tales of Hoffmann (excerpts)  
Orpheus in Hades Overture  
Boston Pops Orchestra  
Arthur Fiedler, Conductor  
RCA ACS-49  
Stereo ... \$6.95 ... 15 mins.

Here is an excellent reading of these familiar selections performed in a top-notch manner by Fiedler and the Pops. From beginning to end you should be impressed. Clear, razor-sharp stereo fidelity enhances the brilliant, intoxicating orchestration. You will agree this is an exciting recording.

## ROSSINI-RESPIGHI

La Boutique Fantasque  
Boston Pops Orchestra  
Arthur Fiedler, Conductor  
RCA CCS-53  
Stereo ... \$10.95 ... 27 mins.

Here is happy music for the young at heart presented in an effective performance that glows in stereo reproduction. Respighi constructed a popular ballet from an album which Rossini composed and entitled "bits of nothing." "La Boutique Fantasque" is an enchanted toy shop whose miniature residents first entertain the customers and then repulse them when the circle of the toy family is threatened by purchasers. The nine movements of this delightful work include such varied themes as Tarantelle, Danse Russe, Can-Can, Nocturne and Galop.

The engineering maintains RCA's high standards.—D.S.W.

## TCHAIKOVSKY

Suite from the "Nutcracker"

Boston Pops Orchestra  
Arthur Fiedler, Conductor

RCA BCS-62  
Stereo ... \$8.95 ... 22 mins.

This is a vibrant recording. Fiedler has the Sugar Plum Fairy swirl about at a good clip and in the Russian Dance he reaches the heights of a breathtaking, spine-tingling performance.

The RCA engineers have done a wonderful job achieving clear high's in an ultrabright, close recording.

There are two numbers in the Suite which, of course, are not found in the Rodzinski Highlights tape (Sonotape SWB 7001, Dec. '57). So on the RCA you have 7 more minutes of music for an extra 2 dollars. You pay your money and you take your choice—both are good recordings. Rodzinski is for the ballet lover who desires the delicate, gossamer effects; Fiedler is for the hi-fi enthusiast who likes a potent performance.

## BABITS

1. Western Star Concerto
  2. Variations on Twinkle, Twinkle Little Star
  3. Schuman, Arabesque
- Linda Babits, pianist composer accomp. in concerto by Alfred Grant, Accordionist

## TAPE OF THE MONTH S-306

Stereo ... 26 mins.

This young 16-year-old pianist plays attractive shorter pieces, and offers a sixteen-minute rhapsody of her own composition. Upon themes which are strongly reminiscent of Schumann and other composers studied by young pianists, plus Red River Valley, she has improvised a continuity that is by no means a concerto or serious composition. The role of the accordion is unclear, but the combination and the talent of the composer are to be encouraged, if not commended. The sound is adequate.—D.S.W.

## POPULAR

### DANCING ALONG IN STEREO

Let's Dance  
Somewhere Over the Rainbow  
Women Are No Angels  
Please, A Cha-Cha  
Five Foot Two  
Siboney

The Fred Martin Radio Orchestra  
LIVINGSTONETTE 2001 C  
5" reel, Stereo ... \$6.95 ... 16 mins.

Here are tunes of varied tempo given suitable dance beats and good arrangements. "Five Foot Two" is performed in a jazzed-up ragtime style. Some organ work is injected in the "Cha Cha" number and "Siboney" . . . in the latter the instrument occasionally sounds a bit tipsy; it seems to have the hiccups!

The recording is clear and well balanced.

### MUSIC FOR A MIDNIGHT MOOD

April in Portugal  
Flamingo  
The Spring Waltz  
Tango de la Luna  
Song of Paradise

LIVINGSTONETTE 2005 C  
5" reel, Stereo ... \$6.95 ... 15 mins.

A very pleasant tape. The selections, except for the waltz, all have a south-of-the border taste and are delivered in a relaxing style by a nameless orchestra. The string section helps create the easy mood. A good stereo recording.

### STEREO DANCERAMA

What's New & I Thought About You  
Gin and Coconut Water  
Penny Serenade & Jeepers Creepers  
Around the World in 80 Days  
Cha-Cha New York  
Anastasia & Ebb Tide  
Oom Fa-Fa  
Theme from "Medic" & Mountain Greenery

Love Letters & While the Music Plays On  
Choppy Merengue  
Mel Connor and his Orchestra  
LIVINGSTON 1100 BN  
Stereo ... \$11.95 ... 29.5 mins.

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**R606 VERLYE MILLS HARP WITH A BILLY MAY BEAT**. Big band Billy May pile driver brass with Verlye Mills jazz harp.



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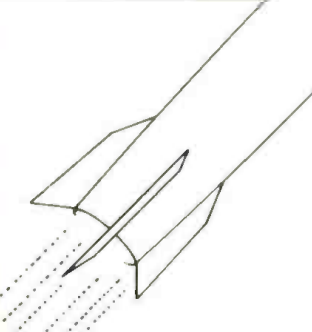
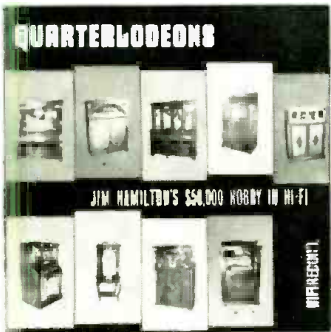
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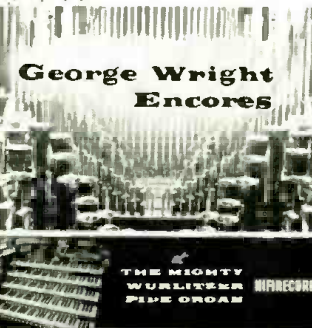


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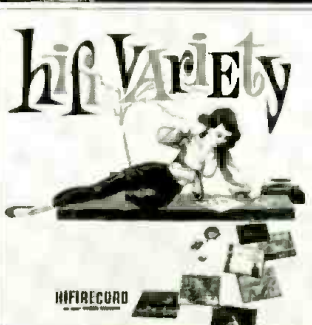
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**R804 THE END ON BONGOS**. Jack Burger (the end) craziest skin slapper of them all does it with top name group and 26 different drums and native percussions.



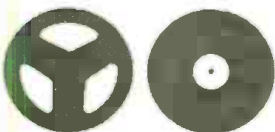
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BASFIDE 61 NEW YORK

tapes a particular tape has to have something very special to get the spotlight . . . this one does . . . it offers particularly engaging selections, played and recorded in a most excellent fashion. The pure tone of Mel Connor's Trumpet has been well-named "The Golden Sound." The selections, as you can see, have something for everybody, and the coupling allows ideal dance-length without too much repetition. My only complaint is that Dori Pierce's vocals lack the intimacy which her style calls for, and which might have been afforded with closer miking.—J.L.

### GERSHWIN MEDLEY IN STEREO

Hamburg Philharmonic Orchestra  
Heinrich Alster, Conductor  
BEL CANTO 25  
Stereo . . . \$7.95 . . . 16 mins.

For the millions who love the music of George Gershwin any pleasing arrangement of his most popular works would be most welcome. However, to me, his music has always symbolized a very special kind of "Americana" and to hear it played without the slightest enthusiasm is almost sacrilegious! In this recording the musicians are simply playing notes . . . not the spirit of George Gershwin! There is no listing of the contents on the box or the reel.—J.L.

### HONEYMOON IN MANHATTAN

Curtain Time  
Slaughter on 10th Avenue  
Romance in Central Park  
Autumn Leaves  
Manhattan  
New World Theatre Orchestra  
BEL CANTO 31  
Stereo . . . \$9.95 . . . 23 mins.

In this recording of "mood" music I was somewhat reminded of the music hall when the orchestra plays before the movie. "Slaughter on 10th Avenue" and "Manhattan" have, for me, a close musical link with New York but I can think of other tunes which could have filled the rest of the recording which would have more favorably depicted Manhattan.

All are performed in a polished, sophisticated style . . . with full strings and with a steady beat supplied by brush man, bass and guitar. In the last two numbers the piano comes forward for a few solo shots. This music is given the elegant approach . . . not even in "Slaughter . . ." do you sense the brash, raw quality that some feel characterizes the world's busiest island. Good stereo engineering.

### DANCE HITS OF THE 30's AND 40's

Paper Doll  
Dream  
Stars Fell on Alabama  
I've Got My Love to Keep Me Warm  
Johnson Rag  
The New World Theatre Orchestra  
BEL CANTO 30  
Stereo . . . \$9.95 . . . 22 mins.

Good dance beat, big band sound, easy-going standard arrangements. From the foot-tapping "Paper Doll" and "Johnson Rag" to the smooth string-piano-sax arrangements of the other numbers, all is accomplished in the abundantly ripe style

of this group. Requiring no avid audio application on the part of the listener, this is inoffensive background music.

The recording is fine . . . the sound is big.

### ANGELO INVITES YOU TO DANCE, Vol. 1

Jealousy  
Tango Of The Roses  
In A Persian Market  
La Borrachita  
It's Wonderful  
Out Of Nowhere  
Taboo  
Malaguena  
Caravan

Angelo and his Orchestra  
TAPE OF THE MONTH S-321  
Stereo . . . \$10.95 . . . 30 mins.

Angelo and his orchestra are newcomers to the field. However, their style is one of a thoroughly mature organization which shows promise of being able to hold its own in this tremendously competitive field. The selections on this tape are most agreeable, well-played and well-recorded. There is nothing sensational, about it, but it is what it claims to be . . . good music for dancing.—J.L.

### LATIN RENDEZVOUS

Santander  
Mi Morena  
Vitor A Espana  
Puerto Pinasco  
Dos Banderas  
No Me Lo Digas  
Tonita  
El Ultimo Tango  
Tu Boca

Francois De Haan,  
Robert Brown, pianists  
Jack Phillips, organist  
OMEGATAPE ST-2029  
Stereo . . . \$11.95 . . . 23 mins.

De Haan and Phillips collaborate on six, Brown and Phillips on the other three, of these numbers. The flavor is South American. The rhythms of the tango, bolero, jata, etc., are colorfully captured by the Dutch concert pianist, De Haan, and his colleague at the Hammond organ, Jack Phillips. Bob Brown shows his skill during the two ballad-like tunes and the fast tempo of the bullfight fantasy.

The Max Urban arrangements are very good and the recording is well engineered.

On my copy selection #6 doesn't appear on the reel label and the selections are not in proper order in the notes . . . I think it would be to everyone's advantage if notes gave tunes in chronological order.

### STEREO DANCE TIME

Tenderly  
Matilda  
Moritat  
La Pansa  
My Man  
Day-O  
Que Sera Sera  
The Most Beautiful

Roger Lecussant and His Orchestra

OMEGATAPE ST-7025  
Stereo . . . \$11.95 . . . 21 mins.



Lecussant has a goodly group of musicians on hand and the arrangements are danceable, but somehow I prefer his tape of popular French music . . . perhaps he is more at home. Somehow the calypso tunes, "Matilda" and "Day-O", seem just a little out of easy reach or perhaps I am just used to Belafonte. There is some nice guitar and jazzy clarinet work in "Moritat" and a catchy arrangement of "My Man."

The sound is fine.

**STEREO DANCE PARTY**

- Bop A Doo-Bop A Doo
- Tricky
- Shish-Kebab
- Riffin' Around
- Hey Babe
- Hesitation Hop
- Cattle Crossing
- Driftwood
- Dangerous Curve

**RALPH MARGERIE and His Orchestra**

**MERCURY MS2-13**

Stereo . . . \$8.95 . . . 21 1/2 mins.

One of the most popular bands of the day brings you their leading arrangements of such numbers as "Shish-Kebab," "Hey Babe," and "Cattle Crossing." The tempo varies from rock 'n roll to fox trot.

The sound is excellent. This tape should really go . . . especially with the teen and young adult crowd.

**BRASS IN HI-FI**

- My Mother's Eyes
- All The Things You Are
- God Child
- Brass at Work
- Temptation
- A Rose For David
- Everything Happens to Me
- Salute
- Song For Tuba

**Pete Rugulo and his Orchestra**

**MERCURY MDS2-11**

Stereo . . . \$12.95 . . . 30 mins.

Here is another Mercury tape aimed at pleasing several types of listeners. It is exciting dancing and listening music; and it is a sheer delight for the connoisseur of technical recording excellence. For the devotee of the "new approach" Pete Rugulo takes a brass band (4 trumpets, 4 trombones, 3 French Horns and a Tuba), adds rhythm accompaniment and comes up with a most pleasing and unusual result. The selections are well-chosen to illustrate the versatility of the arranger and enjoyment increases with repeated listening. —J.L.

**THE LASS WITH THE DELICATE AIR**

- As I Went A-Roaming
- London Pride
- The Floral Dance
- These Precious Things
- Where'er You Walk
- Pedro, The Fisherman
- Julie Andrews, Vocalist
- Music arranged and conducted by Irwin Kostal

**RCA BPS-85**

Stereo . . . \$8.95 . . . 20 mins.

Not only does this lass sing with a

delicate air, but the songs she sings possess a different and refreshing air; and she delivers them in a clear, sweet voice. The warmth and sincerity she imparts to these tunes which she personally selected prove to the listener that they hold a fond place in her heart.

The happy "As I Went A-Roaming," the quaint "Floral Dance," and the poignant "These Precious Things" all have their own special atmosphere. The catchy tune and delightful tale unfolded in "Pedro, the Fisherman" are amusing and you may find yourself whistling this one long after hearing it. Miss Andrews and Mr. Kostal combine their talents and transport you back to another age with the rather rooco rendition of "Where'er You Walk."

Beautifully recorded . . . charming vocals by this "Fair Lady."

**JAZZ**

**ROLLING WITH BOLLING**

(A Musical Portrait of New Orleans)

- Royal Garden Blues
- I Thought I Heard Buddy Bolden Says
- Muskrat Ramble
- High Society
- Coronet Chop Suey
- St. Louis Blues
- Basin Street Blues
- King Porter Stomp
- Claude Bolling Big Band

**OMEGATAPE ST-7021**

Stereo . . . \$11.95 . . . 42 mins.

Claude Bolling is a young Frenchman whose piano style has been described as "somewhere between Ellington and Basie." His orchestra produces tasteful "Big Band" sound, beautifully recorded in excellent stereo balance, and on one of the quietest tape surfaces I have encountered. The selections consist of 6 New Orleans perennials plus two originals, all exhibiting an excellent blend of freedom for the soloist with well-planned support in accompaniment. Omega can well be proud of this tape. I would rate it one of their best to date.—J.L.

**PROMOTIONAL TAPE**

**DIXIELAND JAMFEST**

When the Saints Go Marching In  
The Blues

Toddle  
Battle Hymn of the Republic

**REEVES-SOUNDCRAFT CORP.**

Stereo or Monaural

Soundcraft has specially recorded an "All-Star" jazz combo and is making it available as a bonus to anyone who purchases a 7-inch reel of Soundcraft tape. This jamfest will be duplicated on the tape the customer buys for just the cost of the tape, plus 75c for handling and postage.

If you're a jazz advocate and would like a topnotch jazz recording, latch on to this offer . . . it's a bargain.

The artists featured are: Coleman Hawkins, tenor sax; Sol Yaged, clarinet; Henry "Red" Allen, trumpet; J. C. Higginbotham, trombone; Lou Stein, piano; Milt Hinton, bass and Cozy Cole on drums. This is a real gasser . . . a collector's item . . . not for sale and can be obtained only through this promotion offer.

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Phone: 570-1000

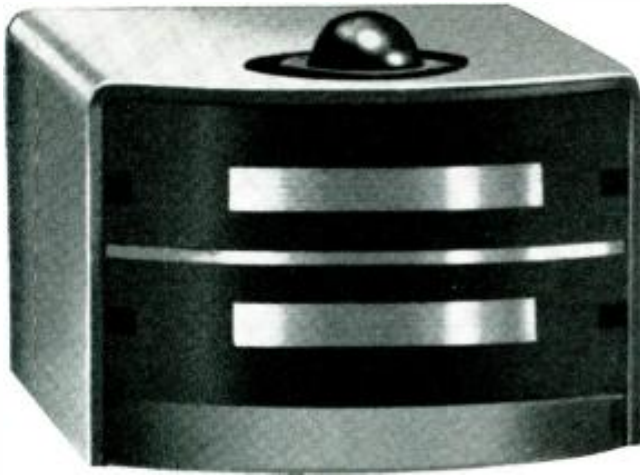
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attached to your present power amp and presto! you've got the finest stereo system Channel 1-25 with amp free, resp. 2-25. (Price \$49.95, plus \$2.00 shipping, tax, postage and 20% with local dealer. Total price \$71.95. Controls: volume, bass, treble, 10 and hi filters; equal for all labels plus MARET tape head. Channel 2—same sensibility. **SAVE! Easy-to-Install Kit \$89.95 \$59.95**

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The first and only one of its kind. Provides complete stereo system. Includes: pre-amp, amplifier, tuner, 4 speakers, 10" and 15" speakers. Easy to install in your car or home. **\$49.95 \$39.95**

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**OTHER MATCHING ARKAY STEREO UNITS...**

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## Four-Channel Head Developed

*... new head announced by Shure Brothers opens fantastic possibilities for home tape recorders.*

**D**ETAILS on the new four-channel head recently announced by Shure Brothers have just become available. This is the first multi-channeled head ever designed for home type tape recorders and the possibilities in it are tremendous.

It will record and play back four single channels on regular tape, thus permitting twice the recording time on an ordinary reel.

It will play the present stacked stereo tapes.

It can be used for recording stacked stereo, single or dual.

It can play back present dual track or single track tapes made for present day machines.

It makes possible dual track stereo.

It will play and record on the new Add-the-Melody tapes and we can imagine, with the proper switching and amplifiers, that it could be used for some fantastic sound on sound work.

Best of all, it is compatible with present day standards. Usually, when a dramatic improvement like this makes its bow to the public, it means the older form of an article becomes obsolete. However, if the manufacturers of the various types of recorders could make the necessary kits available, it would be possible to convert older recorders to the new head. This, admittedly would not be a simple

operation, as some rewiring of the circuitry would have to take place but it shouldn't be beyond the capabilities of the expert tape recordist or the service man.

At present the heads are only available to tape recorder manufacturers, none is being sold direct by Shure Brothers who are just starting upon the new item.

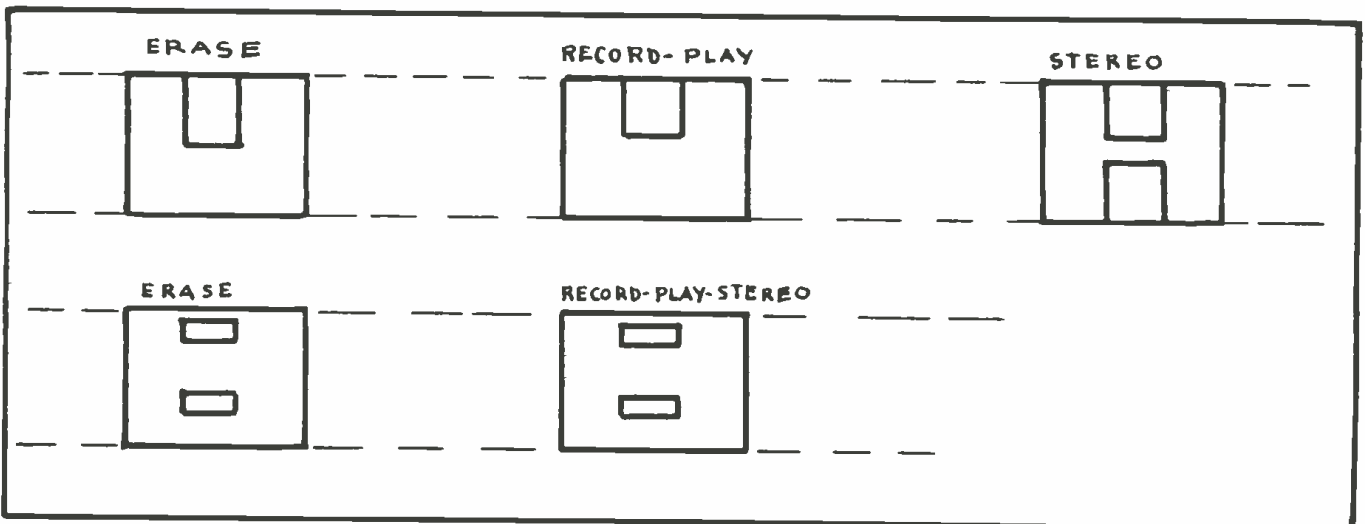
The drawing below shows the difference between the head system now in use and the head system as it would appear with the new Shure head.

The top half of the sketch shows the erase head at the left, the record playback head, center and the stacked stereo head on the right.

The lower part of the drawing shows that only two heads would be necessary. The erase and a combination record-playback-stereo head.

The head gets the four channels by interlacing them, thus only two recording poles are used. There are matching poles on the erase head. When the reel has been recorded in one direction it is turned over and run in the other direction, as is now done with regular dual track tapes. Those recorders which feature no reel turnover to play back on the second track would be able to continue that feature in dual track stereo.

The only disadvantage to the new head lies in the fact that there will be a drop in the signal strength picked off



This not-to-scale drawing shows the differences between the present head arrangement in recorders and the new method employing the Shure four track head. Top: Erase, record/playback and stereo heads are aligned as shown. Lower, the three heads are replaced by two of the new heads, an erase head and a second head that records, plays monaurally or stereophonically.



the tape because of the narrower width of the track. This, however, is no handicap as modern low-noise preamplifiers and amplifiers can boost the volume to satisfactory levels without difficulty.

The drawing to the right shows how the track system was developed. At the top is shown the regular dual track set-up now in use. The shaded area represents the amount of the tape recorded on commercial stacked stereo. The solid line shows the amount recorded in dual track monaural operation.

The lower part of the drawing shows how the tracks will fall in the new four-channel interlace. For stereo, tracks one and three would be used in one direction, two and four in the other.

For four track monaural operation, the top track would be recorded first, then the bottom track, then the upper center track and finally the lower center. This would minimize reel turnover. Other combinations are, of course, possible.

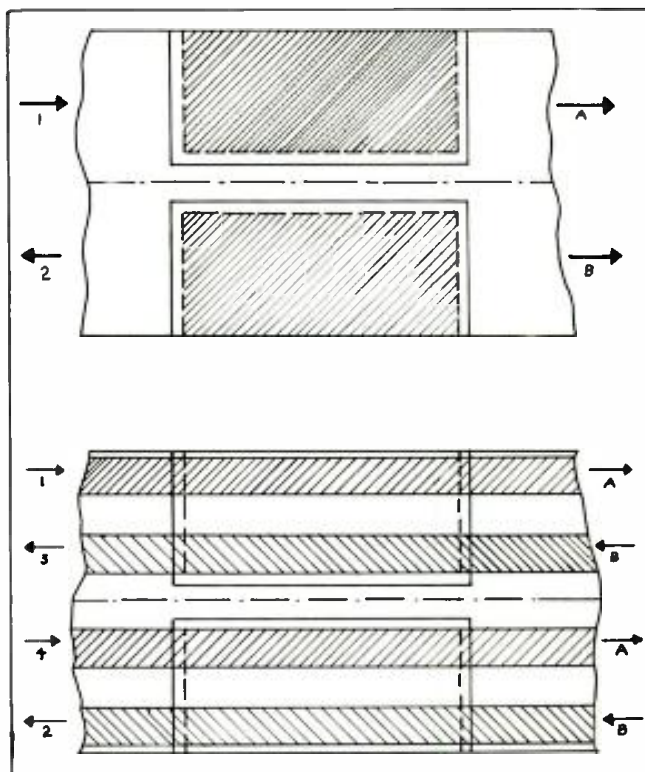
Using the new double play tape on a seven inch reel it would be possible to put four hours of monaural recording at  $7\frac{1}{2}$  inches per second on one tape or eight hours at  $3\frac{3}{4}$  ips. At  $1\frac{7}{8}$  speed, with which some recorders are equipped it jumps to an amazing total of 16 hours of recording on one tape!

Even with the standard  $1\frac{1}{2}$  mil tapes at the  $3\frac{3}{4}$  ips speed, four hours of recording could be put on one reel.

The new head is named the TR48A and its companion erase head is the TE28A. As will be noted from the drawing, the recording does not go to the edge of the tape but stays .005 inch inside. This is to avoid edge curl effect which might cause some signal variation should the tape become deformed.

The actual track widths are .031 inch with a space of .0315 between tracks. Between the two middle tracks there is a space of .050 inch. The spacing was based on present stereo tape spacing. Professionally recorded stereo tape has a track width of .100 inch.

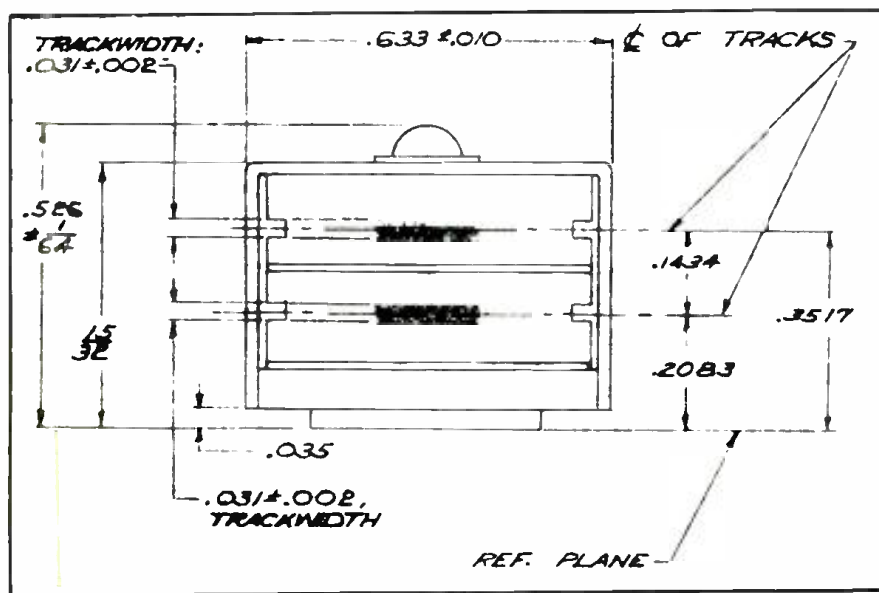
With a separate record-playback preamp attached to each of the heads the possibilities would be enough to make a tape recordist drool. Recording could be done on the top track, then as this is played, the second track could be recorded while the first is played, for sound on sound. If



Top: present day monaural recording. Arrows on right show direction of recording for stereo. Arrows on left show direction of recording for monaural. Shaded area shows depth of professional stereo recording. Solid line shows depth of present monaural recording. Tracks labeled A & B are stereo, if numbered are monaural. Lower: How the tracks would appear using the new system. Tracks A & A would be stereo pairs in one direction, B & B in other. Numbers indicate sequence for monaural.

a second head were mounted a slight distance away from the first and upside down you could then play any track or record any track or combination separately or together—you can take it from there.

As we mentioned, production is just starting on these heads and when they will become available on regular brands of recorders, or in kit form for conversion, we do not know. But we'll sure keep you posted.



The dimensions of the new head. This unit is just about the size of present single channel heads and should present no complications in fitting it to existing recorders. The two recording faces are off center so that they will produce interlaced tracks when the reels are turned over. The head is well shielded.

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- Send literature and prices on stereo recorders.

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Remittances in full should accompany copy. Ads will be inserted in next available issue. Please print or type your copy to avoid error. Address ad to: Shop or Swap, Hi-Fi Tape Recording Magazine, Severna Park, Md.

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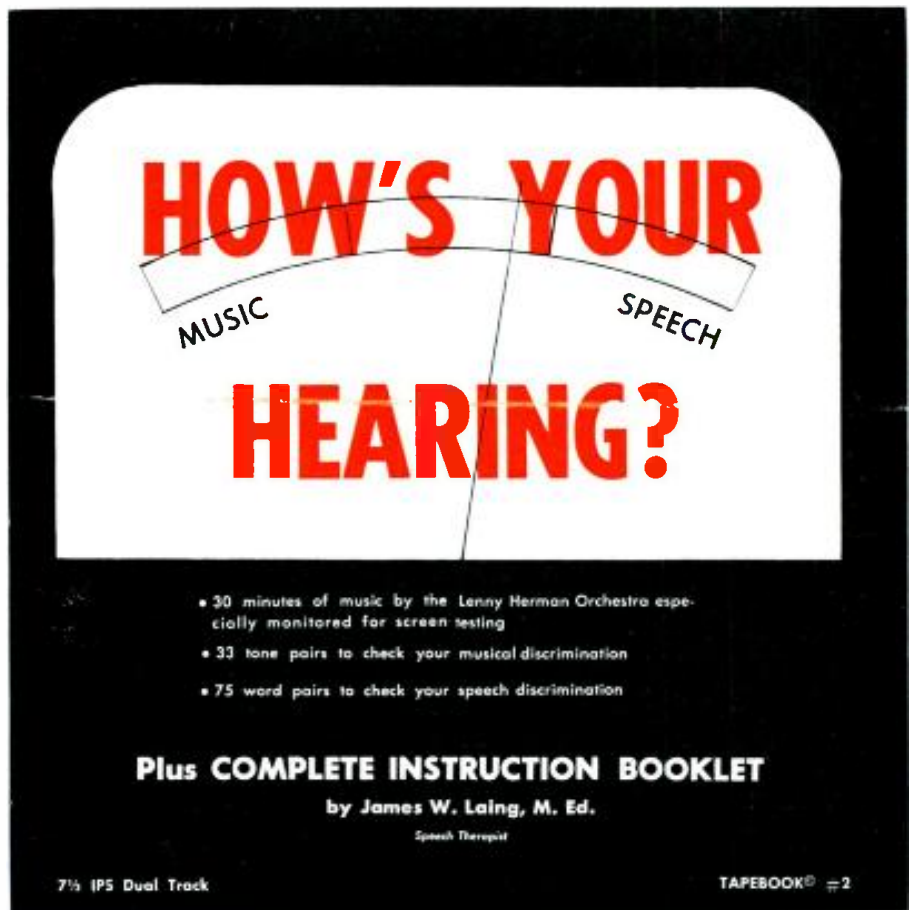
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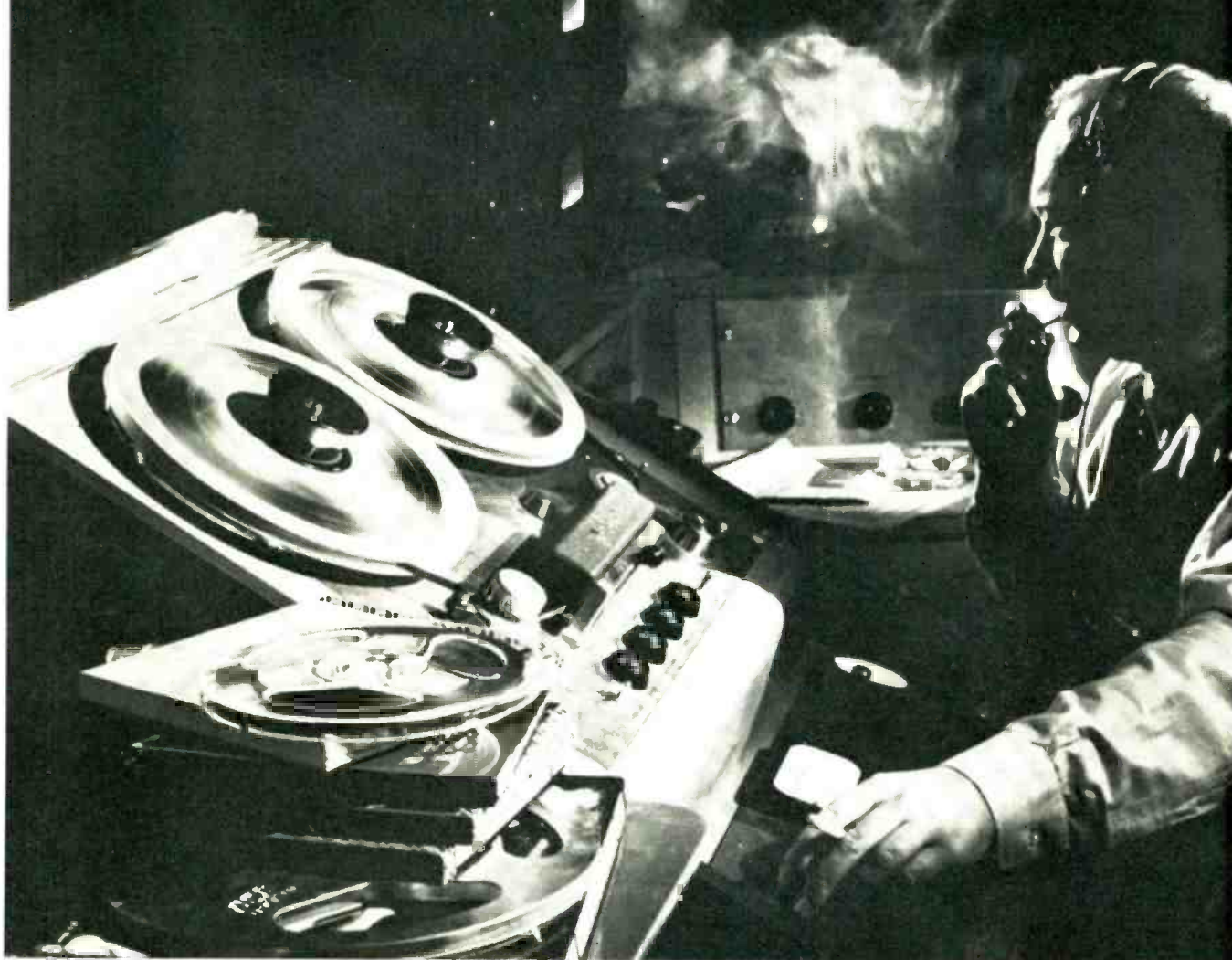
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