



# TAPE RECORDING



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Cadiz, Ohio

Playback—Sir Thomas Beecham Listens

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Studios . . .**

***all recording and duplicating  
is on Audiotape and Audiodiscs***

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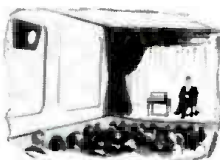


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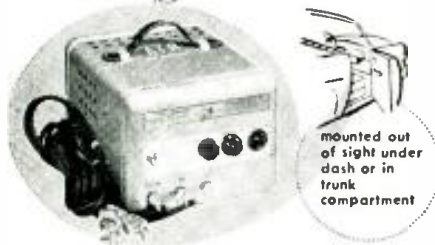
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# HI-FI

# TAPE RECORDING

VOL. 5 NO. 10

SEPTEMBER 1958

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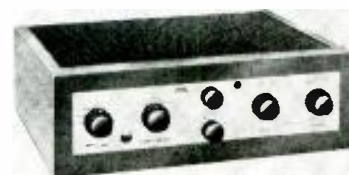
**NEW PRODUCTS**

**NEW EMPEROR II STEREO RECORDER**



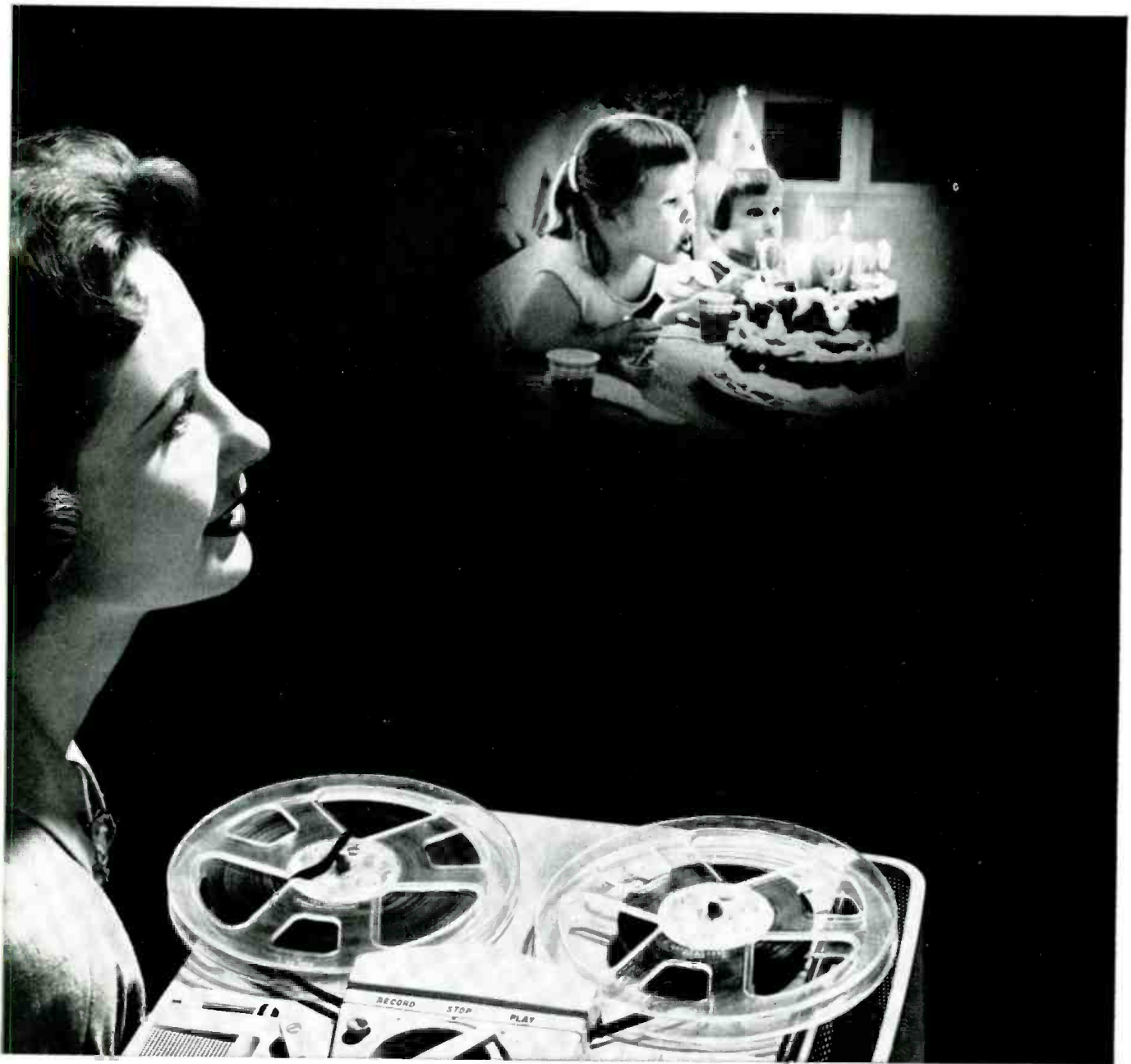
Pentron Corp., 777 S. Tripp Ave., Chicago 24, Ill., has introduced the new Emperor II (Model NL-4) stereo tape recording/playback system. Special features of this unit include: an automatic micro switch end-of-reel shut-off, automatic idler disengagement and instant automatic braking, frequency response of 40-15,000 cps, twin 4 x 6 oval speakers for use in stereo record monitoring and monaural playing, two microphones are supplied, signal to noise ratio is 50 db, will play 4 track and 2 track, flutter is under 0.3% at 7½ ips, and it is housed in a contemporary, scuff-resistant, two-toned carrying case with two extra large tape storage compartments. The price is \$450. Also available is a portable stereo speaker system (Model ES-2) at \$75, and a remote control accessory at \$15. For full information, contact Pentron.

**MODEL HF81**

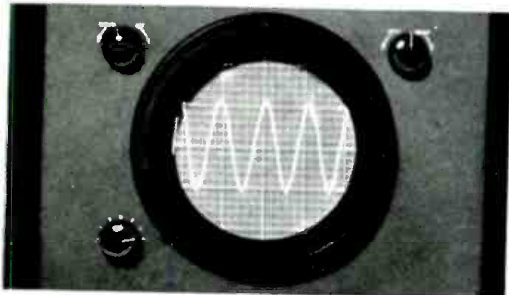


Electronic Instrument Co. (EICO), 33-00 Northern Blvd., L. I. City 1, N. Y., is marketing a dual amplifier-preamplifier in both kit and factory-wired form. It is the Model HF81, and it selects, amplifies and controls any stereo source, be it tape, discs, or broadcasts, and feeds it through the self-contained dual 14W amplifiers to a stereo pair of speaker systems. Features include: separate low-level input in each channel for mag phono, tape head and microphone; separate high-level inputs for AM tuner, FM tuner, FM Multiplex, two auxiliary A inputs and two auxiliary B inputs (one A & B in each channel); ganged level controls and separate focus control; independent low distortion bars and treble controls in each channel; audio output 2 W (1 W each channel) plus or minus 0.5 sdb 10 cps to 100kc. Kit—\$69.95. Wired—\$109.95. Contact EICO for further information.





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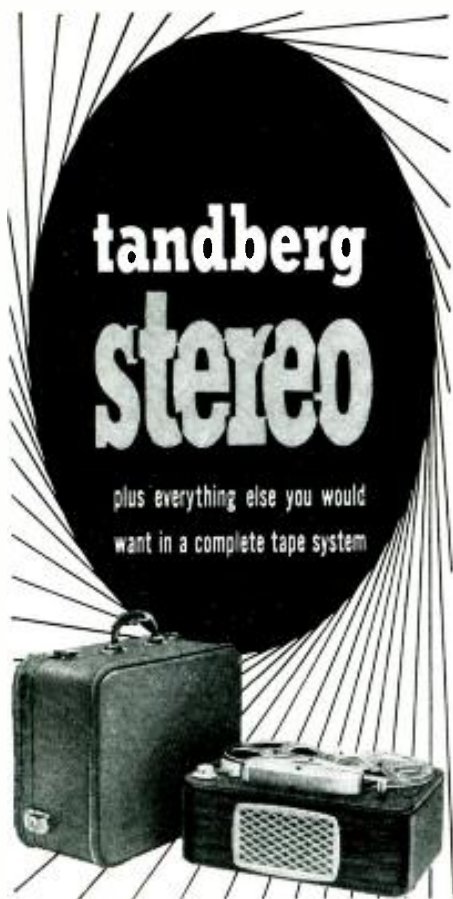
\*Du Pont manufactures "Mylar", not finished magnetic recording tape. "Mylar" is a registered trademark for Du Pont's brand of polyester film.



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The Tandberg stereo-trio including model 3-Stereo recorder/reproducer and two perfectly matched speaker systems. \$469.95



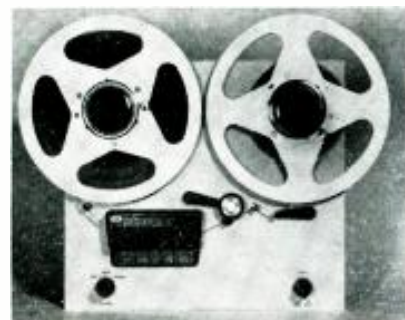
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#### E-V STEREO



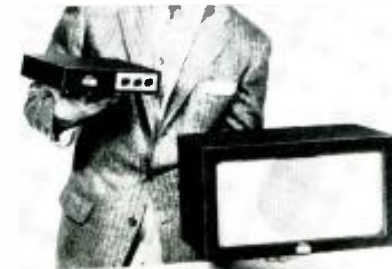
Electro-Voice, Inc., 425 Carroll St., Buchanan, Michigan, has introduced the Stereon, a new loudspeaker system designed to solve the space problem for stereo by eliminating the need for a large second full-range loudspeaker. The Stereon is comprised of mid-bass, treble and high-frequency drivers, and it produces only the frequencies needed for stereo—sounds above 300 cps. Bass below 300 cps from both channels is properly phased and directed to one full-range speaker system through the E-V Model XX3 Stereon control filter which uses the full bass capabilities of the large speaker. The upper range of one channel follows into the same loudspeaker, the mid and high range of the second channel is fed through the Stereon control filter to the Stereon. For price and more information, contact Electro-Voice.

#### NEW TAPE DECK



American Electronics, Inc., 655 W. Washington Blvd., Los Angeles 15, Calif., has announced its new Concertone professional tape deck. It accommodates reels up to 10½ inches in diameter; and it has three motors—a hysteresis synchronous capstan drive motor provides timing accuracy of plus or minus two seconds in one-half hour, and two torque motors eliminate the need for belts, gears, clutches and pulleys. With preamplifier included, the Concertone tape deck sells for \$349.50. Write to American Electronics for further details.

#### STEREO CONVERSION KIT



An all-purpose stereophonic conversion kit for present mass-market phonographs

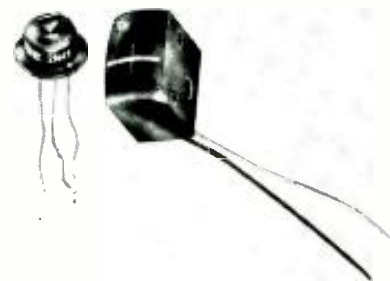
has been introduced by Walco Products, Inc., East Orange, N. J. It is complete with remote speaker in cabinet and stereo cartridge, which will sell for \$59.95. The new Walco unit consists of three basic elements: a four watt push-pull auxiliary amplifier for the stereo channel; two tone controls; a separate auxiliary loudspeaker in a specially baffled cabinet and an entirely new four-wire ceramic stereo pickup cartridge which readily adapts to most existing tone arms and replaces the monaural cartridge used in the conventional record player. For details, contact Walco.

#### AUTOMATIC TAPE PLAYER



The Tape-Athon Division of Anthony Brothers Refrigeration, 523 Hindry Street, Inglewood, Calif., is now manufacturing the Tape-Athon continuous automatic tape player. This machine is dual track, utilizes the 3½ ips speed, has a frequency response of 50 to 7500 cps, and flutter and wow of less than 2% which is inaudible. It is available in two models; one for playing 4 hour tapes, and the other for accepting 10½ inch reels and playing 8 hours. Tape-Athon also has a music library with over 50 hours of music edited into four-hour programs especially for use on the player. Model 375-7 sells for \$299.50, and Model 375-10 which accommodates the 10½" reels sells for \$345. For additional information, contact the manufacturer.

#### NEW DC ERASE HEAD



Michigan Magnetics, Inc. of Vermontville, Michigan has announced the production of a new dc erase head providing 50 db erasure with 5.5 ma of current through the coil. This head is currently manufactured in a 20 mil track width configuration. A mating play-back record head will be announced shortly. For more information, contact the manufacturer.



# 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:

Without describing all the different things in detail in your magazine Hi-Fi Tape Recording, I would like to say it is really outstanding in the field of tape recording information.

It has been my pleasure to read and enjoy the many articles which have helped me in my recording. I have been recording about four years now and the equipment I use now is like putting a show on the road during the week ends. I am a singer.

In the May issue, the author of the article on Visataping Britain mentioned dubbing these sounds for any reader who is interested. I would like his address so I can send him a tape. I think it is a wonderful gesture on his part.—*Raymond C. Torrey, Silver Creek, N. Y.*

The author of the article was Erik Lindgren, Lund, Sweden. There is no box number or street address.

To the Editor:

Four or five months ago I bought two sample 7" reels of plastic base off-brand tape at a reduced price, etc., simply because I've never had occasion to buy an off brand tape and was curious as to their capabilities.

The two reels have apparently come into a high degree of electricity (before purchasing), as both were filled with static. The observance of blue sparks at the automatic shut-off on my VM-10 (in fast rewind) was sufficient proof. A crackling sound is heard as the tape is pulled away from the reel on recording and playback; this sound is transferred to the tape while recording.

Means of solving (or attempting to) was by placing my head demagnetizer on the broad side of the tape as it passed by the automatic shut-off in fast wind—no avail. Second step: let tapes sit in box for awhile (at least four months) away from other tapes allowing time to discharge the static charge. Some reduction has been noted but a good deal still remains. Problem remains unsolved. Do you have any suggestions I might try? Tape is not expensive, so the loss is hardly felt (ouch!).

Each test session with this tape has left my heads magnetized . . . thanks to my head demagnetizer. I was able to remove

this particular kind of charge. Anybody want two static filled reels of tape—the off-brand kind???

As all Hi-Fi Tape Recording readers say, I enjoy the magazine tremendously and I think that's the consensus of us all.—*Norman G. Gignac, Brooklyn, N. Y.*

*Sorry to hear of the difficulties with the off-brand tape. The trouble is static electricity, as you mention. The only possible way of eliminating it is to try lubricating the tape with one of the silicone preparations now on the market. The static is caused by friction of the tape on guides and heads and, as you discovered, is difficult to discharge. The old adage—you get what you pay for—is just as true in tape recording as in anything else.*

To the Editor:

Though departments such as your own stereo section are of great value in choosing recorded tape investments, there is still something lacking in the present set-up.

I know that a tape dealer cannot allow his stock to be shop-worn by every "ear-seer" that comes along. Still I am sure something could be done to improve on our present set-up where one must buy a tape in order to hear it, often finding that the recording performance or interpretation is not what was desired. Perhaps one of your readers has a suggestion, I know the dealer would be happy to do anything short of exposing their valuable stock to the indiscriminate general public.—*G. E. J.*

*One of the best features of tape is that it cannot be damaged by playings such as disc records can. Of course, if someone punches the record button and activates the erase head then that is the end of the tape. The obvious solution is a tape player which cannot erase . . . anyone else have suggestions?*

To the Editor:

Just received my first copy of Hi-Fi Tape Recording and, I must say, in my estimation it is one of the finest magazines I have ever read. I particularly enjoyed the article, "Party Fun by the Foot." I have a V-M 711 tape recorder which I enjoy very much and thanks to your very informative magazine I hope to add to my enjoyment by trying the various suggestions. I will be looking forward to future editions.—*Jerry De Simone.*



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# CROSSTALK

from the Editors

\* \* \* \* \*

BIGGEST NOISE at the National Association of Music Merchants show in Chicago was stereo in every form that could be had. Stereo discs and phonographs were much in evidence. Tape, not to be outdone was demonstrated in two track, four track and cartridge versions.

\* \* \* \* \*

INGENIOUS USE of the tape recorder came to light recently when three teen-age boys were arrested in Ardmore, Oklahoma. They called a girl in New York and then tried to deceive the operator by playing the tape recorded sounds of coins being deposited in a pay phone. Must have had a lo-fi machine for they didn't fool the operator.

\* \* \* \* \*

SANDWICH TYPE TAPE for computers is announced by Minnesota Mining. Tape has a thin plastic layer over oxide side, eliminating wear on oxide itself. Usable life-span of new tape is 30 to 100 times more than old type, depending upon machine. Purple plastic coating is 50 microns thick.

\* \* \* \* \*

RADIO BROADCASTERS are showing increased interest in stereo broadcasting. Recent survey by this magazine reveals at least 150 stations now doing stereo broadcasting with more to follow. CBS and NBC have both put on network stereo shows in eastern cities and Chicago. With Ampex, Pentron and Webcor announcing stereo recorders and the advent of stereo tuners, etc. it might prove a field day for tape recordists in the near future.

\* \* \* \* \*

FIVE YEARS AGO there was monaural sound in records, tapes and broadcasts. Then tape swung to stereo playback and started to move ahead rapidly. Today there is stereo sound in records, tapes and broadcasts . . . we're back where we were five years ago except one notch higher on the scale. The quicker manufacturers make reasonably priced stereo recorders available, the quicker will the tape recording man buy them and get in on the new fun. After all, tape always was better than records and still is. There are units available now in component form and shortly in "package" form. We're looking for the day.

\* \* \* \* \*

THERE SHOULD be lots of new merchandise in dealers stores come fall. The recession talk is receding and the dealers, whose shelves are starting to bare because of inventory reductions, are looking for new products. There was evidence of this at the Music Merchants show.

\* \* \* \* \*

LOOKING AWAY ahead, music masterminds see in five to ten years all music except pop singles on tape. The tape will be in magazines which will require no threading. The early stages of this development are already at hand. Industry people are generally amenable to the idea of tape in magazines but feel that they must be "right" before they are widely introduced otherwise great harm can be done to their future development if early experiences with tape magazines is unsatisfactory.

\* \* \* \* \*

RUMBLINGS ARE already being heard that stereo records are not all they are touted to be. Improvements will undoubtedly be made but people with "Golden Ears" find that they suffer in comparison with tape. Be that as it may, every large manufacturer will have stereo discs and playing units.

\* \* \* \* \*

A BARGAIN you will want. A booklet "Tape Editing and Splicing" put out by Robins Industries, 36-27 Prince Street, Flushing 54, N. Y. is real good. You can have a copy by sending two-bits to Robins. Tell them we told you.

\* \* \* \* \*

WE NEGLECTED to mention that the excellent pictures used with the Waring story in the last issue, and on the cover, were the work of George Cohen. Our apologies.



# TAPE IN EDUCATION

BY JOHN J. GRADY, JR.



AT the recent close of another school year, educators in general had become aware that magnetic taping had fully proved to be of great value as a teaching facility. Educational journals, during the past year, published numerous articles in praise of tape recorders as efficient Audio teaching tools. And more institutions, devoted to the training of teachers, included practical experience with magnetic recording.

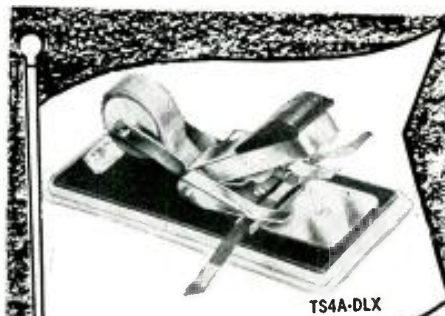
The impetus behind this recognition of tape recording as an important teaching practice can be credited to the success of the modern language laboratories. That success has been most impressive in a number of universities. The carefully-planned magnetic tape installations have thoroughly demonstrated that if all teaching factors are harmonized with the electronic factors, more capable instruction would be the natural result, and the more capable instruction was certain to help students to become more proficient in the languages of their choice. And in a shorter time than by old methods. Of course, these conclusions had been fully established by exacting governmental tests. All over the world, magnetic recording language laboratories have been helping selected personnel in the various service branches of the United States to master the language of the country where they are stationed. And it has been completely proven that this form of instruction is faster and more effective than any other previously-tried method. As further proof of the efficacy of magnetic tape in language instruction, friendly foreign nations use the American designed units to teach liaison personnel the English language.

Reference has been made to the success of language laboratories because the operative formula for them could well become the pattern for adapting tape recording to other curricular subjects. Such experiments indicate the necessity of protecting the prerogatives of teachers in the preparation of taped texts, or in the selection of texts from tape libraries. This problem of developing taped texts is certain to near solution during the coming year. In fact, some subjects already have received considerable attention and acceptable texts are available in some tape libraries. All experiments in educational taping clearly prove the advantage of an expert knowledge about the operation of tape recorders. And that this knowledge can best be developed to the highest degree of skill only through the ownership of a portable recorder as a necessary teaching tool. This finding sustains the prediction of *Tape in Education* that, ultimately, every teacher will own a magnetic tape recorder. Students of languages, too, have discovered

that their progress toward mastery of any language can be speeded by the use of a tape recorder during study at home. For that matter, every home where there are children at school, should be equipped with a portable recorder for the more rapid advancement of students, in addition to the magnetic recorder used as a component of the family hi-fi installation.

With the beginning of a new school year, there are indications that more and more truly ambitious students will become identified with the expanding group of boys and girls fortunate enough to have tape recorders to help them master their studies. Students going to distant colleges should have with their luggage a portable tape recorder. Thoughtful parents who provide such a practical unit of educational equipment will assure themselves of a fine form of happiness. The exchange of taped messages is a far more intimate method of maintaining contact with absent dear ones. The voice of such an absent one, the laughter, the confidential whisper, even the tap on dad for funds, provide the sweetest kind of a communication between members of a family. And such messages of cheer and confidence can benefit the morale, as they are listened to again and again. Teachers, too, generally leave home for school assignments. Their voiced messages to those at home will be far more welcome, and will be far more satisfying, than any inked words on a piece of paper. And the responses from home—what a joy after the hubbub of a roomful of lively youngsters. Certainly, tape recorders have happy functions in addition to the practical ones associated with modern education.

The huge body of students, who are music fans, should obtain inspiration to own a tape recorder from the experience of the song writer, who is responsible for the popular melody. *WITCH DOCTOR*. David Seville, or Ross Bagdasarian, as he's known to friends and neighbors in the California grape country, confesses that he didn't write *WITCH DOCTOR*. He's graduated from scribbling, long associated with the ancient and honorable craft of songwriting. He composes his songs—perfects the orchestration, too—via his tape recorder. He hums, whistles, chants, whispers and taps tunes and lyrics—traps them right now, and where they can't be forgotten or lost—on magnetic tape. There's a valuable lesson in creative production for every student in this practice of the young musical genius, who first gained fame with *Come on-A My House*. Just by putting vagrant thoughts and melodic notes into sound—on tape—he eliminates tedious writing. Doesn't he qualify as an inventive educator?



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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.

**Q**—I have a 710 V-M and would like to pick up sound a distance of 20 ft. to 30 ft. from the mike. Shall I buy a preamp or mike that is more sensitive. I want it for use at partys, etc. If mike—what type; if preamp—how many watts? Thanks—*H. H. L., Cedar Rapids, Iowa.*

**A**—*Cheapest and easiest would be to buy an extension cord for your mike. You can run up to about 25 feet of cord on the mike before any serious losses set in. If you buy a more sensitive mike or use a preamp to boost the output, you will find that it also picks up all the background noise and amplifies that also. The net result is a recording that sounds like the ladies sewing circle where everyone talks and no one listens and it will be difficult to distinguish voices. Best bet is to conceal the mike and run the cord to another room. In that way you will pick up voices that can be understood and the background noise will stay in the background. Remember—play the tape back to yourself before springing it on the party—it saves a lot of embarrassment and hurt feelings.*

**Q**—At various times I have read that tape recordings should be stored in metal cans, particularly iron or steel, to protect the recordings from damage resulting from magnetic fields. The latest instance is found in your May issue.

I am not certain I would agree with that opinion. Iron and steel and, to a lesser extent, some other metals are capable of becoming magnetic either during manufacture or in use. For example, one day I idly ran my pocket knife blade through loose sand and was surprised to discover that the blade was magnetic and had collected a fuzz of magnetic materials from out of the sand. These were analyzed and found to contain largely iron and some other associated metals in compound form. I had never done anything to magnetize the knife blade.

Since iron and steel products often are magnetic, or become so through use, it seems to me that in putting magnetic tape in tin cans, a person is likely to cause the damage that he is trying to avoid. He should keep his tape recordings away from all iron, I should think. The only exception would be if the iron or steel cans were thoroughly grounded, with no chances of stray electrical currents creating magnetism in the iron cans. Power lines, particularly if they are leaky through defective insulation and of high voltage, can cause magnetization of nearby iron objects.

Another question of which I have been thinking: would static electricity such as would be present on some plastic objects (plastic containers) cause deterioration of magnetic tapes?

P.S. To be on the safe side, I wouldn't recommend iron cans for tape recordings unless careful laboratory tests proved there was no possibility of damage resulting from magnetic iron. A magnetized iron can, can do the same damage (hiss) that a magnetized recorder head can cause. And, just like a recorder head, an iron can that is not magnetic to start with can become magnetic. I would recommend aluminum cans... they are lighter in weight, and the tape reels sometimes are aluminum too, aren't they? There aren't any iron reels, are there? And aluminum doesn't rust.—*E. F. W., San Bernardino, Calif.*

**A**—*Metal cans are the best storage units for tape, especially if they are sealed with a pressure sensitive tape that will keep the moisture content of the air from changing in the can. This prevents drying out and embrittlement of the tape base. Magnetic forces, to be strong enough to erase the tape would never be able to penetrate a soft iron can. Of course, if the can were heavily magnetized, it could do damage to the recorded signal but who would store tape in a magnetized can? The chances of the can accidentally becoming magnetized sufficiently to damage the tape are indeed remote. Scissors and knives do become magnetized, principally through shocks which cause the molecules to align themselves with the magnetic field of the earth. Static electricity would not affect the tape. Aluminum cans are satisfactory for tape storage also. There have been iron reels but they have been replaced by aluminum and plastic because of the lighter weight and easier fabrication.*

**Q**—First, I wish to state how useful I find your recommendations as set forth in the "Questions and Answers" column. Usually this is the first page I turn to. I have tapped the volume control in preference to the speaker terminals, and find an improvement in sound (Feb. 1958 issue). I also placed a 5 ohm resistor in series with a patch cord and found that also helpful, although I would like to know if this has any effect on the pitch of musical tones when playing from one recorder to another (dubbing)?

Another question—I have a 78 rpm turntable with a cutter—an Astatic crystal—model X-26. Sometime ago I had the set repaired, and now I don't get enough power to the stylus to cut a disc. I used to get wonderful results with it. Playbacks were absolutely natural. Could you suggest the trouble?

When I "dub" from a Revere to a Pentron, the bass notes on the playback on the Pentron are quite "gravelly"—rough. What could cause this?

P.S. In cleaning tape heads I found a brush superior to that suggested by someone, i.e.: those spiral things for cleaning

pipes (not pipe cleaners), which are very rough. I suggest the brushes that come in those mascara sets the women use. These brushes have enough stiffness to do a good job. Besides they are small and not clumsy.  
—C. T. F. N., Bronx, N. Y.

**A**—So long as your output and input impedances match there should be no change in the tones being recorded. A mismatch will alter the tonal values and cause distortion. This may be the cause of your trouble in the dubbing. If your recorder has an output from its preamplifier, use that in preference to the external speaker jack for feeding the second recorder or, if it does not, then tap off the volume control as you did on the radio. Regarding the disc cutter we would say the trouble is insufficient signal to the cutter head. This may be due to a faulty tube or in working on it, perhaps the repairman accidentally grounded some part of it. Check the wiring for breaks, cold solder joints, grounds, etc. and also check the tubes. If enough signal is being delivered to the cutting head then the trouble would lie in the head itself, perhaps a damaged crystal, which would have to be replaced.

**Q**—I have found that by holding a permanent magnet (from a lid lifter can opener) against the tape as it is fast rewind, I get a clean erasure of both tracks. Is this harmful to the tape or recorder? And if not, why isn't this method recommended? Question #2. Can the V-M 714 recorder be used to record in stereo by using a Crescent recorder as a remote control recorder for the second track. I now use it as the second speaker. Why can't it serve as a remote control recorder by patchcord or otherwise to the V-M.—C. S., San Jose, Cal.

**A**—Many early recorders, and some of the least expensive ones used a permanent magnet for the erase. This works satisfactorily but not as well as the oscillator type of erase which does a cleaner job. Also, by using a permanent magnet erase over and over on the same tape the basic noise level of the tape will be increased.

You can connect the Crescent to the lower part of the V-M head by means of a shielded cable to make it stereo record. You will have to disconnect the leads to the head of the Crescent and also the V-M leads. Not having the schematic handy we cannot tell whether or not the bias current will be correct. We suggest you try it.

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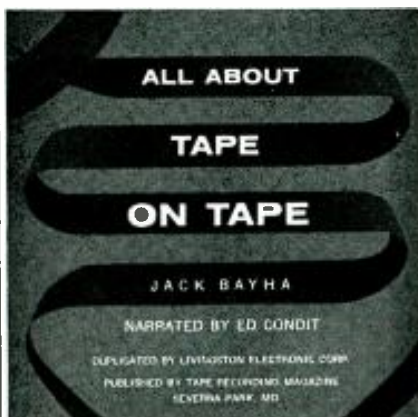
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## TEEN TAPERS

BY JERRY HEISLER



OTS of things poppin' during this summer vacation and it seems that teens are really busy with their recorders. I've had a great amount of mail recently indicating that during the summer, what with no school and all, teens have a lot of time to think about recording. This is as it should be.

Several people have shown an interest in converting to stereo recording since I mentioned my conversion. We are forwarding their names to the manufacturers that the magazine has featured stories on such conversions in the past.

Leo Waltz from Denison, Texas wrote us a very interesting letter telling of a conversion he made. Leo claims that he got the plans from an outfit called Hi-Fi Information Service, in Pomona, California. He claims the whole job cost him about \$12. Some of you might want to look into this.

Just prior to writing this column I had a chance to listen to a stereo broadcast on FM and television. This is quite common now in big cities and is quite simple in principle yet quite effective. A stereo tape is played at the studio, one track being fed to the TV and the other to the FM or AM radio. By properly placing the speakers in your home, you hear stereo. If you have equipment for making stereo tapes this is a good source for material free of charge.

We are currently investigating stereo discs, but they'll have to do a lot to convince us that they beat tape. You still have the problem of the needle scratching the record, hiss, and the other bugs of records that we all know about. As far as we're concerned it's tape all the way in the future of stereo.

A letter from Stuart Crowner, age 16 shows us what teens can do and are doing in this field. Stuart holds the title of Secretary of the American Tape Exchange, a tapespondence club of about 100 members all over the world. Stuart sent us the newsletter and the membership list and expressed an interest in our activities here. From his letter it sounds like the A.T.E. is a real up and coming group and it's all headed by a teen. Lots of luck Stuart, and if we can be of any service to you let us know. If any of you would like to join you can write Stuart at 181 East Main Street, Gouverneur, New York.

Last month we mentioned some low cost amplifiers made by Nortronics. Mr. Joe Dundovic of that firm, informs us that he will be glad to supply readers of Teen-Tapers with a circular on their teen priced recording amplifiers. A letter to him at 1015 South Sixth Street, Minneapolis 4, Minnesota, will bring you the information.

Our product search also comes up with the news that Pentron is coming out with a new unit capable of making stereo tapes at a popular price and including amplifiers. As we come in contact with these machines we'll pass the facts along to you. If any of you have any information on teen priced equipment, please pass it along. Teens work on a limited budget, we feel, and we're always out to save that allowance.

We didn't get many replies from our request for pictures as yet, and we hope you're working on them.

What about this mysterious term Hi-Fi? This writer has long been concerned, as has been most of the rest of this industry, with the misapplication of this term. Many people use the term hi-fi as a guide post to their sound purchases. They insist on "hi-fi" records, "hi-fi" speakers, and the like. Yet today we find the term "hi-fi" being used on breakfast cereals, lipsticks, and a world of other products. Certainly this is not the thing we mean when we talk of hi-fidelity.

The term is also misused within the realm of sound itself. I have seen radios advertised as hi-fi and bearing a price tag of \$20. Just what is Hi-Fi then and how should we judge it? I think that it's worthy of a little explanation since many of you may be bewildered by it. Teens should be interested in finding out things, so let's see if we can't provide you with a modest education.

Actually Hi-Fi, short for High-Fidelity, refers to the reproduction of sound as close to the original sound as possible. Fidelity is derived from the latin word Fideles, meaning truth. Hence, High Fidelity literally means a great degree of truth in the reproduction of the sound. Tapes and records are copies of original sounds played by an orchestra and the higher the fidelity, the closer to the original sound. There is no definite requirement for a product to be considered "hi-fi". This we feel is unfortunate, because the term can be used in any way that anyone wants to use it. All too many people have become so used to using this word as a measuring stick of quality. It just ain't so.

Generally speaking though, a high fidelity product can be judged by the way it sounds. If a \$20 radio sounds the same to you as if you were sitting at a concert, then it is most likely adequate for you. Don't go by the word alone. Always compare records, recorders, tapes, and other equipment and buy the products that have the highest fidelity for your ears. Remember this rule: Whether a man tells the truth or is lying depends on whether or not you believe him. Likewise—if it sounds true then it is true—FOR YOU. Use this rule and beware of the term Hi-Fi.



# TAPE CLUB NEWS

United Recording Club members will have an opportunity to promote the club and its endeavors this fall when the club will enter two of five exhibitions at hobby shows. Lack of members to take care of booths has compelled the club to withdraw from exhibiting in other shows. How about it URC members—volunteer to man the booths when the exhibits are in your locality. Notify your officers before August 30th if you wish to help. They will inform you as to the date, place, etc. All members are requested to send in suggestions for displays and exhibits.

World Tape Pals members in the cities of Dallas, Texas, and Dijon, France, "twinned" under the program to encourage cultural exchanges between such cities, assisted in an exchange of greetings from Mayor R. L. Thornton of Dallas to M. le Chanoine Kir, Mayor of Dijon. Recorded by WTP President Harry Matthews, the tape from the Dallas mayor has been heard by the mayor of Dijon, and will be broadcast over the local French radio station the first week in August. World Tape Pal Marcel Monard, resident of Dijon, received the tape and played it for the mayor of his city. Thus WTP members assist in various methods of promoting international friendship.

The British Amateur Tape Recording Society is seeking a volunteer to fill the position of Blind Service Secretary in the club. Former secretary, Bill Rawle of Darlington, regretfully resigned when his business affairs increased, leaving him little time to devote to the blind service work. The volunteer need not be a B.T.R.S. member, just as long as his or her heart is in the position offered. The fine work of this committee has brought much light to those folks who otherwise live in a world of darkness and it must continue. We hope we have a new secretary's name available next issue.

## JOIN A CLUB

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**WORLD TAPE PALS, Inc.**  
Marjorie Matthews, Secretary  
P. O. Box 9211, Dallas 15, Texas

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**UNITED RECORDING CLUB**  
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210 Stamford Road  
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Stuart Crouner, Secretary  
181 E. Main St.  
Gouverneur, N. Y.

Please enclose self addressed, stamped envelope when writing to the clubs.

Arthur G. Brooks, Navarre, Ohio, is interested in organizing a "Golden Agers" Tape Club, designed for the retirement age group. We agree that this would be a pleasant and refreshing hobby for this group of folks. Anyone who would like to know more about this and perhaps lend a helping hand in getting it started, may contact Mr. Brooks by writing to Navarre, Ohio.

American Tape Exchange member Don Wallace is stationed in the Hawaiian Islands. Don would be happy to record Hawaiian sounds for any fellow member. Members are urged to check their membership list for Don's address.

Voicespondence member Bernard Corbin of Red Oak, Iowa, combined two hobbies to give his fellow citizens a visual trip through their community. When Bernard found himself with a new movie camera, he began taking pictures of everyone and everything, but soon he began specializing in scenes of his town. From photo albums of the past he brought forth and photographed on film scenes of the town back at the turn of the century and then filmed the places as they appear at the present. With his handy tape recorder, Bernard then recorded his own narration on the scenes and synchronized the two. The effect was well worth the effort, and he is now constantly being called upon to show his film and its accompanying recording for civic groups in his town and others near by.

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## Tapebook #2

# HOW'S YOUR HEARING?

by James M. Laing

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Hearing is one of your most precious human possessions. It, however, like every other precious possession, requires protective care. Without proper protection your hearing can leave you completely, and without warning.

To properly protect your hearing there are two things you must do: (1.) test your hearing periodically, and (2.) seek early medical guidance as soon as a hearing test indicates a possible hearing loss.

Periodical hearing tests are important because, unlike most other ailments, a hearing loss gives you little positive warning. A hearing loss can creep into your life so gradually that you can be completely unaware of its presence.

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*Photo by Jeanne Hickam*

A tape record made at regular intervals will serve to indicate progress in reading, as well as serve as an incentive for improvement. Bad reading habits, such as pointing to each word as it is read, will show up on the tape in the form of jerky or hesitant delivery, hence the recorder serves the double purpose of revealing such undesirable habits along with indicating pronunciation difficulties.

## LET YOUR RECORDER HELP YOU STUDY

by Jeanne Hickam

... your recorder is a valuable study aid for any topic.

**P**ARENTS of elementary school children are often "driven to distraction" nowadays by a sheer lack of time in which to help the kiddies with their school work. This does not refer to the times when "pop" struggles with Junior's arithmetic, but to the simpler everyday aids which many parents provide as a matter of course without realizing it . . . mother or dad listening to one of the younger children read from his school primer, or giving the third or fourth-grader a boost with the multiplication table.

High school students with courses in Latin or modern languages often run into the same problems. There just isn't time in our high-speed living day for some other family member to sit down and listen to a vocabulary list; and there is even less time for mother (or sister or brother) to spend at the appropriate times with the shorthand beginner struggling with "brief forms." Night school students, or adults enrolled in many of the adult education classes throughout the country are also victims of this situation. Regardless of age level, any student sooner or

later is going to run into a problem which is best solved with the assistance of another person, whether this second individual acts in the capacity of quiz master testing memory material to determine the portion needing further study, poses as critic examining the delivery of a public-speaking project, or is merely a speaker providing audible dictation in some form. Growing out of this need is the use in many leading school systems of tape recorders and recorded material. And while much of this special material used by teachers has a specific restricted application, up-to-date parents and students of all ages can certainly take a leaf from the books of the nation's foremost educators.

For example, why should mother be required to interrupt her busy day to recite the multiplication table over and over with Junior? It would surely be much simpler for all concerned if mother, dad, an older brother or sister were to record the "six times table" at his convenience so that the fourth-grader could have the tape replayed and be able to recite with it at will while mother cooks or mends.



Both the youngster's study hours and the parents' time are thus made much more adaptable to other family plans and contingencies. After Junior has recited with the recorder a sufficient number of times, someone in the family can spend a few minutes (again at his convenience) erasing the answers from the tape and make it an easy task for the young learner to find out in short order just how well he knows six-times-six. Because tape can be erased and re-used time after time *ad infinitum*, the cost to the family is small indeed. The making of the recording is also simple, the main requisite being a quiet "background" and clear, precise enunciation.

Parents who are worried because a child is not doing well with reading, his most important elementary school subject, can use the recorder to help him in several ways. First, hearing the playback will help the child to hear inaccuracies in his reading which escape him otherwise (or are subjects for argument). Secondly, a series of recordings made, for example, on the first of each month, will serve as both a record of, and an incentive for, improvement. Thirdly, if the child's reading problem is especially serious, a tape record would be of help to the teacher of remedial reading, a school subject in which tape recorders are widely used in up-to-date schools employing the latest educational aids.

More advanced students confronted with the problem of vocabulary lists in beginning foreign language courses can also make their study easier by using the tape recorder. While it is true that modern language vocabularies are best increased through extensive reading (or listening) experience with the language itself, there are times when the study of a list of foreign words or expressions with their English equivalents is unavoidable. The problem here is that a number of the items on the required list are often already known to the student, and he may lose time unnecessarily in working over such material.

One of the simplest ways for the student to meet this

problem is to test himself before going to work, a thing difficult to do by oneself. Yet it would take only a few minutes before supper to tape record the English equivalents of, say, a list of Latin, French, German, or Spanish words, with approximately ten to fifteen-second intervals between them. When it is time to work on this lesson, the student need only turn on the recorder and write down the foreign language equivalent in the interval provided. He will then have an accurate record, indicating just which portions of the list he must study and those which he may safely ignore. Tapes of this type may also be saved for review purposes. While tape recordings in this category may be prepared to equal advantage with the foreign language portion serving as the recorded material, this practice is recommended only in cases where there can be no question as to the correct pronunciation of the foreign words involved.

In the same manner as that indicated for putting the vocabulary list test on tape, mother can record her primary-school child's spelling words, or the shorthand beginner can make his own check list of brief forms. In this way also, the history major can check himself on important dates, and the music appreciation beginner can test his knowledge from copies of the various compositions which he will be required to identify.

It might be mentioned in passing that the primary student is often not the only member of the family with a list of spelling words which should be studied . . . the student specializing in English composition or the potential private secretary can also profit by such drill. Advanced students in these categories will do well not only to make their own recordings for study purposes, but to save them for future review, and many will find it expedient to make use of the new extended play tapes (Scotch #190, Reeves Plus-50, Audio LR, or Irish 1-mil tape) so that a larger number of tests may be recorded or taken before an interruption is necessary.

Aspiring shorthand specialists will find the use of ear phones highly advantageous, as they enable the student to practice dictation from the recorder at any time without interference from other room sounds and without creating a disturbance to family or roommates.

*Photo by Jeanne Hickam and  
Cal Hupman*







*Photo by Jeanne Hickam*

Today's third- and fourth-graders have never heard of "mike fright" and it is easy to enlist their co-operation. Parents with only limited time will find it easy to fit the recording activity into short intervals of time which would be useless for other types of assistance with school work. An example of this would be Dad's turning on the recorder for the youngsters' use while Mother prepares dinner.



*Photo by Jeanne Hickam*

Even a youngster can hear his good and bad points when it is time for the playback, which might take place after supper, or at some other convenient time. A child who is self-conscious about errors is easily reassured if only he and the parent helping him hear the playback . . . and rapid improvement is possible when the incentive is to make a perfect recording to play for the rest of the family.

The new, longer play tapes will also be appreciated by the shorthand student, beginner or advanced, who is dependent upon the audible word for much of his practice. While it may be difficult for a member of the family to

properly record timed dictation, experts in the shorthand field have proved the value of any additional dictation as tending to increase the shorthand vocabulary of the student, even when the material is taken down at speeds relatively slow in comparison to those of which he is capable. Teachers also assert that writing a given exercise over several times in correct shorthand has a value equal to that of constantly-new material in building speed. Under these circumstances, the shorthand student who wishes to advance rapidly will agree that the tape recorder is his most valuable aid, especially when he considers the additional advantage inherent in his ability to check back his transcription merely by replaying the tape, an advantage possessed by no other media, since even the most experienced teacher may mis-read printed material upon occasion.

Advanced students who make use of such large quantities of taped material as would the aspiring shorthand specialist will also find it expedient to use earphones to hear the playback of such tapes, and thus be enabled to use the recorder at any time. Most of the newer tape recorder models, as well as many of the older ones, have provision for the use of earphones, and are therefore ideal for student use, even in areas where more or less constant playbacks would otherwise create a disturbance. Student typists aspiring to dictaphone work can practice with the recorder and earphones in a set-up closely resembling conditions under which they will one day work.

The ability of the tape recorder to faithfully reproduce radio broadcast material may also be turned to advantage at home by students in many courses of study. Political speeches are almost invariably delivered at the same rate of speed which the speaker would employ on the Senate floor . . . Congressional Record Speed (140 words per minute). Both the rate of speech and the more specialized vocabulary of the political aspirant are particularly applicable to both the speed and type of material required of shorthand specialists in several fields. The student planning a shorthand career such as Congressional or court reporting will do well to take advantage of the abundance of material of this



*Photo by Jeanne Hickam*

The student typist can use the recorder either for rhythm exercises which are typed to music or for practice in taking dictation direct to the typewriter. The use of earphones also duplicates the office situation where the typist may work from either a tape recorder or a dictaphone.

kind available from the radio networks. Those who are especially systematic may find it expedient to make this copy on one of the colored tapes now on the market, thus distinguishing it on the shelf from vocabulary or brief form tests . . . or to use Audio colored reels for the same purpose.

Students of political science, theology, sociology, or public speaking will find taped radio speeches useful in many ways: The ability of the recorder to re-play the speech for analysis, and of the tape to preserve it for reference at any time are obvious assets which will appeal to the serious student in any of these fields. By keeping a close check on the offerings of local radio stations it is often possible to build a collection of taped speeches upon almost any

subject from art to poetry to the sciences, while another type of educational material readily available for recording via the radio is music. Whether folk music for history or English courses, or classical selections for those studying music appreciation or aspiring toward a career in music, radio broadcast material copied on tape can form the basis of a special interest library and aid the student simultaneously.

In conclusion, no commentary on student use of the tape recorder would be complete if it did not mention the most obvious advantage of all. To the aspiring theologian, radio announcer, politician, actor, or musician, the tape recorder pays its way by giving him, inexpensively and easily, the ability to hear himself as others hear him.

## TAPE RECORDING ANAGRAM

BY JOHN A. COMSTOCK

How familiar are you with the many words and terms used in the field of tape recording? Here is an anagram puzzle for you to work that is designed to test your familiarity with the many words and terms. See how many of the blank spaces you can fill in without peeking at the solution on page 31.

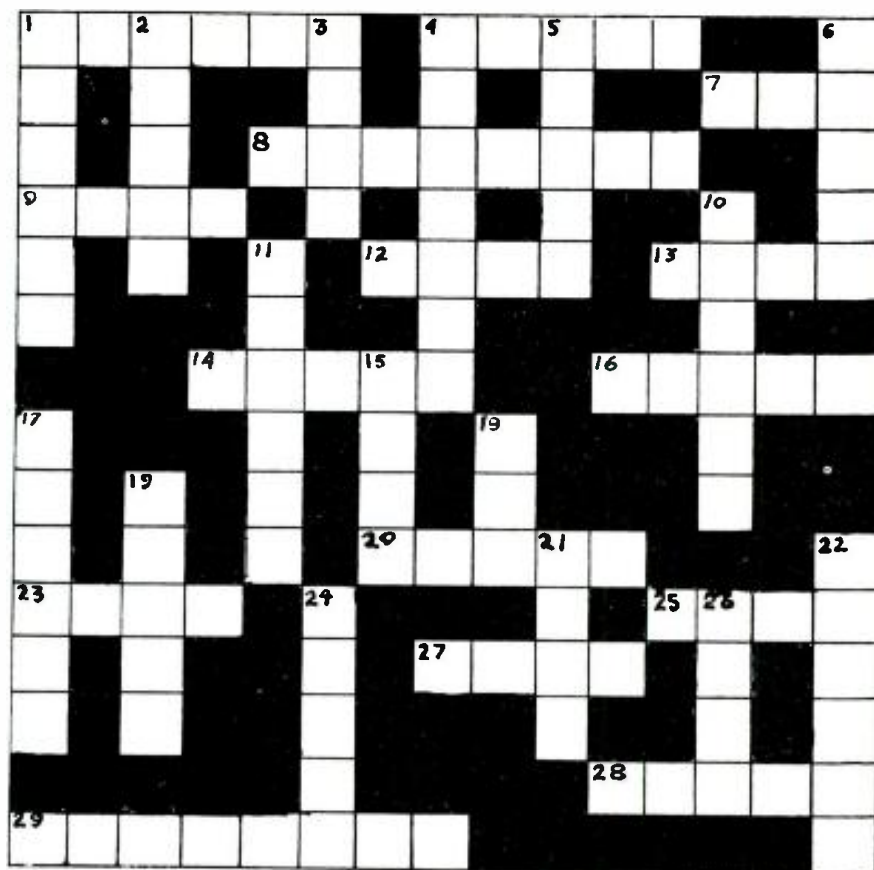
### CLUES

#### ACROSS

1. A tape connection.
4. Recorded sound frequencies.
7. The opening in a tape recorder's head.
8. The ability of a recorder to record and playback faithfully.
9. The device on which tape is wound.
12. The ribbon on which intelligence is recorded.
13. The electro-magnetic transducer which puts the intelligence on the tape and first receives the intelligence during playback.
14. To remove intelligence from recorded tape.
16. A device used to keep the tape in correct alignment when it enters the record or playback head.
20. A jumper cord used for making connections between a recorder and phono, radio, etc.
23. . . . . .-speed—meaning the recorder can be operated at two different speeds.
25. Transducer used to pickup sound and transmit it to a recording machine.
27. Many tape recorders have a detachable power . . . . .
28. One program source for a tape recorder.
29. A single-channel recorder.

#### DOWN

1. Three-dimension sound recording.
2. The intensity of the signal fed into a tape recorder.
3. To eliminate unwanted portions of a recording.
4. Material used as a base for most recording tapes.
5. A tape recorder's mechanical mechanism which moves the tape past the head.
6. Most tape recorders are dual- . . . . .
10. To run the tape in a reverse direction.



11. To give the tape a start on the reel.
15. The button depressed to stop a recording.
17. A length of unrecorded tape used as feeder at the leading-end of a tape.
18. Single pulse of recording signal.
19. Most modern tape recording machines are of the dual- . . . . . type.

21. Something every recordist should give his recorder.
22. To put intelligence on tape by means of a recorder.
24. The electromechanical transducer which drives a recorder's mechanical mechanism.
26. The oxide coating on tape which stores the intelligence.

# RECORDING PERCUSSION INSTRUMENTS

by L. L. Farkas

. . . . . getting the “beat” on the tape without unbalancing the entire recording takes a bit of know how — here it is.

**S**INCE the days when Gene Krupa first rose to fame the percussion spotlight has been focussed on the drums. Nor has their popularity diminished in the present rock-and-roll era.

Now while there are several varieties of drums, their construction is basically the same. It consists of a parchment skin or vellum stretched over either one or both ends of a hollow cylinder of wood or metal. The snare drum, probably the smallest of the family, has a skin stretched over both ends of its cylinder. The tension of this skin is controlled by means of hoops over the heads and laced cords or metal rods as tighteners. Then, across the lower skin several catgut cords are stretched, causing the rattling sound heard when the upper end of the snare drum is beaten.

This drum has two characteristics that affect a recording: the noise it creates is fairly high in frequency, while its peaks are very high. This means that unless you have a high fidelity recording system, you won't record all the frequencies of the snare drum. Or you may record them and yet not hear them on your playback because your loud-

speaker cannot reproduce them. In an extreme case this will cause the snare drum to have a muffled instead of a crisp and clear sound.

For a snare drum solo the instrument should be about eight to ten feet from the microphone. Closer pick-ups can be made provided however that the drum is located to the side of the microphone, off the pick-up beam; or the drum can be left in the front position if the microphone is raised so that the drum is under the pick-up beam. In either case the method is the same: the drum is kept away from the center of the microphone beam, thus preventing its sharp noise peaks from causing distortion.

The off-beam pick-up has the advantage of more effectively reducing the noise peaks and permitting the drum tones to have a closer perspective, but it also has the disadvantage of losing some of the higher frequencies. However this method is useful when you want to balance the perspective of the drum with that of another instrument. This is particularly true in a trio or quartet where the in-



Close pick-up of solo drums. Note that the closest drums, of the highest timbre, are under the microphone beam. This maintains a close perspective without distortion of the tones.



Saul Goodman, timpanist of the New York Philharmonic-Symphony, was the youngest member of the orchestra when he joined it in the autumn of 1926. Today, two of the players in the Philharmonic's percussion section are his pupils. The timpani Goodman uses were designed and built by him 11 years ago. He does all the machine work himself, and constantly fills orders from other orchestras. Here Mr. Goodman adjusts the basic tone of his drum. The pickup for a kettle drum should be made at 10 to 15 feet.



dividual tones of each instrument and their relative perspective can readily be identified.

Of course noise peaks obtained at close range with the straight pick-up method also can be reduced by beating the drum more softly; but this is not always practical. In such case you can deaden the sound by placing a rug under the drum. Or, if desired, you can dampen the tones by placing a piece of cloth between the catgut cords or snares and the taut skin on the lower end of the drum. This will eliminate the rattle and at the same time muffle the tones of the drum.

Snare drums come in varying sizes to produce noise of different timbre. This will affect the pick-up slightly since each drum may have a slightly different characteristic; but generally should cause no change in the set-up, except where several of these drums are played together. Then they should be so placed in relation to the microphone that the desired overall blend is obtained. Essentially the procedure is the same as balancing a brass or woodwind section—shifting the position of the individual instruments in relation to the microphone so that they record with the desired intensity.

Generally used in conjunction with the snares is the bass drum. It consists of a short cylinder of wide diameter covered at both ends with vellum. Tension on the vellum is controlled by leather braces so that distinct tones can be produced, thus changing the range of the drum.

When played the bass drum is set on edge, with one end facing the musician and the other toward the microphone. Struck by a stick having a soft round knob, the tightened head vibrates. These vibrations, amplified by the air chamber of the cylinder, produce the deep tones of the bass drum.

Since such tones are fairly heavy and, like those of the bass viol, quite low in frequency, they will distort if picked up from too close a range. However the eight to ten foot distance recommended for the snare drum, or the other distances for off-mike pick-ups should permit recording the tones of the bass drum without distortion.

Another type of drum frequently used in modern rhythm is the kettle drum. The kettle portion of the drum, made of copper, brass, or even silver, sits on the floor, open part facing upward. Vellum covering this open part is stretched by screws working on an iron ring around the head of the drum. By loosening or tightening the vellum of the head, the drum can be set to produce notes varying by one-half octave. And when the head is struck, the vibrations of the skin, air chamber, and metal kettle combine to create a full and resonating tone. A small vent hole at the bottom of the kettle prevents the concussion from breaking the vellum. A pedal also controlling the tension across the head produces variations of the basic drum tone set by the head screws.

Kettle drums date back a long time. Their tones were first used by the Parthians to frighten off their enemies. But it was Beethoven who was the first to utilize the kettle drum as a solo instrument for the orchestra. The opening of his Violin Concerto, and the Scherzo of the Ninth Symphony are examples of this use. Now one, and sometimes several kettle drums tuned to a different tone, are used to produce rhythm or percussion effects for modern music.

For a good pick-up the kettle drums should be set from ten to fifteen feet from the microphone. At that distance the full effect of the drum can be recorded without fear of overloading either the microphone or the recorder—that is, provided the room in which the drum is being played has good acoustic properties. Should the room be too live, then the drum tones will boom in very much the same way as bass viol or tuba tones do under similar conditions. And here again the same remedies apply: playing the drum more softly and picking it up from the side of the microphone; placing a rug under the instrument; or breaking up the reflecting surfaces of the room with drapes or other types of sound absorbent surfaces. Such means should permit you to pick up the drum tones and record them with fairly good quality.

Closely allied to the drums, especially during drum solos, are the cymbals. They consist of two thin circular metal disks, one of which is generally fastened to the top side of the bass drum. The fixed cymbal is struck by another cymbal through a lever action controlled by a pedal. Generally, however, only the fixed cymbal is used, and the musician either strikes it with his snare drum stick, or rubs and strikes it with a metal brush. In the former case a high peaked resonant tone is produced; with the brush, the tone is more of a noise with very high frequency characteristics.

The pick-up distance for cymbals must be a compromise with that used for the bass drum, with the normal bass drum location favored slightly since its peaks are heavier and of a longer duration. Then should the cymbals sound light, they can always be brought up during solos by raising the gain on the recorder. This is safer than having the bass drum come crashing through from too close a range during or immediately after a cymbal spot.

Also part of the percussion group are the chimes. This instrument consists of a series of metal tubes hung by cords from a metal frame. Each tube is of a different size and is closed at one end. When struck by a knobbed stick, it vibrates, setting the air within in motion, and thus creating a note that has the clear and mellow quality of the bell tone.

When chimes are played alone, their tones can be picked up very simply by placing them about eight to ten feet from the microphone, with the treble end a trifle closer to compensate for the lower volume of its notes.

When played with an orchestra often the volume of the chimes is so much lower than that of other instruments, that the volume difference may tax the pick-up capability of the recorder. This is particularly true where the drummer also plays the chimes and naturally has them located near him. From this position the notes of the chimes either will be drowned out by the ensemble, or become hollow from increased recorder gain during the solo spots.

One remedy is to move the chimes closer to the microphone, to about six to eight feet away, and make the drummer come in for the solos. This may be a bit inconvenient, but under the circumstances it is the best way of assuring a good pick-up.

Another percussion instrument used frequently is the xylophone. It contains a number of wooden blocks, of different size, laid parallel across a metal or wooden frame. In the modern instrument metal resonating tubes have been placed below each wooden block. Tones are created by striking the blocks with two small wooden hammers, producing vibrations which are then slightly amplified by the resonating tubes.

The sound level of the xylophone is fairly low and, in order to obtain a good pick-up, the instrument should be set about six feet from the microphone, in a direct pick-up position with the treble end favored slightly. Now while the natural tones of this instrument are not very full, they still have a live quality which is impaired when the xylophone is brought too close to the microphone. Such close set-up will produce dead, mechanical tones and should be avoided.

The vibraphone is a direct development of the xylophone. It is similar in construction except that the wooden blocks have been replaced by metal plates, and small electrically driven vanes have been installed inside the resonating tubes. When the metal bar is struck, the sound built up within the resonating tube is modulated by the revolving vane,

creating the vibrato effect which gives the instrument its name. The vanes can be turned on or off by a switch on the side of the instrument, and the tones dampened at will by means of a pedal which causes a padded bar to come into contact with the vibrating plate.

The tones of the vibraphone are heavier and of a more penetrating quality than those of the xylophone. Thus the vibraphone can be set from eight to twelve feet from the microphone. It is often placed alongside the drums and from that position can be picked up quite well.

Too close a pick-up will produce a marked booming of individual notes. With too distant a pick-up, the room echo striking the microphone will tend to distort the bell-like quality of the tones. However, since the vibraphone has a wide perspective range, the instrument can generally be moved within a given perspective area to the location that will produce sufficient volume for a good pick-up.

At this point it may be well to touch briefly upon the piano (discussed in a previous issue), also classed as a percussion instrument. In the piano, felt covered hammers striking steel strings create the sound which is amplified by a sounding board and the air column within the piano sound box. Now generally the best piano pick-up, whether from an upright, a spinet, or a grand can be obtained by placing the microphone in a direct line with the tones emanating from the sound box. The distance may range from two feet for a close pick-up of the spinet to twenty or thirty feet for a distant pick-up on a concert grand. Here the criterion is avoiding distortion, for the sharp percussion of the piano tones upon the microphone can readily cause blurring. Hence any time the piano tones are not crisp and clear, whenever they seem to lose their highs and become mushy, or conversely when specific tones start to ring or echo, then the microphone is set too close and must be moved back. Too distant a pick-up will also cause reverberation, but at the same time the definition of all the tones will be lost.

Similar to the piano in construction is the celesta. This instrument is one of the most difficult to pick-up. In appearance the celesta resembles an upright piano, but it is considerably smaller and the tone it produces is quite different.

It has a small keyboard, with each key connected mechanically to padded hammers which in turn strike metal bars like those on the vibraphone. However, instead of metal resonators, small holes in a wooden crosspiece are used. This limits the volume of the sound which consequently is very low as it emerges from the back of the instrument.

On solos it is possible to pick up the tones of the celesta at a distance of four to five feet, but whenever it is played with other instruments, its tones are readily drowned out. To make a pick-up under those circumstances, a separate microphone must be placed at a distance of two to three feet and at a height as close as possible to the middle of the back of the instrument. Thus its tones can be raised independently so that the desired blend with the tones of the other louder instruments is obtained.

Of course this discussion has not covered all the types of percussion instruments, but since all have essentially the same characteristics: impact tones that distort readily when picked up at too close a range and, except for the celesta, generally good sound carrying qualities, the hints given on the recording set-ups for the instruments discussed should be sufficient to permit you to make an acceptable pick-up of any percussion instrument.





# PLAYBACK!

photo by Adrian Siegel

**P**LAYBACK! The acid test of every recording. As intently as we listen to our own taping efforts, the professional people whose living is dependent upon top performance are intensely critical.

Adrian Siegel, cellist with the Philadelphia Orchestra is as well known for his magnificent photography of the musical world's personalities as he is for his musicianship. Here he has captured the reaction of some of the great personalities as they listen to their own efforts played back from the tapes.

Above: Dorothy Maynor seems pleased with the playback of her recording. Upper right: the interpretation and phrasing are as important as the actual playing of a composition. William Schuman, Director of the famous Juillard School of Music, checks the recorded playback with the score of his Third Symphony, reading the music as we would read the printed page. Upper center: a tense moment during the playback of Honegger's "Joan au Bucher." At left is Eugene Ormandy, famous conductor of the Philadelphia Orchestra and at right Goddard Lieberson, Vice President of Columbia Recording. Lower center: Frances Yeend and the children from the chorus who are heard in the same work. Bottom: Eugene Ormandy, flanked by David Oppenheim and Howard Scott from Columbia Recording. They are listening to the playback of Strauss' "Till Eulenspiegel." On the front cover is shown Sir Thomas and Lady Beecham listening to a playback during a recording session with the Philadelphia Orchestra.





# THE INDEX: WHAT IT IS AND HOW TO USE IT

by

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University of Illinois

... the "counter" on your recorder can pinpoint any selection on a reel if you know how to use it.

LET us first consider a common misconception. "... the footage counters and elapsed time indicators. ..." To begin with let us get a clear concept of what the program indicator on a modern tape recorder really is. It is simply an *indicator*, and does not count either footage or elapsed time. In order to show footage or elapsed time the indicator would have to be driven by the drive capstan or the idler puck. While this could be done, such an arrangement would be complicated and costly and, so far as I know, there is no semi-professional tape recorder which is so designed.

Rather, the program indicator is operated by a belt drive which connects it to a pulley located on the spindle which accommodates either the supply reel or the take up reel. Therefore, the number shown on the indicator has no direct relation to either time or footage but is merely an index of the position on the tape at which a particular recording is being made. As the machine is operated the number of digits shown on the indicator per minute (or per foot) will vary, since there is always a continuing variation in the speed of revolution of both the take up and the supply reels, depending on how much tape has been reeled on or paid out.

If the indicator is driven from the supply reel it will show a lower count per minute (or foot) at the beginning of the recording and a much higher count at the end. If the indicator is driven from the take up reel this effect will be reversed.

For example, on a V-M recorder, (which by the way has an exceedingly accurate index) the indicator is driven off the supply reel spindle. Using a 7 inch reel of standard tape I gathered the data shown in Table I.

TABLE I

V-M TAPE-O-MATIC, STANDARD TAPE 7½ I.P.S.

Time	Index Reading	Digits Per Min.
1st minute	0-22	22
5th to 6th min.	114-138	24
10th to 11th "	238-265	27
20th to 21st "	525-559	34
29th to 30th "	872-922	50

The T.D.C. recorder, however, has its indicator driven from the takeup reel spindle. With this machine,

using the same reel of tape, I gathered the data shown in Table II.

TABLE II

TDC Stereotone Time	Standard Tape Index Reading	7½ ips Digits Per Min.
1st Minute	0-38	38
5th to 6th min.	167-195	28
10th to 11th "	295-318	23
20th to 21st "	499-517	18
29th to 30th "	650-665	15

Thus we see from Table I that with one recorder the last minute of elapsed time near the end of a 7-inch reel of tape registers more than twice as much on the indicator as does the first minute. On another recorder as shown on Table II, we find that the last minute registers only 39.47% as many digits as does the first.

These data have no special significance per se, but were gathered and are here presented merely to clarify three points: (1) If the indicator is driven from the supply reel spindle it will register fewer digits per minute at the beginning of the recording and more digits per minute as the tape is paid out. (2) If the indicator is driven from the takeup reel spindle the above effect will be reversed, and (3) Regardless of which spindle drives it, the figures on the indicator do not show either elapsed time or footage but merely serve as an arbitrary index.

Having established this point, let us now consider another statement: (5) "... 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."

Of course, if you do not index your recordings the above statement is essentially true. However, if you are willing to spend only a few seconds to identify each reel of tape before you start recording on it, you can save hours of time and immeasurable amounts of frustration at some later date when you want to play back a specific segment of what you recorded earlier.

By identity I do not mean merely writing on the box which contains the reel, for reels frequently get put into

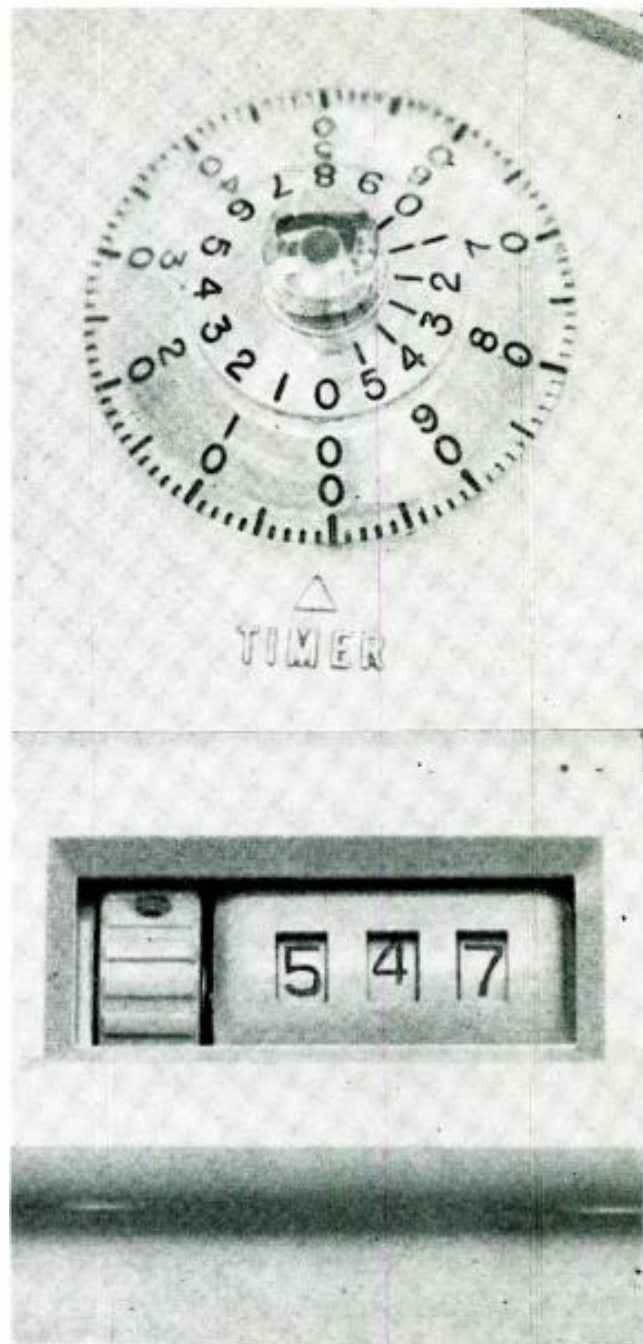
the wrong boxes. Nor do I mean putting a tag on the reel itself, for tape often gets wound onto other than its original reel. What I do mean is to record, by voice, on the tape, complete data indicating Reel Number, Track Number, Date, Subject, Source of Signal, etc. Let me illustrate with a specific example. For several years I have been recording the speeches which students present in a Metallurgical Engineering Seminar. Three speakers are recorded at each class meeting and then at some later time the students come to my office individually to listen to their speeches and receive personal criticism and suggestions for improvement. Each speech is limited to 8 minutes so I record 6 speakers on one track, or a total of 12 speeches on each 7" reel of tape at 3¾ ips. When a student appears for a listening session no time is lost in finding the exact spot at which his speech starts because I always record on each tape a specific identification of what it will contain before starting the classroom session. Since there are two sections of this seminar my recorded identification includes not only the class and the date but also the day, *and* a "count down." For this purpose I use the following formula: "Met E. 296, on Wednesday, 30 April, 1958. Reel C Track 1. 5, 4, 3, 2, 1, zero."

Such an identifying recording on a tape serves several purposes. First, it is a check to show that the recorder is in working order, since it takes but a moment to play back. Second, it gives an *exact* spot in which to "zero in" your program indicator. When you hear "zero," stop the machine and set the indicator at 0. And finally it makes it possible to pick out for play back any given speech recorded that day with no time lost hunting for it. For instance, my records show that on Wednesday, 30 April, 1958, three speeches were recorded on Reel C, Track 1. These were Zack (0-120), Larsen (120-233), and Sandstrom (233-367). One week later I threaded the same tape, listened to the count down, stopped it immediately when I heard "zero," set the indicator at 0, and ran fast forward to 367. I then recorded: "This is Wednesday, 7 May 1958." A play back showed that the recorder was operating properly, so I recorded three more speakers as follows: Morris (370-589), Pasley (589-841), and Hayes (841-1036).

The procedure I have outlined above may seem time consuming, but it is not. I find that the original identification which included the Class, Reel, Track, Date and Count Down took only 11 seconds, while the second identification which was the date only, took just 3 seconds. You will get a big return on a small investment when a few seconds result in a saving of many minutes in finding the starting point for playback.

Now you may say: "That's all right for a professor recording speeches in a classroom, but that's not the kind of recording I do." For most readers of this article that is true. What you probably do is record programs from radio, copy records from discs or other tapes, or preserve special events such as weddings, parties, the bright sayings of children and amateur musical or theatrical performances.

One type of tape recording which is probably the most common today is taking programs from the radio. Here there are two possibilities: (1) You know a particular program is scheduled and you get all set ahead of time, so as not to miss it, or (2) You are all set for recording from your radio but you are just listening to a station, or fishing around in the hope of finding something that you might want to preserve on tape.

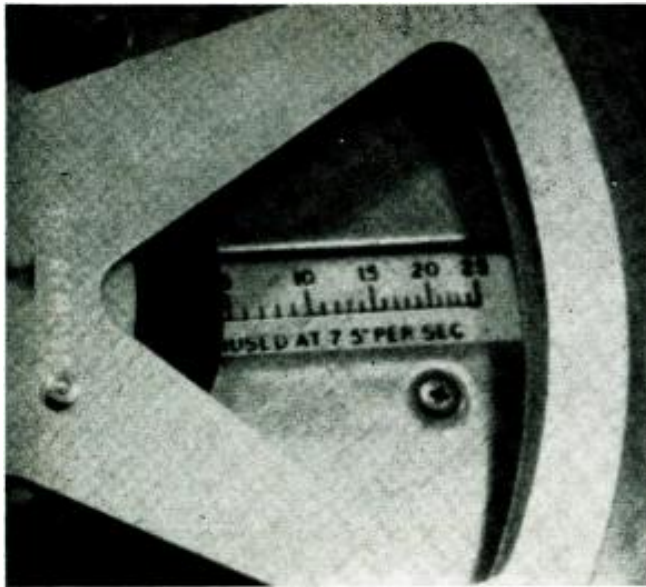


Top: the vernier type counter found on the V-M recorder. The outer ring revolves faster than the inner as it shows units while the inner ring shows hundreds. Lower: the odometer type counters found on many machines. None of these indicators shows actual footage but they are accurate and can be used to locate selections if used as described in the article.

The first case offers no problem. Before it is time to record the program you are waiting for, put your identification on the tape. To illustrate, here is what you would hear upon playing a tape taken at random from my collection:

"Address of President Eisenhower on Thursday, 7 November 1957. Taken from radio station WDWS, Columbia Broadcasting System, 7:00 P. M. Central Standard Time. Reel 164-E, Track 2. 5, 4, 3, 2, 1, Zero." Regardless of which box might contain this tape, which reel it might be wound on, or where it might be spliced into some other length of tape at some future time, there can be no question as to exactly what you will hear following the above quoted identification.





Some machines have "minutes of tape" indicators. While these are relatively accurate they are of more use in recording than in the location of desired selections. They may be used to locate the general area of the desired number and the voice identification used for positive location.

In the second case there are three possible procedures. Let us consider them in the inverse order of their desirability. One method is to make the recording and when you are thru splice in ahead of it the necessary identification. This has two disadvantages. It is time consuming and the extra tape you spliced in will throw your index count off.

The second procedure is to add at the end of your recording: "The preceding recording was — — —." This technique is also inefficient, since, when you hear such an identification you waste a lot of time fishing around to find the start of "the preceding recording." Also you might very well go ahead of the starting point to some other material and assume that it, too, was a part of the recording referred to.

The most efficient way to identify spontaneous or random recordings is to leave a space on the tape which can be used later. The chances are that when you are set up to record you will be somewhere in the middle of a reel. While you are waiting for that bit you might want to catch, set the volume at 0, and run the machine on "record" for fifteen or twenty seconds. This will provide a clean section of tape on which you can later put the necessary data to identify the material which follows. I suggest fifteen to twenty seconds as ample to avoid any possibility of erasing the first part of the program you want

to preserve, since I find that the example quoted above, which is perhaps more complete and detailed than you would ordinarily need, takes just 18 seconds to play back.

Regardless of the ways in which you use your recorder, and the possibilities are legion, the same principle applies. To be able to find immediately *anything* you have recorded, at *anytime* you want to play it back, and also to insure that your recorded materials will not become valueless in the future for lack of data regarding date and source of the original signal, you should always record *on the tape* a detailed identification. If you don't, you will find yourself some day listening to a passage and wondering "Who is that speaking?"; or "What artist played that selection?"; "Where did that come from?"; "When was it recorded?"; etc. Before long you will discover that you have a wealth of recorded material which might be technically very "Hi-Fi," but which has lost much of its value for lack of identification.

I speak with the voice of experience, an experience which goes back many years to the days long before tape recording was available. I have on hand a large collection of "instantaneous" recordings made on aluminum, lead, composition and acetate discs, all of which are interesting, many of which are practically priceless but, unfortunately, quite a few of which are of little or no value simply due to the fact that I neglected to adequately identify them at the time of recording. So, to get the most out of your recording efforts, to preserve your material in a form which can be easily found for playback and to guard against loss of value due to inadequate identification just put into practice the following simple rules:

1. Devise an indexing system to be followed with all tapes recorded.
2. When you thread a new reel on your machine, always identify it, by voice. Be sure to include Reel No. —, Track No. —, *and* a "count down" to zero.
3. Before going further, play back your count down and set the program indicator at 0.
4. *Before* each recording either: (a) identify the material by voice as to date, performer, and source of signal or (b) erase a 15-20 second spot for future recording of such identification.
5. Keep a log showing the number on your indicator at the beginning and at the end of each recording.

By recognizing that the program indicator offers an accurate index of the location on the tape of any given recording, and by following the simple rules set forth above you will not only enhance the value of your recordings, but also eliminate the time taking fumbling and the temper testing frustration which is the inevitable result of not being able to find the passage you want when you want it.

## TAPE CONTROLS WORLD'S FAIR EXHIBIT

**V**ISITORS to the Brussels World's Fair are flocking to watch a typical Belgian countryside of today transformed before their eyes to the world of 2000 A. D. This unique 962 square-foot display is part of the General Motors exhibit.

The secret behind the animated display is a complete automation control system using magnetic tape. The units were made by the Magnecord Division of Midwestern Instruments. Not only do the units control the exhibit but

four Magnecords deliver a complete magnetic tape commentary in English, French, German and Dutch simultaneously. Observers on three gallery levels may listen to the language of their choice through headsets.

The Magnecord tape instruments which control the huge exhibit are standard 616 long-play professional type, like those used in background music studios, which operate continuously on a tape 9,600 feet long for 8 hours play, reversing at the end of each cycle.

# STEREO SECTION

## NEW TAPES

By Georgie Sigsbee

### CLASSICAL SYMPHONY BEETHOVEN

Symphony No. 7 in A Major, Op. 92  
The Pittsburgh Symphony Orchestra  
William Steinberg, Conductor  
CAPITOL ZF-22

Stereo... \$14.95... 38 mins.

Symphony No. 7 in A Major  
Chicago Symphony Orchestra  
Fritz Reiner, Conductor  
RCA ECS-11

\$14.95... 34 mins.

That happy day has arrived in which the tape collector may critically choose between several first-class performances of our major orchestral works; while frustrating at times, this is, I think a healthy indication of the concern of the major recording companies in this direction.

Capitol presents a fine reading of this symphony which Beethoven himself considered one of his finest works. The presently-competing version is that of the Chicago Symphony conducted by Fritz Reiner (RCA ECS-11) issued by Victor about two years ago. Predictions are that at least two more performances of this work will be released by rival companies within the next few months.

The Steinberg performance is straightforward and concise, adhering closely to the markings of the score. The splendid orchestral playing is magnificently recorded by Capitol making each instrumental voice clearly heard, but at the same time preserving just enough resonance of the concert hall to place the listener in the center of the audience.

The Reiner tape is in many ways a sharp contrast to Steinberg's, although the comparison is by no means one-sided. I rather like the brisker pace which Reiner sets, particularly in the 2nd (Allegretto) Movement, and his total playing time (with no cuts as far as I could detect) is four minutes less than Steinberg's. I am impressed

also by the fine articulation of the Chicago Strings, although they are not as clearly recorded as the Pittsburgh Strings. The overall sound of the Victor tape is impressive, rich . . . massive . . . but not altogether clean. There is a muddiness which obscures many instrumental nuances in the Reiner version. The choice at the moment then seems to be between a dynamic (though somewhat unorthodox) performance marred only by less-than-perfect recorded sound (Reiner), and a more restrained and sensitive reading superbly recorded (Steinberg). J. L.

### ORCHESTRAL GROFÉ

Grand Canyon Suite—Sunrise, Painted Desert, On the Trail, Sunset, Cloud-burst

Mississippi Suite—Father of Waters, Huckleberry Finn, Old Creole Days, Mardi Gras

Hollywood Bowl Symphony Orchestra

Felix Slatkin, Conductor

CAPITOL ZF-53

\$14.95... 44:20 mins.

Utterly delightful in every respect. I, for one, am happy as a lark to have this tape in the library. Grofé's musical Americana is truly family fare to be enjoyed by all. I remember as a child being particularly fond of the "donkey" in "On The Trail" and now I find history is repeating itself through our children.

Sensitive to sights, sounds and sensations, Grofé has captured some of his feelings for these two sections of our country in his compositions and the partnership of Slatkin-Capitol have transmitted it to us through the medium of the finest stereo sound.

### CHOPIN BY STARLIGHT

Polonaise in A Flat Major

Nocturne in E Flat Major

Fantasie-Impromptu

Prelude in A Major

Waltz in C Sharp Minor

Polonaise in A Major

Prelude in E Minor

Waltz in D Flat Major

Etude in E Major

Waltz in E Flat Major

Hollywood Bowl Symphony Orchestra

Carmen Dragon, Conductor

CAPITOL ZF-50

\$14.95... 42:50 mins.

Carmen Dragon has provided orchestral settings to these compositions by Chopin and, as a whole, they come off rather nicely. To me the opening number does not seem particularly suitable to orchestration but on the other hand the "Polonaise in A Major" takes on majestic proportions. The Nocturne and two Preludes contain piano performances by Emanuel Bay, well-known accompanist of Jascha Heifetz.

These transcriptions are delivered with finesse and the sound is spacious and of luminescent quality.

### THE SOUND OF WAGNER

Lohengrin: Prelude to Act III

Die Walküre: Ride of the Valkyries and Magic Fire Music

Die Meistersinger: Dance of the Apprentices and Procession of the Mastersingers

Götterdämmerung: Siegfried's Funeral Music

Tannhäuser: Overture

Concert Arts Symphony Orchestra

Erich Leinsdorf, Conductor

CAPITOL ZF-37

43 mins... \$14.95

Working with 97 individually selected musicians from the Los Angeles area, Mr. Leinsdorf proceeds to conduct these fine examples of the genius of Wagner in an acceptable manner which will, undoubtedly, bring pleasure to many listeners.

Having been immersed for years in readings by such Wagnerian interpreters as Furtwängler, Stokowski, Toscanini, Knappertsbusch, etc., I do not derive a feeling of



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GOOD! ..... 1106F  
The Triads Plus Two  
POLKAS ANYONE? . . . 1107F  
1200 ft., 130 min. . . \$11.95

## LIVINGSTON

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SYMPHONY NO. 1 IN C  
MINOR — Mannheim National  
Symphony, Herbert  
Albert, cond. .... 4004K  
1800 ft., 145 min. . . \$17.95

Jose Melis  
TONIGHT ..... 2017C

Richard Strauss  
ROSENKAVALIER WALTZ

Berlioz  
RAKOCZY MARCH — Graz  
Philharmonic, Gustav Cerny,  
cond. .... 2018C

Bizet  
SUITE FROM CARMEN —  
Mannheim National Sym-  
phony, Joseph Rosenstock,  
cond. .... 2019C

Beethoven  
LEONORE OVERTURE NO.  
3—Mannheim National Sym-  
phony, Joseph Rosenstock,  
cond. .... 2020C  
600 ft., 115 min. . . \$6.95

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Full 1200 ft.—100F—\$11.95

LIVING SOUND FROM

# LIVINGSTON

LIVINGSTON AUDIO PRODUCTS CORP.  
DEPT. T-5 BOX 202, CALDWELL, N. J.

dramatic tension from this recording. Let us say the colorful picture of intense heat on the album cover does not particularly match the music. Other Wagnerian music would have supplied a much higher temperature. There are, however, moments of musical excitement such as in the "Die Walküre" selections. (Could it also be a lack of extreme sensitivity that I feel?) Be that as it may, this recording will rate as one of the best "sounds of Wagner" on tape to date. Gui and Munch are still high on the list.

Capitol has given this release a very decent job of engineering.

The notes are concise and informative, although you will please note that the Overture to Tannhauser is not first, but last, on the tape. The listing on the box and label on the reel coincide with the actual performance. One can also take exception to the paragraph in the notes relative to Mr. Leinsdorf's editing of Act III of Die Walküre, the word "some" might be more apropos in lieu of "most."

## DVORAK

Concerto in A Minor, Op. 53 for Violin and Orchestra  
Nathan Milstein, Violin  
The Pittsburgh Symphony Orchestra  
William Steinberg, Conductor  
CAPITOL ZF-26  
\$14.95 . . . 29 mins.

We have come to look upon the collaboration of Milstein and the Pittsburgh Symphony under Steinberg as a most fruitful one for the violin concerto.

Bruch, Beethoven, Brahms, Mendelssohn and Glazounow have thus been treated with some of the finest performances on records. The Dvorak Violin Concerto in A Minor (his only concerto for this instrument) is much less frequently heard than its beauty and musical substance merit, and we should be doubly grateful to Capitol for helping it to achieve its due popularity, and for bringing us a truly masterful example, both from the performance and engineering standpoints.

The famous "Milstein Tone" comes alive in stereophonic sound as it never has before off the concert stage . . . a characteristically "singing" tone of incomparable beauty and freshness. The final movement, in its rondo form, abounds in delightfully lively and picturesque melodies arising from Slavic dance rhythms. The orchestral support befits the virtuoso playing of the soloist. A splendid tape on every count!—J. L.

## SHOW TUNES

### PAL JOEY

Overture  
There's a Small Hotel  
I Could Write a Book  
The Lady Is a Tramp  
My Funny Valentine  
Bewitched  
Zip  
I Didn't Know What Time It Was  
Duke Hazlit and Adele Francis  
Hollywood Radio City Orchestra  
Directed by Thomas M. Davis  
OMEGATAPE ST-2022  
\$11.95 24 mins.

Pal Joey has been "kicking-around" for almost 20 years on and off Broadway, records and the Cinema. It certainly contains some of the best tunes Dick Rogers ever wrote, and it's the music rather than the double-entendre lyrics which has made it a perennial. Surprisingly, only three of these selections are duplicates of those on Mercury MS2-15 (reviewed April, '58). The performance here is quite good in all respects, and the choice between this and the Mercury Tape seems to depend upon your preference for the individual selections.—J. L.

## THE MUSIC MAN

Original Broadway Cast, Starring Robert Preston  
Orchestra Conducted by Herbert Greene  
CAPITOL ZF-41  
\$14.95 . . . 47 mins.

One of the nicest things that has happened to Broadway in a long time took place at the Majestic Theater on December 19, 1957 when "The Music Man," with story, music and lyrics by Meredith Willson, began what I believe (and hope) will be its deservedly long run. On this tape Capitol presents most of the original performance by the Broadway cast and in so doing shows us the great value of stereophonic recording in recreating the true dimensions and action of the musical stage. It is simply a wonderful, thoroughly enjoyable recording in every respect.

Meredith Willson draws upon recollections of his own boyhood in a small Iowa town for the locale and action of Music Man. Professor Harold Hill, the "Music Man" (played by Robert Preston) is an itinerant salesman who traveled through the mid-west selling band uniforms and instruments to the townspeople with the promise of forming a boys' band and teaching the children to play the instruments. Regularly he would leave town just ahead of the enraged townsfolk but with their money. However, in River City, Professor Hill encounters an insurmountable obstacle: he falls in love with "Marian the Librarian" (played by Barbara Cook). He is exposed as a fraud; forgiven by the populace, and they all live happily ever after.

A large factor in the success of "The Music Man" is that it draws upon so many of the elements of musical comedy tradition that everyone loves: there are beautiful love songs, patter songs, a hint of Gilbert and Sullivan, excellent Barber Shop Quartet harmony (ably done by the Buffalo Bills) and band music.

Willson's clever switch of tempo which transforms the tune of "Seventy-six Trombones" to the tune of "Goodnight My Someone" is certainly worthy of mention. So is the opening number in which a group of entrained salesmen recite a parody on the problems of the traveling salesman to the rhythm of the starting, running and stopping steam engine. They reiterate that "You've gotta know the territory" . . . and we must say that Meredith Willson does indeed "know the territory" . . . he has given audiences exactly what they have been wanting in a musical comedy . . . and even more!—J. L.

## RAINTREE COUNTY

Musical Highlights from the Original  
Soundtrack

Music Composed and Conducted by  
Johnny Green

M-G-M Studio Symphony Orchestra and  
Chorus

RCA CPS-108

\$10.95 . . . 26.45 mins.

Unfortunately, I did not see the motion picture "Raintree County" and I feel that if I had I would have derived a great deal more from this soundtrack recording of its musical highlights. For me, it had to stand on its own musical merit which, frankly, is quite meager. True enough, the basic theme is pleasant . . . even to a degree "haunting" like the "Tara Theme" from "Gone With The Wind" or the themes from "Snowbound" or "The Lost Weekend." But it becomes rather hackneyed after being dragged through the various episodes of the story without much variation. The M-G-M Studio Orchestra and Chorus do turn in fine performances, but they have, I feel, little with which to work. As background music for reading or conversation, or to recall scenes from the picture it is decidedly worthwhile. But as a musical work it lacks the body to stand on its own. And twenty-six minutes of it is just too much! J. L.

## TWO FOR THE SHOW

Around the World in 80 Days

Lover

Medley from Oklahoma!

I Feel Pretty (from West Side Story)

Push De Button (from Jamaica)

There's a Small Hotel (from On Your Toes)

Donkey Serenade (from The Firefly)

Under Paris Skies

In Times Like These (from Rumpel)

Getting to Know You (from The King and I)

I Could Have Danced All Night (from My Fair Lady)

Tom and Jerry Vincent at the Piano and Hammond Organ

LIVINGSTON 1101 F

\$11.95 . . . 31.22 mins.

A very pleasant collection of delightful melodies cleverly arranged by Tom and Jerry Vincent to fuse the two instruments in a union of harmony. The recording lends just the right perspective to this instrumental combination and the Vincent brothers play very nicely. However, there is a certain degree of "sameness" to the arrangements and for this reason I found this tape somewhat repetitious for pure listening, although for background purposes it is ideal. J. L.

## POPULAR

KNUCKLES O'TOOLE PLAYS HONKY  
TUNK PIANO

Smile, Darn Ya, Smile

Walkin' My Baby Back Home

Sweet Rosie O'Grady

After the Ball

Among My Souvenirs

Gea But It's Great to Meet a Friend From  
Your Home Town

I Want a Girl

Give My Regards to Broadway

# STEREO

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It All Depends On You  
 Nelly Was a Lady  
 There Is a Tavern in the Town  
 Singin' In the Rain  
 GRAND AWARD ST-9  
 \$9.95...20:15 mins.

O'Toole is backed by a banjo, drummer, and bass man while banging away at these pieces from by-gone days. [During "Sweet Rosie O'Grady" and "After the Ball" there seems to be a drop in level and the piano is not as close up as before and after.] The men really work out... the drummer beats his sticks, simulates shufflin' and cuts loose with rackets while the banjo and bass string actively along. The main sound, however, is the raucous, tinny, clangy piano which O'Toole plays with know-how.

Did someone mention fidelity? Well, it's loud... not "pinpoint" audio but spread out. [O'Toole seems to be all over the end of the room.] At times one gets a "hollow" sound but it's hard to evaluate quality within the audio effect of this sort of keyboard boiler-making!

**POLKA PARTY**

Hoop-Dee-Deo  
 Milwaukee, the Home of the Braves  
 Laugh Polka  
 Pizza Polka  
 Emilia Polka  
 Pittsburgh Polka  
 Chopstick Charlie Polka  
 State Street Chicago Polka  
 Suzanna Polka  
 Hot Dog Polka

Charles Magnante and His Orchestra  
 GRAND AWARD ST-5  
 \$9.95...29:15 mins.

For those of you who like the polka here is a recording you will most certainly want. Out in this neck-of-the-woods polka dance groups are increasing in popularity. Since most groups cannot afford "live" instrumental talent, a recording like this one provides almost a half-hour of predominately American (catch the titles) polkas played by top artists. I suggest this recording as a "must" for such gatherings throughout the country.

Featured is the well-known accordionist, Charles Magnante, assisted by Bobby Haggart on bass (remember "Big Noise From Winnetka"), Terry Snyder on drums (Como show), Andy Ackers at the keyboard, and Al Gollodaro on sax. All are fine musicians who display their skill in a thoroughly competent and zestful fashion.

A gay, sprightly recording with what Grand Award refers to as "Phase X" recording process which eliminates the "hole in the middle." No complaints as to the fidelity.

**DINNER IN ACAPULCO**

Sin Ti  
 Lisboa Antigua  
 Lindo Michoacan  
 Veracruz  
 Chuchita En Chihuahua  
 Salterio Quintet  
 LIVINGSTONETTE 2011 C  
 \$6.95...15:40 mins.

This is dinner music, Mexican style. You are easily transported to the terrace of a dining salon overlooking the beauty of Aca-

pulco. The Salterio Quintet serenades you with a violin, bass guitar, string bass, and a soprano and tenor salterio.

In case you are not familiar with the latter instrument... Salterio is the Italian name given to the ancient instrument, the dulcimer, a string instrument struck with mallets or little rods. According to Livingston's notes, the sound is much like the zither and the players use steel picks.

A tasty musical enchilada, served up in an easy, relaxed manner. The recorded sound is warm and airy... the fidelity good.

**THE FEATHERY FEELING**

Fascination  
 Swingin' Sweethearts  
 A Beautiful Lady in Blue  
 Dinner At Eight  
 The Ski Song  
 I Love You Truly  
 Treadmill

David Carroll and His Orchestra  
 MERCURY MVS2-19  
 \$7.95...17:15 mins.

Who could help but have his sagging spirits lifted by the catchy "Swingin' Sweethearts" or the "Ski Song?" And who could help but be soothed or get a bit sentimental when hearing the lovely strains of "A Beautiful Lady in Blue" or the Wayne King-like arrangement of "I Love You Truly?"

David Carroll uses wordless vocals as instruments in the orchestra. They are so well blended that the humming, etc., is not obtrusive... and certainly achieves the "feathery feeling."

An excellent stereo recording. It seems that name credits are seldom ever given to the engineers (and without them where would we be) so I am glad to see MERCURY and other companies coming out with such credit lines. In this case Bill Putnam was the engineer.

**VIVA**

Mexican Hat Dance  
 La Paloma  
 La Cucaracha  
 Solamente Una Vez  
 Granada  
 Be Mine Tonight  
 Chiapanecas  
 Percy Faith and His Orchestra  
 COLUMBIA GCB 15  
 \$10.95...21:20 mins.

Sunshine and gaiety in the swirling rhythms of the "Mexican Hat Dance" and "Granada" and the soft, swaying cadences of "La Paloma" and "Solamente Una Vez" fill this recording with spirit and variety. Percy's arrangement of "La Cucaracha" is utterly delightful.

Full, spacious orchestral arrangements and high "Hi Fi" reproduction.

**JACKIE GLEASON PRESENTS "Oooo!"**

Thine Alone  
 You Brought A New Kind of Love to Me  
 My Devotion  
 High On A Windy Hill  
 Dearest, You're the Nearest to My Heart  
 It's All Right With Me  
 Can This Be Love?  
 Willow Weep For Me  
 I'll Be Around

**Imagination**  
 The Voices of Artie Malvin  
 CAPITOL ZD-33  
 \$12.95... 29 mins.

Jackie Gleason, who has introduced many musical novelties in the past, presents here the Vocal Orchestra of Artie Malvin, which sings no words but is blended like the string section of an orchestra. The effect is enchanting, very similar to the "Vocestra" tape of Stereophony, Inc. (C-151, rev. Dec. '57) or "Though Not a Word Was Spoken" by the Voices of Walter Schumann (RCA Disc LPM 1266). However, here the voices have little in the way of accompaniment to compete with them save for the solo guitar of Tony Mottola (miked close-up in the foreground) and Bernie Leighton's piano (somewhat more distant). Very pleasant listening, excellent background music, but all the selections are done in about the same manner without variation, and things get pretty monotonous after a while.—J. L.

**THE MILLARD THOMAS GROUP  
 IN MUSIC AND SONGS OF THE  
 CARIBBEAN**

- Water In Me Rum
- 'Bye Sweet Dreams
- Give Me Back Me Shilling
- Love Tastes Like Strawberries
- Bon Soir Dame
- Celebration Day
- Like My Heart
- Linstead Market
- Band of Birds

RCA CPS-84  
 \$10.95... 24.5 mins.

Millard Thomas is best known for the sensitive guitar backgrounds he provides for Harry Belafonte. In this recording his own group presents a delightful selection of folk songs from the West Indies.

The crystal clarity of this recording and the enchantingly relaxed style so typical of the music can transport you—with a little imagination—to the land of balmy breezes, brilliant colors and utterly complete relaxation.—J. L.

**STEREO FOR DANCING**

- Tenderly
- Paradise
- Bewitched
- Hernando's Hideaway
- I Kiss Your Hand Madame

Answer to Anagram, page 19



# STEREO WEBCOR

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Once In A While  
Autumn In Paris  
My Wonderful One  
My Ideal  
Begin the Beguine  
La Mer

OMEGATAPE STD-11  
\$5.95 ... 28 mins.

Here the opening notes of ship's bells pipe you aboard a good dance tape. This *Omega* demo contains selections from various dance tapes and presents six different orchestras. Altogether there are three numbers by Montero; two by Lecussant; two from Sandlauer, and two from the Hollywood Radio City group. Rounding out the half-dozen is one number by Warren Baker and one with Anton Karas with orchestral backing.

The album is aptly named. Fidelity is of high quality and the price makes it a real bargain.

#### WHERE ARE YOU?

Where Are You?  
Maybe You'll Be There, Laura  
Lonely Town, Autumn Leaves  
I Think of You  
Where Is the One  
There's No You  
Baby Won't You Please Come Home

Frank Sinatra  
Gordon Jenkins Orchestra  
CAPITOL ZD-17  
30 mins. ... \$12.95

The mood is slow and blue; the singing that of the "old" Sinatra (no flip, jazz style here); the orchestral backing filled with limpid, poignant strings; the reproduction very good.

#### JAZZ

##### THE JAZZ PICKERS

Bebe  
Don't Worry 'Bout Me  
Clap Hands—Here Comes Charlie  
I'll Remember April  
Yardbird Suite  
Infiltration  
Rap-Scallion

MERCURY MVS3-5  
\$7.95 ... 19.65 mins.

Here is another fine Mercury tape to draw our highest praise on every count. It is a good clean recording and a sterling example of the balanced use of multiple mikes to record a small group. Excellent musicianship is displayed by the Jazz Pickers in this, their first, stereo recording. I feel that this tape makes an excellent introduction to modern jazz, for even to the uninitiated it is decidedly not "hard to listen to." I found the "Yardbird Suite" particularly enjoyable, but there is such a wonderful variety of contrasting devices, musical forms and instrumentation that each selection has its own particular delights. J. L.

##### JAZZ IMPRESSIONS OF PAL JOEY

What Is a Man?  
Bewitched, Bothered and Bewildered  
I Could Write a Book  
Do It the Hard Way  
I Didn't Know What Time It Was  
The Lady Is a Tramp

The Kenny Drew Trio  
RIVERSIDE TAPE RT 21 F  
\$11.95 ... 29.52 mins.

Fine piano improvisations by Kenny Drew, with the rhythm accompaniment of Wilbur Ware on the bass and Philly Joe Jones on the drums . . . plus excellent stereo balance to produce very realistic "presence" . . . one could hardly ask for anything nicer in this vein. J. L.

#### RE-PERCUSSION

Crocodile Crawl  
Cymbalation  
Pentatonic Clock  
Moonlight Reflection  
That's A Plenty  
Cloud Nine  
Woodpile Polka  
Omoo  
Amazon Tributary  
Josephina De Granada

The Percussive Arts Ensemble, conducted  
by Richard Schory

#### CONCERTAPES 25-1

\$11.95 ... 31.5 mins.

Whatever glowing adjectives I might choose, it would be difficult to do justice to this tape . . . it is wonderful! I must admit that I had, at the outset, some reservations about another recording of percussion instruments, but here we have something outstandingly different . . . percussion not for the sake of noise but used effectively to interweave melodic themes. The selections employed (all original except "That's A Plenty") are masterpieces of amazing scoring and orchestration. Schory conducts the ten men of his ensemble (who between them play more than 100 different percussion instruments) in a novel type of sound which employs not only the melodic and harmonic elements of chromatically tuned percussion but also the full rhythmic potential of instruments of indefinite tuning. While the sounds will be sheer ecstasy to the Hi-Fi fan, the melodies are thoroughly enjoyable and make for fascinating listening. J. L.

#### MARCH

##### MARCH TIME

Bugles and Drums  
Illinois March  
Children's March  
The Interlochen Bowl  
Onward-Upward  
Boy Scouts of America

Eastman Symphonic Wind Ensemble  
Frederick Fennell, Conductor

MERCURY MWS5-29

\$6.95 ... 11:30 mins.

Here is the fourth stereo recording of this splendid march ensemble. Featured on this release are six compositions by Edwin Franko Goldman. From the rousing opener to the concluding official march of the Boy Scouts (this is the first recorded performance of the latter), this release upholds the high calibre of the previous tape recordings by Fennell and the Eastman group.

The young fry will enjoy the "Children's March" with nursery tunes such as "Three Blind Mice," "Hickory Dickory Dock," etc., as well as "Jingle Bells" and others. See if your child catches the clever instrumental imitations of a baby crying and a rooster crowing.



# NEW PRODUCT REPORT

STA **OK** STED



## BELL & HOWELL 600 STEREO MODEL

*... push-button solenoid control, two speakers built in case, three motors, jacks for external speakers.*

**T**HE Bell & Howell Model 600 in most respects is similar to the Miracle 2000 model which was reviewed in the January 1957 issue.

The greatest difference is, of course, stereo. The unit is equipped with the standard two-channel stacked head which enables it to record and playback dual track monaural or to playback two track stereo.

The excellent feature of three motors and solenoid operated controls is retained as is the use of neon indicators for modulation control.

The program indicator is of the

vernier type. All controls, except the speed change are operated by push button solenoid. They are: stop (an electrical braking stop), forward, rewind, play, speaker and record.

The unit may be used for public address purposes by putting the speed shift lever in neutral and depressing the record and speaker buttons with no tape on the machine. Sound will come from the left speaker only.

Stereo in a package is the object of this recorder for the two speakers are mounted one on each end of the case. The speakers are two extended range

**Product: Bell & Howell 600**

**Manufacturer: Bell & Howell Company, 7100 McCormick Rd., Chicago 45, Ill.**

**Price: \$329.50**

8" speakers with 4 watts per channel for stereo or 8 watts on monaural. This is adequate for any normal use.

Bell & Howell engineers have very cleverly brought into use something that everyone has—the walls of the room. By placing the recorder in a corner, on a diagonal, the sound coming from the speakers is reflected by "wall bounce" and this works quite nicely.

In addition, there are two jacks on the back of the unit for the connection of extension speakers, if desired. As both preamps and power amplifiers are contained in the recorder case, just a speaker is needed. When the plug is placed in the jack, the speaker on that side of the case is automatically disconnected. This permits the extension speaker to be placed a distance from the recorder and any degree of separation may be secured. Or, if desired, two extension speakers may be used.

The recorder has two speeds,  $3\frac{3}{4}$  and  $7\frac{1}{2}$  ips and comes complete with input cord and microphone. The reels may be left in place with the lid closed.

This is a well-built and attractive machine with good performance. It is available in the portable style shown or in two furniture styles in blond or mahogany.



New model stereo machine with cover closed. Note use of key in lid catches—this prevents unauthorized hands from tampering.

# SHOP OR SWAP

Advertising in this section is open to both amateur and commercial ads. Hi-Fi TAPE RECORDING does not guarantee any offer advertised in this column and all swaps, etc., are strictly between individuals.

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**LEARN WHILE ASLEEP** with your recorder. Amazing 100 page book gives full instructions. \$2.00 Satisfaction guaranteed. Sleep-Learning Research Association, Box 24-TR, Olympia, Washington.

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**URGENTLY NEED** copy of Columbia record No. 40091: "38th Parallel," by Bobby Scott. Record now out of print. Will consider tape copy if quality. Name your price. C. W. Rossow, Rt. 1, Box 143, Mission, Texas.

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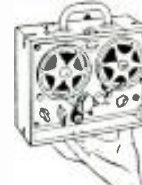
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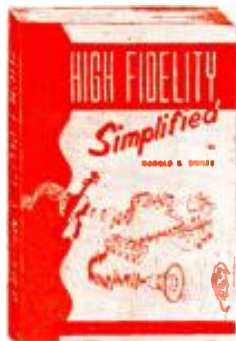
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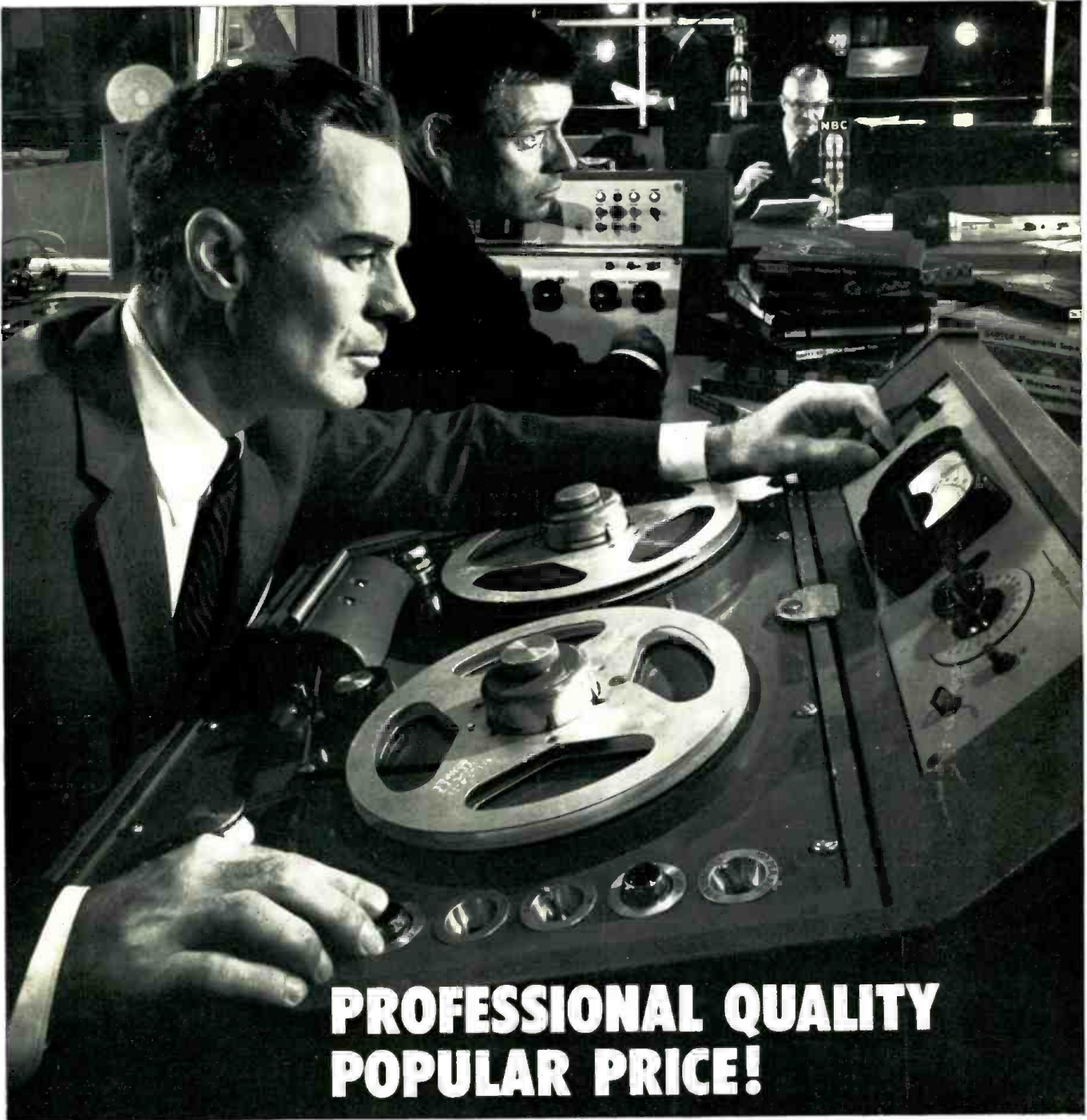
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