

audio record

Published by
AUDIO DEVICES, INC.
444 MADISON AVENUE, N. Y. C.

audiodiscs
audiotape
audiofilm
audiopoints



Miss Joan T. Peterson of Ficker Recording Service, pulls out another request number from their 500-tape library. Note Audioidisc Chip Chaser at each of the four disc recorders below the tape shelves. Story on Pages 4 and 5.

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- New Plastic Reel
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- New Midget Tape Recorder
- Educational Recording Contest
- Turn Discs into Dollars

How UNIVERSAL Cuts Cost of TV Sound

Universal Recorders Adapts Radio Production Technique to Film — Saves Cost on Top Quality.

Universal Recorders, one of the most progressive studios in the world, using only the most modern equipment, has recently added new facilities to its headquarters at 6757 Hollywood Blvd. in Hollywood to help service its clientele in the field of television.

Universal is now geared to the new medium, using radio production techniques in adding sound to films made for teevee. It has pioneered the new approach in Hollywood. Because of excessive costs involved, television production has to adopt a middle road between motion picture and radio technique. As the head of the sound department of a major motion picture studio said recently at a luncheon during which he addressed TV packagers: "Sound recording for a feature film on 35mm film costs about \$5600 for raw stock and processing, for each full length picture. The same thing can be achieved on 1/4 inch tape, with all editing done on tape for under \$800. Moreover, the additional savings on labor is terrific."

Using Rangertone 1/4 inch lip synchronization tape recorder, Universal is well in front of others in the use of tape. Will Voeller, president of Universal Recorders, and Arthur Hogan, chairman of the board, estimate they can save motion picture producers up to 70% of the cost of sound on film. The new method not only saves money but is an infinite time-saver.

"Television cannot afford to cut the costs of good properties for dramatization. It cannot carp on the price of good actors and good technical and creative talent. It must save on the technique of production," says Voeller. "Television producers have to give top quality on an economic price level, and we can now give it to them."

Most motion picture producers are trying to continue with the same methods they have used in the past twenty years. They



Signing contracts for series of air shows produced by Universal Recorders for the U. S. Marine Corps, are director Frank Danzig, Chairman of the Board Arthur Hogan (seated), Lt. Jack Sorensen, Patti Clayton, and orchestra leader Jerry Gray.



Engineers DeWitt Morris and Andrew Richardson, of Universal Recorders, checking a program on a Rangertone 1/4" tape recorder and Stancil-Hoffman 17 1/2 mm synchronous magnetic film recorder and reproducer.

have refused to recognize the great advances made by radio. It is possible to save an inestimable amount of raw stock with the use of tape. For instance, suppose a producer of motion pictures has a director who needs ten, twenty, or thirty "takes" for the scene he means to use. All the sound recorded on film is ruined on the "out takes", and the raw stock cannot be used again. On tape, he can pick his best scene (or several scenes) of the thirty and wipe out the rest using that tape over and over again. Moreover, if he is on location, instead of waiting days to have the raw stock processed, on tape he can hear the results immediately.

For puppet shows made for television, producers can record, say, ten programs in one day and film to the sound at their convenience. It obviates the cost of having sound men and their equipment on the stages for days during filming. It is the cheapest and only method.

For short films, such as those used in commercials, it is possible to film days of sequences "silent" and then project the image on a screen at Universal, with the actors reading the lines to the screen.



Universal Recorders studios are as complete and up to the minute as any in the world. Studio above measures 36' by 46', can accommodate up to a 35 piece orchestra.

This leaves capable sound men free to creative activities rather than to mechanical duties.

Universal Recorders now has perfect sync, adopting the radio technique of cueing in on 1/4 inch tape all dialogue, sound effects, special effects, and background music.

They also use 17 1/2 mm magnetic film, inscribing a visual track next to the magnetic track in a technique called "modulation writing".

Among the producers using Universal
(Continued on Page 3, Col. 1)

audio record

VOL. 7, NO. 8

OCT.-NOV., 1951

Published monthly by Audio Devices, Inc., 444 Madison Avenue, New York City, in the interests of better sound recording. Mailed without cost to radio stations, recording studios, motion picture studios, colleges, vocational schools and recording enthusiasts throughout the United States and Canada.

Universal Cuts Cost —

(Continued from Page 2, Col. 3)

Recorders facilities are: George Carillon, Eddie Bracken Productions, Consolidated TV, Tom Kelley, Rene Williams, Bob Baker, Churchill-Wexler.

Voeller believes that ultimately pictures will be recorded electronically on tape. When the process becomes practical, it will mean all sound as well as pictures will be recorded on tape. It will mean a simpler process, cheaper, and a more faithful reproduction of image and sound.

Recording sound for television is by no

which he received a Legion of Merit Award.

The entire staff of Universal Recorders is orientated and alerted to assist in each phase of recording. Working with hundreds of clients, they still devote personal attention to each order. The operation is complete from studio to shipment.

The company is unique in its field in that it has an employee profit-sharing plan. This supplies additional incentive to the employees to see that customers are satisfied and works for the benefit of the client.

The entire operation is geared to precision and speed, and no assignment is too

Something New in Plastic Reels



AUDIO DEVICES, INC.
444 Madison Avenue
New York 22, N. Y.

To Our Readers:

We are pleased to place your name on the mailing list to receive the Audio Record, as you requested.

If you have some story on recording work, suitable for publication, we shall be glad to hear about it. Any questions on recording technique will also receive our prompt attention.

The Editor
Audio Record
444 Madison Avenue
New York 22, N. Y.



An engineer at Universal Recorders checks the depth of cut, the condition of the stylus and the distance between each groove through a microscope.



For the customer's protection, Universal recommends two original recordings for every important processing job; one to be filed in the library (shown above) which is controlled for proper temperature and humidity.

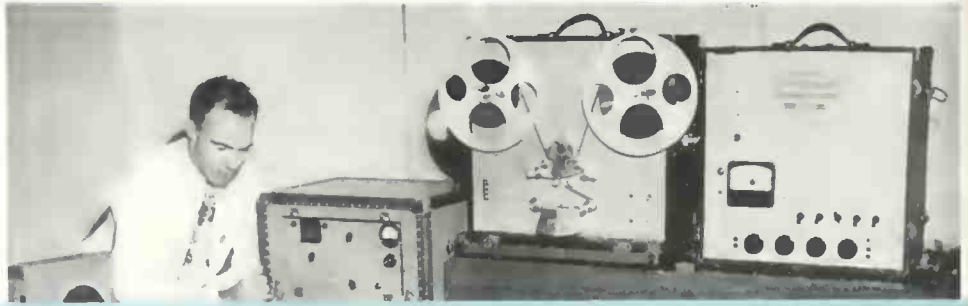
selections spliced together, as any desired portion can be more quickly spotted by noting the position of the splices on the reel before unwinding. The use of a grease pencil to mark the position of splices directly on the reel flange, also facilitates easy spotting of selections on a machine.

When a reel of plastic-base tape is held up to the light, any splices will show up clearly as white "pips" of light, something like the dots on a radar screen. Incidentally, all plastic base Audiotape, in both 1250 and 2500 ft. sizes, is guaranteed to be *splice-free*. See illustration on back cover.

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Voeller believes that ultimately pictures will be recorded electronically on tape. When the process becomes practical, it will mean all sound as well as pictures will be recorded on tape. It will mean a simpler process, cheaper, and a more faithful reproduction of image and sound.

Recording sound for television is by no means the only service accorded by Universal Recorders. Since its inception six years ago, Universal has grown to be one of the largest studios in the world. Streamlined to maximum efficiency and fastest service, it is devoted to making highest quality records. It services the government, motion pictures, radio, phonograph record, and transcription industries (as well as the religious field) with five, modern, air-conditioned Studios, a complete Recording Room, a large disc and tape library, and the finest audio, disc and magnetic tape equipment as well as all the lip-sync equipment and projection rooms mentioned before.

Chairman of the Board of Universal Recorders is Arthur B. Hogan, whose wide experience in the fields of finance and investment banking, equips him admirably for the position. Hogan became part owner of Universal in 1946 and bought out Wesley Dumm in 1950.

Will Voeller, president of Universal, has degrees as Doctor of Laws, Political Economy and Philosophy, was once executive assistant at Paramount Publix, was one of the leaders in developing foreign radio broadcasting for American manufacturers, was one of the pioneers in custom-built package shows and syndication of radio programs, was in the army from 1942 to 1945 working with Armed Forces Radio Service where he was responsible for developing a special system of distribution of radio programs among overseas radio stations and was instrumental in gearing the recording, processing, and pressing industry to the war-time demands of AFRS, for

which he received a Legion of Merit Award.

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The company is unique in its field in that it has an employee profit-sharing plan. This supplies additional incentive to the employees to see that customers are satisfied and works for the benefit of the client.

The entire operation is geared to precision and speed, and no assignment is too small or too large. As a result, Universal Recorders has become in a comparatively short time one of the recognized leaders in its field.

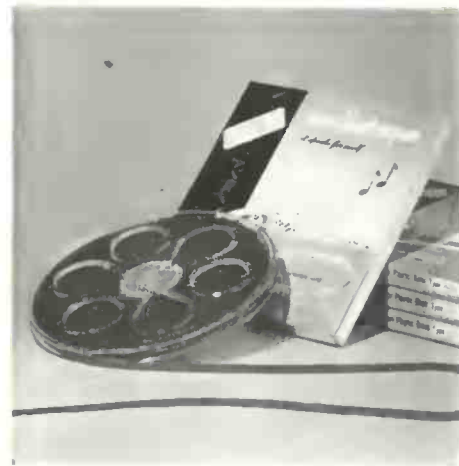


Another Vinylite pressing of a 16" transcription rolls off the fast-moving production line at Universal Recorders' huge, modern processing plant.



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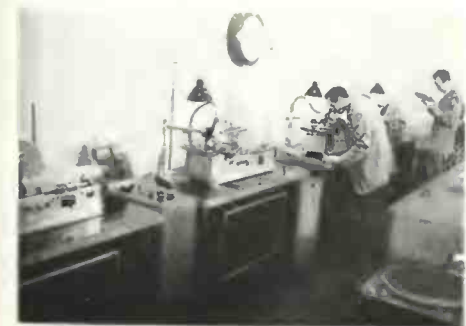
Something New in Plastic Reels



Audiotape, in 1250 foot sizes, plastic and paper base, is now being supplied on a new, 7-inch, clear plastic reel. The reel has been especially designed for attractive, streamlined appearance and added strength and durability. The side flanges, which have less cut-away area than conventional plastic reels, give more uniform support for the tape and greater resistance to breakage, warping or distortion. What's more, this distinctively Audio design is easier to thread, smoother winding and provides greater protection against damage to the edges of the tape when wound on the reel.

The new plastic reel has been very well received by users in many divergent fields of recording work. And when a busy recordist takes time out to make favorable comments on a new reel design, you can be sure it's really good. It combines the extra strength and rigidity of Audio's all-aluminum reel with the desirable transparency of clear plastic material. You can see right through it. This is particularly helpful on reels containing two or more selections spliced together, as any desired portion can be more quickly spotted by noting the position of the splices on the reel before unwinding. The use of a grease pencil to mark the position of splices directly on the reel flange, also facilitates easy spotting of selections on a machine.

When a reel of plastic-base tape is held up to the light, any splices will show up clearly as white "pips" of light, something like the dots on a radar screen. Incidentally, all plastic base Audiotape, in both 1250 and 2500 ft. sizes, is guaranteed to be splice-free. See illustration on back cover.



An engineer at Universal Recorders checks the depth of cut, the condition of the stylus and the distance between each groove through a microscope.

FICKER RECORDING SERVICE

Ficker Brothers of Old Greenwich, Connecticut, find that there's big business in "small-lot" duplicating of discs and tapes.

Just an hour out of New York City, in Old Greenwich, Conn., is one of the busiest little recording plants we've seen yet. Notice we didn't call it a recording studio — there are no sound-proof rooms, no grand pianos, no fancy trimmings. Yet, out of this little plant go hundreds of acetates each week plus a fair share of pressings. Inside, you'll find a beehive of activity — duplicates being made from tape to disc by means of a Magnecorder and a bank of cutters, stacks of packages containing anywhere from one to fifty records being readied for shipment, sales promotion plans and new ideas being formulated in the front office, newly recorded tape being edited, and last minute packing and checking for a music festival almost anywhere in the East.

This is a first impression of Ficker Recording Service, established in 1947 and fast becoming one of the leading organizations of its kind in the country.

While there are many recording studios and pressing plants throughout the country, there seems to be a need for someone to specialize in a fast, high quality, acetate duplicating service. Not only is this needed to satisfy the requirements of small quantity purchasers and people who cannot wait the time required for the pressing process, but also because it opens greater channels in the field of on-the-spot recordings of community, school, and industrial events in which the participants have a strong interest and can be sold acetate cuts.

Starting its fifth year as a recording organization, the Ficker service has made a positive move to overcome the confusion, for itself and all other small recordists, of attempting to travel throughout an extended area to tape on-the-spot events and concerts AND THEN being faced with the problem of rushing its limited personnel back to home base to complete the operation by editing and dubbing the order. A separate department assigned exclusively to full time duplicating has been established as the most economical method for themselves as well as for all other recordists wishing to use their facilities.

Through sheer concentration upon, and specialization in, the project of efficient acetate duplication, the Ficker Recording Service has developed a quantity production technique for a process that does not naturally lend itself to mass production



Dave Ficker keeps an eagle eye on the bank of four cutters, making acetate duplicates of a tape recording. Magnecord tape recorder is shown on the cover illustration.



Dave and Thiel Ficker discuss the pros and cons of a new college glee club record album with Miss Joan Peterson.

methods. Their lathes have, at present, the capacity to turn out large quantities of ten and twelve inch 78's a day and a smaller number of 16 inch discs for its own customers, and the concern contemplates the installation of another bank of cutters as the need arises. In addition, the shop's tape duplication service is assuming larger proportions as magnetic recordings are becoming increasingly popular. Duplicate copies of recorded tapes—in any quantity—can be produced at attractively low prices.

Audio Devices, Inc. hastens to mention

that the entire recording program of this firm is carried on with the use of Audio-tape and Audiodiscs, exclusively.

Five years ago the brothers, Nicholas T. and David B. Ficker, not then in the recording business, looked about for a method by which they could earn money in their spare time. Having had a musical background, which they had used to help themselves through college, they naturally explored the field of music merchandising and suddenly hit upon the idea of recording local events and selling acetates to the



Long-playing Vinylite pressing and record jacket of a recent Ficker Recording Service release featuring the Wesleyan University Glee Club.

in pointing out with a grin that being non-technical, they, as owners, really have not the foggiest concept of the electronic activity that goes on inside of a recording machine. That problem is left up to their chief engineer who is allowed complete freedom, but whose sole responsibility is to give them good musical reproduction.

One important phase of F.R.S. operation is the recording of state and sectional music festivals. These present no problem to the Fickers. Using a well-proven plan of action, they make tests during rehearsals, recordings of the concerts, play back to the participants, and merchandise the sale of records—all without fuss or bother to the director or chairman. Another service that is becoming increasingly popular with their customers is the production of high school and college glee club pressings. Working in conjunction with one of the major record manufacturers, they are putting out some mighty fine standard speed albums and L.P. records.

The Audio Manufacturing Co. has produced a tape developed by Ficker Recording Service for the purpose of vocabulary exercises in language study to be used in conjunction with tape recorders having a switch-over button that automatically throws the machine from playback to record position for as long as the button is depressed. This tape is made with alter-

nating five-second sections of clear and colored tape. It enables the teacher to place a ninety word vocabulary pronunciation exercise at $7\frac{1}{2}$ inch speed, or a ninety sentence exercise at $3\frac{3}{4}$ inch speed on a 600 ft. reel of Audiocolor tape using the uncolored segments while any number of students can then use the colored section, erasing each other while the instructor's words are left untouched. This system has been designed to allow out of class study and practice by the student without the presence of the teacher being necessary.

Thirty dollars a week for spare time taping is a modest, un-exaggerated estimate of what anyone with just a tape recorder can make with a minimum of ease and a maximum of fun in and about his home town. The Fickers have had long experience with just such an operation, and we are sure they would be willing to send specific facts and figures to anyone interested. Such facts as: where to get local recording jobs with a minimum of effort, how many duplicates you probably would sell, suggested prices, profits, copyright clearances, etc. Also, how they could serve you by handling the many details which, for a part time recorder, would make the operation too complicated and time consuming to be worthwhile. This information is available at no cost by writing Ficker Recording Service, Old Greenwich, Conn.

participants. Starting out with a home tape recorder, no technical knowledge, and considerable nerve, they gradually began to build a recording service that now satisfies the needs of over 300 colleges, high schools, private schools, community musical groups, and state music festivals throughout the East for both acetates and commercial type pressings. Although the quality of their work is considered top grade, they delight

SCHOLASTIC MAGAZINES' RADIO SCRIPT CONTEST FOR 1952 SPONSORED BY AUDIO DEVICES

For the Fifth Consecutive Year, Audio Devices is offering valuable cash prizes for the best entries in Scholastic Magazines' National Script Writing Contest for High School Students

If past performance is any index, the Scholastic Magazines Radio Script Contest for 1952 will be bigger than ever before. For the steady increase in quantity and quality of scripts submitted over the past four years indicates an ever growing interest in radio work among the Nation's high school students.

To students with a flair for writing and an interest in radio and TV work as a possible career, this contest offers a two-fold inducement—in the form of valuable cash awards, plus national recognition for outstanding ability in this very promising field.

This contest is open to any high school student in America. One or more scripts

can be entered in any or all of the following three classifications:

1. Original Radio Drama
2. Radio Drama Adaptation
3. General Radio Scripts

A total of 24 cash prizes will be awarded for the best scripts submitted—eight awards for each of the above classifications, as follows:

- First Prize—\$25.00
- Second Prize—\$15.00
- Third Prize—\$10.00
- Five Fourth Prizes—\$5.00 each

In addition, students whose scripts are selected for publication in "Audioscripts 1952" will receive special supplementary awards.

Teachers, too, receive both recognition and reward for their efforts in developing the ability of prize-winning students. The teacher of each student receiving a First Award will receive 25 Audiodiscs, 3 Sapphire Recording Audiopoints and 3 Sapphire Playback Audiopoints—or equivalent

value in reels of Audiotape.

If any of our high school readers have not yet received the contest rules and entry blanks, they can be obtained by writing to Mr. William D. Boutwell, Scholastic Magazines, 351 Fourth Ave., New York 10, N. Y.

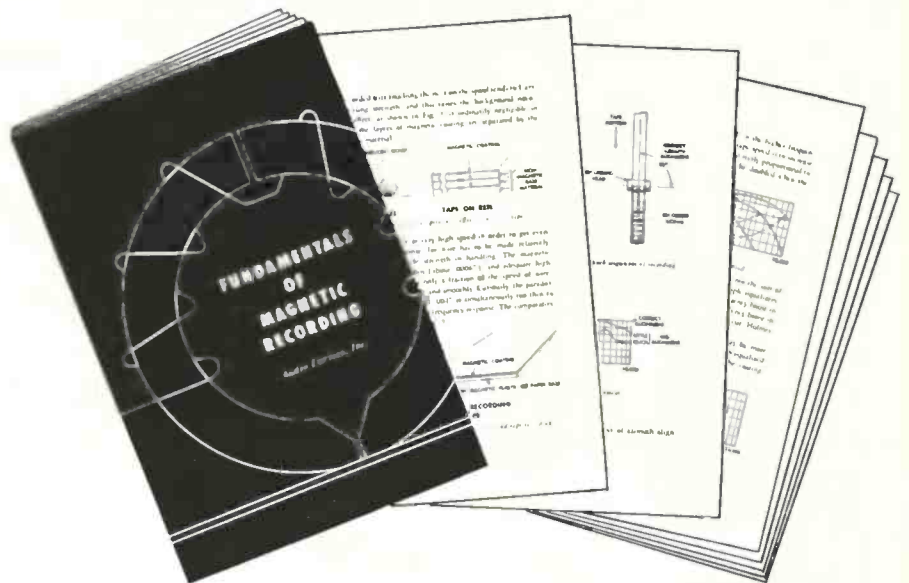
Students and teachers who are planning to enter the 1952 contest will be particularly interested to know that the prize winning scripts from the 1951 contest are now available in convenient booklet form. "Audioscripts 1951", published by Audio Devices for the benefit of future participants, contains twelve complete student-written scripts selected from prize-winning entries in both the Scholastic Magazines' Contest (for high school students) and the AER Contest (for college students). These scripts, by the way, are all royalty-free, and make excellent material for school dramatization and local radio programs. "Audioscripts 1951" is available at cost—\$1.00 net each. Send check or money order to Audio Devices, Inc., 444 Madison Ave., New York 22, N. Y.

FUNDAMENTALS OF MAGNETIC RECORDING

By C. J. LeBel,
Vice President,
Audio Devices, Inc.



New, 50-page, Technical Handbook
Now Available Without Charge
to All Tape Recordists



The recording industry has long been faced with the need for a complete, up-to-date and authoritative reference manual on the subject of magnetic recording. This new recording medium has grown so rapidly in recent years that even many professional recordists who use it every day are not thoroughly familiar with all of the basic principles involved—the physical and magnetic characteristics of the tape and the machine design requirements for optimum performance.

Audio Devices' new manual on "FUNDAMENTALS OF MAGNETIC RECORDING" has been especially prepared to meet this need—to combine, in one convenient, pocket-size volume, all of the basic information which has heretofore been available only from widely separated sources in the technical press. The author, Mr. C. J. LeBel, Vice President of Audio Devices, Inc., is well known to all Audio Record readers through his informative and very readable discussions in our monthly Audio Pointers column. He is one of the country's foremost authorities on the subject of audio engineering and practical acoustics, with an extensive background of experience in every field of sound recording.

The "FUNDAMENTALS OF SOUND RECORDING" is not a highly technical treatise, intelligible only to the relatively small circle of audio engineering specialists. It is an intentionally simplified text which contains all of the important factual information on the subject, presented in such a manner as to be readily understood by anyone familiar with the basic principles of electronics and sound reproduction. It is not recommended, however, for

the strictly amateur recordist who doesn't know a decibel from a kilocycle. But anyone who is seriously interested in obtaining a better understanding and practical working knowledge of magnetic recording will find this new handbook extremely helpful. It will answer many of the important questions which are still unresolved in the minds of many recordists and will enable them to use this relatively new recording medium with maximum efficiency.

The following synopsis, by chapter headings, indicates the scope of the information contained in this 50-page, pocket-size booklet.

A Brief History—where and when magnetic recording was first developed and how it was improved upon both here and abroad.

Tape Vs Wire—a comparison of physical characteristics, frequency response, printing effects and timing errors.

Magnetic Recording Method—explanation of transverse and longitudinal magnetization.

Magnetic Relations—B-H curves, hysteresis, remanence and coercive force clearly explained.

Bias—DC and supersonic bias and relative effects on noise level and distortion.

Erasing—DC, AC and modified DC erase, bulk erasure and head demagnetization.

Output—effects of bias current, coating thickness and surface irregularities on output volume and uniformity.

Frequency Response—effects of slit width, azimuth alignment, tape speed, coating thickness and bias current.

Distortion and Noise—relative effects of

bias current for different oxides and base materials, bias wave form, harmonic distortion and optimum recording level.

Modulation Noise—causes, effects and measurement.

Tape Construction—base materials, oxides, binders; physical and magnetic properties.

Head and Capstan Cleanliness—suggestions for improving machine performance.

Head Wear—effects on frequency response.

Printing—its cause, effect and cure.

Storage—recommended conditions for maximum shelf life.

Splicing—simple rules for quieter splices.

Selecting a Tape Recorder—dimensions of performance and minimum requirements for various classes of service—radio broadcasting, disc recording studios, educational recording, home recording and office recording.

Machine Features—two vs three heads, bias adjustment, rewind and shuttle speeds, tape speeds vs frequency response ratios.

Maintenance—what to check and how often, for best machine performance.

It can be seen from the above that this handbook covers every significant aspect of magnetic recording as simply and concisely as possible. It is 7 $\frac{3}{4}$ " by 5 $\frac{1}{4}$ " in size—profusely illustrated with charts, curves and diagrams.

To obtain your free copy, simply send a request on your company letterhead, to Audio Devices, Inc., Dept. R3, 444 Madison Ave., New York 22, N. Y.

NEW MIDGET TAPE RECORDER

Repeats Messages Endlessly for Sales and Safety

Now in production by the Mohawk Business Machines Corporation, 47 West Street, New York City, this midget-size automatic tape recording and playback unit weighs only 6 pounds, and measures only 6" square. It is intended primarily as a selling tool—for the continuous or intermittent repetition of a sales or advertising message. It also has a wide field of application as a safety or warning device, as well as for repetitive announcements of the type required at transportation terminals.

Despite its small size, the equipment is completely self-contained, including a 5" Alnico V speaker, 3-tube amplifier with 1½ watts output, driving mechanism for 3¾" tape speed, and a unique, automatic loading tape cartridge. This removable plastic cartridge, containing the endless reel of magnetic tape (2 minutes playing time) is not much larger than a package of cigarettes. To load, the cartridge is simply slipped into a slot in the top of the case. This automatically brings the tape in proper contact with the magnetic heads and engages the drive mechanism. For easy removal, the cartridge pops up when a re-

lease button is pressed. Tape can be erased and recorded on the spot, obviating the need for sending cartridges back to the factory for recording.

A full two minute tape will repeat its message continually, or the message can be divided into as many intervals as required—the tape mechanism stopping, if desired, after each interval. The device can be actuated by its self-contained stop-start switch, or by any external control device, such as a photo electric cell, treadle switch, or micro switch. Jacks are provided for external speaker, booster amplifier and microphone. The Message Repeater has a frequency response of 120-6000 cycles per second. It retails for \$159.50.

The manufacturer also expects to produce cartridges, at some later date, containing up to 30 minutes of recording time, which will not only extend commercial usage, but will offer interesting possibilities in the field of recorded music for home use.

Suggested applications for the Message Repeater include the following: At super markets—to call attention to special sale items or displays. In industrial plants—to



repeat safety warnings. At bus, airline and railroad terminals to repeat announcements of arrivals and departures. In department stores—for talking counter displays. In auto show rooms—to give sales talks automatically when car door is opened. In hotels—to repeat special announcements. In hospitals—to page doctors. For civil defense—to repeat air raid instructions.

Complete information on the new, midget-size Message Repeater can be obtained by writing to the Manufacturer.

EDUCATIONAL RECORDING CONTEST UNDER WAY

\$ \$ \$

Although Audio Devices' offer of cash prizes for the ten best articles on educational recording was only announced in the last issue of *Audio Record*, many entries have already been received.

If you are engaged in any phase of educational recording work don't overlook this opportunity to cash-in on your experience. For each of the ten best articles submitted, Audio will pay \$25 cash, plus ten 1250-ft. reels of plastic-base Audiotape. In addition, ten reels of Audiotape will be given for every other contest entry which is used for publication in *Audio Record* or any other literature prepared by Audio Devices.

Please make your stories as specific as possible—telling exactly how you use tape or disc recordings in your work. Cover as many applications as you wish. Length is no object. And don't forget to include photographs if they are available.

Entries must be post marked not later than Dec. 15, 1951—addressed to Contest Editor, Audio Devices, Inc., 444 Madison Ave., New York 22, N. Y.

TURN YOUR OLD DISCS INTO DOLLARS

—and help insure your supply of new aluminum-base discs, too!

Your old used aluminum base discs may be worth more than you think. For, despite today's restrictions on the purchase and use of scrap aluminum, Audio Devices can still pay you top cash prices for your used discs.

By taking advantage of this long-standing offer, you benefit two ways—in direct cash payments that can mount up to a really substantial sum, and in contributing to the supply of aluminum available for disc production. This means more new discs for you when you want them.

Audio Devices will purchase any make of aluminum base disc—of any size—and in any quantity—at the following rates:

10" — 4 cents each
12" — 8 cents each
13¼" — 10 cents each
16" — 15 cents each
17¼" — 15 cents each

You don't have to pay the shipping charges, either. Audio Devices will pay cheapest way freight on all shipments of 100 pounds or more. All used discs should be returned to:

The Audio Manufacturing Corporation
25 Palmer Avenue,
Glenbrook, Connecticut

Every year, recordists receive checks amounting to many thousands of dollars from Audio Devices for the return of their old discs—dollars that mean lower over-all recording costs.

If you have a supply of used aluminum-base discs on hand—discs that are just collecting dust, why not let them collect cash for you instead. You'll be surprised how much it can add up to.

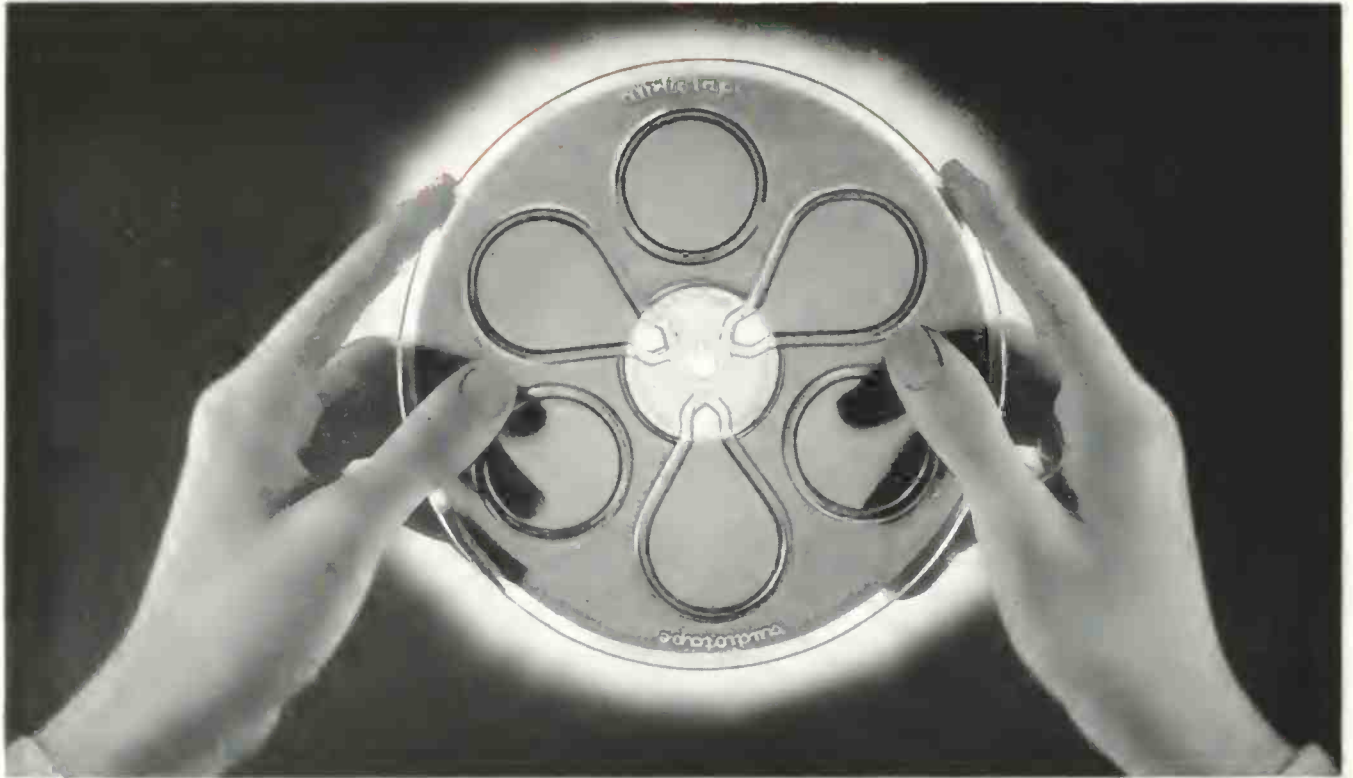
HOW DO YOU LIKE OUR NEW FORMAT?

As you've probably noticed by now, *Audio Record* has had its face lifted. We hope you like it—and would appreciate your frank comments on the subject.

If you have any suggestions for improvement of the subject matter or style, please send them in. *Audio Record* is your publication, and we want to make it as interesting and helpful to you as possible.



You don't have to look, because
THERE ARE NO SPLICES
in **audiotape***



... but this "transparency test" shows some other important things about Audiotape quality

■ When you hold a reel of plastic base Audiotape up to the light, notice its extremely uniform translucency—free from dark rings or fuzzy areas. You can see your fingers right through it, sharply outlined against the light. This is proof of the clean, straight line slitting that makes Audiotape track and wind absolutely flat. There are no rough or turned-over edges which would lift the tape away from the heads, causing loss of high-frequency response. Of course this test also proves that the tape is entirely free from splices. But with Audiotape you can be sure of that without looking. For all 1250 foot and 2500 foot reels of plastic base Audiotape are *guaranteed splice-free!*

You can see the output uniformity of Audiotape, too. For every 5-reel package includes an Esterline-Angus output chart, showing the measured output of the entire length of one of the reels in the package. And since all 5 reels are slit from the same roll after coating, the chart actually measures the uniformity of all the tape in the package. This gives positive visual proof of Audiotape's unequalled output uniformity.

NO OTHER TAPE OFFERS YOU ALL OF THESE EXTRA-VALUE FEATURES:

- **Splice-Free Reels.** All 1250 and 2500 foot reels of plastic base Audiotape are *guaranteed* to be free from splices.
- **Unequalled Uniformity.** Plastic base Audiotape is guaranteed not to exceed $\pm 1/4$ db within the reel and $\pm 1/2$ db from reel to reel.
- **Output Curves** in every 5-reel package of plastic base Audiotape show actual measured output of the tape contained in the package.
- **Maximum Output with Minimum Distortion.** Oxide formulated to give high output at bias which results in low harmonic distortion.
- **Safe-Handling Package** for 2500 and 5000 foot reels permits loading onto turntable without danger of spilling tape from hub, simplifies attachment of reel flanges, and provides safe storage without flattening bottom of roll.

*Trade Mark

AUDIO DEVICES, Inc.

444 Madison Avenue, New York 22, N. Y.

Export Dept.: 13 East 40th St., New York 16, N. Y., Cables "ARLAB"