

# audio record

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audiodiscs  
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Part of the Audio Devices-Magnecord tape recording center set up in Chicago's International Amphitheatre to give radio newscasters local-level coverage of the Republican and Democratic National Conventions. All recordings Magnecord on Audiotape. Story on Page 2.

*In this issue*

## DIRECTORY OF TAPE RECORDERS

... also

- Audiotape at Chicago Conventions
- New Language Lab at SHAPE
- Musical Engineering
- New 7" Reel Design
- New Adhesive Reel Labels

# AUDIOTAPE STARS AT CHICAGO CONVENTIONS

## New Tape Recording Service Gave Both National Political Conventions Wider Radio Coverage Than Ever Before

A lot of mighty important things went on at Chicago's big National Political Conventions this year. Of course, there were some pretty fundamental differences between the two. But both had one thing in common — plenty of Audiotape. And it played a mighty important part in keeping the public informed on what transpired behind the scenes at these history-making events.

At Convention Time, the big network newscasters are in an ideal position to give complete coverage on a national scale. But the hundreds of small and independent radio stations throughout the country have heretofore been left out in the cold — especially as far as on-the-spot coverage at the local level is concerned.

This year, for the first time, these small stations got a real break — thanks to a unique tape recording service made available through the joint sponsorship of Audio Devices, Inc. and Magnecord, Inc. This service enabled any representative or newscaster from any radio station in the country to supplement the network coverage with on-the-spot tape recordings custom-tailored to the local interests of his particular radio audience.

Under the auspices of the Chicago News Broadcasters Association of Radio News Directors, complete tape recording facilities were set up in the radio and TV area of The International Amphitheatre and in The Conrad Hilton Hotel. This included individual recording booths, professional Magnecord tape recording machines, Audiotape, convention accredited union engineers, and an efficient packaging and mailing service for air mailing the recorded Audiotape back to the home station for broadcast.

Visiting newscasters were able to record interviews with the delegates from their local areas — to record their own local interpretation of convention events as they happened. All without having to bring along any recording equipment or technical personnel, or renting expensive space, lines and loops.

All recordings were made with Magnecord machines on Audiotape — assuring the highest professional quality of all taped program material.



Another view of the busy convention newscasters tape recording center, — sponsored jointly by Audio Devices and Magnecord, Inc. Here, more than 550 programs for a total of 81 radio stations were recorded on Audiotape, and mailed back to the station for local re-broadcast.

In all, more than 550 programs, ranging in length from five to thirty minutes were recorded during the two Political Conventions. Most were 15 minutes in length. Programs were recorded for a total of 81 radio stations in 34 states, Hawaii, the District of Columbia, the British, Canadian, French and Swiss Broadcasting Companies and the Voice of America.

The people who made use of the facilities were just as widely representative. There were Mrs. W. W. Jarrell, a 70-year old grandmother from WKTG, Thomasville, Ga. and Joel Lynch, 17-year old student from WLAG, La Grange, Ga. Convention highlights were reported to WWDC, Washington, D. C. by Hazel Markel, Mutual network commentator, while those to WARL, Arlington, Va., were handled by State Senator Charles R. Fenwick, a delegate.

Practically all the important dignitaries and guests were interviewed in the Magnecord-Audiotape studios. During the Democratic convention, for example, Sen. Russell (Ga.), Sen. Benton (Conn.), Sen. Kefauver (Tenn.), Rep. Roosevelt (N. Y.), Secretary of the Interior Chapman, Sen. Lehman (N. Y.), Mrs. Barkley, Sen. Magnuson (Wash.), Sen. Bird (Va.), James A. Farley, Gov. Battle (Va.), and Gov. Long (Hawaii) were only a few. The same impressive array were Audiotaped during the Republican convention.

In addition to providing the smaller stations with convention coverage to supplement network or press service coverage, these recording facilities were used by network commentators for local shows. It was far easier to get guests at a convenient hour in the Magnecord-Audiotape studios, record them and then feed them back than wait for the jammed network facilities.

Ralph O'Connor, WISC, Madison, Wisc. was typical of another group. These had direct lines from the station. However, it was impossible to get interviews during the broadcast hour in a station distant from the convention centers in the Amphitheatre and Hilton Hotel, so the programs were Audiotaped and fed back on the line at broadcast time.

The entire floor proceedings in the Amphitheatre from start to finish of each convention were also Magnecorded on Audiotape. Pierre Crenessc of the French National Broadcasting System was a familiar figure in the Amphitheatre studio. Each morning he appeared to get the last sentence of each nominating speech or major address as well as 15 seconds of cheering for background to his newscast.

In short, the Audiotape-Magnecord team provided a heretofore unavailable news recording service which brought vital, first-hand information to millions of radio listeners the world over.

**audio record**  
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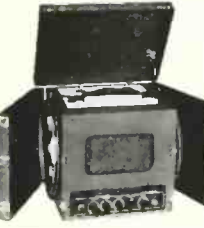
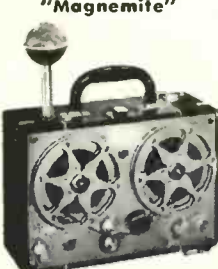
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If you're not already on the Audio Record mailing list, and would like to receive it regularly, just send us a post card or letter. There's no cost or obligation, of course.








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## QUICK FACTS ON MAGNETIC TAPE RECORDERS








(Additional Information can be obtained by writing to the manufacturer)

| Manufacturer   | Model and Price  | Frequency Response   | Data   | Tape   |
|--|--|--|--|--|
| <b>AMPEX ELECTRIC CORPORATION</b><br><br>934 Charter St.<br>Redwood City<br>California       |  <p>Portable<br/> <b>Model 400-A</b><br/>                     (Dual Track)<br/><br/> <b>Model 401-A</b><br/>                     (Single Track)<br/><br/>                     \$985.00</p>  | <p>50-15,000<br/>                     cycles (<math>\pm 2</math> db)<br/>                     at 15"/sec.<br/><br/>                     70-10,000<br/>                     cycles (<math>\pm 2</math> db)<br/>                     at 7 1/2"/sec.</p>  | <p>Portable, single or dual-track recorder, with tape speeds of 15 and 7 1/2" per second. Signal-to-noise ratio, over 55 db at either speed. Either half-track or full-track recordings can be played back without changes in adjustment. Separate record and playback heads. Instantaneous starting. Rewind time, 1 1/2 min. Simultaneous monitoring. Weight—approx. 80 lb.</p>   | <p>Wound with OXIDE IN</p> <p>Red Oxide, Plastic Base Recommended</p>        |
|  |  <p>Console<br/> <b>Model 300-C</b><br/><br/>                     \$1,860.00</p>  | <p>30-15,000<br/>                     cycles (<math>\pm 2</math> db)<br/>                     at 15"/sec.<br/><br/>                     40-10,000<br/>                     cycles (<math>\pm 2</math> db)<br/>                     at 7 1/2"/sec.</p>  | <p>Professional-type, single-track recorder, with tape speeds of 15 and 7 1/2" per second. Signal-to-noise ratio, over 60 db. Separate record and playback heads and amplifiers. Rewind time, 1 min. for full NAB reel. Design flexibility permits modifications for special applications, including multi-channel recording and response beyond 80 KC. Custom built instrumentation machines available with response to 100 KC. Also available in portable and rack-type units.</p>                             |  |
|  |  <p>Console<br/> <b>Model 402</b><br/>                     (Dual Track)<br/><br/> <b>Model 403</b><br/>                     (Single Track)<br/><br/>                     \$995.00</p>  | <p>30-15,000<br/>                     cycles (<math>\pm 2</math> db)<br/>                     at 15"/sec.<br/><br/>                     40-10,000<br/>                     cycles (<math>\pm 2</math> db)<br/>                     at 7 1/2"/sec.</p>  | <p>Professional type, single or dual-track recorder with tape speeds of 15 and 7 1/2" per second. Signal-to-noise ratio, over 55 db. Separate record and playback heads and amplifiers. Rewind time, 1 1/2 min. for full 2400 ft. reel. Push-button controls. Timing accuracy, within 3.6 seconds per 30 minutes. Built-in preamplifier. Also available in rack or portable mounting.</p>  |  |
| <b>AMPLIFIER CORPORATION OF AMERICA</b><br><br>396-398<br>Broodway,<br>New York 13,<br>N. Y. |  <p>"Twin-Trax Magnemuse"<br/> <b>Model 810B</b><br/>                     (7 1/2"/sec.)<br/>                     \$285.00<br/><br/> <b>Model 810C</b><br/>                     (15"/sec.)<br/>                     \$345.00</p>   | <p>50-9,000<br/>                     cycles (<math>\pm 3</math> db)<br/>                     at 7 1/2"/sec.<br/><br/>                     30-13,000<br/>                     cycles (<math>\pm 2</math> db)<br/>                     at 15"/sec.</p>   | <p>Portable, dual-track recorder, with automatic reversal—giving up to 1 hour continuous play on 7" reel. Dynamic range, 45 db. Input channels for microphone and radio-phono. Total distortion, less than 3%. Shuttle speed in both directions. Weight—42 lb.</p>   | <p>Wound with OXIDE OUT</p> <p>Red or Black Oxide, Plastic or Paper Base</p> |
|  |  <p>"Twin-Trax Magnerama"<br/> <b>Model 910B</b><br/><br/>                     \$495.00</p>   | <p>50-9,000<br/>                     cycles (<math>\pm 3</math> db)<br/>                     at 7 1/2" sec.</p>  | <p>Portable, dual-track recorder, with 7 1/2" tape speed and automatic reversal—giving 4 hours continuous play on 13 1/2" reel. Microphone included. Weight—55 lb. Other data same as for "Twin-Trax Magnemuse" above.</p>   |  |
|  |  <p>"Magnemite"<br/><br/> <b>Model 610-B</b><br/>                     (Dual Track)<br/>                     \$225.00<br/><br/> <b>Model 610-C</b><br/>                     (Dual Track)<br/>                     \$255.00<br/><br/> <b>Model 610-TD</b><br/>                     (Dual Track)<br/>                     \$275.00<br/><br/> <b>Model 610-SD</b><br/>                     (Single Track)<br/>                     \$295.00</p> <p>Battery Operated,<br/>                     Spring Motor<br/>                     Drive</p> | <p>100-3,000<br/>                     cycles, at<br/>                     1 7/8"/sec.<br/><br/>                     50-5,000<br/>                     cycles at<br/>                     3 3/4"/sec.<br/><br/>                     50-7,500<br/>                     cycles, at<br/>                     7 1/2"/sec.<br/><br/>                     50-7,500<br/>                     cycles, at<br/>                     7 1/2"/sec.</p> | <p>Completely self-contained, battery-operated tape recorders with spring motor drive, especially designed for a wide range of remote recording work. Include provision for playback thru headphones or external amplifier. Dynamic range, 45 — 50 db. Winding interval, 15 min. for Model 610-B; 7 1/2 min. for all others. Can be rewound while operating. Weight, 10 — 15 lb. Overall dimensions, 11 x 8 x 5 in. for Model 610-B; 11 x 10 x 7 in. for all others. Complete accessory equipment available.</p> |  |


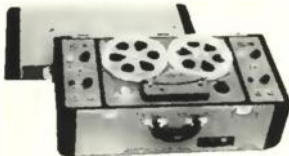


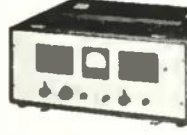
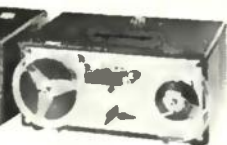
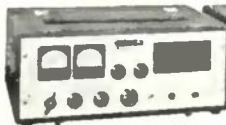









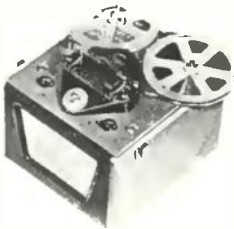
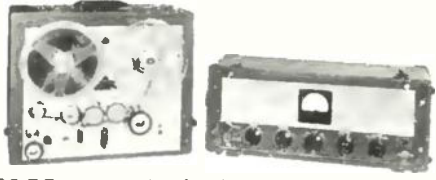
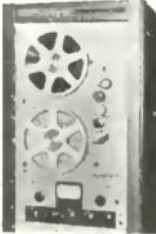
| Manufacturer   | Model and Price   | Frequency Response   | Data  | Tape   |
|--|---|--|---|--|
| <b>AMPRO CORPORATION</b><br><br>2835 North Western Ave., Chicago 18, Ill.                      |  <p><b>"Ampro-Tope Recorder"</b><br/><br/>           Model 731-R<br/>           \$119.75</p>   | 100-7,000 cycles, at 3 3/4"/sec.   | Portable, dual-track recorder with 3 3/4" tape speed—giving 2 hours of continuous playing on one 7" reel. Instant stop switch for accurate spotting. Microphone and direct radio, T.V. or phone connection. Rewind time, 4 min. for 7" reel. Includes microphone, 5" x 7" elliptical Alnico 5 PM speaker and jack for external speaker for 3 ohm voice coil or earphones. Weight—17 lbs.  | Wound with OXIDE IN<br><br>Red or Black Oxide, Plastic or Paper Base |
| <b>BELL SOUND SYSTEMS, INC.</b><br><br>555 Marion Rd., Columbus 7, Ohio                        |  <p><b>"RE-CORD-O-fone"</b><br/>           Model RT-65-B<br/><br/>           \$186.45</p>  | 70-8,000 cycles (±3 db) at 7 1/2"/sec.   | Portable, dual-track recorder with tape speeds of 1 7/8", 3 3/4" and 7 1/2" per second. Rewind ratio 6 to 1. Includes crystal microphone, 6" PM speaker, inputs for microphone and radio-phono, and headphone monitoring jack. Weight—33 lb.  | Wound with OXIDE IN<br><br>Red Oxide, Plastic or Paper Base          |
| <b>BROADCAST EQUIPMENT SPECIALTIES CORP.</b><br><br>135-01 Liberty Ave. Richmond Hill 19 N. Y. |  <p><b>Travis "Tapak"</b><br/><br/>           \$289.50 plus mike and headphone</p>   | 100-3,000 cycles at 7 1/2"/sec.  | Completely self-contained, battery-operated, spring motor driven unit for single-track recording at 7 1/2" per sec. Records, erases, monitors and plays back through headset. Power rewind, 44" per sec. Winding interval, 5—6 min. Can be rewound while operating. Max. speed variation, 1%. Signal-to-noise, 40—45 db. Includes editing and splicing fixture. Operates with cover closed. Weight, 17 lb. Dimensions, 14 x 10 x 5 1/2 in.  | Wound with OXIDE IN<br><br>Red Oxide, Plastic Base                   |
| <b>BERLANT ASSOCIATES</b><br><br>4917 West Jefferson Blvd., Los Angeles 6, Cal.                |  <p><b>"Concertone"</b><br/>           Model 1401<br/>           Chassis<br/><br/>           \$345.00</p>                                     | 50-15,000 cycles (±2 db) at 15"/sec.<br><br>50-9,000 cycles (±2 db) at 7 1/2"/sec. | Professional type single or dual track recorder mechanism and electrical chassis for console installation. Tape speeds, 15" and 7 1/2" per sec. Signal-to-noise ratio, over 50 db. Fast forward and rewind time, 1 min. for 10 1/2" reel. Separate record, erase, and playback heads. Monitors while recording. Carrying case and console available. Weight—50 lb., in case, with 8" speaker.   | Wound with OXIDE IN<br><br>Red Oxide, Plastic Base                   |
|  |  <p><b>"Concertone" Network Recorder</b><br/><br/>           NWD-1 Drive Mechanism \$478.00<br/><br/>           NWA-1 Amplifier \$317.00</p> | 40-15,000 cycles (±2 db) at 15"/sec.<br><br>50-9,000 cycles (±2 db) at 7 1/2"/sec. | Professional single or dual-track recorder with tape speeds of 15 and 7 1/2" per second. Signal-to-noise ratio, 55 db. Fast forward and rewind, less than 1 min. for 2500 ft. reel. Starting time 1/10 sec. Separate erase, record and playback heads with facilities for 5 heads. Monitors while recording. Includes manual editing facilities. Amplifier unit includes push-button interlock controls for all mechanical functions. Automatic instant stopping in case of power failure or tape breakage at end of reel. May be mounted in rack, portable cases (as shown), or console. | Wound with OXIDE IN<br><br>Red Oxide, Plastic Base                   |
| <b>THE BRUSH DEVELOPMENT CO.</b><br><br>3405 Perkins Ave., Cleveland 4, Ohio                   |  <p><b>"Saundmirror" Model BK-443P</b><br/>           \$279.50<br/><br/> <b>Model BK-443PS</b><br/>           \$289.50</p>                   | To 7,000 cycles, at 7 1/2"/sec.<br><br>To 4,000 cycles, at 3 3/4"/sec.             | Portable, single-track unit, available with 7 1/2 or 3 3/4" tape speeds—providing 30 to 60 minutes recording time. Signal-to-noise, over 40 db, Wow and flutter, less than 0.3% RMS. Fast forward and rewind, 75"/sec. Inputs for microphone, radio-phono. Output, 5 ohms, 33 dbm. Includes 6" PM speaker and crystal microphone. Weight—32 lb.   | Wound with OXIDE IN  |
|  |  <p><b>"Saundmirror" Model BK-442</b><br/>           \$259.50 (mahogany)<br/>           \$269.50 (blond)</p>                                 | To 7,000 cycles, at 7 1/2"/sec.  | Table model, single-track units with 7 1/2" tape speed—providing 30 minutes recording time on 7" reel. Signal-to-noise, over 40 db. Wow and flutter, less than 0.3% RMS. Fast forward and rewind, 75"/sec. Inputs for microphone, radio-phono. Output, 5 ohms, 33 dbm. Includes 8" PM speaker and crystal microphone. Weight—33 lb.   | Red Oxide, Plastic or Paper Base                                     |

| Manufacturer   | Model and Price  | Frequency Response  | Data  | Tape  |
|--|--|---|---|---|
| <p><b>CALIFONE CORPORATION</b></p> <p>1041 North Sycamore Ave., Hollywood 38, Cal.</p> |  <p><b>"Dynacord" Model C3-C3A</b></p> <p>Rack Panel \$799.00</p> <p>Portable \$849.00</p>                              | <p>50-15,000 cycles (<math>\pm 2</math>db) at 15"/sec.</p> <p>50-9,000 cycles (<math>\pm 2</math>db) at 7 1/2"/sec.</p> | <p>Portable, single-track, dual-speed recorder designed to NAB Standards. Unique features include direct capstan drive from special slow-speed synchronous motor which eliminates flutter, and clutch-free dynamic braking of tape reels. Signal-to-noise ratio, over 50 db. Fast forward and rewind, 48 sec. for 10 1/2" reel. Three separate heads permit monitoring from tape while recording. Includes VU meter, 2-speed equalization, and separate record and monitor gain controls. Weight—44 lb. for C3 transport mechanism; 33 lb. for C3A amplifier.</p> | <p>Wound with OXIDE OUT</p> <p>Red Oxide, Plastic Base</p>          |
| <p><b>CRESTWOOD RECORDER CORP.</b></p> <p>5990 Northwest Highway, Chicago 31, Ill.</p> |  <p><b>Crestwood Model CP301</b> (7 1/2" speed)</p> <p><b>Model CP302</b> (3 3/4 and 7 1/2" speeds)</p> <p>\$199.50</p> | <p>50-10,000 cycles (<math>\pm 2</math> db) at 7 1/2"/sec.</p>  | <p>Portable, single or dual speed, dual-track recorder. Signal-to-noise ratio, 48 db. Flutter and wow, 0.5% max. Rewind time, 1 min., 25 sec. for 1200 ft. reel. Input for high impedance mike, radio or phono. Output for external speaker, phone jack for monitoring. Built-in speaker. Weight, 30 lb.</p>  | <p>Wound with OXIDE OUT</p>   |
| <p>5990 Northwest Highway, Chicago 31, Ill.</p>  |  <p><b>Crestwood Model 400</b></p> <p>\$299.50 Complete</p>  | <p>40-12,000 cycles at 7 1/2"/sec.</p>  | <p>Portable, dual-track recorder with 7 1/2" tape speed. Signal-to-noise ratio, 50 db. Flutter and wow, 0.25% max. Rewind and fast forward speed same as above. Records from microphone, phono or radio. Tone control equalized for maximum performance. Automatic interlock prevents accidental erasure. Power output 10 watts. Built-in 8" speaker. Weight: 22 lb. for recorder and pre-amplifier, 21 lb. for speaker and power amplifier.</p>  | <p>Red Oxide, Plastic Base</p>                                      |
| <p><b>DuKANE CORPORATION</b></p> <p>St. Charles, Ill.</p>                              |  <p><b>"DuKane" Portable Model 11B-55</b></p> <p>\$229.50</p>   | <p>50-8,000 cycles, at 7 1/2"/sec.</p>  | <p>Portable, dual-track recorder with 7 1/2" tape speed. Power output, 7 watts. Input channels for microphone and radio-phono. Output jacks for headphones and external speaker. Fast forward speed, 150"/sec. Rewind time, 80 seconds for 7" reel. Microphone and built-in 6"x9" speaker included. Weight—26 lb.</p>   | <p>Wound with OXIDE OUT</p> <p>Red Oxide, Plastic or Paper Base</p> |
| <p>St. Charles, Ill.</p>   |  <p><b>"DuKane" Portable Model 11A-75</b></p> <p>\$279.50</p>   | <p>50-10,000 cycles, at 7 1/2"/sec.</p> <p>50-7,500 cycles, at 3 3/4"/sec.</p>  | <p>Portable, dual-track recorder with tape speeds of 3 3/4 and 7 1/2" per sec. Signal-to-noise ratio, 50 db on playback. Rewind time, 80 sec. for 7" reel. Fast forward, 2 3/4 min. for 7" reel. Keyboard controls for selection of recording facilities—microphone, radio or phono, tape copying, playback and PA system. Output, 7 1/2 watts. Includes 6 x 9 in. speaker. Weight—35 lb.</p>   | <p>Wound with OXIDE IN</p> <p>Red Oxide, Plastic Base</p>           |
| <p><b>ECTRO INC.</b></p> <p>Delaware 1, Ohio</p>                                       |  <p><b>"Cub Corder" Battery Operated Portable</b></p> <p>\$295.00</p>   | <p>200-600 cycles, at 7 1/2"/sec.</p>   | <p>Completely self-contained battery-operated, dual-track recorder with tape speeds of 3 3/4" and 7 1/2" per sec. Also available with 1 7/8" and 3 3/4" speeds. Fast forward and rewind, 37" per second. Power supply, rechargeable wet cells and dry batteries. Instantaneous playback through microphone. Simplified circuit with constant-speed motor. Size, 12 1/4 x 13 1/4 x 5 3/8 in. Weight, 12 7/8 lb.</p>  | <p>Wound with OXIDE IN</p> <p>Red Oxide, Plastic Base</p>           |

| Manufacturer   | Model and Price   | Frequency Response  | Data   | Tape   |
|--|---|---|--|--|
| <b>EDUCATIONAL LABORATORIES, INC.</b><br><br>1625 Conn. Ave.<br>N. W.<br>Washington 9,<br>D. C.                        | <b>"Educorder Dual"</b><br><b>\$450.00</b><br><br>                                 | to<br><b>5,000</b><br>cycles,<br>at<br><b>3 3/4"/sec.</b>   | Portable tape recorder with two separate channels, each having its own amplifier and record-playback and erase heads. Can record and play back two channels simultaneously for binaural effect or record on one channel while listening on the other. Tape speed, 3 3/4" per second (7 1/2" optional). Wow and flutter, less than 1.3% RMS. Fast forward and rewind, 20:1 ratio. Radio and mike input for each channel. Three output connections: Channel 1, Channel 2 and "Dual" for binaural headphones. Weight, 26 lb.  | <b>Wound with OXIDE IN</b><br><br><b>Red or Black Oxide, Plastic or Paper Base</b> |
| <b>EICOR, INC.</b><br><br>1501 West Congress St.,<br>Chicago 7,<br>Ill.  | <br><b>Portable Model 230</b><br><br><b>\$160.00 (Approx.)</b>                     | <b>70-8,000</b><br>cycles at<br><b>7 1/2"/sec.</b><br><br><b>70-4,000</b><br>cycles, at<br><b>3 3/4"/sec.</b> | Portable, dual or single track recorder with dual-speed capstan for 7 1/2" and 3 3/4" tape speeds. Provides up to 2 hrs. recording time on 7" reel. Amplifier equalized for both speeds. "Finger-Flip" controls for mechanical and amplifying systems. Volume peak indicator window. Safety lock prevents accidental erase. Crystal microphone and 5" x 7" speaker included. Weight—28 lb.   | <b>Wound with OXIDE IN</b><br><br><b>Red Oxide, Plastic or Paper Base</b>          |
| <b>FAIRCHILD RECORDING EQUIPMENT CORP.</b><br><br>154th St. and 7th Ave.,<br>Whitestone,<br>N. Y.                      | <br><b>Console Model Unit 126</b><br><br><b>\$2,750.00</b>                        | <b>50-15,000</b><br>cycles ( $\pm 1$ db)<br>at <b>15"/sec.</b>  | Professional type, single-track recorder with 15" tape speed (7 1/2" and 30" models available). Total noise and distortion -64 db (ref. 2 1/2% dist.). Adjustable bias. Speed tolerance, 0.1%. Built-in VU meter and circuit checking. Unit-type, plug-in chassis. Automatic stop— instant braking and reversal. Full protection against accidental erase.   | <b>Wound with OXIDE IN</b><br><br><b>Red Oxide, Plastic or Paper Base</b>          |
|  | <br><b>Console Model "PIC-SYNC"</b><br><br><b>\$4,000.00</b>                     | <b>50-15,000</b><br>cycles ( $\pm 1$ db)<br>at <b>15"/sec.</b>  | Same as model 126 with the addition of lip synchronous operation. Used with motion picture camera and film projector, synchronous sound tracks are made and played back on 1/4" tape, with no interconnecting equipment. Automatic Framing, which assures correct cueing of tape and film, available at additional cost. Other applications include Facsimile recording, multi-track, and telemetering, with frequency response to 100 KC.   |  |
|  | <br><b>Control Track Generator Model 141</b><br><br><b>\$200.00</b>              |   | Portable light weight unit for "On Location" picture synchronous sound track recording on 1/4" tape. Used with any portable tape recorder with 15"/sec. tape speed and frequency response good to 14 KC., a control track is simultaneously applied which later becomes the tape speed control when played back on Pic-Sync recorder.  |  |
| <b>THE GENERAL INDUSTRIES COMPANY</b><br><br>Elyria,<br>Ohio   | <b>Tape-Disc Recorder Assembly Model 250</b><br><b>\$79.50</b><br><br>           | (depends on amplifier used)   | Combined disc and tape recorder assembly for installation in console or portable case. Tape speed, 3 3/4"/sec., dual track. Fast forward and reverse. PM erase. Takes 5" reels. Disc recorder cuts and plays back up to 10" discs, at 78 rpm. Records from tape to disc and vice versa— and from microphone or radio to disc or tape.  | <b>Wound with OXIDE IN</b><br><br><b>Red or Black Oxide Plastic or Paper Base</b>  |
| <b>MAGNETIC RECORDING INDUSTRIES LTD.</b><br><br>30 Brood St.,<br>New York 4,<br>N. Y.<br><br>(Continued on next page) | <b>"Voice-Master" Magnetic Disc Dictating Machine</b><br><b>\$175.00</b><br><br> | <b>Voice Frequency Only</b>   | Portable magnetic-disc dictating and transcribing machine using mailable and re-usable paper discs with magnetic oxide coating. "Correct-O-Matic" feature erases previous dictation while recording changes or corrections. Visual record-listen indicator. "Split-A-Word" instant start and stop control. "Codic" scrambler available for confidential dictation, making recording unintelligible unless transcribed on machine with identical coding unit. Complete line of dictation and transcription accessories available. Price listed does not include microphone. Weight—11 lb. | <b>Uses Special Paper Base Magnetic Discs</b>                                      |




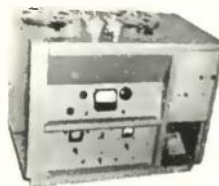
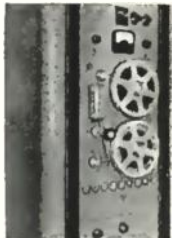










| Manufacturer  | Model and Price   | Frequency Response  | Data   | Tape   |
|---|---|---|--|--|
| <p><b>MAGNETIC RECORDING INDUSTRIES LTD.</b></p> <p>30 Broad St.,<br/>New York 4,<br/>N. Y.</p>   |  <p>Portable<br/>Model VM-57<br/>\$395.00</p>  | <p>to 10,000<br/>cycles (<math>\pm 2</math> db)<br/>at 7 1/2" /sec.</p>   | <p>Portable, single-track recorder with tape speed of 7 1/2" per second. (Also available with speeds of 2", 3 3/4", or 15" per sec.) Separate record, playback and monitor amplifiers. Separate bass and treble controls. Radio and microphone inputs may be used simultaneously. Plug for foot controlled stop and start. Fast forward and rewind. Dual-track units can be supplied at same price. Weight 24 1/2 lb. Complete line of dictating and transcribing accessories available.</p>                         | <p>Wound with<br/><b>OXIDE IN</b></p> <p>Red Oxide,<br/>Plastic or<br/>Paper Base</p>              |
|   | <p>"Synchrotone" Dual Magnetic Recorder</p>  <p>Model VM-58<br/>\$439.00</p>   | <p>to 7,000<br/>cycles,<br/>at<br/>7 1/2" sec.</p>  | <p>Portable tape recorder with two separate recording and reproducing channels. Permits synchronous recording or playback of two different events, synchronous playback of one event and simultaneous recording of another, or simultaneous two-channel recording or playback of same event for binaural effect. Independent control of record, erase and playback on each channel. Two inputs per channel. Fast forward and rewind, 75" per sec. Wow and flutter, less than 0.3% RMS. Weight—26 lb.</p>             | <p>Wound with<br/><b>OXIDE IN</b></p> <p>Red or<br/>Black Oxide,<br/>Plastic or<br/>Paper Base</p> |
| <p><b>MAGNECORD INC.</b></p> <p>360 North<br/>Michigan Ave.,<br/>Chicago 1,<br/>Ill.</p>          | <p>Model PT6-J<br/>Amplifier<br/>\$248.00</p>  <p>Model PT6-AH<br/>Recorder<br/>\$316.00</p>                          | <p>50-15,000<br/>cycles (<math>\pm 2</math> db)<br/>at 15" sec.</p>   | <p>Portable single-track, professional type recorder with interchangeable capstans for 15 and 7 1/2" tape speeds. Also available with dual-track heads and with dual speed motors for three speed operation. Fast forward and rewind speeds. Two separate heads. Combination record/playback amplifier. Flutter, 0.3% max. Low impedance mike input, bridging input, monitor speaker, O-level output terminal, VU meter, terminal for external speaker.</p>  | <p>Wound with<br/><b>OXIDE IN</b></p> <p>Red Oxide,<br/>Plastic Base</p>                           |
|   | <p>Model PT63-J<br/>Amplifier<br/>\$387.00</p>  <p>Model PT63-AH<br/>Recorder<br/>\$350.00</p>                    | <p>50-15,000<br/>cycles (<math>\pm 2</math> db)<br/>at 15" sec.</p>   | <p>Same as above, except with three separate heads for erase, record, and playback for monitoring from tape while recording. PT63-J amplifier has separate record and playback amplifiers, and switch for equalization at 7 1/2 and 15" tape speed.</p>  |  |
|   | <p>Binaural Amplifier<br/>Model PT6-BN<br/>\$515.00</p>  <p>Binaural Recorder<br/>Model PT6-BAH<br/>\$364.50</p>  | <p>50-15,000<br/>cycles (<math>\pm 2</math> db)<br/>at 15" sec.</p>   | <p>Portable dual channel recorder designed for binaural recording and reproduction (using simultaneous inputs from two microphones and outputs to two speakers or binaural headphones). Separate record/playback head for each channel—also separate gain controls and VU meters. Signal-to-noise ratio, 47 db per channel. Flutter, 0.3% max. Fast forward and rewind speeds. Includes speaker for monitoring either channel. Binaural conversion equipment available for use with existing Magnecord machines.</p> |  |
|   |  <p>"Magne Cordette"<br/>\$385.00<br/>Complete</p>   | <p>50-15,000<br/>cycles (<math>\pm 3</math> db)<br/>at 15" sec.</p>   | <p>PT6-AH Magne recorder and "custom" amplifier mounted in attractive blonde or mahogany cabinet. Amplifier unit serves as recording amplifier and playback pre-amplifier for use with separate high fidelity or radio amplifier. Can be supplied with single or dual track heads. Tape speeds of 15" or 7 1/2" per second with interchangeable capstan. Three-speed units also available. Fast forward and rewind speeds. Flutter, 0.3% max. Hi-impedance inputs for microphone and radio-phonograph.</p>           |  |
| <p><b>PREMIER ELECTRONIC LABORATORIES</b></p> <p>382 Lafayette St.,<br/>New York 3,<br/>N. Y.</p> |  <p>"Tapesonic"<br/>Model 70<br/>\$298.50</p>  | <p>40-15,000<br/>cycles, at<br/>15" sec.<br/>40-12,000<br/>cycles, at<br/>7 1/2" sec.<br/>40-7,000<br/>cycles, at<br/>3 3/4" sec.</p> | <p>Portable, professional-type, dual track recorder with tape speeds of 15", 7 1/2" and 3 3/4" per second. Fast forward and rewind, less than 1 min. for 2500 ft. reel. Flutter and wow, 0.1% at 15" per second. Mixing channels for mike, radio and phone inputs. Monitoring speaker attenuator. Three heavy-duty dynamic balanced motors. Includes 8" speaker. 12 watts audio output. Weight 54 lb.</p>  | <p>Wound with<br/><b>OXIDE IN</b></p> <p>Red Oxide,<br/>Plastic<br/>Base</p>                       |

| Manufacturer   | Model and Price   | Frequency Response  | Data   | Tape  |
|--|---|---|--|---|
| <b>MARK SIMPSON MFG. CO. INC.</b><br><br>32-28 49th St.,<br>Long Island City 3,<br>N. Y. |  <p><b>"MASCO"</b><br/> <b>Model 52L</b><br/> <b>\$160.00</b></p> <p><b>Model 52LR</b><br/> <b>(with radio)</b><br/> <b>\$196.00</b></p> | <p><b>80-8,500</b><br/> <b>cycles (<math>\pm 3</math> db)</b><br/> <b>at <math>7\frac{1}{2}</math>" /sec.</b></p> <p><b>80-5,000</b><br/> <b>cycles (<math>\pm 3</math> db)</b><br/> <b>at <math>3\frac{3}{4}</math>" /sec.</b></p> | <p>Portable, dual-track, dual-speed recorders, arranged for instant change from <math>7\frac{1}{2}</math> to <math>3\frac{3}{4}</math>" per sec. Up to 2 hours recording time available on 7" reel. Signal-to-noise ratio, 45 db at <math>7\frac{1}{2}</math>". Automatic equalization. Neon recording level indicator, volume and tone control, monitor switch, 6" PM speaker, and microphone. AC erase and bias. Microphone and radio-phono inputs. External speaker and amplifier outputs. Available with or without built-in AM tuner. Weight of mechanism (less case), 30 lb.</p> | <p><b>Wound with OXIDE IN</b></p> <p><b>Red Oxide, Plastic Base</b></p>                   |
|  |  <p><b>"MASCO"</b><br/> <b>Model 52C</b><br/> <b>\$179.50</b></p> <p><b>Model 52CR</b><br/> <b>(with radio)</b><br/> <b>\$215.50</b></p> |   | <p>Models 52L and 52LR, without carrying case.</p>   |   |
|  |  <p><b>"MASCO"</b><br/> <b>Model 52</b><br/> <b>\$179.50</b></p> <p><b>Model 52R</b><br/> <b>(with radio)</b><br/> <b>\$215.50</b></p>   |   | <p>Models 52 and 52R, with two-tone tweed carrying case.</p> <p>Models 52C and 52CR have metal cover with carrying handle. Cover operates interlock switch and can be locked with key.</p>   |   |
| <b>THE PENTRON CORP.</b><br><br>221 E. Cullerton St.,<br>Chicago 16,<br>Ill.             | <p><b>Portable Model 9T3-C</b>    <b>\$179.50</b></p>   | <p><b>50-8,000</b><br/> <b>cycles, at</b><br/> <b><math>7\frac{1}{2}</math>" /sec.</b></p> <p><b>50-5,000</b><br/> <b>cycles, at</b><br/> <b><math>3\frac{3}{4}</math>" /sec.</b></p>   | <p>Portable, dual-track, dual-speed unit (<math>7\frac{1}{2}</math>" and <math>3\frac{3}{4}</math>")—providing 2 hours recording on 7" reel. Signal-to-noise ratio, 50 db. Flutter less than 0.5%. Fast forward and rewind ratio, 20 to 1. Inputs for microphone and radio-phono. Outputs for headphones, external speaker, and PA system. Includes 6" PM speaker and crystal microphone. Weight—27 lb.</p>  | <p><b>Wound with OXIDE IN</b></p> <p><b>Red Oxide, Plastic or Paper Base</b></p>          |
|  | <p><b>Pentran Tape Player</b></p>  <p><b>Model PB-1</b><br/> <b>\$99.50</b></p> <p><b>Model PB-A2</b><br/> <b>\$119.50</b></p>         | <p><b>50-8,000</b><br/> <b>cycles, at</b><br/> <b><math>7\frac{1}{2}</math>" /sec.</b></p> <p><b>50-5,000</b><br/> <b>cycles, at</b><br/> <b><math>3\frac{3}{4}</math>" /sec.</b></p>   | <p>Portable magnetic tape reproducer, for playback only of any standard <math>\frac{1}{4}</math>" tape recorded with dual track at <math>7\frac{1}{2}</math>" or <math>3\frac{3}{4}</math>" per second (single track heads available at slightly higher cost.) Flutter less than 0.5%. Fast forward and rewind speed, 20 to 1.</p> <p>Model PB-1 consists of player and pre-amp only. Weight—19 lb. Model PB-A2 is complete with amplifier and speaker. Weight—22 lb.</p>  | <p><b>Wound with OXIDE IN</b></p> <p><b>Red or Black Oxide, Plastic or Paper Base</b></p> |
| <b>PRESTO RECORDING CORP.</b><br><br>P. O. Box 500,<br>Hackensack,<br>N. J.              |  <p><b>RC-7 Transport Mechanism</b><br/> <b>\$425.00</b></p> <p><b>A-920 Amplifier</b><br/> <b>\$324.00</b></p>                        | <p><b>To 15,000</b><br/> <b>cycles, at</b><br/> <b>15" /sec.</b></p>  | <p>Professional type equipment for portable or stationary use. Tape transport mechanism has true three-motor drive and separate recording and reproducing heads. Instantaneous monitoring from tape is provided. Input for single microphone or high impedance bridging. Output, 10 watts. Also zero level line. Two speakers are mounted in amplifier for playback. Monitoring output for 'phones.</p>  | <p><b>Wound with OXIDE IN</b></p>   |
|  |  <p><b>Model RC-10-14</b><br/> <b>\$684.00</b></p> <p><b>Model RC-10-24</b><br/> <b>\$761.00</b></p>                                   | <p><b>To 15,000</b><br/> <b>cycles, at</b><br/> <b>15" /sec.</b></p>  | <p>Professional, single-channel, dual-speed recorders (<math>15</math>" and <math>7\frac{1}{2}</math>" /sec.) for rack mounting. Three separate heads, permitting monitoring from tape while recording. Three-motor drive mechanism. Fast forward and reverse. RC-10-14 controlled by rotary type selector switch. RC-10-24 completely push-button controlled. Can be arranged for remote operation.</p>   | <p><b>Red Oxide. Plastic or Paper Base</b></p>  |

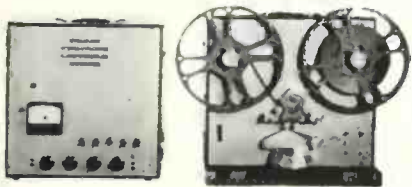


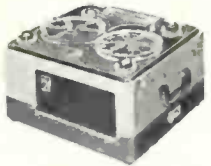

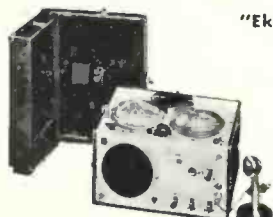
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| Manufacturer   | Model and Price   | Frequency Response   | Data   | Tape  |
|--|---|--|--|---|
| <p><b>PRESTO RECORDING CORP.</b></p> <p>P. O. Box 500,<br/>Hackensack,<br/>N. J.</p> |  <p>Console Model 5R-950<br/>\$2,785.00</p>  | <p>50-15,000 cycles (<math>\pm 1</math> db) at 15"/sec.</p>  | <p>Professional, single-channel recorder, with 15 and 7 1/2" tape speeds (15" and 30" optional). Signal-to-noise ratio, over 58 db below max. signal. Fast forward and reverse, 240 ft./sec. Three separate heads. VU meter. Amplifier and power supply units on hinged panel.</p>   | <p>Wound with OXIDE IN</p> <p>Red Oxide, Plastic or Paper Base</p>          |
|  |  <p>Tape Drive Model TL-10<br/>for 7 1/2" or 15" tape speed \$132.50<br/>for 7 1/2" and 15" tape speeds \$140.00</p> | <p>50-15,000 cycles, at 15"/sec.<br/>— subject to limitations of amplifier used</p>                                    | <p>Compact tape transport mechanism and re-producer, arranged to be mounted on and driven from any standard 16-inch turntable. Does not include provision for erase or recording. Equalized output of playback head may be fed directly into standard speech input equipment. Accommodates standard 7-inch reels. Tape speeds indicated are based on turntable speed of 78 rpm.</p>  | <p>Wound with OXIDE IN</p> <p>Red or Black Oxide, Plastic or Paper Base</p> |
| <p><b>RANGERTONE INC.</b></p> <p>73 Winthrop St.,<br/>Newark 4,<br/>N. J.</p>        |  <p>"Rangerette" Portable Model A-2<br/>\$1,500.00 complete</p>  | <p>45-15,000 cycles (<math>\pm 2</math> db) at 15"/sec.<br/>50-8,000 cycles (<math>\pm 2</math> db) at 7 1/2"/sec.</p> | <p>Professional-type, single-track, dual-speed recorders, with choice of 3 3/4", 7 1/2", 15" or 30" per second tape speeds. Up to 2 hours recording at 7 1/2" per sec. on 14" reel. Distortion, less than 2% total harmonic. Maximum signal-to-tape noise, 55 db. Double-puck, tight-loop tape drive. Peak-to-peak flutter, less than 0.1% at 15"/sec. Rewind speed controllable continuously from 0 to 250"/sec. in both forward and rewind. Meets all N.A.B. adopted standards. Complete monitoring and mixing facilities. VU meter, signal indicator and footage counter calibrated in minutes and seconds. Complete tape editing facilities. Also available with positive "sprocketless" synchronization for motion picture and TV applications. Weight of Rangerette — 30 lb.</p> | <p>Wound with OXIDE IN</p> <p>Red or Black Oxide, Plastic Base</p>          |
|  |  <p>Console Model R-5C (with synchronizer)<br/>\$4,477.00</p>  | <p>45-15,000 cycles (<math>\pm 2</math> db) at 15"/sec.<br/>50-8,000 cycles (<math>\pm 2</math> db) at 7 1/2"/sec.</p> |  |   |
| <p><b>RCA BROADCAST EQUIPMENT SECTION</b></p> <p>Camden, N. J.</p>                   |  <p>Cabinet Rack Model RT-11A<br/>\$1,975</p>  | <p>50-15,000 cycles (<math>\pm 2</math> db) at 15"/sec.</p>  | <p>Single-track, dual-speed professional type recorder, available in cabinet rack or console mounting. Separate erase, record and playback heads permit simultaneous recording and monitoring. Distortion, less than 1% at 10 db below maximum level. Signal-to-noise, 60 db below maximum level. Wow and flutter, 0.1% at 15" per sec. Fast forward and rewind time, 60 sec. for 2400 ft. reel. Timing accuracy, <math>\pm 2 1/2</math> sec. for 30 minute run. Instant stop and start (within 1/10 sec.). All control functions push-button controlled. Remote push-button control also available.</p>   | <p>Wound with OXIDE IN</p> <p>Red Oxide, Plastic Base</p>                   |
|  |  <p>Console Model RT-12A<br/>\$2,270</p>   | <p>50-5,000 cycles (<math>\pm 2</math> db) at 7 1/2"/sec.</p>  |  |   |

| Manufacturer   | Model and Price   | Frequency Response  | Data   | Tape  |
|--|---|---|--|---|
| <b>REVERE CAMERA CO.</b><br><br>320 East 21st St., Chicago 16, Ill.                          |  <p>Model T-700<br/>2 hour play<br/>\$225.00<br/>Model TR-800<br/>2 hour play (with radio)<br/>\$250.00</p> <hr/> <p>Model T-10<br/>1 hour play<br/>\$235.00<br/>Model TR-20<br/>1 hour play (with radio)<br/>\$260.00</p>                           | <p>80-8,000 cycles (<math>\pm 3</math> db) at <math>3\frac{3}{4}</math>" /sec.</p> <hr/> <p>60-15,000 cycles (<math>\pm 3</math> db) at <math>7\frac{1}{2}</math>" /sec.</p>  | <p>Portable dual-track recorder available in either <math>3\frac{3}{4}</math>" or <math>7\frac{1}{2}</math>" per second tape speed. Signal-to-noise ratio, over 50 db at either speed. Distortion less than 1%. Rewind and fast forward speed, 170" per second. Flutter less than 0.3%. Solenoid operated. Two neon lamps for more accurate level setting. Can be operated as a P.A. 6" x 9" Alnico V speaker. Weight—30 lbs.</p>  | <p>Wound with OXIDE IN</p> <p>Red or Black Oxide, Plastic or Paper Base</p> |
| <b>SCRIBE CORPORATION</b><br><br>2835 N. Kedzie Ave., Chicago 18, Ill.                       |  <p>Permoflux Scribe Dictating Unit<br/>\$354.50</p> <hr/>  <p>Permoflux Scribe Transcribing Unit<br/>\$361.30</p>   | <p>Ample for all voice recording</p>  | <p>Compact magnetic tape recorder designed for varied business purposes. Same recorder, with different accessories, serves as either a dictating or transcribing unit. Dictating unit includes microphone with control switch. Transcribing unit includes single earphone and dual foot control. Simple "cartridge" loading eliminates threading. Tape speed, <math>3\frac{3}{4}</math>" per sec. Recording time, <math>\frac{1}{2}</math> hour per magazine. Includes provision for card indexing of corrections, extra carbons, length, rush, etc. Available accessories include: carrying case, telephone pick-up, magazine packet, tape mailing envelopes, dual foot control, single or double earphones, paddle-type or conference "mike," microphone adapter, external speaker and extra tape magazines.</p> | <p>Wound with OXIDE IN</p> <p>Red Oxide, Paper or Plastic Base</p>          |
| <b>SPEAK-O-PHONE RECORDING AND EQUIPMENT CO.</b><br><br>23 West 60th St., New York 23, N. Y. |  <p>Speak-O-Phone "Superior" Tape-Disc Recorder<br/>Model TD52<br/>\$299.50</p>  | <p>Amplifier Response,<br/>60-8,000 cycles per sec.</p>   | <p>Portable combination tape and disc recorder, with <math>3\frac{3}{4}</math>" tape speed (dual tract) and 78 rpm turntable (12" capacity). Records from microphone or radio to tape or disc, from disc to tape or from tape to disc. Plays back from tape or disc. Accommodates 5" tape reels. Fast forward and reverse tape speeds. Includes crystal microphone and 5" x 7" speaker. Weight—30 lb.</p>  | <p>Wound with OXIDE IN</p> <p>Red Oxide, Plastic Base</p>                   |
| <b>THE STANCILOFFMAN CORP.</b><br><br>1016 North Highland Ave., Hollywood 38, Cal.           |  <p>"Minitape" Model M5A<br/>\$249.00</p> <hr/>   <p>Model R4 \$1,670.00</p> | <p>100-5,500 cycles (<math>\pm 2</math> db) at <math>7\frac{1}{2}</math>" or 15"</p> <p>100-4,000 cycles (<math>\pm 2</math> db) at <math>3\frac{3}{4}</math>" /sec.</p> <hr/> <p>50-15,000 cycles (<math>\pm 1</math> db) at 15" /sec.</p> | <p>Portable, single-track recorder with tape speeds of <math>3\frac{3}{4}</math>", <math>7\frac{1}{2}</math>" and 15" per sec. Signal-to-noise ratio, at least 35 db. Completely self-contained battery operated unit (recording only) Weight—13 lb.</p> <p>Portable, professional-type, single-track recorder with tape speeds of <math>7\frac{1}{2}</math>" and 15" (or 15" and 30") per sec. Signal-to-noise ratio, over 60 db. Separate record and playback heads and amplifiers with independent monitor amplifier and speaker</p>  | <p>Wound with OXIDE IN</p> <p>Red Oxide, Plastic Base</p>                   |

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| Manufacturer  | Model and Price   | Frequency Response  | Data  | Tape   |
|---|---|---|---|--|
| <p><b>THE STANCIL-HOFFMAN CORP.</b></p>   |  <p><b>Model 55</b><br/>Synchronous Magnetic Film Recorder and Reproducer<br/>\$2,142.00</p>       | <p>45-7,500 cycles (<math>\pm 2</math> db)<br/>16mm</p> <p>45-15,000 cycles (<math>\pm 2</math> db)<br/>17½mm</p>       | <p>Synchronous magnetic film equipment for motion picture and TV sound recording. Includes proper speed and equalization for both 16mm and 17.5mm film width. Full synchronous sprocket drive arranged for forward or reverse recording or playback. Also fast forward and reverse for editing. Gearless drive. Signal-to-noise, at least 50 db. Max. harmonic distortion, 1.5% from full level. Playing time: up to 1 hr. for 16mm, up to 24 min. for 17.5mm. 2,000-ft. reel capacity.</p>                   | <p>Uses Magnetically Coated 16mm and 17.5mm Film</p>               |
| <p>1016 North Highland Ave., Hollywood 38, Cal.</p>                                       |  <p><b>Model CRM-15</b><br/>Multi-Channel Communications Recorder<br/><br/>(Prices on Request)</p> | <p>200-7,500 cycles (<math>\pm 3</math> db) at 7½"/sec.</p> <p>200-3,500 cycles (<math>\pm 3</math> db) at 3¾"/sec.</p> | <p>Provides up to 15 simultaneous recording channels on 0.7" wide tape. Recording time, up to 4½ hours for 1,000 foot reel. Two units, with automatic sequence control permit continuous, 24-hour recording. Signal-to-noise, at least 40 db. Distortion, not more than 5% total harmonic at "0" input level. Negligible crosstalk between channels. Push-button control. Fast forward and rewind. Automatic stop.</p>  | <p>Uses Special 0.7" Plastic or Paper Base Tape</p>                |
| <p><b>TELECTRO INDUSTRIES CORP.</b></p> <p>35-16 37th St., Long Island City 1, N. Y.</p>  |  <p><b>Telectro Portable</b><br/>Model TR-175<br/>\$750.00</p>                                    | <p>50-9,000 cycles, at 7½"/sec.</p> <p>50-5,000 cycles, at 3¾" sec.</p>   | <p>Portable, dual track, dual speed unit operating at 7½ and 3¾ in. per second. Signal-to-noise ratio, better than 45 db. Flutter less than 0.5%. Separate mike and telephone line inputs. Provision for control by microphone pushbutton, foot pedal forward and back-space, and automatic voice operation. Precise counter index for accurate spacing. Built-in PA amplifier with separate control, and 6" PM speaker with external speaker connection. Ruggedized for military service. Weight—43 lb.</p>  | <p>Wound with OXIDE IN</p> <p>Red Oxide, Plastic or Paper Base</p> |
| <p><b>WEBSTER CHICAGO CORPORATION</b></p> <p>5610 Bloomingdale Ave., Chicago 39, Ill.</p> |  <p><b>Web-Cor Portable</b><br/>Model 210<br/>\$187.50</p>                                       | <p>70-7,500 cycles at 7½"/sec.</p> <p>70-4,000 cycles at 3¾"/sec.</p>   | <p>Portable, dual-track recorder with tape speeds of 3¾" and 7½" per sec. Gives up 2 hours recording on 7" reel. Records or plays in both directions without reel turnover. Fast forward and rewind. Two recording heads and two motors. Signal-to-noise, 35 db. Amplifier automatically equalized for both speeds. Includes electronic eye volume level indicator, 6" PM speaker and microphone. Input for microphone or radio. Phono output for external speaker, amplifier or PA system. Weight—38 lb.</p> | <p>Wound with OXIDE IN</p> <p>Red or Black Oxide, Plastic Base</p> |
| <p><b>WEBSTER ELECTRIC CO.</b></p> <p>Racine, Wisc.</p>                                   |  <p><b>"Ekotape" Model 114</b><br/>\$179.50</p>  | <p>50-4,500 cycles, at 3¾"/sec.</p>   | <p>Portable, dual-track recorders with 3¾" or 7½" tape speed—giving 2 or 1 hour recording time respectively on 7" reel. Fast forward and rewind, 75" per sec. Neon recording level indicator. Input jacks for microphone and radio-phono. Output jack for external speaker. Includes 5"x7" PM speaker and crystal microphone. Foot switch available as an accessory. Weight—34 lb.</p>  | <p>Wound with OXIDE IN</p>   |
|   |  <p><b>"Ekotape" Portable</b><br/>Model 101-8<br/>\$385.50</p> <p>Model 101-9<br/>\$412.50</p>   | <p>50-7,500 cycles at 7½"/sec.</p> <p>40-10,000 cycles, at 7½"/sec.</p>   | <p>Portable, single-track recorder with 7½" tape speed. Fast forward and rewind, 75" per sec. Electronic eye recording level indicator. Inputs for microphone and radio-phono. Output for external speaker. Includes 8" PM speaker. Weight—50 lb.</p> <p>Model 101-8 includes crystal microphone. Model 101-9 includes receptacle for connecting a remote control foot switch.</p>  | <p>Red or Black Oxide, Plastic or Paper Base</p>                   |









| Manufacturer   | Model and Price  | Frequency Response   | Data  | Tape  |
|--|--|--|---|---|
| <b>WILCOX-GAY CORP.</b><br>385 4th Ave.<br>New York 10,<br>N. Y. |  <p><b>"Tape Recardio"</b><br/> <b>Model 3A10</b><br/>           (7½" and 3¾"/sec.)<br/> <b>Model 3A11</b><br/>           (3¾" and 1⅞"/sec.)<br/> <b>\$159.95</b></p> | <b>75-10,000</b><br>cycles (±3 db)<br>at 7½"/sec.<br><b>80-6,000</b><br>cycles (±3 db)<br>at 3¾"/sec.<br><b>100-5,000</b><br>cycles (±3 db)<br>at 1⅞"/sec. | Portable, dual-track tape recorders with tape speeds of 7½ and 3¾ in. per second or 3¾ and 1⅞ in. per second. Signal-to-noise; 55 db for 3A10, 45 db for 3A11. Neon normal and overload record level indicators. Inputs for microphone and radio-phono-TV. Jack for external speaker. Fast forward and rewind. Keyboard control of all recording functions. Includes microphone and built-in speaker. Weight—23 lb. | <b>Wound with OXIDE IN</b><br><br><b>Red Oxide, Plastic or Paper Base</b> |
|  |  <p><b>"Tape Recardio"</b><br/> <b>Model 3F10</b><br/> <b>\$179.95</b></p>  | <b>55-10,500</b><br>cycles (±3 db)<br>at 7½"/sec.<br><b>75-7,500</b><br>cycles (±3 db)<br>at 3¾"/sec.  | Portable, dual-track, dual-speed tape recorder, operating at 7½" and 3¾" per second. Signal-to-noise, 57 db. Balanced push-pull circuit. Other features, controls and facilities similar to 3A10 described above. Also includes compartment in case for storing extra tape reels and connecting cord. Weight—25 lb.   |   |
|  |  <p><b>"Tape-Disc Recardio"</b><br/> <b>Model 3C10</b><br/> <b>\$199.95</b></p>   | <b>80-6,000</b><br>cycles (±3 db)<br>at 3¾"/sec.   | Portable combination tape and disc recording and reproducing unit, with tape speed of 3¾" per second (dual track) and 78 rpm disc speed. Signal-to-noise, 45 db. Transfers recordings from tape to disc or vice-versa. Jack for external speaker. Neon normal and overload recording level indicators. Fast forward and rewind speeds. Includes microphone and built-in speaker. Weight—30 lb.                      |   |

## RECORDING TIME

### For Various Tape Speeds and Reel Sizes

| REEL SIZE                                    | 3"  | 4"                      | 5"                           | 7"                            | 10½"                           | 14"                             |
|--|---|-------------------------|------------------------------|-------------------------------|--------------------------------|---------------------------------|
| LENGTH IN FEET<br>Audiotape<br>Other Types   | 150<br>150  | 300<br>300              | 600<br>600                   | 1200<br>1200                  | 2500<br>2400                   | 5000<br>4800                    |
| RECORDING SPEED                              | TOTAL RECORDING TIME (Based on Audiatape footage) |                         |                              |                               |                                |                                 |
| 1⅞" per sec. {<br>Single Track<br>Dual Track | 16 min.<br>32 min.                                | 32 min.<br>1 hr. 4 min. | 1 hr. 4 min.<br>2 hr. 8 min. | 2 hr. 8 min.<br>4 hr. 16 min. | 4 hr. 26 min.<br>8 hr. 52 min. | 8 hr. 52 min.<br>17 hr. 44 min. |
| 3¾" per sec. {<br>Single Track<br>Dual Track | 8 min.<br>16 min.                                 | 16 min.<br>32 min.      | 32 min.<br>1 hr. 4 min.      | 1 hr. 6 min.<br>2 hr. 12 min. | 2 hr. 13 min.<br>4 hr. 26 min. | 4 hr. 26 min.<br>8 hr. 52 min.  |
| 7½" per sec. {<br>Single Track<br>Dual Track | 4 min.<br>8 min.                                  | 8 min.<br>16 min.       | 16 min.<br>32 min.           | 32 min.<br>1 hr. 6 min.       | 1 hr. 6½ min.<br>2 hr. 13 min. | 2 hr. 13 min.<br>4 hr. 26 min.  |
| 15" per sec. {<br>Single Track<br>Dual Track | 2 min.<br>4 min.                                  | 4 min.<br>8 min.        | 8 min.<br>16 min.            | 16 min.<br>32 min.            | 33⅓ min.<br>1 hr. 6½ min.      | 1 hr. 6½ min.<br>2 hr. 13 min.  |
| 30" per sec. {<br>Single Track<br>Dual Track | 1 min.<br>2 min.                                  | 2 min.<br>4 min.        | 4 min.<br>8 min.             | 8 min.<br>16 min.             | 16½ min.<br>33⅓ min.           | 33⅓ min.<br>1 hr. 6½ min.       |

# THE COMPLETE AUDIOTAPE\* LINE

|   | Length in Ft. | Reel                           | Coating     | PLASTIC BASE |          |            | PAPER BASE |          |            | Std. Pkg. |
|---|---------------|--------------------------------|-------------|--------------|----------|------------|------------|----------|------------|-----------|
|   |               |                                |             | Type No.     |          | List Price | Type No.   |          | List Price |           |
|   |               |                                |             | Oxide Out    | Oxide In |            | Oxide Out  | Oxide In |            |           |
|    | 150           | 3" Plastic                     | Red Oxide   | 150          | 151      | \$0.85     | 120        | 121      | \$0.70     | 10<br>30  |
|    | 300           | 4" Plastic                     | Red Oxide   | 350          | 351      | 1.60       | 320        | 321      | 1.25       | 10<br>30  |
|    | 600           | 5" Plastic                     | Black Oxide | 640          | 641      | 3.50       | 600        | 601      | 2.25       | 5         |
|   |               |                                | Red Oxide   | 650          | 651      | 3.50       | 620        | 621      | 2.25       | 10<br>30  |
|    | 1200          | 7" Plastic                     | Black Oxide | 1240         | 1241     | 5.50       | 1200       | 1201     | 3.50       | 5         |
|   |               |                                | Red Oxide   | 1250         | 1251     | 5.50       | 1220       | 1221     | 3.50       | 10<br>30  |
|   | 2500          | Std. NAB Aluminum Hub          | Red Oxide   | —            | 2551H    | 10.00      | —          | 2521H    | 6.50       | 5         |
|   |               | Complete 10 1/2" Aluminum Reel | Red Oxide   | —            | 2551R    | 12.85      | —          | 2521R    | 9.35       | 5         |
|  | 5000          | Std. NAB Aluminum Hub          | Red Oxide   | —            | 5051H    | 20.00      | —          | —        | —          | 5         |
|   |               | Complete 14" Aluminum Reel     | Red Oxide   | —            | 5051R    | 26.00      | —          | —        | —          | 5         |



## AUDIO SELF-TIMING LEADER TAPE on white plastic base

A 1/4" wide leader tape of durable white plastic material. It can easily be marked with pencil or ink to identify selections and will outlast paper tapes many times over. Spaced markings permit accurate timing at all standard speeds. Individually boxed in 150-ft. rolls.

Box of 150 ft.

List Price  
\$0.60

\*Trade Mark

# New Tape Recording Language Lab for SHAPE Headquarters

Educational Laboratories, Inc. of Washington, D. C., whose activities have been reported by Audio Record in the past, has installed another language laboratory, this time at SHAPE headquarters in Paris, France. Starting with the first truly custom engineered laboratory for language teaching at Georgetown University, Educational Laboratories, Inc. has been responsible for similar installations at various places in the United States, and in Yugoslavia, France, Puerto Rico and the Philippines, thus extending its influence nearly around the world.

The new laboratory in Paris has been installed in General Eisenhower's old headquarters, Supreme Headquarters Allied Powers Europe. The laboratory consists of twelve semi-soundproof student booths (the booths that are becoming the familiar feature of Educational Laboratories' installations) and is the first such laboratory built

around the new Educorder Dual two channel tape recorder which is described in the "Quick Facts" directory in this issue. The Educorder Dual provides ideal facilities for individualized instruction and a close teacher-student relationship, thus meeting the needs of the eighty-eight generals and admirals who wish to study languages at SHAPE but find it impossible to attend regular classes.

While the laboratory is designed primarily for individual work, each booth is equipped with four incoming audio lines which can be patched into the student's Educorder. Signals emanate from the back of the room and are channeled through a custom control console. Signals may originate from a public address microphone, a microgroove disc player, a Soundmirror, or from either of two Educorder Dual "master" machines.

Facilities are also provided through a

"black box" custom designed by ELI, and to be offered soon for public sale, for synchronizing a tape recorded lecture with film strip or slide material by having a special signal on the tape actuate an automatic projector.

The new laboratory makes it possible for one of the Generals to sit down at his booth and have a private audio-visual language lesson in French while his neighbor is working on an entirely different language. Patching in and recording a signal from one of the master machines at the back of the room permits the student to record the original lesson on channel 1 of his Educorder while recording his individual responses on channel 2 of his machine. Later, he can use the same tape for review, crasing and re-recording on channel 2 without destroying the teacher's recording on channel 1 and without tying up the master equipment for a second time. Plastic Audiotape is used exclusively.

The new laboratory in one of the most famous headquarters on earth is causing a great deal of interest among educators in Europe who will no doubt prove to be quite vocal about this newest Yankee technique designed to eliminate our language barriers.

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## MUSICAL ENGINEERING

By Harry F. Olson,  
McGraw Hill Book Co.,  
347 Pages — \$6.50

... as reviewed by C. J. LeBel

A new book by Dr. Olson has always been an event, and this one is no exception to the rule. It is a survey of the musical acoustics field from that most unusual viewpoint, the engineer's, and should be of interest to almost everyone in recording. If you have a complete file of all the literature for the last twenty-five years, only portions of Musical Engineering will be new to you, but if your library is typical then it is well worth a full reading from cover to cover. It should be required reading in acoustics courses, as a staircase down from the physicist's moss-grown ivory tower.

Dr. Olson starts with the production of sound waves, then takes up musical notation, scales, and jargon. After touching on dynamic analogies, he studies resonators, radiators, and the full gamut of musical instruments. The writer found his data on the tonal and directional properties of musical

instruments very interesting. Dr. Olson then takes up the characteristics of the ear, followed by a study of theater, studio, and room acoustics. He concludes with sound recording systems in block diagram form.

Since he has been in very intimate touch with the development of sound recording and reproduction systems for many years, the discussion is on the whole both accurate and up to date. We would expect this, for it was one of his works which, first among engineering books, recognized that lacquer had virtually completely replaced wax as a disc recording medium. There are still books being published which ignore lacquer and treat wax in detail.

It takes time to write a book, so there are a very few places where "Musical Engineering" has picked old data to lead to an obsolete conclusion. For example, in talking about home reproducing systems he says: "Attempts have been made to increase the frequency range, but without public acceptance". The phenomenal growth of the high fidelity home market in the last year has fairly well disproved this. Also, Olson says: "Tests made upon representative cross-sections of the people in this country show a very large percentage to be hard of hearing". This is undoubtedly based on some of the very first published tests of hearing.

Subsequent work has shown that, with more accurately calibrated audiometers and truer samples of the population, the percentage of "hard of hearing" has shrunk to a small fraction of what it originally was thought to be. It would have been better to say "defective hearing" instead, for a substantial percentage do not have perfect hearing — just as most new automobiles have at least one scratch — somewhere — before they are delivered. They are "defective", but not to a degree which the customer notices! The distinction between "hard of hearing" and "defective hearing" has been too often neglected. We had to read the entire book to find these examples, so they are definitely not typical of the book as a whole.

MUSICAL ENGINEERING is written with unusual clarity, so engineer, musician, and layman will find it useful. The musician and layman will find the book quite readable by skipping the mathematics, while the engineer will find the quantitative data he relies on. The jacket note says, "An engineering treatment of the interrelated subjects of music, musical instruments, speech, acoustics, sound reproduction, and hearing". An accurate description of a book we recommend.



# audio pointers for the Recordist

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

## A NEW SEVEN INCH REEL DESIGN

It is a sad fate that meets standards in a changing world. There is always pressure from the user for the quick standardization of something — anything — for the sake of uniformity. Thus we take the chance of adopting a design even though a few still voices point out the dangers, because a poor standard is still better than triple distilled chaos. Then we repent at leisure. The tape industry is beginning a period of very mild repentance, and out of it is coming a new reel.



C. J. LeBel

Friction Clutches

A very large proportion of the lower cost magnetic recorders presently manufactured use friction clutches to drive the takeup reel and hold back the supply reel. This avoids the high cost of torque motors.

The most obvious design of clutch will maintain a constant torque (or inch-pounds) as the tape unwinds and its diameter on the reel decreases. That is,

torque = tape tension x radius = constant

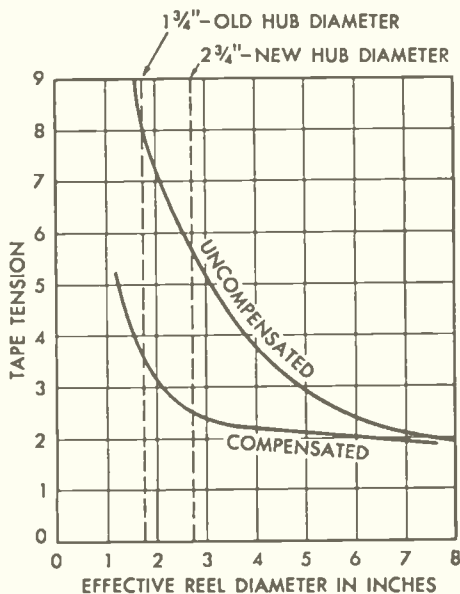
If we transpose, this becomes

$$\text{tension} = \frac{\text{constant}}{\text{radius}}$$

In other words, tape tension becomes inversely proportional to the radius of wind.

The nature of this relation becomes apparent if we look at the "uncompensated" curve of figure No. 1.

In actual practice a certain degree of compensation can be introduced, by changing the clutch torque with slip speed — using the changing coefficient of friction with speed, or the changing weight of the reel as more tape is added. This tends to produce a curve more like the "compensated" curve. However, the compensation usually ceases to be very effective at small diameters.



### The Problem

It may be seen that, in any case, there is a steep rise in tape tension as we approach the minimum diameter — that of the hub. This condition is most serious during high speed rewind, but it should not be disregarded even at normal recording speed. We can shift the whole curve up or down, without change of shape, by changing the clutch tension. This is not too helpful, because the limit of change is set by inadequate tension with a full reel — leading to impaired high frequency response.

Getting down to fundamentals, we find the basic source of trouble to be the excessive ratio of diameters over which we have to work — 1 3/4" to 7" or 10 1/2". The obvious answer is to decrease the ratio by increasing the minimum diameter — the hub — as much as feasible without making it impossible to put enough tape on the reel.

### The Solution

For this change of the 7" RTMA reel we have chosen to use the time-tested NAB hub diameter of 2 3/4". With an uncompensated friction clutch drive this reduces the tension at the minimum winding diameter by about 35%, perhaps far more if the clutches are not in proper adjustment. The change in hub diameter also reduces the space available for tape so much that we have had to decrease the footage from 1250 ft. down to 1200 ft. minimum.

### The Result

Needless to say, the change to the new hub diameter would not have been made without good and sufficient reason as far as advantages to the user are concerned.

So far, we have discussed only the matter of torque and tension. Now let's consider the effect of these factors on machine performance. The high tape tensions encountered when operating at small effective

diameters, on both the take up and supply reels, have been found guilty of introducing undesirable speed changes in the operation of many machines. These speed changes, even though very slight, can be a source of annoyance to the professional recordist, particularly as regards the timing errors which they may introduce. The new reel, by eliminating these areas of excessive tape tension, will help the engineer who is striving for split-second timing of taped program material.

Also, by reducing tape tension, the new reel will lessen the pressure of the tape on the heads, minimizing head wear and consequently contributing somewhat to increased stability of the recording and reproducing characteristics of the machine.

The musician, be he of the professional or domestic variety, will especially appreciate the improved constancy of speed and timing, as this means more constant pitch — a factor to which his trained ear is particularly sensitive.

## Audio Devices Offers New Adhesive Reel Labels



The convenient, press-on adhesive labels, shown above in a handy 30-label package, permit easy and positive identification of recorded tape reels — even when they have been removed from their respective boxes. Each label provides space for title, date and reel number. All you have to do is peel the label off of the paper backing sheet and press it onto the side of the reel. It will adhere firmly as long as desired without curling up at the edges or peeling off.

When you want to remove the old label, you simply lift up one edge and pull it off the reel, leaving the surface clean and entirely free of sticky residue.

These new reel labels are available through your regular Audiotape supplier.

NEW 7" REELS OF  
audiotape\* give you

# EXTRA VALUE

at no extra cost!

## GUARANTEED SPLICE-FREE

## SPLIT-SECOND TIMING with New 2 $\frac{3}{4}$ " Hub

Timing errors are virtually eliminated by this improved reel design which minimizes tension and speed changes throughout the winding cycle. Ratio of O.D. to hub diameter is the same as on the standard NAB aluminum reel.



## PERFECTED ANTI-FRICTION PROCESS.

Reduces head wear—eliminates annoying tape "squeal"—prevents "tackiness" even under extreme temperature and humidity conditions.

## MAXIMUM UNIFORMITY OF OUTPUT.

All 7" and 10" reels of plastic-base Audiotape are guaranteed to have an output uniformity within  $\pm \frac{1}{4}$ db—and reel-to-reel-variation of less than  $\pm \frac{1}{2}$ db. What's more, there's an actual output curve in every 5-reel package to prove it.

With Audiotape, all of these extra-value features are *standard*. There's no extra cost—no problem of separate inventories or variations in tape quality.

For there's *only one* Audiotape—the finest obtainable anywhere. Test it—compare it—let Audiotape speak for itself.

The new 7-inch plastic reel with large diameter hub for greater timing accuracy is now being supplied on all orders unless otherwise specified. Because of increased hub diameter, maximum reel capacity is slightly over 1200 feet. Older style Audiotape reels with  $1\frac{3}{4}$ " hub and 1250 feet of tape will continue to be furnished on request at the same price.

\*Trade Mark

## AUDIO DEVICES, Inc.

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

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