

# CLASSICS THAT MADE THE HIT PARADE

#### DETAILS OF THE PROGRAM

"Classics that Made the Hit Parade" includes these popular symphonic themes:

Borodin . . . Polovtsian Dances from Prince Igor (Stranger in Paradise) Tchaikovsky . . . Symphony No. 5 in E

Tchaikovsky . . . Symphony No. 5 in E (Moon Love)
Waldteufel . . . Espana Waltz

Chopin . . . Polonaise No. 6, in Ab Major (Till the End of Time)

Tchaikovsky . . . Symphony No. 6 in B (The Story of a Starry Night) Rachmaninoff . . Piano Concerto No. 2 in C Minor

(Full Moon and Empty Arms)
Chopin . . . Fantasie Impromptu in C≠ Minor
(I'm Always Chasing Rainbows)
Tchaikovsky . . Romeo and Juliet Overture
(Our Love)

(Our Love)

#### DETAILS OF THE OFFER

This exciting recording is available in a special bonus package at all Audiotape dealers. The package contains one 7-inch reel of Audiotape (on 1½-mil acetate base) and the valuable "Classics that Made the Hit Parade" program (professionally recorded on Audiotape). For both items, you pay only the price of two reels of Audiotape, plus \$1. And you have your choice of the half-hour two-track stereo program or the 55-minute monaural or four-track stereo versions.

See your Audiotape dealer now.

### - a new bonus reel from Audiotape

Some of our greatest popular songs—hits like "Full Moon and Empty Arms," "Till the End of Time," "Stranger in Paradise"—took their melodies from the classics. Eight of these lovely themes—in their original classical setting—are the basis for "Classics that Made the Hit Parade," a program with strength, variety, and, of course, rich melodic beauty.

This unusual program, professionally recorded in sparkling full fidelity on Audiotape, is available RIGHT Now from Audiotape dealers everywhere. (And only from Audiotape dealers.) Ask to hear a portion of the program, if you like. Then, take your choice of a half-hour of two-track stereo, or 55 minutes of four-track stereo or dual-track monaural sound—all at 7½ ips. Don't pass up this unique opportunity.

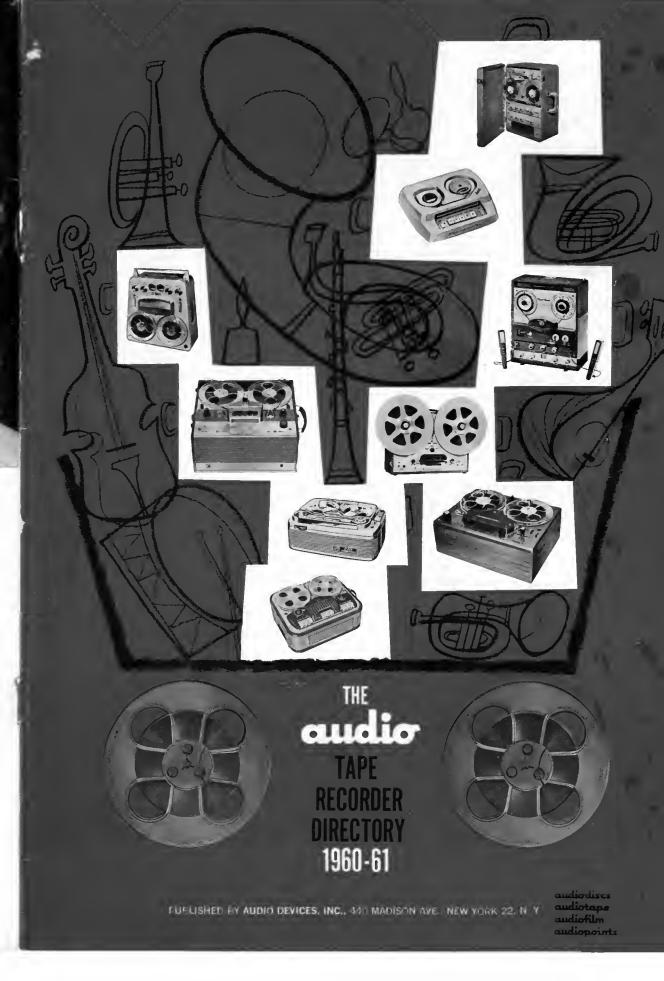
"Classics that Mode the Hit Parade" makes an ideal addition to Audio's first two bonus reels, "Blood-and-Thunder Classics" and "High Spirits," still available at Audiotape dealers.



audiotape ..

"it speaks far itself

AUDIO DEVICES, INC., 444 Madison Ave., N. Y. 22, N. Y.
In Hollywood: 840 N. Fairfax Ave. • In Chicago: 5428 N. Milwaukee Ave.





AUDIO DEVICES technician at the company's plant in Stamford, Connecticut checks sample of Audiotape under microscope for possible width variation. This is just one phase of quality checking during production at Audio Devices. All Audiotapes—including Audio's extra precision tapes for instrumentation and computer use — are also checked for uniformity, sensitivity, frequency response and distortion. EP Audiotapes are 100% certified against signal drop-out.

September, 1960

Model and P	rice	Frequency Response	Data
	"Ekotape" Stereo Decks  Model 340 \$118.00  Model 342 \$138.00  Model 360 \$124.00  Model 362	30-15,000 cycles at 7½″/sec.	Series of tape decks for stereo record/playback and monophonic record/playback. Model 340 is for record and playback of monophonic or two-channel stereo. Central control selects tape direction. Speeds: 7½ and 3¾ ips. Second control for tape speed and on/off. Pause control button. Wow and flutter: 0.2% at 7½ ips., 0.3% at 3¾ ips. Dimensions: 7½ h., 12¾ w., 9" d.  Model 342 is same as Model 340, but includes program selection finder and automatic stop.  Model 360 is same as Model 340, but with fourchannel record/playback head.  Model 362 is same as Model 342, but with fourchannel record/playback head.
	"Ekotape" Model 310 A-V Control Center \$399.50	as above	amp for decks is \$70. Stereo record/playback preamp is \$199.  Audio-visual control center for any automatic slide or strip-film projector. Eliminates need for audible signal. Has two recording heads that record over full width of tape. One records from mike or radio. The other records 1000-cycle signal that operates an automatic projector. Speeds: 7½ and 3¾ ips. Other specs same as Model 320 on page 26 except for following: output, 12 watts; no preamp output jack; microphone is accessory.
	WOLLENSAK OPTICAL	COMPANY, 320 E.	21st St., Chicago 16, III.
	Model T-1500 Monaural Portable \$199.50  Stereo Model T-1515 \$229.50	40-15,000 cycles (±3 db) at 7½"/sec. 40-8,000 cycles (±3 db) at 3¾"/sec.	Portable, two-speed, dual-track recorder with inter- locked keyboard control that can be operated in any  sequence. Flutter and wow: less than 0.3%. Signal- to-noise: 48 db. Overall distortion less than 0.8%.  Fast forward and rewind, 150"/sec. Dual level record  indicator, revolution index counter. Automatic drive  roller release when power switch is off, Pre-amp  output for hi-fi system. Extension speaker jack. Built- in automatic head demagnetization. Remote foot con- trol available. Weight: 18 lbs. Stereo model is same  as above with built-in lower channel pre-amp added.

All specifications and performance data on tape recorders listed in this directory are based on information supplied by the manufacturer. Performance data are generally based on average values and individual machines sometimes vary widely from published figures, depending on the amount of quality control exercised in manufacture. Space limitations do not permit listing of all features of each recorder. Consult manufacturer or local dealer for further information.

as above

\$229.50 Model T-1600 **Automatic** 

Monaural Portable

\$249.50

Stereo Model T-1616 \$279.50

Prices subject to change without notice. Consult manufacturer or local dealer for exact price, as some prices are list and others not.

EXTRA PRECISION (EP) Audiotape is protected by polyethylene bags. EP Audiotapes meet the toughest specifications for computer and instrumentation use and represent a large and growing part of Audio's sales.



Model T-1600 is automatic version of T-1500 recorder above. Has rack space bar for instant replay of any part of tape; push-talk control in mike for remote op-eration; added function indicator lamps.

Model T-1616 is same as Model T-1600 plus stereo playback head and built-in second preamp.

Model and Pric	e	Frequency Response	Data
	WEBCOR, INC., 56	10 West Bloomingdale	Ave., Chicago 39, III.
9,9	Royalite Model 2008 stereo Portable \$244.50 Royalite Model 2001 Monophonic Portable \$194.50	50-12,000 cycles at 7½"/sec. 70-7,000 cycles at 3¾"/sec.	Triple-speed portable recorder for dual- or four-track stereo playback and mono record/playback. Speeds: 7½, 3¾ and 1½ ips. Knob controls. Editing key. Record safety lock. Cathode ray recording level indicator. Monitor control. Digit tape counter. Signal-tonoise ratio: 45 db. Wow and flutter: 0.4%. Two speakers. Input: one. Outputs: external amplifier, speaker; stereo speaker. Dimensions: 8″ h., 14½″ w., 14½″ d. Weight: 23 lbs.  Model 2001 is monaural version of above. Same specifications, but weighs 20 lbs.
3.39	Regent Model 2005 Monophonic Portable \$169.95	as above	New triple speed monophonic recorder with the same specifications as Model 2001 above, except for single speaker. Dimensions: 9" h., 15" w., 16½" d. Weight: 28 lbs.
Model 2006 Monophonic Part	able, \$164.50		Model 2006 is the same as 2005 except for remote control jack for starting and stopping recorder in record or playback with mike.
	Microcorder Model 2104 Transistor Portable \$175.00	250-5,000 cycles at 3¾"/sec.	New dual-speed dual-track transistorized recorder for battery or electric power. Speeds: $3\frac{3}{4}$ and $1\frac{7}{6}$ ips. Push-button controls. Safety interlock button. VU meter. Tape counter scale. Capstan drive. Wow and flutter: $0.6\%$ at $3\frac{3}{4}$ ips., $0.8\%$ at $1\frac{7}{6}$ ips. Signal-to-noise ratio: $35$ db. Output: external amplifier. Inputs: mike, remote. Dimensions: $8^{\prime\prime}$ w. x $8^{\prime\prime}$ d. x $2\frac{1}{4}^{\prime\prime}$ h. Weight: 4 lbs.
1000	Royalite II Model 2108 tereo Portable \$249.95 Model 2101 pagural Portable \$199.95	50-15,000 cycles at 7½"/sec. 50-10,000 cycles at 3¾"/sec.	New triple-speed dual-track monaural portable that also plays back 2- and 4-track stereo tapes. Speeds: 7½ ips., 3¾ and 1½ ips. Push-button controls. Editing key. Cathode ray record level indicator. Monitor control, digital tape counter. Wow and flutter: less than 0.4%. Signal-to-noise ratio: 50 db. Inputs: one, mike. Outputs: external speaker and external amplifier. Dimensions: 11½″ w. x 7½ h. x 13¼″ d. Weight: 19 lbs.  Model 2101 is a monaural version of above. All other specifications are the same.
9 Q	Viscount Model 2103 pnaural Portable \$139.95	50-12,000 cycles at 7½"/sec. 70-7,000 cycles at 3¾"/sec.	New triple-speed dual-track monaural recorder. Speeds: $7\frac{1}{2}$ , $3\frac{3}{4}$ , and $1\frac{7}{2}$ ips. Function switch controls. Record safety lock. Monitor control. Record level scale. Wow and flutter: less than $0.4\%$ . Signal-to-noise ratio: $45$ db. Input: mike. Output: external speaker. Dimensions: $14\frac{3}{4}$ " w. x $9\frac{1}{4}$ " h. x $16\frac{1}{2}$ " d. Weight: 26 lbs.
	Regent Coronet Model 2107 tereo Recorder \$349.95	50-15,000 cycles at 7½"/sec. 70-7,000 cycles at 3¾"/sec.	New triple-speed recorder that records and plays back both four- and two-track stereo and monaural tapes. Speeds: $7\frac{1}{2}$ , $3\frac{3}{4}$ , and $1\frac{7}{6}$ ips. Sound-on-sound recording facility. Digital tape counter. Editing key. Push-button controls. VU meter. Wow and flutter: less than $0.4\%$ . Signal-to-noise ratio: 45 db. Inputs/outputs: one for each channel for input, external amplifiers and speakers. Dimensions: $9''$ h. x $14\frac{3}{4}''$ w. x $17''$ d. Weight: 32 lbs.
WEBSTER E	LECTRIC — ELECT	RONICS DIVISION,	1900 Clark Street, Racine, Wisconsin
Prop Mind of the second of the	"Ekotape" Model 300W Stereo Table corder System \$699.00	30-15,000 cycles at 7½"/sec.	New dual-speed table recorder system for monophonic, two- and four-channel stereo record/playback. Speeds: 7½ and 3¾ ips. Central control selects tape direction. Second control for tape speed and on/off. Odometer type program selection finder. Automatic stop. Wow and flutter: 0.2% at 7½ ips., 0.3% at 3¾ ips. Signal-to-noise ratio: 45 db. Inputs: six—mike, radio/phono, record/playback head—for each channel. Outputs: four—amplifier, erase head—for each channel. Deck and preamp only: \$439. Speakers, crossover network and power amplifier: \$149.
	"Ekotape" Monophonic Portable Model 320 \$279.50	as above	Portable, two-speed, dual-track recorder with monomatic single-knob control. Speeds: $7\frac{1}{2}$ and $3\frac{3}{4}$ ips. Meter type recording level indicator. Power output, 8 watts max. Distortion, 1.6%. Total harmonic at 6 watts, 400 cycles. Signal-to-noise, 43 db. Wow and flutter, 0.2% max. at $7\frac{1}{2}$ "/sec. Odometer type selection finder. Fast forward and rewind ratio, 15 to 1. Two built-in speakers: 6" x 9" oval PM and 3" round. External speaker jack and output for preamp. Inputs: mike and radio-phono jack. Dimensions: $11$ " x $13\frac{1}{2}$ " x $15$ ". Weight: 35 lbs.
	"Ekotape" Stereophonic Portable Model 350 \$455.50	as above	Similar to Model 320 above, except designed for mon- aural record/playback and stereo playback with stacked heads. Includes two amplifiers for stereo playback—one for half-track monaural record/play- back. Each amplifier has 12 watts maximum output. Weight: 44 lbs. Matching stereo speaker cabinet, including 6" x 9" oval and 3" round speaker, avail- able at \$59.50.

September, 1960

## QUICK FACTS ON MAGNETIC TAPE RECORDERS

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

Model and Price	Frequency Response	Data
AMERICAN CONCERTONE DIV., AMERICAN	ELECTRONICS, INC.,	9449 West Jefferson Blvd., Culver City, Colif.
Transicorder Monaural Portable Recorder \$199.50	200-5,000 cycles at 3¾"/sec.	New battery powered portable transistorized recorde using 3" reels. Two speeds: 3½ ips and 1½ ips. Two heads: record play-back, and erase. Audio-level and battery-condition meters. Power rewind. Adaptors for 12 volt DC and 110 volt AC power supplies. One knol control. Price includes batteries, microphone and earphones. Weight: under 4 lbs.
Model 505 Stereo Recorder \$495.00	50-15,000 cycles (±2 db) at 7½ ips 50-10,000 cycles (±2 db) at 3¾ ips	New two-channel recorder that can be converted to single-channel half-track monaural. Plays ½ track full-track, 2-track and 4-track tapes. Tape speeds 3¾ and 7½ ips. Rewind time: 45 seconds for 1200 feet. Push button controls; calibrated meter leve indicators; automatic cutoff. Wow and flutter: less than 0.2% rms at 7½ ips. Signal-to-noise ratio: 50 db. Three motors, including hysteresis drive mechanical flutter filter and dynamic balanced fly wheel, instant source/tape monitoring, instant start, stop, separate record/playback. Amplifiers, automatic tape lifters, and separate microphone/line in puts, each channel. Weight: 36 lbs.
MARK X BROADCAST RECORDERS  X-1 Half-track monaural record/playback \$965.00 X-3 Stereo record/playback 1050.00 X-6 Full-track monaural record/playback 965.00 X-8 Monaural or stereo playback 850.00 X-9 Full-track monaural playback 820.00	30-17,000 cycles (±2 db) at 15"/sec. 40-12,000 cycles (±2 db) at 7½"/sec. 50-7,500 cycles (±2 db) at 3¾"/sec.	A new series of dual-speed recorders available with speeds of 15 and 7½ ips or 7½ and 3¾ ips. Three motor direct capstan drive: one hysteresis synchronous, two induction motors. Push-button controls Timing accuracy: 99.8%. Harmonic distortion: 2.5% at maximum record level. Signal to noise: 55 db a 15 ips, 50 db at 7½ ips, 45 db at 3¾ ips. Flutter and wow: 0.15% at 15 ips, 0.25% at 7½ ips, 0.35% a 3¾ ips. Bias frequency: 100 kc nominal. Separatheads for erase, record and playback. All triode play back amplifier. Two high impedance inputs. Threoutputs: cathode follower, 600 ohm, high impedance monitor phone jack. Dimensions: 14" h., 16½" w. 9" d. Weight: 45 lbs. including carrying case.
MARK VII Stereo Recorder \$940.00  Mark VII-F Stereo Recorder \$995.00	30-17,000 cycles (±2 db) at 7½"/sec. 40-12,000 cycles (±2 db) at 3¾"/sec.	Dual-speed recorder with 15 ips and 7½ ips or 7½ ips and 3¾ ips available. Has direct drive capstar motor, four pole induction type reeling motors. Push button controls. Self energizing brakes. Master out put volume control, VU calibrated meter. Dual input for mike and auxiliary sources with four separate level controls. Flutter and wow: 0.35% at 3¾ ips 0.25% at 7½ ips. Dimensions: 14" h., 16½" w. 6" d. Weight: 35 lbs. Mark VII has three heads for recording and play-back of two-track stereo and mono. Mark VII-F has four heads for recording and playback of two-track stereo and four-track stereo.
SERIES 30 RECORDERS  Model 31, full-track recorder \$795.00  Model 32, half-track recorder \$795.00  Model 32ST, monaural record/play- back, stereo playback \$899.00  Model 33, stereo recorder \$995.00	40-15,000 cycles (±2 db) at 15"/sec. 50-12,000 cycles (±2 db) at 7½"/sec. 50-5,000 cycles (±2 db) at 3¾"/sec.	All Series 30 models have following features: Two speed direct drive hysteresis synchronous motor and two torque motors; 3 heads with provision for 2 more; 4½" VU-type meter; 2-channel input mixer A-B test fader for cueing/editing switch. Instanspeed selection of 15"/sec. and 7½"/sec. or 3¾"/sec. and 7½"/sec. or 3¾"/sec. and 7½"/sec. Signal-to-noise, 55 db by proposed NAB Standard (full track). Total harmonic distortion, 2% at zero VU. Total futter and wow, less than 0.1% rms at 15"/sec., 0.2% at 7½"/sec. Fast forward and rewind, less than 60 sec. for 2500 ft High impedance microphone input and unbalance bridging input. Output impedance, cathode follower. 600 ohms with plug-in transformer.



Model G-258A Recorder \$249.95

50-12,000 cycles at 33/4"/sec.

New three-speed recorder: 3¾, 1½, ¾6 ips. Push button controls; recording level indicator. Tape counter. Input jack for mike, telephone adapter, other sound sources. Output monitor jack. Pilot lite. Power output: 2½ watts. Signal-to-noise ratio: better than 50 db. Wow and flutter: less than 0.2%. Power required at 110 volts, 60 cycles: 38 watts. Automatic tape threader. Special feature prevents tape breakage. Weight: 12½ lbs.

Frequency Response

VIKING OF MINNEAPOLIS, 9600 Aldrich Ave., Sa., Minneapolis 20, Minnesota

Model and Price

Data

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Model ar	d Price	Frequency Response	Data
A	MERICAN GELOSO ELECTR	ONICS, INC., 251 Pc	ark Ave. S., New York 10, N. Y.
	Model G256/60 Geloso "StenOtape" Portable Recorder \$179.95	80-6,500 cycles at 1 1/8 ips	Imported dual-track recorder and dictating/transcriber. Speed: 1½ ips. Four push-button controls for record, fast rewind, playback and stop. Automatic erase and correction. "Glo-light" recording level indicator Tape counter hand-resettable. Plays up to 128 minutes. Transparent lucite cover. Signal-to-noise ratio better than 40 db. Wow and flutter: 0.3%. Output: 1½ watts. Rewind ratio: 15-1. Fast forward ratio: 10-1. Input impedance: ½ megohm. Output impedance: 3.2 ohms. Preamp output. Extension speake jack. Accessories available. Dimensions: 4" x 10" x 15½". Weight: 6½ lbs.
AMPE	( AUDIO COMPANY, a di	vision of AMPEX CORP.	, 1020 Kifer Road, Sunnyvale, Calif.
C.S.	Model 970 Stereo Portable \$595.00 Model 2010 Amplifier-Speaker \$199.50	30-20,000 cycles at 7½"/sec. 30-15,000 cycles at 3¾"/sec.	New stereo/monophonic portable dual speed recorder. Speeds: 7½ and 3¾ ips. Plays 4-track, 2 track, single-track tapes. Dial controls. Two 7" ova speakers. Flutter and wow: less than 0.2% rms a 7½ ips. Inputs: radio/TV/phono/auxiliary; mike. Out puts: cathode follower that are primarily for monitoring. Recorder is designed for playback through 2010 amplifier/speakers. Dimensions: 25½" x 15° x 9". Weight: 46 lbs.
Uncased Model 902 Model 9 \$349.50 \$449.5	0.40 50	At 7½"/sec. 30-20,000 cycles (±2 db) 50-15,000 cycles At 3¾"/sec. 30-15,000 cycles (±2 db) 50-10,000 cycles	Model 960 is a two-speed recorder for either stered recording or half-track recording. Speeds: 7½ and 3½ ips. Plays back half-track, full track, 2-track stered and 4-track stereo. Automatic stop mechanism Signal-to-noise, better than 55 db below peak record level at 7½ "/sec. and 50 db at 3¾"/sec. Flutter and wow, under 0.2% at 7½"/sec., 0.25% at 3¾"/sec Inputs: high impedance line 0.4v rms for program level; high impedance microphone. Playback output greater than 0.75 rms into high impedance load Weight: 38 lbs.  Model 910 is same as above except for two-speed half-track monaural record. Plays back 2-track stereo 4-track stereo, half track and full track. Model 2510 stereo system includes Model 910 and two speaker amplifiers (2010). Model 2560 stereo system include: Model 960 and two speaker-amplifiers (2010).
	Model 601 Portable Tape Recorder \$595.00	30-15,000 cycles (±4 db) at 7½"/sec. (±2 db 40 to 10,000 cycles)	Portable, professional-type single-track or dual-tracl recorder with 7½" tape speed. Takes up to 7" reels Signal-to-noise, over 55 db. Flutter and wow, below 0.17%. Starting and stopping time, less than 1½ second. Fast forward and rewind, 90 seconds fo 1200 ft. Timing accuracy ± 0.2% for 30 minute recording. Separate record and playback amplifiers Separate erase, record and playback heads. VL meter, independent level controls for microphone and line. Weight, 28 lbs.
Model 620 nplifier-Speaker \$189.50	Model 601-2 2-Track Stereo Portable \$995.00	same as above	Model 601 tape transport with two modified 601 elec tronic chassis. Full-track erase, two-track record and two-track playback. Signal-to-noise, over 50 db eithe channel. Inter-track crosstalk rejection, over 50 db.
	'Crescendo'' Consoles 7000 Series \$1995.00 Other Consoles: 8000 Series \$2650.00	At 7½"/sec. 30-20,000 cycles (±2 db) 50-15,000 cycles At 3½"/sec. 30-15,000 cycles (±2 db) 50-10,000 cycles	Each Crescendo console includes a Model 960 stereo phonic tape recorder-reproducer, described above plus: a Garrard 4-speed record changer with stereo, monaural diamond stylus pick-up, push-button Audic Control Center, Ampex 2-channel AM and FM stereo phonic tuner, two matched Ampex amplifier speake units consisting of twin 25-watt amplifiers and six speakers — a 12" bass, 8" mid-range and one omni directional high-frequency projector for each channel
AMPEX PROFESS	Model 300-C Console Tape Recorder \$2250.00	30-15,000 cycles (±2 db) at 15"/sec. 30-15,000 cycles (±4 db) at 7½"/sec. (±2 db 40 to 10,000 cycles)	Professional-type, single-track, dual-speed recorde operating at 15" and 7½" per second. Signal-to noise, over 60 db by NAB standards. Instant star and stop. Flutter and wow, less than 0.1% at 15"/sec Rewind time, 1 min. for 2400-ft. reel. Timing accuracy, ± 0.2%. Push button controls for start, stoj and record — may be remotely operated. Separat plug-in heads for erase, record and playback. Othe features as on Model 351-U on page 5. Also avail able for portable or rack mounting. Dimensions 36" x 25" x 26". Weight: 195 lbs.
	Model 300-3SSC Three Channel "Sel-Sync" Console Recorder \$5125.00  Model 300-3C Three Channel Console Recorder \$4698.00	same as above	Professional three-channel tape recorder with "Se Sync" feature for recording sound-on-sound. Wit this optional feature, any given track can be erase and re-recorded without effect to the other two charnels. 300 Series multi-channel recorders are equippe with selector for NAB and AME curves. Latter curv gives an effective 7 db increase in signal-to-nois ratio in the 2 to 6 thousand cycle range. Separat erase, record and playback heads. Signal-to-nois ratio (NAB curve): 55 db. Cross talk rejection 50 db Otherwise same as Model 300-C above. 300 serie recorders are available from one to eight channels Rack mount units available. Dimensions: 64" x 25". Weight: 288 lbs.

95 SERIES Tape Deck (Prices available on request)	Dependent upon type of heads supplied	Broadcast type recorder designed for professional applications. Available with any of three drive pulleys: $15-71/2$ ; $71/2-33/4$ ; or $33/4-17/8$ ips. Three motors: hysteresis synchronous drive; 6-pole induction torque motors. Space for six interchangeable heads allows head configurations for any tape application. Rewind and fast forward time, 70 sec. for 2400 feet tape. Instantaneous dynamic braking, less than 2 sec., from fast forward or fast rewind. Signalto-noise ratio: 55 db or better. Wow and flutter: less than 0.1% at 15 ips, less than 0.15% at $71/2$ ips rms. Deck is available with matching VU Record/Playback Amplifiers, for rack mounting.
Viking Endless Play Cartridge Recorder 35P \$60.00 35R \$67.00  (other models available by request)	40-14,000 cycles at 7½"/sec. 40-7,000 cycles at 3¾"/sec.	Portable handler for use with Fidelipac continuous loop tape cartridges holding up to 1600 feet of tape. Single lever control. Speed change control for 3¾ or 7½ ips tape speeds. 115v, 60 cycle A-C motor (50 cycle motor available). Dimensions: 10½ x 9½ x 5½ mounted in case. Weight 5 lbs.  Model 35P is monaural half-track playback only, mounted in case Model 35R is monaural half-track record/playback/erase, mounted in case.
Viking 85 Series Tape Decks  Model 85R. Two-Track Monaural Record/Playback Model 85RQ. Two-Track Monaural Erase/Record/Playback and Four-Track Stereo Playback Model 85Q. Two- and Four-Track Monaural-Stereo Playback Model 85ES. Two-Track Monaural- Stereo Erase/Record/Playback Model 85ESQ. Two- and Four-Track Monaural-Stereo Erase/Record/ Playback Model 85ESQ. Two- and Four-Track Monaural-Stereo Erase/Record/ Playback Model 85ENQ. Similar to Model 85ESQ. See data  179.50	30-15,000 cycles (±2 db) at 7½"/sec.	Series of tape decks featuring flutter-filter belt drive. Two motors providing fast forward and rewind. Front panel speed change, 3¾ and 7½ ips. Dual rotary controls. Inner ring selects "fast forward" and "fast rewind". Outer knob selects normal forward, stop and cue (edit). Footage counter. Space for five heads. Pressure pads provided at three head positions. Tape-lifters remove tape from heads except in play and "cue" positions. Short-gap record/playback heads. Models RQ, ESQ, RMQ have a third head for playback. Signal-to-noise ratio: 50 db. Wow and flutter: 0.2% rms. Tapes recorded on Viking may be played back on any machine having standard NAB equalization. 110v, 60 cycles. (50 cycle models) (All 85 Series Viking decks are flexible in that head may be added to provide special functions such as sound-on-sound recording, stereo monitoring, language teaching, etc.) Dimensions: 9½" x 13" x 5". Weight: 12 lbs. Model 85 RMQ is same as 85 ESP except has wide-gap recording heads; short-gap monitor/playback heads; quarter track erase-record-monitor.
Model RP62. Record/Playback Amplifier \$77.50  Model RP62-3. Record/Playback    Amplifier \$79.50  Model RA-72. Record Amplifier \$57.50		RP-62 for use with 2-head decks, or if third head is connected directly to music system preamp. RP-62-3 is same as above except it is for use with three-head decks. RA-72 for use with three-head decks.
Stereo Recorders  "Stereo- Compact" ESQ \$297.50  "Stereo- Compact" RMQ \$297.50	30-15,000 cycles (±2 db) at 7½"/sec.	New group of portable stereo recorders incorporating the equivalent of either the 85ESQ or 85RMQ tape decks described above with two RA72 recording amplifiers described above. Function selector switch for four- and two-track stereo, monaural, sound-onsound. Behind-panel connectors for high-level inputs and music system and monitor outputs. Maximum power requirement: 125 watts. Dimensions: 14" h., 14" w., 9" d. Weight: 23 lbs.
Stereo Recorders "Stereo-Pro" ES \$344.50 "Stereo-Pro" ESQ \$374.50 "Stereo-Pro" RMQ \$374.50	as above	New group of portable stereo recorders incorporating the equivalent of the 85 ES, 85 ESQ, and 85 RMQ tape decks described above, with the RP62 or RP62-3 record/playback amplifiers described above. Storage compartment below amplifiers. Front-panel-mounted high level inputs (2), mike jacks (2), output jacks for monitor and music system (2). Dimensions: 20¾" h., 13¾" w., 10¼" d. Weight: 37 lbs.
V-M CORPO	RATION, Benton Har	bar, Michigan
"Tape-O-Matic" Model 722 Stereo/Record Four-track Portable \$259.95  Model 168 Matching Auxiliary-Amplifier Speaker \$75.00	40-15,000 cycles (±5 db) at 7½"/sec.	New dual-speed stereo portable that records four-track stereo, plays back two- or four-track stereo. Sound-on-sound recording. Speeds: $7\frac{1}{2}$ and $3\frac{3}{4}$ ips. Push-button controls. Precision tape index timer. $6'' \times 9''$ and $3.5''$ speakers. Double cathoptic tuning eye for recording level. Monitor switch. Pause button. Safety switch prevents accidental erase. Pilot light. Record bias and power erase: $75$ kc. Power output: $14$ watts (peak) $8.16$ ohms, damping factor $7.15$ . Stereo inputs: microphones, radio, TV, phono. Outputs: dual external amplifier, external speaker. Dimensions: $9\frac{7}{8}''$ h, $\times 16\frac{5}{8}''$ w. $\times 14\frac{3}{4}''$ d. Weight $35$ ibs. approx. Add $\$15.05$ to recorder price and $\$10.00$ to amplifier price for table model cabinet.
"Tape-O-Matic" Model 720 Stereo/Play Four-track Portable, \$225.00 Model 166 Matching Auxiliary-Amplifier Speaker, \$75.00	as above	Four-track monaural record/playback version of Model 722 above.
"Tape-O-Matic" Model 710		Dual-track monaural record/playback version of

Model and	l Price	Frequency Response	Data
T	ELECTROSONIC CORPOR	ATION, 35-18 37th	St., Long Island City 1, N. Y.
	Model MR511 Monaural Battery Portable \$129.95	100-6,500 cycles (±3 db) at 33/4"/sec.	New battery-operated, two-speed monaural portable recorder. Speeds: 3¾ and 1½ ips. Three controls: function, volume, speed. Runs on seven Panlite batteries. Speaker: 2½" x 6½". Safety record interlock. Reels: 3". Bias frequency: 37 kc. Output level: ½ watt. Input: mike. Output: headphone/speaker. Dimensions: 3" h., 6" w., 10¾" d. Weight: 7 lbs.
	Telecto Model MR111 Monaural Portable \$89.95	100-7,500 cycles at 7½"/sec.	Portable, dual-track monaural recorder with 7½ and 3¾ ips tape speeds. Push-button speed control and single knob controls for record/playback; wind/rewind. Record interlock. Neon record-level indicator. Elapsed time indicator. Built-in 6" speaker. Inputs: one for mike, one for radio/phono/TV (with patch cord). Dimensions: 7¾" h., 11" w., 115%" d. Weight: 15 lbs.
TE	LEFUNKEN, distributed by	AMERICAN ELITE, INC.	., 48-50 34th St., L.I.C. 1, N. Y.
	Telefunken Magnetophon Monophonic Portable \$299.00	30-20,000 cycles (±3 db) at 7½"/sec. 30-15 000 cycles (±3 db) at 3¾"/sec.	New dual speed German monophonic portable recorder. Speeds: 7½ and 3¾ ips. Push-button controls. Three-digit counter. Automatic tape tension. Built-in splicing device. Signal-to-noise ratio: 50 db. Inputs: three, changeable by an input-selector-switch for radio, mike and phono. Outputs: for monitoring earphone and electric remote control. Dimensions: 7½" h., 15½ w., 11½" d. Weight: 26½ lbs.
	TOEPFER, A. C.	, INC., 1 Broadway,	New York 4, N. Y.
	Model HM8S Stereo Portable Recorder \$438.95	50-16,000 cycles at 7½"/sec. 50-10,000 cycles at 3¾"/sec.	New dual speed recorder with four-track stereo and monaural record-playback. Speeds: 7½ ips. and 3¾ ips. Built-in second channel amplifier. Push-button controls. Fast/forward/fast rewind. Digital counter. End-of-tape stop. Non-erase for re-record. Inputs: two each for mike, phono, radio. Outputs: amps and external speakers. Dimensions: 16½ x 15 x 9½. Weight: 34 lbs.
	Model HM45 Stereo Portable Recorder \$355.95	as above	New portable for two-track stereo and monaural play- back and monaural record. Otherwise same as model HM85 above with the exclusion of non-erase feature Weight: 27 lbs.
TRUVOX	LTD., Truvox (U.S.A.), dis	tributed by: FEN-TONE	CORP., 106 5th Ave., New York 11, N. Y.
	Mark IV Stereo Tape Deck TR-2106 \$199.50 TR-2116 \$215.00 Type "K" Record/Playback Amplifier \$109.50	40-15,000 cycles (±3 db) at 7½"/sec.	Dual track, dual speed. TR-2106 with timing scale. TR-2116 with precision index counter, both fitted with stacked stereo head. With suitable electronics for monaural record/playback plus stereo playback or monaural record/playback plus stereo record/playback (half-track erase head requires raw tape). 3 shaded pole B.T.H. motors. Wow and flutter: less than 0.2% at 7½ ips. Push button operation, electrical braking, high speed rewind (45 sec. for 7" reel). Automatic tape lifter. Dimensions: 14½ x 12-13/16" x 5". Weight: 14½ lbs.
00	Model T-A-B Stereo Twinset (2 units) Record/Replay \$495.00	as above	For monophonic and stereo record/playback. Unit "A" contains deck mechanism TR-2116 (described above) plus identical amplification system and pre-phased speaker in Unit "B." Amplification: 8 watt total output. Two input jacks for mono and stereo microphones, AM-FM, pickups or telephone adaptors. Outputs: external amplifiers and speaker systems. Speakers: 10" x 6" elliptical wide range with flux density of 10,000 lines. Each unit has tone controls and magic-eye level indicator, monitoring facilities. Accidental erase prevention. Dimensions, each unit: 1534" w., 85/8" h., 14" d. Weight: Unit "A," 37 lbs. Unit "B," 22 lbs.
U	HER, distributed by: WAR	REN J. WEISS, 346 Wes	st 44th St., New York 36, N. Y.
	Uher Universal Monophonic Portable \$299.95	40-16,000 cycles at 3%"/sec. 40-8,000 cycles at 1%"/sec. 40-4,000 cycles at 15/16"/sec.	New triple-speed monophonic portable recorder. Speeds: 3¾, 1½ and 15/16 ips. Hysteresis synchronous motor. Push-button controls. Record level indicator. Tape counter. Signal-to-noise ratio: 45 db. Wow and flutter: ±0.3%. Inputs: five; radio, phono, mike, remote control speaker; Akustomat (allows recorder to be operated solely on audio); mixer (allows four inputs to be mixed at once). Outputs: radio, amplifier; external speaker, earphones. Dimensions: 4½" h., 12" w., 10" d. Weight: 17 lbs.
00	Stereo Record III Portable Stereo Recorder \$399.50	40-20,000 cycles at 7½"/sec.	New stereo recorder that records and plays four-track stereo/mono and plays two-track stereo/mono. Three speeds: $7\frac{1}{2}$ ips., $3\frac{3}{4}$ ips. and $1\frac{7}{6}$ ips. Sound-on-sound recording. Hysteresis synchronous motor, Digital counter. Recording lock button. Cueing/editing pause button. Separate level indicators. Wow and flutter: better than $0.1\%$ . Signal-to-noise ratio: less than 55 db. Dimensions: $16\frac{1}{4}$ " x $15\frac{1}{4}$ " x $7\frac{3}{4}$ ". Weight: 35 lbs.

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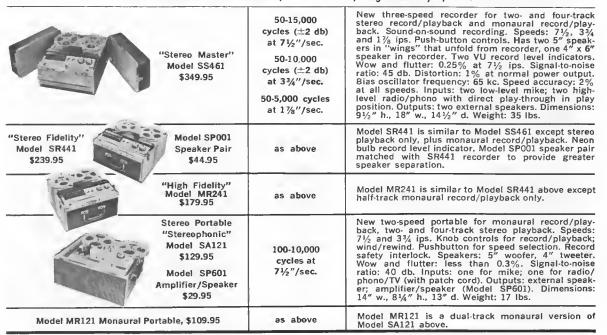
Model and Price	Frequency Response	Data
Model PR-10-2 Stereo/Mana Recorder \$945.00 for Rack Mounting \$995.00 With Portable Case	30-18,000 cycles (±2 db) at 15"/sec. 40-12,000 cycles (±2 db) at 7½"/sec. 40-8,000 cycles (±2 db) at 3¾"/sec.	New two channel, two speed professional recorder for either stereo or monophonic recording. Has new electro-dynamic clutch system. All alignment controls available from front panel access door. Plug-in equalizers for NAB, AME or CCIR curves. Accessory self-threading system available. Four-position head assembly: separate two-channel erase, record, play-back heads plus position for optional 4-track stereo playback or special requirements. Independent record and playback amplifiers for each channel permit "A-B" monitoring while recording. Two VU meters. Push-button control plus remote control. Automatic stop switch. Hysteresis synochronous drive motor. Speeds 7½ — 15 ips or 3¾ — 7½ ips. Inputs: two unbal. bridge. Outputs: two 600 ohm + 4 dbm nominal. Signal-to-noise ratio: 55 db at 7½ — 15 ips, 50 db at 33½ ips. Flutter and wow: less than 0.15% at 15 ips and 7½ ips; 0.25% at 3¾ ips. Requires 14" rack space. Portable dimensions: 20½" x 15½" x 9". Weight: 50 lbs.
Model PR-10-1 Monophonic Recorder \$845.00 For Rack Mounting \$895.00 With Portable Case	same as above	Model PR-10-1 is the same as the above except for single channel (half or full track) operation, Inputs include one microphone input and one bridging input (may be converted to two mic inputs with accessory plug-in pre-amp). Gain controls on each input.
Model 354C Stereo/Mono Recorder \$1925.00 console mounted \$1875.00 2 case portable \$1775.00 Unmounted	30-18,000 cycles (±2 db) at 15"/sec. 40-12,000 cycles (±2 db) at 7½"/sec. 40-8,000 cycles (±2 db) at 3¾"/sec.	Professional two-channel, two-speed recorder. Three head stacks. Two illuminated VU meters, plug-in equalizers for NAB, AME or CCIR curves. "A-B" monitor switches. "Record-Safe" switch and channel A, AB or B record selector. All electronic alignment available from access door in front panel. Direct drive $7\frac{1}{2} - 15$ or $3\frac{3}{4} - 7\frac{1}{2}$ ips hysteresis synchronous motor. Pushbutton relay-solenoid operation. May be fully remote controlled. Automatic cutoff switch. Two unbal. bridge inputs. Output: $+4$ dbm into 600 ohm load. Signal to noise ratio $55$ db at $7\frac{1}{2}$ and $15$ ips, $50$ db at $3\frac{3}{4}$ ips. Flutter and wow: $0.15\frac{5}{4}$ at $15$ ips and $7\frac{1}{2}$ ips, $0.25\frac{5}{4}$ at $3\frac{3}{4}$ ips. Dimensions: transport $19^m$ x $15\frac{3}{4}$ , electronics $19^m$ x $7^m$ unmtd. Console: $42^m$ h x $24\frac{1}{2}$ w x $28\frac{1}{2}$ d. Weight: $155$ lbs.
Model 351-U Unmounted Monophonic Recorder \$1475.00	same as above	Professional (full or half track) two speed recorder. Direct drive $7\frac{1}{2} - 15$ or $3\frac{3}{4} - 7\frac{1}{2}$ ips hysteresis synchronous motor. Pushbutton relay-solenoid operation. May be remote controlled. Automatic cut-off switch. Timing accuracy: $\pm 0.2\%$ . Standard NAB equalization curves (AME optional). $4^{\prime\prime}$ VU meter. Built-in microphone pre-amp. Output $+8$ dbm (or $+4$ ) into 600 ohms. Signal to noise ratio: full track, 60 db; half track, 55 db at $7\frac{1}{2}$ and 15 ips. Flutter and wow: less than 0.15%. Independent record and playback system, Also available in portable cases or console. Rack space $19^{\prime\prime}$ x $22\frac{3}{4}^{\prime\prime}$ . Weight 76 lbs.
Model 351-2P Two-channel Portable Recorder \$2105.00	same as above	Professional dual speed, two-channel (stereo/mono) recorder with same tape transport and control features listed on the 351-U above. Three, two-track head stacks; erase, record and playback. Independent electronics for each channel, each with input selector, channel record button, 4" VU meter with switch to read "input" or "tape" level, bias and erase current. Also available for rack mounting. Weight (2 cases) 105 lbs.
Model 352-2 Stereo Tape Reproducer with console \$1643.00 without console \$1485.00	same as above	Professional tape reproducer for playback of pre- recorded tapes. No danger of accidental erasure since the 352 does not have erase or record heads. Specifications are the same as the 351-2P recorder above, less the record feature; may be fully remote controlled. Other models available for full or half track playback, rack or portable mounting. Dimen- sions: 35" x 241/4" x 243/4". Weight: 109 lbs.
Model 3300-B High Speed Tape Duplicator (other duplicator models available)	Detailed specifications and prices available from manufacturer	New high speed tape duplicator for making four track 7½ ips commercial stereo tapes, duplicating simultaneously two stereo tracks in the forward direction and two-stereo tracks in reverse direction. Up to 10 one-hour reels of four track stereo program material can be duplicated in 4 minutes. Can feed from one to ten slave units, employing new permanently aligned head stacks. Equalization compensates for speed ratios used, tape copies have no appreciable change in frequency response from suitably prepared 4-track masters.
AMPLIFIER CORPORATION	N OF AMERICA, 398 I	Broodway, New York 13, N. Y.
"Standard Trans-Magnemite"  Speed in/sec. Pric 612-A 11/4 537 537	ce 20 300 - 2,500 cps	Professional, transistorized, battery-operated, springmotor, portable field recorder. Available in single, two-, three-, and four-speed models. Models at speeds of 334, 7½, and 15 jps exceed NARTB Broadcast standards. Uses small dry replaceable or rechargeable batteries which last 125 hours. No microshopped able batteries which last 125 hours.

	5peed  Models in/sec 512-A ½ 512-B 1½ 512-C 3¾ 512-TD 7½ 512-SD 7½ *Single Track U	\$420 \$370 \$380 \$390 \$390 \$430	300 - 2,500 cps 100 - 3,000 cps 50 - 7,500 cps 50 - 10,000 cps	Professional, transistorized, battery-operated, spring motor, portable field recorder. Available in single two-, three-, and four-speed models. Models at speed of 334, 7½ and 15 ips exceed NARTB Broadcas standards. Uses small dry replaceable or recharge able batteries which last 125 hours. No microphonic or motor noises; low noise input stage (0.25 microvolt). High-speed rewind; modular plug-in construction; ball-bearing supply and take-up reel shaf Dimensions: 11" x 10" x 7". Weight: 15 lbs. Samunits with VU meter: \$75 additional.
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Model 785-4TS is a new four-track stereo version of the above.

6			AUDIO RECORD
Model and Price		Frequency Response	Data
AMPLIFIE	RCORPORATION	OF AMERICA, 398 8	roadway, New York 13, N. Y.
Models 312-A 312-B 312-C 312-TD 312-SD 312-E* *Single	15/6 \$436 13/8 \$386 33/4 \$396 71/2 \$406	50 - 2,500 50 - 4,000 50 - 7,500 50 - 10,000 50 - 10,000 50 - 15,000	Professional, transistorized, portable, electric-motor, battery-operated recorder available in six single-speed models. Low noise input stage (0.25 micro-volts); no microphonics. Overall gain 110 db. Operates from dry rechargeable or replaceable batteries. Special meter incorporated for VU, Amplifier and Motor Batteries. Electrically rewinds 5" reel in less than three minutes. Modular plug-in construction. Models at speeds of 3%4, 7½ and 15 ips exceed NARTB 8roadcast standards, Dimensions: 5½" x 9" x 12". Weight: 8 lbs. Same units usually available in conventional briefcase: about \$89 additional.
Models 610-A 610-B 610-C 610-TD 610-SD 610-E "Magnemite" Portables 610-EM	1%6 \$275 11% \$225 33% \$255 71/2 \$275 71/2 \$295 15 \$335 1%6-71/2 \$355	300 - 2,500 cps 100 - 3,000 cps 50 - 5,000 cps 50 - 7,500 cps 50 - 7,500 cps 50 - 15,000 cps } same as above	Completely self-contained, battery-operated portables with spring motor drive. Models 610-SD and -E, one track. Four speed models 610-DM and -EM, one or two track. All others dual track. Winding interval, 3 to 15 min. Motor can be rewound white operating. Indicator signals 30 sec. before motor rewind. Playback through headphones or external amplifier. Optional erase. Dimensions: 11" x 8" x 5" for 610-A and B; 11" x 10" x 7" for others. Weight, 12 to 17 lbs. All standard "Magnemites" available in weathertight sealed aluminum cases with tongue and grooved edges and built-in neoprene gasket seals: \$30 extra. All models except 610-DM and -EM are available with VU meter: \$90 additional.
SIN 535-B 535-C 535-D 535-E "Magneloop" Continuous Loop Recorder	GLE CHANNEL  1½ \$345  3¾ 365  7½ 385  15 405	50 - 2,500 cps 50 - 7,500 cps 50 - 10,000 cps 50 - 15,000 cps	Designed to record and play back any messages, musical programs or sound effects up to 60 min. in length on cartridge-loaded endless loop of std. \(^1/4\)" tape. Automatic erase. Push-button start and stop, switch or relay remote control. Electronic-eye recording level indicator. Microphone and bridging inputs. Output impedance, 600 ohms. Output level, +6VU. Headphone monitoring. Panel mounting or rack cabinet. Size, 19" x 8\(^3/4\)" x 9\(^1/2\)". Weight: 24 lbs. Dual channel version of each model is \(^1/2\)150 additional.
ANDRE	WS ENTERPRISES,	, INC., 6 East Kinzie	Street, Chicago 11, Illinois
Rec	entory order 60.00	100-3000 cycles at 1%"/sec.	New transistorized recorder designed for inventory taking. Single speed: 1½ ips. Uses 8" reels. Frequency response deliberately diminished at upper and lower extremes to distinguish voice from background noise. Two switch level controls. Remote control. Error proof echo feature. Trouble alarm. Dimensions: 18½" x 11¾" x 8". Weight: 21 lbs.
AUDIO	MATION LABORA	TORIES, 7230 Clinton	n Rd., Upper Darby 23, Pa.
Progra De	lonitor m Delay vice 85.00	150-5,000 cps for telephone use Wider Range for Direct Mike Use	This endless loop device, using standard ½" tape, permits monitoring broadcast program several seconds before it goes on the air. Designed for 600-ohm balanced lines at plus 4 VU. For use with telephones, frequency response is intentionally limited to maximize intelligibility and minimize hum and noise.
Autosperser  Consecutive Conse	utor	40-15,000 cycles at 7½"/sec. 40-8,000 cycles at 3¾"/sec.	Autosperser has two Exactone players, (described below), control panel for either wired or broadcast service, Adcaster tape player that provides up to 30 minutes of recorded commercial on one track and automatically rewinds and cues to first commercial when played through. The twelve-station programming cycle repeats automatically. Automatic standby. Autosperser-24 has 24-station programming cycle. Consecutor System has two Exactone 8-hour machines and a control panel. For unattended operation. Operating cycle: Machine #1 plays track A, reverses, plays track 8, reverses, shuts off, starts machine #2. Machine #2 performs same cycle and restarts machine #1. Automatic standby. Provision for manual operation so that tapes may be changed without interrupting program.
Continu	ctone ous Tape syer \$1000	40-15,000 cycles at 7½"/sec. 40-8,000 cycles at 3¾"/sec.	Heavy-duty rack type tape player for up to 8 hours of unattended background music without repetition. Two speeds. Automatic reversal and shut-off, Automatic continuous re-cycling or shut-off controlled by switch on panel. Signal-to-noise, better than 50 db at 7½"/sec. Hysteresis synchronous capstan motor and two 4-pole torque motors. Max. reel size, 14". Price depends on type of amplifier.
BELL	& HOWELL COM	PANY, 7100 McCormi	ck Road, Chicago 45, III.
Monaura \$20 Model Four-tra Portable	el 785 I Portable 19.00 785-4TS ck Stereo Recorder 9.95	50-13,000 cycles (±4 db) at 7½"/sec.	Two-speed, dual track monaural portable. Five push-button controls. Two 5¼-inch speakers. Tape speeds: 7½ and 3¾ ips. Recording level guide. Play and Record pushbuttons interlocked to prevent accidental erasures. Fast rewind: 1200 feet in 80 seconds. Distortion less than 1%. Signal-to-noise ratio more than 40 db. Wow and flutter less than 0.35%. Input for microphone, radio, phonograph or TV. Output jack for external speaker. Dimensions: 10" x 15½" x 15¼". Weight: 33 lbs.

Model ar	nd Price	Frequency Response	Data
	Model 2 Monaural Tape Recorder \$249.50	60-7,500 cycles (±3 db) at 33/4"/sec. 60-4,000 cycles (±3 db) at 17/8"/sec.	Model 2 is a dual-speed, dual-track monaural re- corder. Signal-to-noise ratio: 52 db. Other specifica- tions similar to Model 3 on page 22. Built-in sole- noids and plug-in foot pedal for remote control operation are \$50 additional.
	TAPE-ATHON,	523 South Hindry Stree	et, Inglewood, Calif.
	Model 375 Portable Player Monaural \$344.50 Stereo \$464.50 Add \$45.00 for 10½" reel capacity Add \$10.00 for rack mounting Add \$20.00 for pre-amplifier Add \$50.00 for pre-amplifier	50-8,000 cycles at 7½"/sec. 50-12,000 cycles at 7½"/sec. (stereo)	New series of monaural and stereo tape players in models for $7''$ or $10^1\!/\!_2''$ reels at speeds of $7^1\!/\!_2$ , $3^3\!/\!_2$ or $1^1\!/\!_3$ ips. (Stereo version handles either $3^3\!/\!_4$ or $7^1\!/\!_2$ ips four-track stereo tapes.) Automatic reverse from end-of-tape foil. Automatic tape tension shut-off. Wow and flutter: less than $0.4^0\!/\!_4$ at $1^1\!/\!_3$ ips, less than $0.25^0\!/\!_4$ at $3^3\!/\!_4$ ips. Signal-to-noise ratio: 50 db at $3^3\!/\!_4$ ips. Approximate dimensions: $19^0\!/\!_4$ w., $11^1\!/\!_4''$ h., $10^0\!/\!_4$ d. Units with $10^1\!/\!_2''$ reel capacity are also available in console mounting for \$94.50 additional, $30$ -watt amplifier is \$26 additional.
TAPE F	RECORDERS ELECTRONICS	LTD., 784-788 High	Rd., Tottenhom, London N-17, England
	Model 333 Belle Monaural Portable Recorder \$85.00	90-8,500 cycles at 3 <i>¾</i> ″/sec.	Twin track automatic monaural recorder with push button control, made in England. Electronic eye level indicator. Wow and flutter: better than 0.1%. Signal-to-noise ratio: better than 45 db. Can be used as amplifier or pick-up, tuner, mike. Outputs: external speaker. Dimensions: 5" x 10" x 8". Weight: 11 lbs.
	TELECTRO INDUSTRIES	CORP., 35-16 37th S	t., Long Island City 1, N. Y.
	Telectro Model 938 Price on Request	30-10,000 cycles (±2 db) at 7½"/sec.	Professional-type recorder for portable, rack or console mounting. Plug-in head assembly—single or dual track. Two speeds: 7½ ips and 15 ips. Wow and flutter: less than 0.2% at 7½ ips, less than 0.15% at 15 ips. Distortion: less than 0.2% rms at maximum recording level. Signal-to-noise: over 55 db at both speeds. VU meter. Adjustable bias. Microphone, bridge and line inputs. Outputs: 600 ohms balanced; monitor jacks for power amplifier and headset. Playback timing accuracy: better than 0.2%.
	Telectro 14" Tape Transport Price on Request	30-15,000 cycles (±2 db) at 7½"/sec.	Professional tape transport for rack or portable mounting. Hysteresis synchronous motor drive, with torque motors for supply and take-up reels. Speeds: 7½" and 15"/sec. Starting time: 0.1 sec. Stopping time: 2" at 15"/sec. Timing accuracy: 0.2%. Fast forward and rewind: 1 min. for 14" reel. Wow and flutter: 0.15% at 15"/sec. Plug-in head assembly—3 heads single or dual track. Push-button relay operation, editing knobs, automatic shut-off. Solenoid brakes.
	TELECTROSONIC CORPO	RATION, 35-18 37th	St., Lang Island City 1, N. Y.
		E0 15 000	New three-speed recorder for two- and four-track



Model and	l Price	Frequency Response	Data
STEELMAN	PHONOGRAPH AND RA	ADIO CO., INC., P.O	. Box 82, East Station, Yankers, N. Y.
	Transitape Monaural Portable \$199.50	for voice recording	New dual-speed, dual-track, all-transistor portable recorder/player. Speeds: 3¾ and 1½ ips. Electric motor drive with battery power. 64 minutes playing time. Battery level indicator. 4″ speaker. Glow tube recording level indicator. Fast forward. Record safety interlock. Overall gain: 55 db. Wow: 0.5% at 3¾ ips. Inputs: one miniature jack, 100,000 ohms. Outputs: mike, earphone or external speaker. Dimensions: 9¾″ h., 6½″ w., 3″ d. Weight: 6½ lbs.
	SUPERSCOPE, INC.	, 8150 Vineland Aven	ue, Sun Valley, Calif.
	SONY Model 101 Monophonic Portable \$99.50	50-12,000 cycles (±2 db) at 7½"/sec. 50-8,000 cycles (±2 db) at 3¾"/sec.	New transistorized dual-track monophonic recorder. Two speeds: $7\frac{1}{2}$ ips and $3\frac{3}{4}$ ips. Wow and flutter: less than $0.25\%$ at $7\frac{1}{2}$ ips. Signal-to-noise ratio: better than 55 db. Fast forward and rewind. Recording level indicator. Pilot light. Single function switch: forward/stop/rewind. Dimensions: $13''$ x $10''$ d. x $6\frac{1}{2}''$ h. Weight: 19 lbs.
Transpo (with Four-track stereo	SONY Model 262-SL Mono/Stereo Recorder \$199.50 ort only \$89.50 erase/record/playback)	50-15,000 cycles (±2 db) at 7½"/sec. 50-12,000 cycles (±2 db) at 3¾"/sec.	New four-track monophonic recorder that also plays back four- and two-track stereo. Each track individually selectable. Two speeds: $7\frac{1}{2}$ and $3\frac{3}{4}$ ips. Pilot light. Neon record level indicator. Digital footage indicator. Flutter and wow: $0.15\%$ at $7\frac{1}{2}$ ips. Signal-to-noise ratio: 50 db. Features sound-with-sound recording for language and music training. Dimensions: $14^n \times 11^n \times 7^n$ . Weight: 20 lbs.
	Stereocorder 300 Stereo Portable \$399.50	50-15,000 cycles (±2 db) at 7½"/sec. 50-10,000 cycles (±2 db) at 3¾"/sec.	New dual-speed stereo recorder. Four- and two-track stereo and monaural record/playback. VU meters. Sound-on-sound recording. Push button controls. Fast forward and rewind. Safety interlock. Digital footage counter. Wow and flutter: less than 0.15% at 7½ ips. and 0.25% at 3¾ ips. Signal-to-noise ratio: 50 db. Harmonic distortion: less than 2%. Inputs: for mike, tuners, record and tape players. Outputs: for external preamps or power amps; monitor. Dimensions: 16½" w. x 12¾" d. x 7½" h. Weight: 35 lbs.
	TANDBERG OF AN	MERICA INC., 8 Third	Ave., Pelham, N. Y.
	Series 6 Stereo Tape Deck \$498.00	30-16,000 cycles (±2 db) at 7½"/sec. 40-11,000 cycles (±2 db) at 3¾"/sec. 50-5,500 cycles (±2 db) at 1½"/sec.	New stereo tape deck that records and plays back four-track stereo and monaural. Three speeds: $7\frac{1}{2}$ , $3\frac{3}{4}$ and $1\frac{7}{6}$ ips. Single lever control. Digital footage counter. Hysteresis synchronous drive motor. Dual electronic recording level eyes. Two record and two playback preamps. Pause control. Wow and flutter: $0.1\%$ rms at $7\frac{1}{2}$ ips. $0.2\%$ at $3\frac{3}{4}$ ips. $0.25\%$ at $1\frac{7}{6}$ ips. Cross talk rejection: 60 db. Inputs: two mike, two high level, two low level. Outputs: two cathode follower. Dimensions: $16^n$ I., $12^n$ w., $6^n$ h. Weight: 25 lbs. Carrying case: \$24.50 extra.
	Model 5 Stereo Tape Deck \$419.50	30-16,000 cycles (±2 db) at 7½"/sec.	Three-speed recorder for four-track stereo and monaural record/playback, two-track stereo and monaural playback. Speeds: $7\frac{1}{2}$ , $3\frac{3}{4}$ and $1\frac{7}{6}$ ips. Lever controls. Clock counter, automatic shut-off, dual recording level indicators. Selective erase head erases any of the four tracks, individually or in pairs. Signal-tonoise ratio: 55 db. Wow and flutter: $0.1\%$ at $7\frac{1}{2}$ ips, $0.2\%$ at $3\frac{3}{4}$ ips, $0.25\%$ at $1\frac{7}{6}$ ips. Inputs: two each for mike; radio/phono/stereo disc. Outputs: two for external speakers or amps. Dimensions: $15^{\prime\prime}$ I., $11\frac{7}{6}^{\prime\prime}$ w., $6\frac{5}{6}^{\prime\prime}$ h. Weight: 27 lbs. Luggage case: \$23.00 extra.
	Model 5-2 Stereo Tape Recorder \$514.50	40-10,000 cycles (±2 db) at 33/4"/sec.	Model 5-2 is same as above with addition of two stereo recording playback amplifiers.
	Model 5-2-266 Stereo Tape System \$638.50	70-5,000 cycles (±2 db) at 17/a"/sec.	Model 5-2-266 is stereo tape system consisting of Model 5-2 and two matched bookshelf speakers.
SON	Model 4 Monaural/Stereo Tape Recorder \$349.50		Model 4 records and plays back four- and two-track monaural, plays back four- and two-track stereo. Other specifications similar to Model 5. Built-in solenoids and plug-in foot pedal for remote control operation are \$50 additional.
	Model 3 Monaural Tape Recorder \$299.50	40-16,000 cycles (±2 db) at 7½"/sec. 50-9,000 cycles (±2 db) at 3¾"/sec. 70-4,500 cycles (±2 db) at 1½"/sec.	Model 3 is a dual-track monaural version of Model 5. Does not have selective erase head. Built-in solenoids and plug-in foot pedal for remote control operation are \$50 additional.

September, 1960 Frequency Response

#### BELL SOUND DIVISION, THOMPSON RAMO WOOLDRIDGE, Inc., 555 Marion Road, Columbus 7, Ohio

30-15.000

cycles at 33/4"/sec.

Maestro Group for Stereo Tape Cartridge 201010

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Model 404 Player \$249.95 Model 405 Recorder \$319.95

Model 450 Speaker System \$49.95

The Playmate Model 406 Stereo Cartridge Portable Recorder \$319.95 Model 460

Speaker System \$39.95

New series of four-track stereo tape cartridge players and recorders. Single speed: 3¾ ips. Flutter: less than 0.25%. Power output: 7 watts each channel. Dual outputs: 8 ohms for speakers. Model 404 has playback heads with playback preamps and amplifiers, selector for tape, phono, auxiliary. Model 405 has erase/record/playback heads with record/playback preamps and amplifiers; two volume level indicators; three dual inputs: phone, mike, auxiliary. Controls: knobs for selector, treble, bass, two volume. Model 406 is portable version of Model 405. Approximate dimensions for all three models: 9½" h., 16½" w., 15" d. Approximate weight for all three models: 43 lbs. models: 43 lbs.

Data

Model 450 speaker system matches Models 404 and 405. Model 460 speaker system matches Model 406

Overture Series for Stereo Tape Cartridge

**RP 120B** 

Model and Price



Model 401 Model 402 Player \$129.95 Model 403

Recorder \$219.95

same as above

New series of four-track stereo tape cartridge players and recorder. Single speed: 3¾ ips. Flutter: less than 0.25%. Units have knob controls, where applicable. Model 401 has playback heads only. Model 402 has playback heads with dual playback preamps. Model 403 has erase/record/playback heads with dual record-playback preamps. Approximate dimensions of all models: 7″ h., 12″ w., 11½″ d. Approximate weight of all models: 25 lbs.

Tape Transports T210 \$114.95 T211 \$124.95 T212 \$134.95 T213 \$154.95 T218 \$319.95 T221 \$144.95 T223 \$169.95 T228 \$329.95 T238 \$339.95

Record/Playback Pre-Amplifier \$59.95

25-12,000 cycles (±2 db)

overall-recordplayback extends to 15,000 cycles playback only

A basic tape transport providing almost unlimited flexibility. Three motors. Two speeds: 7½ and 3¾ ips. Signal-to-noise ratio: better than 50 db. Flutter less than 0.25%. Distortion less than 1%. Has index counter, power off-on switch, piano-key controls, micro-switch automatic stop. Available in following combinations. Table more released (alambiants). micro-switch automatic stop. Available in following combinations: T-210: monaural record/playback; T-211: monaural and half-track stereo playback; T-212: monaural record/playback and half-track stereo playback; T-213: monaural record/playback; T-212: monaural record/playback; T-221: monaural quarter-track and half-track stereo playback; T-223: monaural, half-track stereo record/playback and quarter-track stereo playback (above models require matching preamplifiers); T-228 incorporates T-223 with two RP 120B preamps in a carrying case; T-238 has monaural, quarter-track stereo playback playback and quarter-track precord-playback and quarter-track precord-playback playback has monaural, quarter-track stereo record/playback and half-track stereo playback with two RP 220 preamps in carrying case.



BOGEN-PRESTO, Division of THE SIEGLER CORP., P. O. Box 500, Paramus, New Jersey

Model PB-17C Tape Reproducing Mechanism \$785.50

Model A-909 Pre-amplifi \$132.00

Above in console \$1,118.75

50-8,000 cycles at 3¾"/sec.

Dual-track reproducing mechanism with 33/4 ips. tape Dual-track reproducing mechanism with 3½ ips. tape speed and automatic reversal, giving up to 8 hours of continuous music on a 4800-ft. reel. At end of this time, mechanism may be made to recycle or stop. Heavy duty capstan drive unit with individual torque motors for each reel. Fast forward and fast rewind. Signal-to-noise, 55 db. Dynamic range, 45 db. Flutter 0.25% at 3¾" speed. Other speeds available. Silence sensing switch and timing accessories available. PB176 may be incorporated into completely automatic or semi-automatic programming systems for background music or main channel broadcasting.



800 Series Tape Recorder with Amplifier Monaural

\$1695.00 \$1810.00 \$1945.00 Rack Mtg. Portable Console Stereo

\$2185.00 \$2350.00 Rack Mtg. Portable Console \$2485.00

Transport only \$1055.00 (for  $\frac{1}{4}$ " tape) \$1755.00 (for  $\frac{1}{2}$ " tape) Model 825 Mtg. \$2885.00 le \$3050.00 le \$3185.00 Rack Mtg.

Portable

Console Model 850 Three Channel Rack Mtg. \$35 \$3500.00 \$3715.00 \$3800.00 Portable Console

Four Channel Rack Mtg. \$42 \$4240.00 \$4505.00 Portable \$4600.00

30-20,000 cycles (±2 db) at 15"/sec. 40-12,000 cycles (±2 db)

at 71/2"/sec. 50-15,000 cycles (±2 db) at 15"/sec. 50-10,000

cycles (±2 db) at 7½"/sec.

New series of professional-type tape recorders featuring sweep loading, automatic tape lift, new type editing function for run-off of unwanted tape, new cue button for hand cueing without motor or brakes, and new solenoid brakes and pressure pulley. Directand new solenoid brakes and pressure pulley. Direct-drive hysteresis synchronous capstan motor and two torque motors. Three speed ranges of rewind and fast forward, Input can be switched to balanced or unbalanced 600-ohm line, bridging input or micro-phone input. Illuminated VU meter. Two separate output circuits. Wow and flutter are no more than 0.07% at 15 ips or 0.15% at 7½ ips. Signal-to-noise ratio is 60 db at 3.0% distortion. Distortion is 1.0% (harmonic) at +10 dbm output from 25 to 20,000 cps. Monaural version with either full- or half-track heads.

Model 850 is new stereo recorder with exclusive design permitting instant change from half-inch to quarter-inch tape or vice versa. Has three amplifiers. Signal-to-noise ratio: 55 db at 3.0% distortion. Otherwise specifications are the same as above.

Model 825 is Model 850 mechanism with heads for  $^{1}\!\!\!/\!\!\!/\!\!\!/$  tape, and two amplifiers. Can be converted to Model 850 by adding an amplifier and substituting heads.

Model and Price	Frequency Response	Data
BROADCAST EQUIPMENT	SPECIALTIES CORP.,	P. O. Box 149, Beacon, N. Y.
Pocketape Monaural Portable \$349.50	100-9,000 cycles at 7½"/sec. 100-6,000 cycles at 3¾"/sec. 100-4,000 cycles at 1¼"/sec.	Pocket-size transistor recorder. "Broadcaster" model records 90-mil track at single speeds of either 7½ or 3¾ ips, giving up to 15 continuous minutes at 7½ ips. "Investigator" model records at single speeds of either 3¾ or 1½ ips on dual tracks. Speeds of both models may be changed by a technician. All models erase, record, and play back. Interlocks. Microphone doubles as listening device. Signal-tonoise ratio: 55 db. 10-hour motor batteries. Size: 1½" x 4½" x 6¾", Weight: 2¼ lbs. "Tapelog" is the group proprietary name for various communications and instrumentation memory devices employing the basic Pocketape mechanism. Tapelog power source may be internal or external, AC or DC of any common voltage. Prices and performance data from the manufacturer on request.
BUTOBA, distributed by TURN	ING CORP. OF AMERICA,	34 Park Row, New York 38, N. Y.
Portable Recorder Model TS61 \$245.00	50-9,000 cycles (±3 db) at 3¾"/sec.	Portable, transistorized, dual-track, four-flashlight battery-operated recorder with push-button controls. Driven by special spring-wound motor with elapsed-time indicator. Tape speeds: 3¾ and 1½. Running time is 20 and 40 minutes respectively. Multi-purpose head: record and playback-erase. Volume level indicator is magic eye tube. Playback through built-in oval speaker or external amplifier. Telephone conversation recorder adapter optional.
Model TS71 \$295.00	60-13,000 cycles at 7½"/sec.	Same as above except for single speed: 7½ ips. Has noise level of ±45 db. Record and playback time: 15 minutes. Single track.
Model MT4 Portable Recorder \$249.50	50-13,000 cycles at 33/4"/sec.	New battery-operated transistorized recorder that operates on eight flashlight batteries or on electrical current. Two speeds: 3¾ ips and 1½ ips. Seven transistors, push-button operation, fast rewind and fast forward, tone and volume controls, volume indicator. Dimensions: 6" h., 12" w., 9" d. Weight: 12 lbs.
CALIFONE, manufactured by RHEE	M CALIFONE CORP., 102	O North La Brea Ave., Hollywood 38, Calif.
Model LP 901 Dual Channel Student Recorder \$328.00  Model LP 902 Single Channel Student Recorder \$278.00  Model LP 910 Dual Channel Console Recorder \$333.50	30-15,000 cycles at 7½"/sec.	New series of recorders and decks for language laboratories. Two speeds: 7½ and 3¾ ips. Synchronous motor. Single control for functions. Rewind and fast forward interlocked with function to prevent spillage. Student records himself and either console master or student's own master. Lower track erase only. Neon pilot light. Resettable tape index counter. Signal-to-noise ratio: 50 db. Wow and flutter: 0.2% rms. Harmonic distortion: 1.0%. Dimensions: 14½" w., 14½" h. Weight: 27 lbs.  Model 902 is as above except for single channel amplifier for simultaneous record from student mike and console master. Tape reels and heads fully enclosed.  Model 910 may be used as a playback deck for
Model LP 921 Master Playback \$222.25		master recordings as well as making instructional tapes.  Model 921 is for playback only of master tapes.
Model 75-T Master Recorder \$349.50 SOLITAIRE Model 72-T \$349.50	40-15,000 cycles at 7½"/sec. 40-9,000 cycles at 3¾"/sec.	New educational recorder for master recording and group listening. Dual record/play heads record on upper (master) track, or simultaneously on upper/lower with Califone lower track amplifier. One/two-track erase. Two speeds: 7½ ips. and 3¾ ips. Wow and flutter: under .20% rms. Record safety button with upper-track safety interlock. Synchronous motor, VU meter. Single function control. Rewind/fast-forward. Safety interlock. Digital indicator. Dimensions: 15½" w.x 12½" h.x 18" d. Weight: 35 lbs. Price does not include headphones.
COLE STEEL EQUIPMENT	CO., INC., 415 Madi	son Ave., New York 17, N. Y.
Dictator \$220.00 Transcriber \$185.00	for voice recording	New dictating/transcribing machine with operating controls on mike. Speed: $1\%$ ips. Push button controls for telephone recording and upper and lower track. Fast-forward/fast-rewind control. Electronic erase and correction. Separate record/loudspeaker controls. Recording time: 2 hours/reel. Dimensions: $11''$ w. x $4\frac{1}{2}''$ h. x $9\frac{1}{4}''$ d. Weight $11\frac{1}{4}$ lbs.
COLUMBIA PHONOGE	RAPHS, 405 Park Aven	nue, New York 22, N. Y.
Model C-690 Monaural Portable \$89.95	100-10,000 cycles at 7½"/sec.	New dual-speed monaural portable recorder, Speeds: $7\frac{1}{2}$ and $3\frac{3}{4}$ ips. Takes 5" reels. Knob and lever controls. Recording level indicator. Pilot light. Speaker: 6" oval. Inputs: mike, radio. Output: earphone monitor. Dimensions: $6\frac{3}{4}$ " x $11$ " x $8\frac{3}{4}$ ". Weight: 12 lbs.
"Porta-corder" Monaural Portable \$129.95	for voice recording	New transistorized battery-powered monaural portable recorder. Speed: 3¾ ips. Six transistors. Takes 3" reels. Speaker: 3". Knob controls. Recording level indicator. Powered by four 1½ v. "D" batteries and two 1½ v. "C" batteries. Input: mike. Dimensions: 12" w., 4½" h., 7½" d. Weight: 9 lbs.

Model and Price		Frequency Response	Data		
	The Pro Stereo Recorder Model 892 \$229.95		New recorder that records and plays back four- and two-track stereo and monaural tapes. Two speeds: 7½ and 3¾ ips. Record level indicator. Push-button controls. Pointer-type tape indicator. Safety record interlock. Wow and flutter: 0.35% or less at 7½ ips. Signal-to-noise ratio: 40 db. Harmonic distortion: 7%. Bias frequency: 80,000 cycle. Output: one for speaker or earphone. Input: one for mike. Input/outputs: two for radio/phono/TV. Dimensions: 14½" x 15½" x 10". Weight: 37 lbs. Accessories available.		
far.	REED RESEARCH, INC	, 104B Potomac St.,	N.W., Washington 7, D. C.		
0.0	Transcriber Variable Speed Recorder Model K-3 \$1,100.00	depends on tape speed	Transcribing recorder with tape speed continuously variable between two-tenths and thirty ips. Can play back any ½" magnetic tape. Special switch doubles or halves the selected speed. Automatic back-spacing. Single channel, In-line or staggered stereo tapes can be played. Foot pedal control for stopping, starting and rewinding. Signal-to-noise ratio: better than 40 db. Wow and flutter: less than 0.5%. Weight: 46 lbs. Dimensions: 14" x 19" x 5½".		



Model T-2200 Four-track Stereo Portable \$239.50 Model T-2000 Monaural Portable

\$199.50

40-18,000 cycles (±3 db) at 71/2"/sec. 40-13,000 cycles (±3 db)

REVERE CAMERA COMPANY, 320 East 21st St., Chicago 16, III.

at 33/4"/sec.

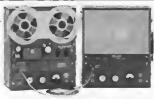
New two-speed recorder that records and plays back two- and four-track stereo and four-track monaural. Speeds: 7½ and 3¾ ips. Keyboard control. Automatic safety lock and warning light to prevent accidental erase. Two-level record indicators. Index counter. Appliance power outlet. Wow and flutter less than 0.3%. Signal-to-noise ratio greater than 48 db. Dimensions: 7½ " x 14" x 14½". Weight: 25 lbs. Model T-2000 is a monaural version of Model T-2200. Its frequency response is 3.000 cycles lower at the upper limit at 7½ lps, 5,000 cycles lower at 3¾ lps.

Model T-11 Mono/Stereo Recorder \$284,50

40-16,000 cycles (±3 db) at 71/2"/sec.

40-15.000 cycles (±2 db) at 71/2"/sec.

Single-speed recorder for monaural record/playback, stereo playback. Built-in lower channel preamp. Signal-to-noise, over 50 db, wow and flutter less than 0.2%. Cathode follower output. Monitor amplifier with 2½ watt output. Adjustable 70 Kc bias-erase oscillator with indicator. Less than ½-second start and stop. Automatic head demagnetizing. Digital tape counter. Electrical remote with automatic drive roller release. Dimensions: 19" w., 14" h., 9" d.



ROBERTS ELECTRONICS, INC., 1045 North Sycamore Avenue, Los Angeles, Calif.

Model 90 Stereo Recorder Model A-901 Stereo Amplifier Model 90-C-4 Stereo Recorder Model 90-D Stereo Recorder

40-7,500 \$349.50 cycles (±3 db) \$149.50 at 33/4"/sec. \$359.50 \$349.50

Dual speed two-track stereo portable recorder with hysteresis synchronous one-motor drive. Adjustable record/play head. Locking device prevents accidental erase. Pause lever. Digital index counter. Calibrated VU meter. Signal-to-noise ratio: 50 db. Wow and flutter: 0.18%. Inputs: low level, high impedance mike; high level line. Input/output jacks for both channels. Output: auxiliary speaker or line. Dimensions: 153/" h., 14½" w., 9¼" d. Weight: 28 lbs. Model 90-C4 is four-track version of above that records and plays four-track stereo and monaural. records and plays four-track stereo and monaural, plays two-track stereo.

Dual speed two-track stereo portable recorder with

Model 90-D is the same as Model 90-C with the addition of "sound-on-sound" recording.



Model 990 Stereo Recorder \$399.50

40-15,000 cycles (±3 db) at 71/2"/sec. 40-12,000 cycles (±3 db) at 33/4"/sec.

Model 990 is essentially the same as Model 90-C-4 except that it includes a second record/play amplifier and set of outputs; wow and flutter is 0.10%; dimensions are 20" x 14" x 9"; weight is  $42\frac{1}{2}$  lbs.





Minitape Monaural Recorder \$494.00

flat to 10.000 cycles at 71/2"/sec. flat to 5,000 cycles at 33/4"/sec.

flat to 4,000 cycles at 1 1/8"/sec.

New version of the MINITAPE available at single tape speeds of 1%, 3%, or 7% jps. Operates completely enclosed. External pushbutton for start or stop. Takes 5" reels, records up to two hours continuously. Rechargeable nickel cadmium battery furnishes up to 4% hours on charge. Automatic volume control over a 40 db range. Available stereo and for lip sychronize motion pictures. Separate record, playback heads and amplifiers. Dimensions:  $9'' \times 12'' \times 5''$ . Weight: 13 lbs. Accessories available.



Model R5 Magnetic Tape Recorder/ Reproducer \$1,600.00

50-15,000 cycles (±1 db) at 15"/sec.

Professional-type, single-track recorder/reproducer. Speeds: 15 and 7½ ips. Direct drive hysteresis motor. Torque motors with mechanical brakes. Bridging or rorque motors with mechanical prakes. Bridging or single low impedance microphone input and 6000 zero level output. Continuously variable high speed forward and rewind for editing and cueing. Plano key push-button relay. Local or remote operation. Less than 1½ % total harmonic distortion at 55 db signal-to-noise. Dimensions: 19" x 14" 10½" d. Weight: 100 lbs.

#### PREMIER ELECTRONIC LABORATORIES, 382 Lafayette St., New York 3, N. Y.



"TAPESONIC" Model 70-D.S.F. Ouarter-track stereo recorder \$535.00

"TAPESONIC" Model 70-D.H.T. Half-track monaural record and playback \$398.75

"TAPESONIC" Model 70-D.F.T. monaural record and playback \$458.50

30-24.000 cycles (±2 db) at 15"/sec.

30-17,000 cycles (±2 db) at 71/2"/sec.

40-10,000 cycles (±3 db) at 33/4"/sec.

New three-speed, quarter-track record and playback machine. Will record and playback four separate tracks, sound on sound. Plays back two-track stereo, half and full-track monaural. Three separate quarterhalf and full-track monaural. Three separate quarter-track heads, instantaneous monitoring from tape while recording. A.B. switch. Direct drive Hysteresis Synchronous motor and two condenser start torque motors. Two VU meters. Push-button operation, automatic stop. revolution counter, 10½" reel capacity. Wow and flutter: 0.1%, signal-to-noise ratio: 56 db. Mixing channels for mike, radio or phone inputs. Button and relay for preventing accidental erasure. Standard NAB recording and playback curves. Timing accuracy 0.2%. Electro dynamic brake action and tape tension. Fast forward and rewind: less than one minute for 10½" reel. D.C. on preamp. heaters, cathode followers on both outputs. Vertical or horizontal operation. Standard 19" rack mount panels. All models can also be supplied with two separate All models can also be supplied with two separate portable cases for transport and amplifiers. Prices at

left do not include any cases.

#### PYRAMID ENTERPRISES, 3815 Trimble Rd., Nashville 12, Tennessee



Reflectograph Variable speed table model recorder \$495.00

40-14,000 cycles (±4 db) at 71/2"/sec.

New recorder with a continuously variable speed control for any tape speed from 3.75 inches to 8.00 inches per second while stationary or in operation. This unit is essentially for the professional recordist and those specializing in the scientific investigation of sound phenomena. Three motors, three heads, interlocked micro-switched controls. Recording and playback amplifiers mounted on separate chassis independent of deck. Half track recording only. Wow and flutter better than 0.2% at 7½ ips. Dimensions: 201/2" I., 141/2" w., 12" h. Weight: 46 lbs.

#### RADIO CORPORATION OF AMERICA, RCA Victor Radio "Victrola" Products, Cherry Hill, Camden 8, N. J.



Model SCP2 Portable Cartridge Player-Recorder \$299.95 Model SH513 Speaker

\$9.95

50 to 15,000 cycles

Portable tape cartridge player-recorder which plays or records either monaurally or stereophonically using new tape cartridge. Tape is four track, quarter-inch tape which runs at  $3\frac{3}{4}$  ips, playing up to two hours of monaural music. Unit contains a  $6\frac{1}{2}$  and two  $3\frac{1}{2}$ inch speakers. Contains two microphones for home stereophonic recording and patch cord to record electrically from stereo phono or AM-FM radio. Push button operation, no-erase guard, automatic shut-off or standby, window counter, pilot light, input jacks.

#### RANGERTONE INC., 73 Winthrop St., Newark 4, New Jersey



PART NOTE OF

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"Rangerette" **Portable** Model A-2 \$1500.00 complete

Console

Model

R-5C

with synchronizer

\$4925.00

45-15,000 cycles (±2 db) at 15"/sec.

> 50-8,000 cycles (±2 db) at 71/2"/sec.

FOR SYNCHRONOUS SOUND RECORDING Professional-type, single or multi track, dual-speed recorders, with choice of 3½", 7½", 15" or 30" per second tape speeds. Up to 2 hours recording at 7½" 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—35 lbs.

Kits added to other professional recorders for Synchronous Sound Recording for \$320.00.

#### RECORDIO-DAP, INC., 721 North Michigon Aveune, Chicago 11, Illinois



Model SA 801 Matching Amplifier/Speaker, \$49.95

Amplifier/Speaker, \$49.95

Matching

The Versatile Model 802 Stereo Recorder \$179.95

The Summit Model 602

80-10,000 cycles at 71/2"/sec.

New dual-speed, stereo recorder that records and plays back two- or four-track stereo or monaural tapes. Two speeds:  $7\frac{1}{2}$  ips and  $3\frac{3}{4}$  ips. Wow and flutter: 0.35% or less. Signal-to-noise ratio: 35 db. Harmonic distortion: 5%. Bias frequency: 80,000 cycle. Record level indicator. Pointer-type tape indicator. Safety record interlock. Input: one for stereo phono playback. Output: one for speaker or earphone. Input/output: for radio/phono/TV. Dimensions: 13 \% " x 13 \%" x 9 \%". Weight: 27 lbs. Accessories available. Model 602 is half-track monaural version of above.

The Combo tereo Recorder \$139.95 The American Monaural Recorder Model 804

\$89.95

85-8,500 cycles at 71/2"/sec.

New dual-speed, stereo recorder that records and plays back two- or four-track stereo and monaural tapes. Two speeds:  $7\frac{1}{2}$  ips and  $3\frac{3}{4}$  ips. Wow and flutter: 0.35% or less at  $7\frac{1}{2}$  ips. Monitor switch. Single knob for tape functions. Input: one for stereo phono playback. Input/output: for radio/phono/TV. Dimensions:  $13'' \times 13\frac{1}{2}'' \times 7\frac{1}{4}''$ . Weight: 19 lbs. Accessories available Accessories available Model 804 is half-track monaural version of above

September, 1960 Frequency Response

CONCORD ELECTRONICS CORPORATION, 1549 North Vine St., Los Angeles 28, Calif. Portable, two speed, dual-channel recorder with single knob control mechanism. Two speeds:  $7\frac{1}{2}$  and  $3\frac{3}{4}$  ips. Magic-eye record level indicator, built-in tone 70-10,000 MODEL 105 cycles at 71/2"/sec. Monaural Portable Recorder control, dual speakers, optically polished heads. Price includes clip-on mike, remote control, monitor earphones, patch cord. Dimensions:  $6\frac{1}{4}$ " x  $13\frac{3}{6}$ " x  $11\frac{1}{4}$ ". Weight: 18 lbs. 70-7,500 \$129.95 cycles at 33/4"/sec. New dual-speed, portable tape recorder. Speeds: 7½ and 3¾ ips. Speed change by single knob control. Tone control, magic eye record level indicator, optically polished laminated heads, high frequency bias and erase. Price includes: clip-on mike, remote con-70-12,000 Model 107 cycles at 71/2"/sec. Monaural Portable Recorder 70-8,500 \$139.95 cycles at 3 3/4"/sec. trol, monitor earphone, patch cord. Dimensions: 71/4' x 111/6" x 13 %". Weight: 20 lbs.

#### "CROWN" INTERNATIONAL, South 17th St. & Mishawaka Rd., Elkhort, Ind.



Gold CROWN Model 702-"PRINCE" Mono Recorder \$460.00

Model and Price

Gold CROWN Model 712-"STEREO X" Stereo/Mono Recorder \$710.00

30-30.000 cycles (±2 db) at 15"/sec.

20-20,000

cycles (±2 db) at 71/2"/sec. 30-11,000

cycles (±3 db) at 33/4"/sec.

Records and plays one-half track monophonic. Three speeds: 15,  $7\frac{1}{2}$  and  $3\frac{3}{4}$  ips.  $(1\frac{7}{6}$  ips available) Patented differential magnetic brakes, magnetic pay-Patented differential magnetic brakes, magnetic payoff, and two-position magnetic torque take-up. Up to 10½" reels. Fast-forward and rewind: 1200' in 38 seconds. Forced air cooling and adjustable microsync timing. Wow and flutter: 0.06% at 15 ips, 0.09% at 7½ ips, 0.18% at 3¾ ips. Timing accuracy: 99.5% for four pole motor, 99.8% for hysteresis synchronous motor. Inputs: mike or phone and mike and playback. Recording bias check. Three speed record/play equalization. VU meter (3"). Signal-to-noise ratio: 57 db at 15 ips, 54 db at 7½ ips, and 51 db at 3¾ ips. Automatic stop at reel end. Dimensions: 19" w. x 14" h. x 7½" d. Weight 42 ibs.

Model 712 is same as Model 702 except for second record/play amplifier for two-track stereo record/playback, monaural record/playback. Dimensions: 19" w. x 17½" h. x 7½" deep. Weight: 49 lbs.



Gold CROWN Model 714C-"5TEREO X" Stereo/Mono Recorder \$730.00

Gold CROWN Model 714C/A3030-"ROYAL" Quarter-track stereo recorder

\$920.00

50-28.000 cycles (±2 db) at 15"/sec. 30-17,000

cycles (±2 db) at 71/2"/sec. 30-9.000 cycles (±3 db)

at 3¾"/sec.

Records and piays quarter-track stereo, records and plays ¼-track monaural, plays 2-track stereo. Three speeds: 15 ips, 7½ ips and 3¾ ips. (1½ ips available) Three motor transport, patented differential magnetic braking, forced air cooling, straight line threading, automatic stop, handles up to 10½" reels, fast-forward and rewind. (1200' in 38 sec.) Wow and flutter: 0.06% at 15 ips, 0.09% at 7½ ips, and 0.18% at 3¾ ips. Timing accuracy: 99.5%. Signal-to-noise ratio: 57 db at 15 ips, 54 db at 7½ ips, and 51 db at 3½ ips. DC filaments. Four high "2" microphone inputs, separate bass and treble boost controls. Dimensions: 19" w.x 17½" h.x 7½" d. Weight: 49 lbs. Model 714C/A3030 is same as 714C. with A3030 am-Model 714C/A3030 is same as 714C, with A3030 am-Model 714C/A3030 is same as 714C, with A3030 amplifier for record and play of quarter-track stereo to speaker outputs. A3030 amplifier is two 30 watt power amplifiers on the same chassis; fixed bias; 4 volt input for 30 watt output. Distortion: less than 0.2% harmonic and 0.3% IM. at 30 watt output. Maximum hum and noise: 80 db below 30 watt output. Output impedance: 4, 8, 16 ohms. Dimensions: 19" w. x 83/4" h. x 71/2" d. Weight: 28 lbs.



"CROWN-O-MATIC" -Model A51 Automatic tape player ½-track \$695.00 "STEREO-O-IATIC" — Model A54 Automatic tape player 1/4-track \$795.00

50-15 000 cycles at 7½"/sec. 50-7.500 cycles at

33/4"/sec.

Player only. With hysteresis synchronous drive motor, and ball bearing reel motors. Accommodates up to 14" reels. Automatic self-reversing system, fast-forward and rewind. Wow is 0.1% at 7½ ips, and 0.2% at 3¾ ips. Signal-to-noise ratio: 50 db at 7½ ips, timing within 0.3%. Remote control is available. Dimensions: 19" w. 14" h. x 7" d. Weight: 51 lbs.

A separate panel unit, which is a mechanical brain that switches in the 2nd or 3rd player according to planned programming functions desired. Dimensions: 19'' w. x  $8\frac{3}{4}''$  h. x  $5\frac{3}{4}$  d.

Records and plays full track. Direct off the tape third

head monitor. A. B., and Echo switch. (no patching necessary) Sound on Sound with stereo models. CROWN "X" Control. (all electric) Full remote opera-

TM3 "Transfer-Matic" \$195.00



CROWN Model 801 "BROADCASTER" Full-track Recorder \$885.00

(other models available)

30-30,000 cycles (±2 db) at 15"/sec.

cycles (±2 db) at 71/2"/sec. 30-15,000

tion available. Photo cell automatic stop in all functions. Three speeds: 15 ips,  $7\frac{1}{2}$  ips, and  $3\frac{3}{4}$  ips. ( $1\frac{7}{8}$  ips available) Synchronous capstan motor, (1½ ips available) Synchronous capstan motor, differential magnetic braking, forced air cooling, straight line threading, handles up to 10½" reels, fast forward and rewind. (1200" in 38 sec.) Maximum wow and flutter: 0.05% at 15 ips, 0.09% at 7½ ips, and 0.18% at 3¾ ips. Timing accuracy: 99.8%. Signal-to-noise ratio: 57 db at 15 ips, 54 db at 7½ ips, and 51 db at 3¾ ips. Two input channels, either 2 low impedance inputs, 2 high impedance inputs, or 2 phono inputs. 500 ohm balanced line outout and cathode follower output. Bias read and adjust on front panel, standard rack mount. Dimensions: 19" h. 20-22,000 cycles (±3 db) at 33/4"/sec. front panel, standard rack mount. Dimensions: 19" h. x 14" w. x  $7\frac{1}{2}$  d. Weight: 48 lbs.

Model and Price

Data

Model and Price	Frequency Response	Deta
De JUR AMSCO CORP.,	45-01 Northern Blvd., L	ong Island City 1, New York
Stenorette-T Dictating and Transcribing Machine \$199.50	150-5,000 cycles	A dictating-transcribing machine that uses "Mylar" magnetic tape. Push-button controls. Duplicate set of controls on microphone/speaker for start, stop, automatic review, electronic erase and correction. Functions perfectly in a moving car (with transformer). Has built-in conference setting for recording groups. Recording time: up to 45 minutes per reel. Transcription accessories: foot pedal control or typewriter control — features remote control backspacer for quick review. Dimensions: 113/4" x 71/6" x 51/2". Weight: 14 lbs.
Stenorette-Companion Portable Dictating Recorder \$199.50	as above	Portable dictating recorder that is compatible with Stenorette-T described above. Pushbutton operated, with duplicate set of controls on mike. Uses batteries that can be recharged. Operates three hours on each charge. Battery condition-indicator shows when recharge is required. Recording time: up to 45 minutes for standard tape. Dimensions: 10½" h. 6" w. 3½" d. Weight: 6 lbs.
DELMONICO INTERNATION	AL, 120-20 Roosevelt A	venue, Corona 68, L. I., N. Y.
Daiwa Recorder DE 11 \$99.95	50-10,000 cycles at 7½"/sec.	New dual-speed monaural portable recorder for operation at 100-245 volts at 50 or 60 cycles. Output power: 2 watts. Recording time: 1 hr. at 7½ ips., 2 hrs. at 3¾ ips. One speaker, 6" x 4". Permanent magnet. Diameter: 13" x 12" x 6½". Weight: 22 lbs.
Documentor Model ST-34 \$169.95	200-5,000 cycles at 3 <sup>3</sup> / <sub>4</sub> "/sec. 200-3,500 cycles at 1 ½"/sec.	New portable, dual-speed, transistor recorder. Bat tery or electrical power. Three-inch speaker. Recording time: up to 1 hr. with 3" reel. One-hand control for record/stop/playback/rewind. Earphone for monitoring. Telephone recording switch. Dimensions 7" x 41/8" x 21/2". Weight: 31/2 lbs.
DICTAPHONE CORPO	RATION, 730 Third Av	enue, New York 17, N. Y.
Dictet Portable Recorder \$311.64	200-4,000 cycles at 2½"/sec.	Miniature, dual-track, magazine loaded, magnesium case tape recorder. Powered by two 7-volt mercury batteries for motor, and separate battery for transistor amplifier. Battery life: 20 hours for motor, 40 for amplifier. Battery life indicators. Magazine has self-adjusting spindles; automatic stop at end of reel. Records at 2½ lps; 30 minutes recording time on each side of magazine. Wow and flutter: 2.25%. Signal-to-noise: 45 db. Magnetic microphone is both microphone and monitor speaker. Motor operates only when mike is plugged in. Dimensions: 2" x 4½" x 6½". Weight: 2 lbs. 11 oz.
Dictet Typer Reproducing Machine \$376.30	100-4,000 cycles at 2½″/sec.	New Dictet Typer reproducing machine designed to reproduce magnetic tape magazines recorded on the Dictet recorder described above. Controls: Instanstant-stop, unlimited backspacing. Continuous variable volume, tone and speed. Fast forward and fast rewind. Separate erase head. Safety interlocks. Print ed circuit amplifier. Four pole capacitor motor. Complete with power cable, foot or hand control, choice of hearing devices. Dimensions: 3½" h., 11-9/16" w. 9%" d. Weight: 12 lbs.  This machine is also the key component of the AIMO message-control playback unit for conveying instructions to manufacturing workers. For more information write Dictaphone.
Dictatape Continuous Recorder \$3400,00	300-2,700 cycles (±3 db) at 11/6"/sec.	Five-channel recorder that permits simultaneous recording of four communication and one time-signal channel on a standard ½" magnetic tape. Up to 16 hours continuous unattended recording. Speed 1½ ips. Instant start and stop. Six motors. Separate reproduce heads and amplifier provide playback on either unit while recording. Automatic safeguards prevent accidental erase. Harmonic distortion: 5% or less at 1,000 cps. Flutter: 1%. Fast forward and rewind.
THOMAS A. EDISON INDUSTRIES,	McGRAW-EDISON CO.	, 51 Lakeside Ave., West Orange, N. J.
Edison Envoy Dictating/Transcribing Machine \$219.50	200-4,500 cycles at 15/16"/sec.	Dictating/transcribing machine with maximum recording time of 90 minutes per reel. (Two-hour tapes are optional.) Recording is erasable. Completely transistorized. All controls on mike. Separate record/playback buttons. Indexing system End-of-tape warning buzzer. Capstan drive. Accessories available. Dimensions: 7" x 10" x 3¾". Weight: 8¾ lbs.

THE PENTRON SALES CO	D., INC., 777 South	Tripp Avenue, Chicago 24, III.
LP Magazine R Repeater Model A-1 \$99.95 Model A-2 \$87.95 Model A-4 \$119.95	40-7,000 cycles at 33/4"/sec.	Series of magazine repeaters playing a regular loop for 28 minutes. Moebius loop for 55 minutes. Stopping by voice operated relay, activated by silence on tape between messages. When applicable, signal-tonoise ratio is 45 db, flutter is 0.5%. A-1 is complete with amplifier, speaker, triggering circuit, case, handle. A-2 is same without triggering circuit. A-4 is recorder/playback, speaker, recorder indicator, microphone, case, handle, magazine.
Model SD-5 Stereo Tape Deck \$199.95	30-20,000 cycles at 7½"/sec. 30-15,000 cycles at 3¾"/sec.	New dual-speed stereo tape deck that, when combined with proper preamps and amps, provides quarter-track stereo and monophonic record/play/erase and half-track stereo and monophonic play. Push-button controls. Digital index counter. Self-locking reel spindles. Removable head cover. Signal-to-noise ratio: 55 db at 7½ ips. Harmonic distortion: less than 1.0%. Wow and flutter: less than 0.3% at 7½; ps. Receptacles: two phono jacks for erase; two phono jacks for record/play. Dimensions: 113¼" w., 14" l., 6¼" h. Weight: 12½ lbs.
Tempo Model GR-15 Mono Recorder \$119.95  Tempo Model GR-15S Stereo Recorder \$149.95	40-11,000 cycles (±3 db) at 7½"/sec. 40-7,000 cycles (±3 db) at 3¾"/sec.	New portable recorder with two speeds: $7\frac{1}{2}$ and $3\frac{3}{4}$ ips. Available in monophonic or four-track stereo version. Single lever control for play, record, fast forward, fast rewind. Motor: 4-pole, shaded pole heavy duty. Separate interlock. Neon type record level indicator. Speaker: 6" round PM extended range. Fast rewind: 7" reel in 90 seconds. Signal-to-noise ratio: 45 db. Flutter: under 0.4% at $7\frac{1}{2}$ ips. Inputs: one for mike; one for radio, TV, phono. Outputs: one for external amplifier or monitor; one for external speaker. Dimensions: $11^n$ h., $14^n$ w., $17^n$ d. Weight: 25 lbs. Companion amplifier/speaker: \$59.95.
Model TR-20 Aristocrat II Monophonic Record/Playback Stereo Playback \$269.95	40-15,000 cycles (±3 db) at 7½"/sec. 40-12,500 cycles (±3 db) at 3¾"/sec.	New dual-speed recorder system for stereo playback, monaural record/playback. Speeds: 7½ and 3¾ ips. Single rotary control for play, record, fast forward, fast rewind. Interlock record button. Two volume controls, two tone controls. Illuminated VU meter for record level. Two detachable speaker cabinets, each containing two speakers. Signal-to-noise ratio: 52 db. Flutter: under 0.3% at 7½ ips. Inputs: one for mike or phono; one for radio, TV, phono. Outputs: two for external amplifiers or head phone monitoring; two for external speakers. Dimensions: 11³¼" h., 22½" w., 15¾" d. Weight: 42 lbs.
Triumph Model XP-60 Mono Recorder \$219.95  Model XP-60S Stereo Recorder \$249.95	as above	New dual-speed, push-button-operated portable recorder available in both monophonic and stereo versions. Speeds: 7½ and 3½ ips. Motor: 4-pole, shaded pole heavy duty. Automatic interlock prevents accidental erase. Electron beam record level indicator. Digital type index counter. Speakers: one 4 x 6 oval (with built-in whizzer cone) and one 4 x 6 round. Signal-to-noise ratio: 52 db. Flutter: under 0.3% at 7½ ips. Inputs: one for mike, one for radio, TV, phono. Outputs: one for speaker, one for amplifier. Dimensions: 6½" h., 12½" w., 13" d. Weight: 18 lbs. Companion amplifier/speaker: \$59.95.
ASTRA Model AR-62 Monophonic Recorder \$189.95  Model AR-62S Stereophonic Recorder \$219.95	as above	New dual-speed, push-button operated portable recorder available in both monophonic and stereophonic versions. Speeds: 7½ and 3¾ ips. Automatic interlock prevents accidental erase. Motor: 4-pole, shaded pole heavy duty. Electron beam record level indicator. Digital type index counter. Speakers: one 4 x 6 (with built-in whizzer cone) and one 4 x 4. Signal-to-noise ratio: 55 db. Flutter: under 0.3% at 7½ ips. Inputs: one for mike; one for radio, TV, phono. Outputs: one for speaker, one for amplifier. Automatic shut-off switch functions in all operating positions. Pause Control. Dimensions: 7½ h., x 12½ w. x. x 13¾ d. Weight: 19 lbs. Companion amplifier/speaker: \$59.95.
PHILCO CORPOR	RATION, Philadelphi	a 34, Pennsylvania
Model ST 300 Stereo Recorder \$249.95	40-15,000 cycles at 7½"/sec.	Dual track, dual speed recorder for monaural record/playback and stereo playback. Speeds: $7\frac{1}{2}$ and $3\frac{3}{4}$ ips. Push-button controls. Safety switch prevents accidental erase. Pause control. Automatic shutoff. Index timer. Two internal speakers. Tuning eye recording indicator. Wow and flutter less than 0.5%. Inputs: one for microphone, one for radio/phono. Outputs: one for external speaker, one for stereo speaker. Dimensions: $9\frac{1}{2}^{x} \times 15^{x} \times 14^{x}$ . Weight: 39 lbs.
PHONO-TRIX, imported by MATHEW	STUART AND CO., INC	, 156 Fifth Avenue, New York 10, N. Y.
Phono-Trix MARK II RECORDER \$79.95	200-6,000 cycles at 33/4"/sec.	All-transistor, battery-operated dual-track portable tape recorder. Operates for 50 hours on four standard flashlight batteries. Choice of 1% or 3% ips models. Uses standard 3" reels. Gives up to 90 minutes of recording time. Direct drive mechanism with constant speed capstan. Push button operation. Power rewind. Volume controls for both microphone and speaker. Shatter-proof plastic case. Accessories available, Dimensions: 9" x 5" x 41/4". Weight: 4 pounds.

Frequency Response

Data

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Model and Price

Model and Price		Frequency Response	Data
MOHAWK	BUSINESS MACH	HINES CORP., 944 Ho	olsey Street, Brooklyn 33, N. Y.
Profe Po R	k "Midgetape" essional 500 cket Tape decorder \$359.50	50-10,000 cycles at 3¾"/sec.	Pocket tape recorder with VU meter for distortion control. No electricity required. Battery life 12 to 50 hours. 6 transistors. Optional I battery operated, all transistor, palm size amplifier speaker. 45 minute cartridge-loaded tape. Three controls: On-Off, Play-Record and Volume. Wow and flutter: 0.3%. Signal-to-noise ratio, 48 db. Input 2,000 ohms or less—.2mv to 3mv. Outputs: two—one 10mw at 2,000 ohms; two Zero VU at 600 ohms. Sockets: three—1 input, 2 output sockets. Distortion: maximum recording level: 2%. Tape type: 1/4" Mylar base, erase AC-20kc. Supplied with battery. Accessories availble. Size: 81/2" x 37/6" x 17/6". Weight: 3 lbs.
Messa Reco Uni Message	Mohawk age Repeater rd-Playback t \$159.50 Repeater Junior \$99.50	200-5,500 cycles (±1½ db) at 3¾"/sec.	Midget recorder/playback unit with continuous-loop tape cartridges of from 15 to 240 seconds capacity. Repeats message continuously or intermittently by external switch control. No rewinding necessary. Neon bulb recording level indicator. Built-in 5" speaker. Output, 1.2 watts. Plug-in sockets for microphone, external start, external amplifier or speaker. Overall size, 6½" x 5½" x 5½". Weight: 5¾ lbs. Numerous accessories available.
MOVI	C COMPANY, INC.	, 12432 Santa Monica	Blvd., Las Angeles 25, Calif.
Ster Mov Ster Add \$50 for 4-	corder A-2-15 eo Portable \$710.00 icorder A-2 eo Portable \$645.00 to above prices track stereo eack models.	30-25,000 cycles (±2 db) at 15"/sec. 45-14,000 cycles (±2 db) at 7½"/sec.	Model A-2-15 is new dual speed (15 and $7\frac{1}{2}$ ips) portable stereo recorder with hysteresis synchronous motor and two induction type reel motors. Records, plays and erases stereo. Records sound on sound. Two VU meters. Knob controls. Wow and flutter: less than 0.08% at 15 ips, 0.1% at $7\frac{1}{2}$ ips. Signal-tonoise ratio: 55 db at 15 ips, 50 db at $7\frac{1}{2}$ ips. Outputs: two cathode follower; two external speaker. Inputs: two radio, phono, TV; two mike. Dimensions: 18" h., 16" w., $6\frac{1}{2}$ " d. Weight: 45 lbs.  Model A-2 is same as Model A-2-15 except that its speeds are $7\frac{1}{2}$ and $3\frac{3}{4}$ ips.
NEWCOMB	AUDIO PRODUCT	S CO., 6824 Lexingto	n Avenue, Hollywood 38, California
Availa half- of	del SM-310 eo Recorder \$499.50 sble in either r quarter-track models.	30-15,000 cycles (±2 db) at 7½"/sec. 40-10,000 cycles (±3 db) at 3¾"/sec.	New two-channel stereo and monaural recorder that has two speeds: $7\frac{1}{2}$ and $3\frac{3}{4}$ ips. Records and plays back stereo and monaural. Joy stick transport control. Synchronous motor. Knob controls. Record interlock prevents accidental erase. Oversize brakes. Automatic shutoff switch. Four-digit counter. Vacuum tube voltmeters for record level. Flutter: less than $0.2\%$ at $7\frac{1}{2}$ ips, less than $0.2\%$ at $3\frac{3}{4}$ ips. Signaltonoise ratio: 50 db at $7\frac{1}{2}$ ips, 45 db at $3\frac{3}{4}$ ips. Inputs: two high level, two mike. Outputs: one for each channel, one monitor. Dimensions: $12\frac{3}{4}\%$ n., $16\frac{3}{4}\%$ w., $9\frac{1}{2}\%$ d. Weight: $34$ lbs. Quarter-track model records and plays back quarter-track stereo, and plays back half-track stereo.
NORT	H AMERICAN PH	ILIPS CO., INC., 230	D Duffy Ave., Hicksville, N. Y.
Model Fo	nental "400" I EL 3536/54 bur-Track eo Recorder \$399.50	50-18,000 cycles at 7½"/sec. 50-14,000 cycles at 3¾"/sec. 60-7,000 cycles at 1½"/sec.	New three-speed recorder for four-track stereo and four-track monaural record and playback. Speeds: $7\frac{1}{2}$ , $3\frac{3}{4}$ and $1\frac{7}{8}$ ips. Records sound on sound. Piano key controls. Magic eye modulation indicator. Four-digit program indicator. Signal-to-noise ratio: better than 48 db. Wow and flutter: less than 0.3% at all three speeds. Inputs: one stereo mike; one stereo phono, radio; mixing of these two. Outputs: two speaker, two amplifier, one headphone. Dimensions: $18\frac{1}{2}$ " h., $15\frac{1}{2}$ " w., $11\frac{1}{2}$ " d. Weight: 43 lbs.
Mod	tinental 300" del EL3542 track stereo recorder \$269.50	60-16,000 cycles (±3 db) at 7½"/sec. 60-13,000 cycles (±3 db) at 3¾"/sec. 60-6,500 cycles (±3 db) at 1¾"/sec.	New four-track stereo recorder: mono record and playback; stereo playback (head output only). Three speeds: 7½, 3¾ and 1½ ips. Hum level: better than 40 db. Wow and flutter: better than 3% peak to peak. Push-button controls. Automatic stop at ends of tape (with metalized tape). Interlocking pause button. Sound on sound recording. Full mixing facilities. Headphone monitoring. Program indicator (4-digit). Magic eye modulation indicator. Foot switch attachment. Inputs: one mike, one radio/phono. Outputs one external speaker, one external amplifier, one headphone, two stereo. Dimensions: 15¾ x x 13x x 6¾ w. Weight: 30 lbs.
Model D Tra	relco "75" I EL 3581/50 lictating/ enscribing Machine \$189.50	300-3,000 cycles at 2½"/sec.	New dual track portable recorder for dictating and transcribing. Speed: 2½ ips. Forty minutes total recording time. Two heads: erase and record/playback. Controls for: record, playback, rapid review, fast wind, fast rewind, stop, start, volume. Moving coil mike doubles as loudspeaker. Two-digital counter "End-of-tape" buzzer. Telephone jack. Telephone mike switch. Quick erasure coupled to fast rewind

	Educorder Dual Model M-6A \$335.00	70-7,500 cycles at 7½"/sec. 70-5,000 cycles at 3¾"/sec.	Portable, two speed, two channel recorder with single knob-control tape mechanism. Two separate record/reproduce amplifiers and two separate record-play-erase heads. Records or plays back both channels simultaneously or records on one while playing back the other. Monitoring by headphones while recording. Signal-to-noise ratio: 40 db. Wow and flutter: 0.3% at 7½"/sec. Fast forward and rewind, 70 sec. for 1200 ft. Nominal 75 watt peak power from each channel. Two input connections. Three output connections: Channel 1, Channel 2 and Dual for binaural headphones. Includes headphones and microphone. Weight, 30 lbs.
E	LECTRONIC APPLICAT	TIONS, 194 Richmond Hi	Il Avenue, Stamford, Cann.
	Stellavox SM4A Portable Recorder \$469.00, less microphone	Record: 30-14,000 cycles (±2 db) at 7½"/sec. Playback: 60-14,000 cycles (±2 db) at 7½"/sec.	Transistorized professional miniature recorder. Speed: 7½ ips. Speed accuracy plus or minus 0.5%. Wow and flutter: 0.4% PP. High frequency erase head in ferrite and combined record/playback head for half-track or full-track. Equalized either CCIR or NAB. Operates from rechargeable miniature dry cells. Operates three hours per charge. Recording time 20 min. per reel (2/10 min.). Built-in monitor speaker. Reel compatibility with all pro machines. Dimensions: 2½" x 4½" x 10½".
	Studer 30 Portable Recorder \$1,530.00 in case	30-15,000 cycles (+ 1, — 2 db) at 15"/sec.	Professional, dual speed recorder that operates at 15 and 7½ ips. Direct hysteresis synchro motor drive. Timing accuracy: 0.2% or better. Unique constant tape tension electronic servo system insures motor torque compensation for tape reel and effective hub size differences. Push button controls all functions. Remote all functions including "cue" position. Signal to noise: 56 db. Wow and flutter: 0.1%/0.15% PP. Tape time counter available. Independent playback/record amplifiers and all circuits use dual triode E 80 CC tube. Input 0.5 to 4 volts balanced bridge. Output 0.7 to 4 volts balanced 200 ohms. Size 20" h., 13½" w., 12¾" d. Weight: 66 lbs.
	Nagra III B & E Portable Recorder \$1,045.00 depending on model	30-15,000 cycles (±1.5 db) at 15"/sec. 40-12,000 cycles (±1.5 db) at 7½"/sec.	Portable, professional, completely transistorized unit available as Model B with three speeds (33½, 7½, and 15 ips) and as model E at 7½ ips. Types B and E contain three heads. Speed constancy: 0.1%. Wow and flutter: 0.15% at 15 ips PP, or 0.2% PP at 7½ ips. Signal-to-noise ratio: 55 db or better. Meter for battery condition and level. Output: +6 at 600 ohms balanced. Self-contained monitor speaker. AGC automatic gain-control for speech recording. All normal mike inputs plus 2 line mixers. Motor speed servo controlled. Operates from any 12 volt source or self-contained flashlight batteries. Accessories available. Fast forward and rewind.
	Revox D-36S Stereo Portable \$449.00	40-12,000 cycles (±2 db) 15,000 cycles (—3 db) at 7½"/sec. 50-8,000 cycles at 3¾"/sec.	Semi-pro portable stereo, mono unit. Two speeds: $3\frac{1}{4}$ and $7\frac{1}{2}$ ips. Three motors; separate recording and playback amplifiers; wow and flutter at $7\frac{1}{2}$ ips: 0.20% RMS. Signal-to-noise ratio: 50 db; two cathode follower outputs; 6 watt internal push-pull monitor channel; 8" coax speaker; push-button solenoid operation; magic eye recording level; tape counter; end of tape switch-off; remote control of selected modes; up to 10" reels. Dimensions: 18" h., 11" w., $13\frac{1}{2}$ " d. Weight: 43 lbs.  Accessory: compatible 6 watt push-pull amplifier/speaker in portable case for full stereo monitoring.
ELECTRONI	C TEACHING LABORA	TORIES, INC., 5034 Wis	consin Ave., N.W., Washington 6, D. C.
Model E-3CS	MONITOR 2-Channel Portable Model E-3 \$297.08 Model E-3C Console \$280.07 Console \$273.05	50-6,500 cycles (±3 db) at 3¾"/sec.	Professional language laboratory recorder, dual track. unique "split" amplifier performs simultaneous playback and recording function on separate tracks, distinctive in aural/oral laboratory work. Selector switch modes for listen/record, dual playback, master record, master play, duplicate. Volume level meter. Separate record-play heads with azimuth adjustment. Bias: 60KC. Signal-to-noise ratio: 45 db or over at 3% harmonic distortion. Model E-3C for console mounting, all components mounted on %" aluminum panel, size 19 x 11 x 5%, weight 15 lbs. Special feature: multiple installations have remote control tape duplication facility. Model E-3CS is same as Model E-3C except for omission of master record and master play selector switch modes.
00	MONITORET 2-Channel Recorder Model E-4 \$247.00	as above	Language laboratory recorder, dual parallel tracks — a "stripped-down" version of Monitor E-3 with same characteristics except only two selector switch modes for listen/record and dual playback. Model E-4C for console mounting.

Frequency Response

EDUCATIONAL LABORATORIES, INC., 1048 Potomoc St., N.W., Woshington 7, D. C.

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Model and Price	Frequency Response	Data
E.M.I., Sole U. S. Agents: ER	CONA CORPORATION, 16	W. 46th St., New York 36, N. Y.
E.M.I.  Battery Portable \$395.00  Model L2A (3 <sup>3</sup> / <sub>4</sub> ips)  Model L2B (7 <sup>1</sup> / <sub>2</sub> ips)  Model L2C (15 ips)	50-7,000 cycles (±2 db) at 15"/sec. 50-5,000 cycles (±2 db) at 7½"/sec. 50-2,500 cycles (±2 db) at 3¾"/sec.	Battery-operated recorder manufactured by Electrical & Musical Industries, Ltd. of England. Accommodates 5" reels and requires no external power source. Signal-to-noise, better than 45 db unweighted, when replayed on high quality studio equipment. Wow, less than 0.2% at 15"/sec., 0.25% at 7½"/sec. and 0.3% at 3¾"/sec. Separate recording and playback heads and amplifiers for monitoring and instantaneous playback. VU meter for recording level. Manually operated geared rewind device to conserve battery life. Operates with cover closed. Weight, 14½ lbs. complete.
ERCONA CORPO	DRATION, 16 W. 46 St.,	, New York 36, N. Y.
STUZZI Magnette Portable Recorder \$269.50 Carrying Case \$17.50	50-9,000 cycles at 3¾"/sec. 60-4,000 cycles at 1½"/sec.	Transistorized portable that operates up to 100 hours on 4 flashlight batteries. Dual speed (1½" and 3¾"), dual track. Two motors: capstan motor electronically controlled. Magic-eye record level indicator. Battery condition indicators. Push-button controls: stop, record, replay, fast forward, fast reverse, and pause. Record safety button prevents accidental erasure. Three-digit counter. Wow and flutter approximates professional standards. Inputs: microphone, radio, pickup or telephone adaptor. Output: built-in speaker, outside amplifier, earphone connections. Size: 11" h., 4½" w., 8" d. Weight: 8 lbs.
Professional STUZZI Portable Recorder \$369.50	30-14,000 cycles at 71/2"/sec.	Professional model with all operation features of above except for: single speed ( $7\frac{1}{2}$ ips), heavy-duty aluminum construction, wow and flutter: 0.25%.
FERROGRAPH RECORDER CO., LTD., Sol		ORATION, 16 W. 46th St., New York 36, N. Y.
Custom Installation  Model 66/N (33/4-71/2 ips) \$399.50  Model 66/H (71/2-15 ips) \$445.00  Portable (illustrated) Model 4A/N (33/4-71/2 ips) \$399.50  Model 4A/NH (71/2-15 ips) \$445.00		Dual-speed, dual-track recorders for portable or custom-installation, manufactured by British Ferrograph Recorder Co., Ltd. of London. Accommodates up to 81/4" reels. Signal-to-noise ratio, better than 50 db, 200-12,000 cps; 45 db unweighted (including hum). Wow and flutter less than 0.2% at 71/2"/sec. Long-term speed stability, better than 0.5%. Erase and bias frequency, 53,000 cps. Inputs: Two; 1 megohm and 0.1 megohm respectively. Outputs: two; 0.75 volts at 0.1 megohm for external amplifier; 15 ohms at 21/2 watts (undistorted). 3 motors including hysteresis synchronous drive. "Ferrodexer" counter, clock type with zero setting. Master control switch for permanent inputs and outputs. Weight: 45 lbs.
Stereo Model 4S/N (33/-71/2 ips) \$495.00 Stereo Model 4S/H (71/2-15 ips) \$520.00	as above	Model 4S — data on this model identical with 3A Series above except for addition of stereo playback. Signals from stacked stereo head may be fed into external dual amplifiers via an equalization chain for each section or to a "Stere-ad" unit which provides all power output for stereo replay requiring only a suitable speaker system. Weights: Model 4S: 493/4 lbs. "Stere-ad" unit: 121/2 lbs. Price of "Stere-ad" Unit: \$195.00
Model 808/2 Dual-track Stereo and Monaural Record/Playback \$595.00 Model 808/4 Quarter-track Stereo and Monaural Record/Playback \$595.00	40-15,000 cycles (±2 db) at 15"/sec. 50-10,000 cycles (±2 db) at 7½"/sec.	Portable recorders for stereo recording and playback manufactured by British Ferrograph Recorder Co., Ltd. of London. Signal-to-noise ratio, better than 50 db, 200-12,000 cps; 45 db unweighted (including hum). Wow and flutter, less than 0.2% at 7½"/sec. Speed stability: better than 0.5%. Erase and bias frequency, 53,000 cps. Takes up to 8½" reels. Twin recording amplifiers and twin replay preamps terminating at 3 milliwatts across 600 ohms (balanced). Switched VU level meter provides proper recording levels for each track which is served by dual inputs (I megohm and 0.1 megohm 0.003 V peak and 0.1 V peak respectively). Includes "Ferrodexer" counter, clock type with zero setting. Weight: 48 lbs.
FILNOR PRODUC	TS, INC., 156 Fifth Ave.	., New York 10, N. Y.
Teltape Monaural Recorder \$29.95	to 4,000 cycles	Transistorized portable recorder with variable speed control. Operates on four "type C" flashlight batteries. Plays for 16 minutes with 3" reel containing 300 feet of ¼" tape. Erase head can be swung out of the way so that erase is optional. Instant braking, fast rewind, automatic slack take-up. Plays back through headset furnished with recorder. Weight: 2 lbs.
GBC AMERICA COR	P., 89 Franklin Street, 1	New York 13, New York
PT 12 "Companion" Monaural Portable \$99.50  PT 15 "Escort" Monaural Portable \$129.50	75-7,500 cycles at 3¾"/sec.	New dual speed, dual track portable recorder made in Italy. Speeds: $3\frac{3}{4}$ and $1\frac{7}{6}$ ips. Magic eye volume level indicator. Clock-type tape counter. Picture push-button controls. Undistorted power output: 2.5 watts. Up to three hours recording time per reel. Dimensions: $4\frac{3}{4}$ " x 8" x $9\frac{1}{2}$ ". Weight: 10 lbs. Model PT 15 is same as above with addition of full range tone control and luggage type hard wood case.

Model and Price	Frequency Response	Data		
Synchrotone Dual-Language Recorder Model 68-DL \$295.00	to 10,000 cycles at 7½"/sec.	Dual recorder-reproducer permitting simultaneous re cording on two channels, or simultaneous playback of "master" channel and simultaneous recording or "student" channel; or simultaneous playback of "master" as well as "student" channel. Speeds: 3¾ and 7½ jps. Two record-play safety lights. Concealed selector switch for recording on "master" channel (makes student erasure of "master" impossible). Inputs: external line and microphone. Two outputs for headphones. Single volume control for both channels. Shut-off switch for external line. Single knob control beltless drive. Automatic safety switch prevents accidental erasure during rewind; automatic shut-off switch; footage index counter.		
Synchro-Magneticon Dual Tape-Disc Recorder-Reproducer Model ML-66, \$295.00	to 10,000 (tape) to 6,000 (disc)	Dual magnetic tape-disc recorder-reproducer using standard 1/4" tape as a master, and pregrooved magnetic disc, 9" diameter, as student's record-play medium; built-in electronic mixer analyzer permitting student to listen to "master" off magnetic tape as he speaks into his microphone, recording himself onto the magnetic disc. Tape speeds: 7½ and 3¾ ips.		



#### MINIFON, from: GEISS-AMERICA, 6424 North Western Avenue, Chicago 45, III.



Minifon "Attache" Monaural Portable \$249.50

150-6,000 cycles at 1 1/8"/sec. New magazine-loaded monaural portable for battery and electrical power. Single speed: 1% ps. Roller counter index. Battery meter. Automatic tape-end stop. Records for 30 min. Fast forward and rewind: 30 to 1. Three-digital roller counter index. Dimensions:  $4'' \times 6^3/4'' \times 1^{1/2}''$ . Weight: 2 lbs., 4 oz.





Mohawk "Midgetape" 300 Pocket Tape Recorder \$249.50

150-5,500 cycles at 1 1/4"/sec.

Portable recorder. Instantly records and plays right back. No electricity required. Battery life 12 to 50 hrs. 4 transistors. 1 or 1½ hr. cartridge-loaded tape. 3 controls: On-Off, Play-Record and Volume. Wow and flutter, less than 0.7%. Signal-to-noise ratio, 42 db. Input, 2,000 ohms-one mv min. Output, 10 milliwatts at 2,000 ohms. Tape used: ½" "Mylar" base, twin track. Supplied with battery. Optional internal transistorized loudspeaker. Accessories available. Size: 8½" x 37%" x 17%". Weight: 3 lbs.

Model and	d Price	Frequency Response	Data
MAGN	ECORD, manufactured by	MIDWESTERN INSTRUME	NTS, P. O. Box 7186, Tulsa 18, Oklo.
0.50	Model N35-B Four Pole Motor \$299,95  Model NS35-B Hysteresis Synchronous Motor \$349,95	Extended range to 12,000 cycles	Recorder and 8-watt power amplifier in composite carrying case. Tape speeds: 7½ and 3¾ ips by capstan change. Phone jack on front panel for monitoring. High impedance microphone furnished. High and low impedance outputs for feeding external system. Printed circuit record amplifier. Interlock prevents accidental tape erasure. 6" x 9" speaker. Illuminated VU meter. Panel size 8½" x 15". Weight: 40 lbs. Half-track heads standard.
O.	Magnecord PT6-6A Monaural Recorder Without Case Recorder \$420 Amplifier \$265 Add \$30 for case	50-15,000 cycles (±2 db) at 15"/sec. 50-7,500 cycles (±2 db)	Portable, two-speed, single-track recorder with speed-change switch and hysteresis synchronous drive motor. Signal-to-noise, 50 db unweighted. Flutter: 0.3% at 15"/sec., 0.4% at 7½"/sec. Rewind time, 40 sec. for 1200 ft. with automatic tape lift. Erase and record/playback heads. VU meter for bias, record and playback level. Monitoring by 5" speaker and phone jack from tape or input. 10 watt power amplifier. Microphone and unbalanced bridging inputs. 4 and 16 ohm power outputs, 600 ohm line output.
Magnecord PT6BA2H Without Recorder \$465 Add \$45 fe	Case Amplifier \$495	at 7½"/sec.	Binaural recording version of above. Same specifications except for three speeds (15, $7\frac{1}{2}$ , $3\frac{3}{4}$ ips) with capstan change, 48 db signal-to-noise ratio, and interchannel calibration circuit.
Magnecord Stere Tape Transport with case \$695	Magnecord P75 Tape Transport with case \$575 without case \$535 Amplifier with case \$305 without case \$265 eophonic P75 Tape Transport with Matched Amplifiers	40-15,000 cycles (±2 db) at 15"/sec. 40-12,000 cycles (±2 db) at 7½"/sec.	Rack-mounted or portable full-track recorder with 10½" reel capacity. Direct drive hysteresis synchronous motor. Push-button controls, instantaneous start and stop, fail-safe brakes and tape break control. Signal-to-noise, 55 db unweighted. Flutter: 0.2% at 15"/sec., 0.25% at 7½"/sec. Rewind time, 100 sec. for 2400 ft. Timing accuracy, ±3 sec. in 30 min. Separate erase, record and playback heads. VU meter for bias, record and playback level. Adjustable bias and high-speed cueing control. Microphone and unbalanced bridging inputs. Phone jack for monitoring from tape or input. 600 ohm unbalanced line output. For recorders with 50-cycle operation, add \$75.
without case \$655	without case \$1,185  Magnecord P73 Tape Transport with case \$575 without case \$535  Amplifier with case \$390 without case \$345	50-15,000 cycles (±2 db) at 15"/sec. 50-10,000 cycles (±2 db) at 7½"/sec.	Tape transport mechanism similar to above, but designed for use with P73-J amplifier instead of P75-C, permitting conversion of existing equipment to new, improved performance standards. Signal-to-noise, 50 db unweighted. Microphone input, 50 to 250 ohms balanced or unbalanced. Unbalanced bridge input. Monitoring by 5" speaker and phone jack from tape or input. Amplifier, 600 ohm balanced line output, 4 or 16 ohm, 10 watt speaker output. For recorders with 50-cycle operation, add \$75.
	Magnecord 817DL Long Term Record Unit \$1814	50-10,000 cycles at 7½"/sec. 50-5,000 cycles at 3¾"/sec.	A long term storage recorder that is completely automatic in operation. This single channel two-speed, record/playback machine is designed to operate continuously for at least 8 hours (14" reels—4800 feet of tape). To avoid any loss of recording information, the erase head has been eliminated. Will record and playback one track in the left-to-right direction, automatically reverse, record and replay the second track in the other direction. It will start and stop on voice signals.
M	AGNETIC RECORDING	INDUSTRIES, 126 Fift	h Avenue, New Yark 11, N. Y.
	Model 80 Magazine Dual-Language Recorder \$325.00	75—9,000 cycles at 3¾"/sec.	New magazine-type monaural recorder for language laboratory teaching. Single speed: 3¾ ips. Controls: rotary reverse, stop-play-fast forward; pause. Master program switch cuts off program from master console. Safety interlock. Concealed record switch for master channel. Size: 8½" x 10½". Weight: 9 lbs.
90.00	Model 10 MRI Tape Duplicator \$4,950.00	50-10,000 cycles for a 7½"/sec. master	New tape duplicator employing the common mandrel principle. Operates at 30 ips, producing 150 7½ ips. 1200" reels in 8 hours. Runs three duplicates at a time. Solid-state rectifiers, transistorized preamplification. Signal-to-noise ratio: within 2 db of theoretical limit of magnetic tape recorder. Wow and flutter: less than 0.5%. Dimensions: 15" d., 36" w., 18" h.

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Model and Price		Frequency Response	Data
	"Transivoice" maural Portable \$159.95	For voice recording	New single-speed, dual-track monaural recorder made in Italy. Speed: 3¾ ips. Push-button controls Operates on four 4½ v. batteries. Takes 3½" reel One output. One input. Speaker: 2¾". Dimensions 3½" d., 8¾" w., 5¾" h. Weight: 4 lbs.
GBO	C "Stenomaster" Dictating/ Transcribing Recorder \$159.50	75-7,500 cycles at 3¾"/sec.	Dual track, dual speed Italian portable recorder Speeds: $3\frac{3}{4}$ and $1\frac{1}{8}$ . "Picture" push buttons for fast rewind, playback, stop, record, fast forward. Magic eye volume indicator. Built-in loudspeaker Undistorted power output: $2\frac{1}{2}$ watts. Two hours maximum recording time. Size in case: $5\frac{1}{2}$ " x 10" x 11". Weight: 10 lbs.
GENERAL	MAGNETICS & ELEC	CTRONICS, INC., 134	-09 36th Rd., Flushing 54, N. Y.
Mc	Gemark 101 maural Portable Recorder \$79.95	100-10,000 cycles at 7½"/sec.	New dual-track, two-speed monaural portable recorder. Speeds: 7½ and 3¾ ips. Single-knob record play control. Safety interlock. Beltless friction pulley drive. Full transformer power supply, 5-watt power output. One speaker: 8″ x 4″. One input for mike, phono, radio, TV. Wooden case. Dimensions: 6½″ h., 12″ w., 10½″ d. Weight: 15 lbs.
MAGNECORD	, manufactured by N	MIDWESTERN INSTRUME	NTS, P. O. Box 7186, Tulsa 18, Okla.
Stereo Recorders  Med  Sp  Week  Med	ITH PORTABLE CASE chanical Unit and Pre-amp only \$479.95 eaker/Amplifier only \$129.95 /ITHOUT CASE chanical Unit and Pre-amp only \$449.95	40-15,000 cycles at 7½"/sec. 50-7,500 cycles at 3¾"/sec.	A series of tape recorders for both stereo and monaural recording and playback. Two speeds: 7½ and 3¾ ips. Separate channel balance controls. Master level control. Individual VU meters for each channel. Four inputs: two microphone-high impedance unbalance; two high-level auxiliary for tuner, phonotape. Outputs: two cathode follower, unbalanced. Bis naural monitor phone jack. Recording indicator. Wow and flutter: less than 0.3%. Signal-to-noise ratio: more than 48 db. (Includes ¼ track play head.) Add \$55 for synchronous motor available for all models except the mechanical unit and pre-amp in portable case.
Reco	gnecord S36-B der and Preamp. th Case \$415.00 out Case \$385.00	50-15,000 cycles (±2 db) at 15"/sec. 50-10,000 cycles (±2 db) at 7½"/sec.	Single unit recorder and preamplifier for rack or portable mounting. Two-speed, single-track, with cap stan speed change and hysteresis synchronous motor drive. Signal-to-noise, 50 db unweighted. Flut ter, 0.3%. Rewind time, 40 sec. for 1200 ft. Erase and record/playback heads. VU meter for record and playback level. Phone jack for monitoring. Microphone and unbalanced bridging inputs. 600 ohm balanced or unbalanced line output. Weight: 40 lbs. in case.
	Model 728 Stereo-stereo Recorder \$759.00 Stereo-stereo Recorder th Fourth Head (1/4 track) \$800.00 of above \$50.00	30-18,000 cycles (±2 db) at 15"/sec. 40-15,000 cycles (±2 db) at 7½"/sec.	Professional portable for sound-on-sound stereo or monaural record/playback. Speeds: 15 and 7½ jps. Hysteresis synchronous motor. Electrical pay-off and take-up torques. Push-button controls. Tape position indicator. Can be supplied with full track, half track or stereo heads. Two VU meters. Separate record and playback amplifiers. Individual controls for record gain and master gain: Timing accuracy: ± 3 seconds in 30 minutes. Signal-to-noise ratio: better than 55 db per channel. Wow and flutter: 0.1% at 15 ips. 0.15% at 7½ ips. Output: cathode follower. Input: two high impedance and two unbalanced bridges, two low impedance with plug-in transformer. Panel size: 17½" x 13" x 12". Weight: 50 lbs.
wit		30-15,000 cycles (±2 db) at 15"/sec. 30-15,000 cycles (±4 db) at 7½"/sec.	Portable, professional-type two speed recorder/amplifier units, also available in console cabinet mounting. Electrically interlocked push-button controls. Direct-drive hysteresis synchronous motor. Separate erase, record and playback heads—interchangeable assemblies for full track, half-track or instrumentation. Instantaneous start and stop, automatic tape lift. Separate record and playback amplifiers for simultaneous monitoring from tape. High speed cueing control. Signal-to-noise, 58 db unweighted. Flutter: 0.1% at 15"/sec., 0.15% at 7½"/sec. Rewind time, 55 sec for 2400 ft. VU meter for bias, record and playback level. 50 or 250 ohm balanced or unbalanced microphone input, balanced or unbalanced bridge input. Line output, 600 ohms balanced or unbalanced.

## The COMPLETE LINE of professional quality AUDIOTAPE —

	Description	Type No.	Length	Reel†	List Price
AMERICAN SERVICE SERVI	PLASTIC-BASE AUDIOTAPE on 1½-mil cellulose acetate  Meets the most exacting requirements of the professional, educational and home recordist at minimum cost. Known the world over for its matchless performance and consistent uniform quality. Series 51.	151 351 651 1251 2551H 2551R ‡2551FS 5051H 5051R	150 ft. 300 ft. 600 ft. 1200 ft. 2500 ft. 2500 ft. 5000 ft.	3" Plostic 4" Plastic 5" Plastic 7" Plastic NARTB Hub 10½" Aluminum 10½" Fiberglass NARTB Hub 14" Aluminum	\$ 0.70 1.35 2.25 3.50 8.50 10.90 10.90 17.00 22.10
audice of MVIRT	AUDIOTAPE ON 11/2-MIL MYLAR*  A premium-quality professional tape that provides the utmost in mechanical strength and immunity to temperature and humidity. Will not embrittle with age. Series 71.  *DuPont Trode Mork	671 1271 2571H 2571R ‡2571FS 5071H 5071R	600 ft. 1 200 ft. 2500 ft. 2500 ft. 2500 ft. 5000 ft.	5" Plastic 7" Plastic NARTB Hub 10½" Aluminum 10½" Fiberglass NARTB Hub 14" Aluminum	2.65 4.25 8.30 11.20 11.20 16.65 24.50
We are noted for production for the control of the	"LR" LONGER-RECORDING AUDIOTAPE on 1-mil "Mylar"  50% more recording time per reel. The strong, super-durable polyester film base assures trouble-free operation even under severe heat and humidity. Series 61.	261 961 1861 3661H 3661R ‡3661FS 7261H 7261R	225 ft. 900 ft. 1800 ft. 3600 ft. 3600 ft. 3600 ft. 7200 ft. 7200 ft.	3" Plastic in Self- Mailer Pkg. 5" Plastic 7" Plastic NARTB Hub 10½" Aluminum 10½" Fiberglass NARTB Hub 14" Aluminum	1.00 3.60 6.20 12.00 14.40 14.40 24.00 30.00
SC MODE receive the pro-part  A span for the p	PLASTIC-BASE "LR" AUDIOTAPE on 1-mil cellulose acetate  50% more recording and playback time on low-cost 1-mil cellulose acetate base, affording maximum economy for applications where high strength is not required. Series 41.	941 1841 3641H 3641R 3641FS 7241H 7241R	900 ft. 1800 ft. 3600 ft. 3600 ft. 3600 ft. 7200 ft.	5" Plastic 7" Plastic NARTB Hub 10½" Aluminum 10½" Fiberglass NARTB Hub 14" Aluminum	3.50 5.50 10.00 12.85 12.85 20.00 26.00

## Other AUDIOTAPE Items

Item		Type No.		Description	
	GREEN	BLUE	LENGTH	REEL	
COLORED PLASTIC-BASE AUDIOTAPE on 1½-mil cellulose acetate  Green and blue colored Audiotape, in conjunction with the standard red-brown tape, provide instant visual identification of recorded selections spliced into a single reel (as shown)—permit fast and easy color cueing and color coding. Eliminate need for identifying leaders between varied individual selections.	151G 351G 651G 1251G 2551HG 2551RG ‡2551F5G 5051HG 5051RG	151B 351B 651B 1251B 2551HB 2551RB ‡2551F5B 5051HB 5051RB	150 ft. 300 ft. 600 ft. 1200 ft. 2500 ft. 2500 ft. 2500 ft. 5000 ft.	3" Plastic 4" Plastic 5" Plastic 7" Plastic NARTB Hub 10½" Aluminum 10½" Fibergloss NARTB Hub 14" Aluminum	.70 1.35 2.25 3.50 8.50 10.90 10.90 17.00 22.10
EMPTY AUDIOTAPE REELS IN INDIVIDUAL BOXES	3P 4P 5P 7P 10R 10F 14R 10F	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	101/2" Fiber	eel in Box eel in Box eel in Box sinum Reel in Box glass (RETMA) in Box um Reel in Box	.25 .45 .60 .75 4.00 4.00 7.40 .70

September, 1960

## -The World's Finest Magnetic Recording Tape

	Description	Type No.	Length	Reel†	List Price
SUPER-THIN audiotape  POWELE Not providing time pro	super-thin audiotape on 1/2-mil "Mylar"  Twice as much recording time per reel as standard plastic-base tape. Suitable for extended-play applications where tape tension is not excessive. Series 31.	1231 2431	1200 ft. 2400 ft.	5" Plastic 7" Plastic	\$ 3.50 6.50
SUPER THIN CUMS OF THE PROPERTY OF THE PROPERT	SUPER-THIN AUDIOTAPE on "Tempered" "Mylor"  Twice as much recording time per reel as standard plastic-base tape, and is twice as strong as other double-length tapes. Will not stretch or break on any tape recorder — will not dry out or embrittle with age. Series 31T.	331T 1231T 2431T 4831T-R ‡4831T-FS	300 ft. 1200 ft. 2400 ft. 4800 ft. 4800 ft.	3" Plastic in Self- Moiler Pkg. 5" Plastic 7" Plastic 10½" Aluminum 10½" Fiberglass	1.60 5.45 9.50 22.00 22.00
MARTIANA MARTIANA ALIGINA ALIG	MASTER LOW PRINT-THROUGH AUDIOTAPE on Plostic Bose  The finest, professional-quality recording tape. Base material, 1½-mil acetate. Maximum fidelity, uniformity, frequency response and freedom from noise and distortion Plus low print-through. Series 51M.	651-M 1251-M 2551H-M 2551R-M ‡2551FS-M 5051H-M 5051R-M	600 ft. 1200 ft. 2500 ft. 2500 ft. 2500 ft. 5000 ft. 5000 ft.	5" Plastic 7" Plastic NARTB Hub 10½" Aluminum 10½" Fiberglass NARTB Hub 14" Aluminum	2.75 4.30 9.80 12.50 12.50 19.55 26.00
audiotape	MASTER LOW PRINT-THROUGH AUDIOTAPE on 1½-mil "Mylar"  Super-durable tape that meets highest standards of performance. Withstands extreme temperatures and humidity plus low print-through. Series 71M.	671-M 1271-M 2571H-M 2571R-M ‡2571FS-M	600 ft. 1200 ft. 2500 ft. 2500 ft. 2500 ft.	5" Plastic 7" Plastic NARTB Hub 10½" Aluminum 10½" Fiberglass	3.20 5.10 10.00 13.50 13.50

<sup>†</sup> COLORED PLASTIC REELS. Audictope on 5" and 7" plastic reels can be supplied on colored reels at no increase in price when ordered in lots of 30 reels or more of any one color. To designate color of reel (Red, Yellow, Green or Blue) add letters "RR" and "YR," "GR" or "BR" to Type No. listed. E.g. Type 1251YR covers 1200 feet of standard plastic-base tope on Yellow Reel.

1 "FS" in Type No. indicates Fiberglass reel with solid hub and 5/16" center hole.

## **Audio Accessories**

ltem	Type No.		Item	Type No.	List Price
RECORDING HEAD CLEANER Especially formulated for use on recording heads. Contains silicone solvent. Superior to carbon "tet." One-ounce bottle with brush.	1HC	\$ .65	AUDIO HEAD DEMAGNETIZER  Removes all permanent magnetism from recording and reproduction heads in a matter of seconds. Includes 7-foot cord and is individually boxed.	400	\$10.00
A strong, durable leader tape of white "Mylar" material with spaced markings to permit accurate rate time of leader intervals. Each box contains 100' x ¼".	3L	.55	AUDIO HEAD ALIGNMENT TAPE Pre-recorded at 2,000, 10,000 and 15,000 cps. (15"/sec.) with precisely correct head alignment. Each box contains 300 ft. on a 4" reel and instructions.	200	10.00
ADHESIVE REEL LABELS Provide positive identification of your tapes right on the reel. Simply press to apply, pull off to remove. Envelope of 30, 2" x ½" labels.	30Al	.20	how to make  GODD TAPE RECORDINGS  This handbook of tape recording contains up-to-the-minute information of interest and practical value to every	25C	2.50
AUDIO ECHORASER  A new instrument for the instantaneous removal of print-through (magnetic echo) from recorded tape during playback. Easy to use and install. Complete instructions provided.	500	12.50	tape recordist. Profusely illustrated with photographs, charts and diagrams prepared especially for this book, it contains 150 pages of valuable information on all phases of modern tape recording.	150	1.50