



AUDIO DISTRIBUTORS, INC.

Professional audio for broadcast recording & motion pictures.
Sound reinforcement. Stereo Hi-Fi components.
2342 S. Division, Grand Rapids, Michigan 49507

if audio is your occupation...

Then this brief message is addressed to you. Audio Distributors, Inc. is dedicated to the principle of supplying recording and broadcasting equipment which reflects the highest state of the engineering art. We stock it in Grand Rapids, install it ourselves where necessary, guarantee it for one year, service it promptly, and maintain a staff competent to make intelligent recommendations regarding its applications.

We actively solicit as clients concerns and individuals who must rely on such equipment as a means of livelihood and therefore look beyond first costs to the "true costs of operation". Nevertheless, a portion of our products finds its way into private ownership, and we are flattered when audio enthusiasts recognize the value of equipment in absolute terms.

Every time we add another product to our ever expanding catalog, we bear in mind our responsibility toward those whose living depends on quality and reliability.

If Audio's aims are meaningful to you, and you are not already one of our valued clients, then we invite you to join our roster of the most distinguished names in industry.

AUDIO DISTRIBUTORS, INC.

2342 S. Division Avenue
Grand Rapids, Michigan 49507
Phone (616) 452-1596



ORDERING PROCEDURE: All sales are made in accordance with the standard Audio Distributors terms and conditions of sale. No order shall be binding upon Audio Distributors until accepted by it in writing at its home office in Grand Rapids, Michigan.

PRICES:

Catalog prices are net, F.O.B. Grand Rapids, Michigan, or point of shipment. Our prices are based on cash transactions and all applicable discounts have been deducted. Prices are subject to change without notice. Orders are filled at prices in effect at time of shipment. We reserve the right to add any federal, state or local taxes required by law.

PAYMENT:

1. Cash — this means full payment with order.
2. COD — the amount due is collected by the delivery agent. A 25% down payment is required on COD orders.
3. Open Account — NET — 30 days. This privilege is extended to those having established accounts with good payment records. If you do not have an established account, please provide a current financial statement, plus trade and bank references with your order. Allow two weeks to process the information. A 1½% finance charge will be applied to any balance open beyond the 30 day limit. This represents an annual rate of 18%.

SHIPPING:

Please specify method of shipment of your order. Shipping charges, insurance and COD fees (when applicable) will be collected at time of delivery when shipment is by air, rail, motor freight or express. If you request United Parcel Service or Parcel Post shipments, postage and insurance fees will be added to your account. Should you receive merchandise damaged in shipment, it is your responsibility to file a damage claim with the delivering carrier at once.

RETURNS AND EXCHANGES:

Do not return any merchandise without our written approval and return authorization. When return of standard equipment is allowed, a re-stocking fee of 15% will apply. Custom built equipment or merchandise specially ordered for you is not returnable. All returned merchandise must be sent freight prepaid and properly insured by the customer.

WARRANTY ADJUSTMENTS:

In the event of equipment failure during the warranty period (one year), Audio Distributors will replace, without charge, any original part that is found to be defective, and which is returned to our office promptly. Failure due to accident, abuse, neglect, normal wear or repairs not made under the control of Audio Distributors, Inc. is not covered by this one year guarantee, nor are transportation charges.

***MANY ITEMS LISTED ARE AVAILABLE ON LEASE OR
INSTALLMENT PURCHASE PLANS. CONTACT US FOR DETAILS.***



170



180



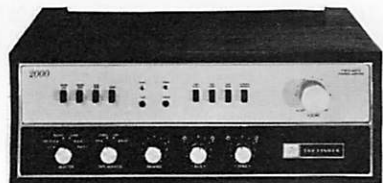
203



205



TX-50



TX-2000

FISHER 170/48 Watt (IHF) AM/FM Stereo Receiver

- Excellent FM Sensitivity and Selectivity • Wide-Band AM Tuner
- STEREOBEACON® automatic FM mono/stereo switching • Baxandall-type bass and treble tone controls • Tape Monitor Facilities
- Loudness Contour Control • Speaker Selector Switch • Balance Control • Ample power to drive two pairs of speakers simultaneously
- Headphone Jack • Handsome Walnut-Grained Wood Cabinet.

Net Each \$199.95

FISHER 180/64 Watt (IHF) AM/FM Stereo Receiver

- Excellent FM Sensitivity and Selectivity • Wide-Band AM Tuner
- STEREOBEACON® automatic FM mono/stereo switching • Baxandall-type bass and treble tone controls • Tape Monitor Facilities
- FM Muting • Loudness Contour Control • Speaker Selector Switch • Balance Control • Ample power to drive two pairs of speakers simultaneously
- Headphone Jack • Handsome Walnut-Grained Wood Cabinet.

Net Each \$249.95

FISHER 203/80 Watt (IHF) AM/FM Stereo Receiver

- Excellent FM Sensitivity and Selectivity • Wide-Band AM Tuner
- STEREOBEACON® automatic FM mono/stereo switching • Step-Type Baxandall bass and treble tone controls • High Filter Switch
- Loudness Contour Control • Tape Monitor Facilities • Step-Type Balance Control • Front Panel Recorder Output • Headphone Jack
- 23-UW Walnut-Grained Cabinet, optional, at slight additional cost.

Net Each \$269.95

FISHER 205/120 Watt (IHF) AM/FM Stereo Receiver

- Excellent FM Sensitivity and Selectivity • Wide-Band AM Tuner
- Signal Strength Tuning Meter • Center-of-Channel Tuning Meter
- STEREOBEACON® automatic FM mono/stereo switching • **Three Tone Controls:** Bass, Midrange, and Treble • Illuminated Program Indicator • FM Muting Switch • Loudness Contour Switch • High Filter Switch • Tape Monitor Facilities • Step-Type Balance Control
- Front Panel Recorder Output • Headphone Jack • 23-UW Walnut-Grained Cabinet, optional, at slight additional cost.

Net Each \$299.95

FISHER TX-50

- 65 Watts of Power (± 1 db at 8 ohms) • Full Tape and Phono Facilities • Main and Remote Speaker Switches • Front-panel Headphone Jack • Loudness Contour • DIMENSION: 15½" wide, 4¼" high, 9" deep. • WEIGHT: 13½ pounds. • Walnut Cabinet, 60-UW, optional, at slight additional cost.

Net Each \$159.95

FISHER TX-2000/150 Watt Master Control Amplifier

- 150 Watts of Music Power (IHF) • 50 Watts RMS Power (at 1 kHz), each channel • 2-Stage Push Button High Filter • Push Button Loudness Contour • Six-Position Program Selector • Four-Position Tape Monitor Selector • Switchable Center Channel Power Output • Separate Mono/Stereo Indicators • Front-Panel Tape and Headphone Jacks • Elegant Silver and Black Styling • DIMENSIONS: 15½" Wide, 4¼" High, 12¾" Deep. • WEIGHT: 24 lbs. • CABINET: Walnut, Model 50-UW, Optional at additional cost.

Net Each \$349.95

FISHER 504/160 Watt (RMS) 2/4-Channel Convertible Stereo AM/FM Receiver With SQ Decoder

- Unique design feature provides full-rated power (from 20-20,000 Hz, with all channels driven) from all four amplifiers, whether used as a stereo or 4-channel receiver.
- With one setting, the "Joystick" Master Balance Control provides perfect balance among the four speakers, for any listening position.
- SQ Matrix Decoder
- Calibrated "Fader"-type Sliding Volume and Tone Controls
- Signal Strength Tuning Meter
- Center-of-Channel Tuning Meter
- STEREO-BEACON® automatic FM mono/stereo switching
- FM Muting Switch
- Volume Attenuator Switch
- FM Noise Filter
- Loudness Contour Control
- Low Filter Switch
- High Filter Switch
- AM DNL Switch
- Tape Monitor Facilities
- Audio Display
- Illuminated Program Indicator
- Front Panel Recorder Outputs
- Phone Jacks for 4-channel and stereo headphones
- Walnut-Grained Wood Cabinet.

Net Each \$529.95

FISHER 404/112 Watt (RMS) 2/4-Channel Convertible Stereo AM/FM Receiver With SQ Decoder

- Unique design feature provides full-rated power (from 20-20,000 Hz, with all channels driven) from all four amplifiers, whether used as a stereo or 4-channel receiver.
- With one setting, the "Joystick" Master Balance Control provides perfect balance among the four speakers, for any listening position.
- SQ Matrix Decoder
- Calibrated "Fader"-type Sliding Volume and Tone Controls
- Signal Strength Tuning Meter
- Center-of-Channel Tuning Meter
- STEREO-BEACON® automatic FM mono/stereo switching
- FM Muting Switch
- FM Noise Filter
- Loudness Contour Control
- Low Filter Switch
- High Filter Switch
- Tape Monitor Facilities
- Illuminated Program Selector
- Front Panel Recorder Outputs
- Jacks for 4-channel and stereo headphones
- Walnut-Grained Wood Cabinet.

Net Each \$429.95

FISHER 304/80 Watt (RMS) 2/4-Channel Convertible Stereo AM/FM Receiver With SQ Decoder

- Unique design feature provides full-rated power (from 20-20,000 Hz, with all channels driven) from all four amplifiers, whether used as a stereo or 4-channel receiver.
- SQ Matrix Decoder
- Excellent FM Sensitivity and Selectivity
- Sliding Volume and Tone Controls
- STEREO-BEACON® automatic FM mono/stereo switching
- FM Muting Switch
- FM Noise Filter
- Loudness Contour Control
- Tape Monitor Control
- Front Panel Recorder Outputs
- Jacks for stereo and 4-channel headphones
- Walnut-Grained Wood Cabinet.

Net Each \$329.95

FISHER 3556S/100 Watt Stereo Compact

- 35 CENTER SECTION: • STEREO-BEACON® automatic FM mono/stereo switching
- Mode Switch
- Main and Remote Speaker Switches
- Baxandall-type bass and treble tone controls
- Loudness Contour Control
- Headphone Jack
- Automatic Shutoff for turntable
- AUTOMATIC TURNTABLE: • Four Speeds
- Ultra-Compliant Magnetic Cartridge
- Long-Wearing Diamond Stylus
- Cueing Control
- Stylus Pressure Gauge
- Anti-Skating Adjustment
- Protective Dust Cover
- XP-56S TWO-WAY SPEAKER SYSTEMS: • Elegant Sculptured Grilles in four colors
- 8" woofer
- 3" tweeter
- Frequency Response, 35-20,000 Hz.
- DIMENSIONS: Main Unit, 17½" w x 8¼" h x 16" d; Each Speaker System, 21" w x 11½" h x 9" d.

Net Each \$369.95

FISHER 2844/40 Watt Stereo Compact

- 28 CENTER SECTION: • STEREO-BEACON® automatic FM mono/stereo switching
- Baxandall-type bass and treble tone controls
- Mode Switch
- Main and Remote Speaker Switches
- Headphone Jack
- Loudness Contour Switch
- AUTOMATIC TURNTABLE: • Ultra-Compliant Magnetic Cartridge
- Long-Wearing Diamond Stylus
- Cueing Control
- Stylus Pressure Gauge
- Anti-Skating Adjustment
- XP-44B TWO-WAY SPEAKER SYSTEMS: • 6" woofer
- 3" tweeter
- Frequency Response, 39-19,000 Hz.
- DIMENSIONS: • Main Unit, 17½" w x 8½" h x 15" d; Each Speaker System, 15¼" w x 8¼" h x 6¼" d.

Net Each \$269.95



504



404



304



3556S

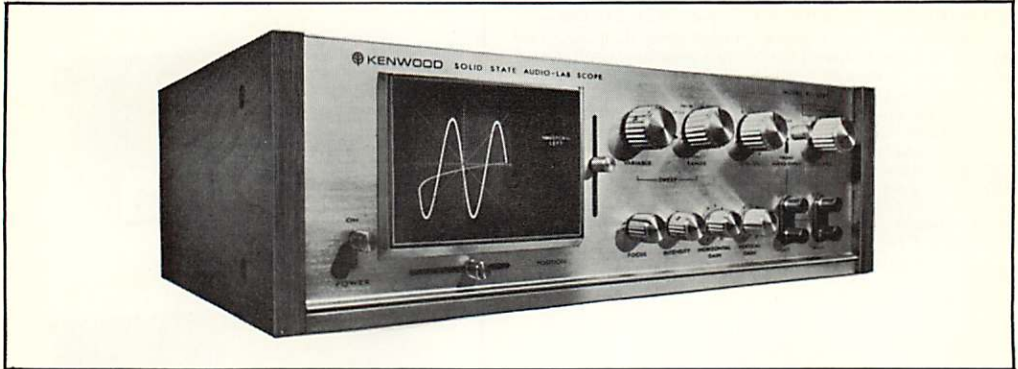


2844



KENWOOD

**AUDIO LAB/SCOPE,
AUDIO DE-NOISER**



**KENWOOD KC-6060A
Solid State Audio/Lab Scope**

A truly professional test instrument that incorporates many outstanding features, such as a large oscilloscope and an oscillator. **YOU CAN TEST** incoming signals for precise tuning and strength of broadcast signal. Performance of FM tuner for minimum multipath and distortion. Correct antenna orientation for minimum multipath distortion and station modulation. Stereo separation from FM broadcast, record play and stereo tape play. Audio amplifier sensitivity, distortion, output voltage and frequency response.

SPECIFICATIONS:

VERTICAL AMPLIFIER: Sensitivity: 25 mV p-p/cm (63 mV p-p/inch) at front panel input. 250 mV p-p/cm (630 mV p-p/inch) at rear panel input. **Frequency Response:** 3 Hz to 200 kHz -3 dB or less. **Input Impedance:** 250 kohms. **Input Capacity:** less than 40 pF at front

panel input; less than 60 pF at rear panel input. **HORIZONTAL AMPLIFIER: Sensitivity:** 25 mV p-p/cm (63 mV p-p/inch) at front panel input. 250 mV p-p/cm (630 mV p-p/inch) at rear panel input. **Frequency Response:** 3 Hz to 200 kHz -3 dB or less. **Input Impedance:** 250 kohms. **Input Capacity:** less than 40 pF at front panel input; less than 60 pF at rear panel input. **Special Circuit:** "Spot Killer" Circuit. **SWEEP GENERATOR: Sweep Frequency:** 10 Hz to 100 kHz in four step. **Synchronization:** Internal (-). **OSCILLATOR: Frequency:** 1,000 Hz \pm 10%. **Output Voltage:** Max. 1 V RMS. **Calibration (TEST):** 0.1 V p-p \pm 5%. **INPUT & OUTPUT:** Audio Input (Left & Right), front & rear. Multipath (V & H). Oscillator Output. **SELECTOR SWITCH:** Test, Wave Form (Left & Right), Stereo Display & FM Multipath. **Dimensions:** 16 $\frac{1}{16}$ " W, 5 $\frac{3}{32}$ " H, 11 $\frac{1}{32}$ " D.

Net Each \$224.95 including cabinet



**KENWOOD MODEL KF-8011
Solid State Audio Denoiser**

MINUTE DENOISING The KF-8011 decreases the noises between 3kHz and 15kHz, which affects most badly on the sound performance, by 6~10 dB. The built-in Frequency Selector enables to pick up the particular frequency range in order to denoise precisely. **NOISE LEVEL ADJUSTOR** The KF-8011 features a pair of large Level Meters and 10-step type Level Adjustor for setting and monitoring the suitable level point of program sources. In addition, the volume of cutoff noises can be controlled by the Noise Level Adjustor. **SUFFICIENT INPUT JACKS** As the Denoiser is to be connected to the REC/PLAY terminals of an amplifier, KF-8011 has the complete input & output jacks for tape decks including DIN connector. It also has 4 pairs of input jacks and by the Input Selector on the front panel 4 sources are switchable. **CHECK SYSTEM FOR DENOISING CONDITION** The built-in Defeat Switch permits to check the denoising condition - what frequency range is to be denoised, how much the S/N ratio has been improved, etc. **AUTOMATIC CIRCUIT SWITCHING** The Denoiser is to be inserted to the input side when making refined recording, and to the output side when enjoying refined playback.

SPECIFICATIONS:

Frequency Response: 10 Hz-80 kHz \pm 0.5 dB. **Noise Blocking Characteristics:** (0 dB = 1 V, at 3.5-12 kHz) **Noise Blocking Amount (S/N Improving ratio) at Input Level:** 0 dB at 0 dB, 0 dB at -30 dB, 2 dB at -40 dB, 10 dB at -45 dB, 15 dB at -50 dB. **Noise Blocking Filter Frequency Response:** 3 ~ 4.5 kHz -8 dB (1 kHz = 0 dB), 4.5 ~ 6.5 kHz -8 dB (1 kHz = 0 dB), 6.5 ~ 10 kHz -8 dB (1 kHz = 0 dB), 10 ~ 15 kHz -8 dB (1 kHz = 0 dB), (-20 dB at following points: 3.5 kHz, 5.5 kHz, 8 kHz, 12 kHz). **Gain:** 0 dB \pm 1 dB. **Maximum Input:** 8 V at LEVEL control "0" position. **Distortion:** Less than 0.09% (5.5 kHz, 1V input). **Input Impedance:** More than 50 k ohms. **Output Impedance:** 1 k ohms. **Level Difference of Counter-Channel:** Within \pm 1 dB (1 kHz). **S/N Ratio:** Better than 75 dB (1 kHz, 0 dB = 1 V). **Channel Separation:** Better than 55 dB. **Input and Output Terminals:** INPUT x 4; OUTPUT x 2; TAPE PLAY, TAPE REC; TAPE DIN x 1. **Switches and Controls:** Tape Monitor Switch, Large VU Meter, De-Noise Position Selector, Filter Defeat Switch, Level Control, Noise Level Control, Through Switch. **Dimensions:** 16 $\frac{1}{16}$ (W) x 5 $\frac{3}{32}$ (H) x 11 $\frac{1}{32}$ (D) inches.

Net Each \$219.95



SQD-2000

SQR-6650

ST-5150

TA-1150

STC-7000

NEW SONY FULL LOGIC SQ DECODER MODEL SQD-2000

The SQD-2000 is designed for use in the conversion of existing stereo systems to four-channel operation, as well as for use in quadraphonic systems built from the ground up. It is the first full-logic version of the SQ stereo/quadraphonic decoder, combining both "front-back" and "wave-form comparator" logic circuits for interchannel separation monitoring and control. Complete volume-balancing and rear-channel bass and treble control facilities built into the SQA-2000 allow its use with stereophonic basic amplifiers to power the rear speakers, instead of more expensive integrated amplifiers which have their own controls. The balancing facilities include individual channel VU meters, clustered in a logical, easy-to-read square, and individual-channel level set controls conveniently adjacent to the meters. High-level and low-level output jacks are provided to accommodate all available power amplifiers. The SQD-2000's full range of operating modes includes stereo operation, quadraphonic ambient enhancement of stereo broadcasts and recordings, full-logic decoding of SQ recordings and broadcasts, and four-channel from tape or other sources. Other controls allow the front or rear channels to be interchanged from side to side, and allow the entire sound field to be rotated 180°, making either end of the room the "front", as desired.

Net Each \$299.50

NEW, INTEGRATED SOLID-STATE AMPLIFIER AND TUNER MODELS ST-5150 FM STEREO/FM-AM TUNER, AND THE TA-1150

The TA-1150 is the first stereo integrated amplifier designed for the four-channel era. The TA-1150 switches from mono to stereo and true 4-channel sound. It has built-in circuitry and switching specifically designed for an SQ, 4-channel converter or converters for any of the other quadraphonic disc systems. All four channels can be controlled with the TA-1150's master volume control. The TA-1150's bass and treble controls can be used to select not only the degree of tonal correction desired, but the frequency at which that correction takes effect. The TA-1150's preamplifier can be disconnected from the power amplifier's section, to insert electronic crossovers or equalizers. The 5150 has all the essential features to make it a deluxe tuner — multi-path scope outputs, AFC and muting that are positive, but not too sharp, two-meter tuning, a high blend switch, automatic stereo/mono switching and 75 ohm coax connectors.

Both Components — Net Each \$229.50

SPECIFICATIONS SONY ST-5150 FM Stereo/FM-AM Tuner

FM: Sensitivity: 2.0 μ V (IHF). **Selectivity:** 70dB (IHF). **S/N ratio:** 70dB. **Harmonic distortion:** Mono 0.3% at 400Hz, 100% modulation, Stereo 0.5% at 400Hz, 100% modulation. **Stereo Separation:** Better than 40dB at 400Hz. **AM: Sensitivity:** 50dB/m built-in antenna, 30 μ V external antenna. **Image rejection:** 45dB at 600Hz. **Harmonic distortion:** 0.6%. **Dimensions:** 15 $\frac{3}{4}$ " (W) x 5 $\frac{1}{8}$ " (H) x 13 $\frac{1}{16}$ " (D). **Weight:** 15 lb. 5 oz.

SPECIFICATIONS SONY TA-1150 Integrated Stereo Amplifier:

Dynamic power output: 100 watts/8 ohms, 150 watts/4 ohms. **Continuous RMS power output:** 30 + 30 watts/8 ohms at 20-20,000 Hz (both channels driver simultaneously.) **Harmonic distortion:** less than 0.2% at rated power output, less than 0.1% at 1 watt output. **IM distortion:** less than 0.2% at rated power output, less than 0.05% at 10 watt output. **Dimensions:** 15 $\frac{3}{4}$ " (W) x 15 $\frac{3}{16}$ " (H) x 12 $\frac{7}{16}$ " (D). **Weight:** 18 lbs. 5 oz. (net).

NEW UNIVERSAL RECEIVER FOR FOUR CHANNEL AND STEREO MODEL SQR-6650

This FM stereo/FM-AM receiver has two built-in decoding circuits: one for SQ, the most widely adopted 4-channel record system; and one for all the other matrix systems on the market. It can provide derived four-channel from stereo broadcasts and recordings. Its four-channel quadraphonic amplifier delivers 32 watts of total continuous RMS output power into 8 ohms. In stereo operation, it employs Sony's unique double-stacked differential circuitry. A switch turns the unit into a powerful, 50 watt stereo amplifier (25+25W RMS). A direct coupling circuit eliminates the coupling capacitor between the speakers and the amplifier for maximum transfer of power. The Sony SQR-6650 has four illuminated VU meters. In the four-channel mode all four light up; in stereo, two light up. The VU meters make it easy for the user to balance the system during listening. Tuner performance is excellent with impressive specifications as 2.2 μ V sensitivity, 70dB selectivity. The preamp section has all the controls needed for stereo, 4-channel and even monophonic use: hi filters, loudness compensation, independent bass and treble controls for front and back.

Net Each \$329.50

NEW TUNER/PREAMP DESIGNED FOR AUDIOPHILE MODEL STC-7000

Tuner facilities include switchable high-blend and muting, signal-input and center-channel tuning meters, a long, linear-spaced dial, rear-panel oscilloscope-output jacks to help orient the antenna for minimum multipath. Coaxial connector for a 75-ohm shielded antenna lead.

SPECIFICATIONS SONY STC-7000 FM Stereo/FM-AM Tuner/Preamplifier

FM: Sensitivity: 1.7 μ V (IHF). **Selectivity:** 100dB. **S/N ratio:** 70dB. **Harmonic distortion:** Mono 0.3% at 400Hz, 100% modulation, Stereo 0.5% at 400Hz, 100% modulation. **Stereo Separation:** Better than 40dB at 400Hz. **AM: Sensitivity:** 53dB/m built-in antenna, 30 μ V external antenna. **Image rejection:** 45dB at 600Hz. **Harmonic distortion:** 0.8%. **Preamplifier: Harmonic distortion:** 0.1% at rated output. **IM distortion:** 0.1% at rated output. **Frequency response:** 10Hz-100K Hz \pm 2 dB. **Dimensions:** 18 $\frac{3}{4}$ " (W) x 5 $\frac{3}{8}$ " (H) x 13 $\frac{3}{16}$ " (D) inch. 480 (W) x 149 (H) x 340 (D) mm. **Weight:** 22 lbs. 11 oz. (net).

Net Each \$549.50

Electro-Voice® HIGH FIDELITY COMPONENTS

EV STEREO-4™

FOUR-CHANNEL PRODUCTS

EVR 4X4 FOUR-CHANNEL AM/FM RECEIVER

Features: Linear tuning dial. Tuning meter for accurate station selection. Stereo light indicates when you are tuned to a station broadcasting stereo or four-channel. FM muting for quiet interstation tuning. Connections and switching for two complete sets of four-channel speakers. Built in AM antenna. **Inputs:** magnetic phono; two or four-channel tape; auxiliary. **Outputs:** 4 main and 4 remote speakers; stereo tape; front and back stereo headphone jacks on front panel; switched a.c. outlet. **Controls:** selector switch; master volume (all four channels) and on/off switch; front bass; back bass; front treble; back treble; front-back balance; left-right balance; tuning. **Switches:** (finger-tip) decode on/off; tape monitor; mono/stereo; loudness on/off; main/remote speakers; FM muting on/off (rear panel).

Specifications:

Output: Total IHF into 8 ohms, 70 watts. Total RMS into 8 ohms, 40 watts. **Response:** (1 watt) 20 to 20,000 Hz ± 1 dB. **Power Bandwidth:** 20 to 20,000 Hz. **Total Harmonic Distortion:** (to full rated output) less than 1%. **Hum and Noise:** Phono, better than -54 db. Tape and Aux., -70 dB. **FM Tuner Sensitivity, IHF:** 2.5 μ V. **Harmonic Distortion,** (1 kHz, 100% mod.) less than 0.5%. **Signal-To-Noise Ratio,** 65 db. **Capture Ratio:** 3 dB. **Channel Separation, tuner:** 30 dB. **AM Sensitivity:** 150 μ V/Meter. **Dimensions:** 4 $\frac{3}{4}$ " h., 16 $\frac{1}{4}$ " w., 11" d. (AM antenna adds 2 $\frac{1}{2}$ " at rear, extended). **Weight:** 17 lbs.

Net Each \$249.95



EVR 4x4



EVX-44 UNIVERSAL FOUR-CHANNEL DECODER

Features: Full four-gang master volume control operates on all four channels no matter what input source is selected, including tape. Input provisions for both two-channel and four-channel tape recorder or other "discrete" source. Any source can be played "straight through" or decoded, making possible direct comparison switching of discrete and decoded sound. Separation enhancement circuit operated either automatically or can be switched off or on full time. **Inputs:** Two channel source (amplifier or receiver); Two-channel tape; Four-channel tape (or aux.). **Outputs:** Four channels (to amplifiers); Stereo tape. **Controls:** Four-channel master volume and on/off switch; Source switch (source, tape 2, tape 4); Function switch (discrete, decode with enhancement, on, auto, or off).

Specifications:

Response: 20 to 20,000 Hz ± 1 dB. **Total Harmonic Distortion** ($\frac{1}{2}$ V input): 0.1%. **Intermodulation Distortion** ($\frac{1}{2}$ V input): 0.2%. **Signal-to-Noise Ratio:** better than 70 dB below $\frac{1}{2}$ V. **Gain:** Unity at max volume setting. **Maximum Input:** Signal: 4V RMS. **Dimensions:** 2 $\frac{3}{4}$ " h., 8" w., 7" d. **Weight:** 3 lbs. **Net Each \$99.95**

EVX-4 STANDARD FOUR-CHANNEL DECODER

Features: All transistor circuitry. Unity gain at maximum control setting. Overall system volume (all four channels) controlled by Decoder Gain control. **Inputs:** two channel source; stereo tape. **Outputs:** four channel outputs to amplifier; stereo tape. **Controls:** master gain; function switch (source decode, tape decode, tape mon.).

Specifications:

Response: 10 to 100,000 Hz +0 -0.5 dB. **Total Harmonic Distortion:** less than 0.15%. **Signal to Noise Ratio:** greater than 70 dB, wideband. **Maximum Input Signal:** 2 $\frac{1}{2}$ V rms. **Dimensions:** 2 $\frac{1}{2}$ " h., 5 $\frac{3}{16}$ " w., 7 $\frac{1}{4}$ " d. **Weight:** 2 lbs. **Net Each \$59.95**

E-V 1244X 2-CHANNEL DECODER/AMPLIFIER FOR ADD ON 4-CHANNEL

Features: Program lights on front panel indicate input source. All connections made

to recessed terminal panel under rear of chassis allowing flush-rear positioning of unit; cables and plugs are neat and out of sight. Color dot on volume control indicates power switch for "one knob" operation. May be used as "front" or "rear" amplifier in four-channel system. Design matched to E-V 1244 amplifier and E-V 1255 tuner for companion use. UL approved. **Inputs:** magnetic phono; tuner; tape; auxiliary. **Outputs:** stereo line (to other amp); stereo speakers; stereo tape; front panel stereo headphone jack; one switched a.c. outlet. **Controls:** volume with on/off switch; balance with mono switch; selector; bass; treble. **Switches:** (finger-tip) decode on/off; loudness on/off; speaker mute; mono/stereo; tape monitor; front/back.

Specifications:

Output: Music-Power ± 1 dB, 80 watts. Total IHF at 4 ohms, 65 watts. Total IHF at 8 ohms, 50 watts. Total RMS, 36 watts. **Response:** at full output, 20 to 20,000 Hz ± 1.5 dB; at one watt, 20 to 30,000 Hz ± 1.5 dB. **Total Harmonic Distortion:** (to full rated output) 1%. **Hum and Noise:** Phono, -60 dB. Tape and Aux., -70 dB. **Channel Separation at 1000 Hz:** 40 dB. **Dimensions:** 3 $\frac{3}{8}$ " h., 8 $\frac{3}{8}$ " w., 10 $\frac{1}{4}$ " d. **Weight:** 9 $\frac{1}{4}$ lbs. **Net Each \$165.00**

SPEAKER SYSTEMS

E-V NINE • A

The E-V NINE • A is a speaker system of outstanding value, providing the performance of much larger systems. A series of subtle refinements in materials, engineering knowledge, and production techniques over the past decade has resulted in dramatic improvement of sound quality. Now this acoustic suspension bookshelf enclosure provides thrillingly lifelike sound with any type of music. This speaker is higher in efficiency than many sealed systems, requiring less amplifier power for realistic sound levels. Excellent transient response. Handsome oiled walnut veneer cabinet finished on all sides. Styled with a contemporary embossed grille panel clad in jet black modern stretch fabric.

Features: Ten-inch woofer with sealed foam half-roll surround provides stable suspension, allows long linear movement. Five-inch midrange cone designed specifically to reproduce less than two octaves precisely and efficiently. Clean and clear reproduction of the important "presence" range which contributes so much to the life and vibrancy of music. Special 2 $\frac{1}{2}$ -inch cone tweeter provides wide dispersion to upper limits of audibility. Deluxe LCR crossover controls input to each driver. Tweeter level control enables matching to room acoustics or personal taste.

Specifications:

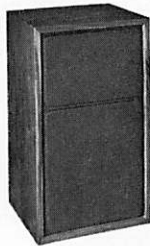
Response: 40 to 20,000 Hz. **Power Handling Capacity:** 60 watts peak. **Nominal Impedance:** 8 ohms. **Crossover Points:** 700 and 3000 Hz. **Dimensions:** 13 $\frac{1}{2}$ " x 24", 11 $\frac{3}{4}$ " d. **Weight:** 29 lbs. **Net Each \$165.00**

E-V SEVEN • C

Features: Component quality eight-inch woofer has Alnico V magnet, precision-wound voice coil and linear suspension for long, but carefully controlled, movement necessary for deep bass tones. 2 $\frac{1}{2}$ -inch cone-type tweeter uses unique symmetrical cone damping providing exceptionally smooth treble response. Excellent high-frequency dispersion. Two-way electrical crossover gives smooth transition between drivers. Continuously-variable tweeter level control allows you to match room acoustics or personal taste.

Specifications:

Response: 50 to 18,000 Hz. **Power Handling Capacity:** 60 watts peak. **Nominal Impedance:** 8 ohms. **Crossover Point:** 1500 Hz. **Dimensions:** 10" x 19", 8 $\frac{1}{2}$ " d. **Weight:** 14 lbs. **Net Each \$72.00**



E-V9A



E-V7C

Electro-Voice® HIGH FIDELITY COMPONENTS

EVR-1 90-WATT AM/FM STEREO RECEIVER

Many important features clearly mark this receiver as a top value. All silicon solid-state circuitry built on modular, etched-circuit boards assures long-term reliability and maintenance of original specifications. Outstanding FM tuner performance is achieved by coupling a sensitive FET (field effect transistor) front end to a highly sophisticated, low distortion IF section. Two ceramic filters plus two integrated circuits in the IF section offer superb selectivity, excellent interference rejection, and low distortion. An additional IC in the AM section greatly improves standard broadcast performance. A fourth IC in the multiplex section provides outstanding stereo separation and reduces distortion to insignificant levels. The preamplifier/tone control section is of extremely wide-range, low-distortion design. The powerful output section utilizes the latest silicon power transistors for dependability and is completely protected against accidental short circuits. Features include a center-tune FM meter, flywheel-weighted tuning action, built-in FM antenna plus 75- and 300-ohm terminals, built-in AM antenna and external terminal, tape output jacks, connections and switching for two sets of stereo speakers, headphone jack, switched AC outlet, 4-position input selector, stereo/mono switch, stereo signal, switchable loudness compensation, balance control, and separate bass and treble controls. **Net Each \$299.95**



EVR-2 140 WATT AM/FM STEREO RECEIVER

Here's a receiver loaded with features and topnotch specifications. Full tape monitor facilities with input and output connections on both front and rear panels together with front-panel pushbutton switch. FM muting circuitry with front-panel on/off switch eliminates between-station noise. Separate speaker selector pushbuttons for main and remote speaker operation. The power output section includes special thermal sensor circuitry together with fast acting fuses for a new standard in high-power dependability. Separate colored lights indicate at a glance the input selected for listening on the selector switch. The front-panel tape in/out jack is a special convenience which will be appreciated by those who wish to make temporary connections to a tape recorder without using the rear-panel connections. It is especially helpful for occasional dubbing of FM broadcasts off the air. The receiver's elegant extruded aluminum front panel, finished in two-tone brushed gold color, is complemented by the matching walnut-grain all wood enclosure supplied at no additional cost. **Net Each \$229.95**



EVR-3 250 WATT AM/FM STEREO RECEIVER

Provides flawless reception of AM, FM, and FM stereo broadcasts together with the finest possible reproduction of phonograph records and tape recordings. This remarkable receiver establishes standards for others to follow. A full 250 watts of virtually undistorted power are available for even the most elaborate stereo system. A total of eight, rather than the usual four, output transistors together with a massive, oversized heat sink for the ultimate in power and dependability. A second tuning meter shows relative strength of FM broadcast signals. Highly useful for precise tuning plus orienting rotatable antennas for best signal. High-filter switch for attenuating very high frequency sounds. Useful in making weak, distant broadcast stations more listenable or to reduce annoying surface noise of older recordings. High-blend switch increases enjoyment of broadcasts from weak or distant FM stations by cancelling stereo separation at high frequencies. Styling of all models, by a noted industrial designer, features a brushed gold color aluminum extrusion with contrasting metallic insert panel. Gold color caps on the rotary control knobs and finger-contoured pushbuttons complete the design. A walnut-grain wood enclosure is standard. **Net Price \$349.95**



SPEAKER SYSTEMS

E-V16 12" 3-WAY

Performance in a shelf-size system equal to many floor-standing systems. From the thundering power of an organ pedal note to delicate musical overtones, nothing is lost, nothing added to affect your listening pleasure. A 12-inch high-compliance, low-resonance woofer features a molded foam surround for distortion-free bass. Midrange performance from the separate five-inch speaker is tailored for cleanest possible sound in the area where the ear is most sensitive. A small, shallow-profile tweeter cone extends high-frequency response and disperses highs more widely than do larger cones. Continuously variable level control for tweeter allows adjustment of highs to match your room acoustics. Selected walnut veneers grace the enclosure. All joints are glued airtight, and panels are veneered on both sides to eliminate the possibility of warpage. **Response: 30 to 20,000 Hz. Crossover Frequencies: 700 and 3000 Hz. Impedance: 8 Ohms. Power Handling Capacity: 70 Watts Peak. Dimensions: 14½" x 25", 13¼" Deep.**

Net Each \$149.95



E-V16

E-V15 10" 3-WAY

The E-V 15 is evidence that acoustic suspension speaker design has advanced to a new state. The full range of all musical instruments is reproduced flawlessly for your listening pleasure. The 10-inch woofer in this superb speaker system has an extremely low free-air resonance for deep, rich bass. A newly developed molded foam surround maintains precise alignment of the cone. A five-inch midrange speaker precisely and efficiently reproduces the vital "presence" range. A special 2¼" cone tweeter provides sparkle and brilliance to the limits of audibility with wide dispersion. Continuously variable level control for the tweeter allows adjustment of highs to match your room acoustics. All four sides of the E-V 15 are finished in genuine oiled walnut veneer. The system is rigid and tight. A rich dark brown grille cloth complements the finish. **Response: 40 to 20,000 Hz. Crossover Frequencies: 700 and 3000 Hz. Impedance: 8 Ohms. Power Handling Capacity: 70 Watts Peak. Dimensions: 13½" x 24", 11¼" Deep.**

Net Each \$129.95

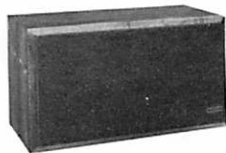


E-V15

E-V14 10" 2-WAY

Full orchestral response in a beautiful walnut veneer enclosure. The ten-inch acoustic suspension woofer employs a molded foam surround for long, linear excursions, thus reducing distortion. Independent 2½-inch tweeter takes over at 1500 Hz, providing clean, pure highs throughout the listening area. Continuously variable level control for tweeter allows adjustment of highs to match your room acoustics. Constructed of a special high-density core stock, the enclosure complements the acoustic performance of the speakers. Genuine walnut veneer exterior, carefully finished on all four sides, is enhanced by the rich, dark grille cloth. **Response: 40 to 18,000 Hz. Crossover Frequency: 1500 Hz. Impedance: 8 Ohms. Power Handling Capacity: 70 Watts Peak. Dimensions: 13½" x 24", 11¼" Deep.**

Net Each \$99.95

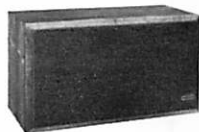


E-V14

E-V13 8" 2-WAY

Smallest of the acoustic suspension systems in this series — delivers outstanding bass for a system of diminutive size. The sealed cabinet and low-resonance 8-inch woofer are correctly matched to extend low-frequency performance with low distortion. A two-way design with separate 2½-inch tweeter divides the audible spectrum, further reducing distortion and improving high-frequency dispersion. Continuously variable level control for tweeter allows adjustment of highs to match your room acoustics. The enclosure is constructed of high-density panels permanently laminated to a quality vinyl covering which resists household wear and tear. The handsome walnut grain finish is set off by a decorator grille cloth. **Response: 50 to 18,000 Hz. Crossover Frequency: 1500 Hz. Impedance: 8 Ohms. Power Handling Capacity: 70 Watts Peak. Dimensions: 10" x 19", 8½" Deep.**

Net Each \$59.95



E-V13

Garrard® AUTOMATIC TURNTABLES

SYNCHRONOUSLY POWERED FOR ABSOLUTE DEPENDABILITY



TOP QUALITY AUTOMATIC MODEL SL95B. SAVE \$44.95.

This brilliantly designed automatic transcription turntable will satisfy the most demanding hi-fi listener. It incorporates every feature for superb reproduction and flawless record play. Incorporates the famous Garrard Synchro-Lab motor for silent, synchronous tracking speed. The ultra-low mass tonearm floats on needle pivots within a gimbaled mounting; the cueing/pausing mechanism is viscous damped to protect the stylus. Includes adjustable counterweight. Has precision sliding weight antiskating control, and stylus pressure adjustment dial. The SL95B plays up to six records automatically, from support platform which assures extra-gentle record handling. Also has manual play. Handles 33 $\frac{1}{3}$, 45, or 78 rpm records. Rotating center spindle; full-size platter. 15 $\frac{5}{16}$ " x 14 $\frac{1}{8}$ "; requires 4 $\frac{3}{8}$ " above, 2 $\frac{15}{16}$ " below mounting board. Save with our special cartridge offer — only \$5.00 more when you purchase with cartridge! Less base and dust cover (see listing below). AC. Shpg. wt., 13 lbs.

SL95B. SL95B less cartridge.

Net Each \$149.95



OUTSTANDING TURNTABLE VALUES MODEL SL72B. SAVE \$44.95.

This moderately-priced turntable includes many professional features generally found only in the more expensive automatic turntables. Incorporates the famous Garrard Synchro-Lab exact-speed motor for flawless performance. The ultra-low mass pickup arm floats within a special gimbaled mounting. Has adjustable counterweight for perfect record tracking; with sliding weight antiskating control. Provides viscous-damped tonearm descent, plus damped cueing and pause control to ensure record and stylus protection. Unique platform design provides two-point record support for maximum gentleness. Plays up to six records automatically at 33 $\frac{1}{3}$, 45, or 78 rpm, or manual play. Size: 15 $\frac{5}{16}$ " x 14 $\frac{1}{8}$ "; requires 4 $\frac{3}{8}$ " above, 2 $\frac{15}{16}$ " below mounting board. Save more with special cartridge offer. A truly great value in a deluxe, feature-packed automatic turntable. Less base and dustcover (see below). Shpg. wt., 13 lbs.

SL72B. SL72B less cartridge

Net Each \$109.95

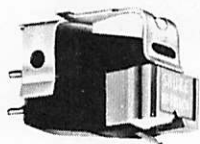


MODEL SL65B. SAVE \$44.95.

Deluxe 3-speed model. Dynamically balanced tubular tonearm with resiliently-mounted counterweight; tracking as low as $\frac{1}{2}$ gram; precision stylus pressure adjustment; antiskate; manual cueing and pause control lever; exclusive Synchro-Lab motor; balanced oversized turntable. Plays up to six records automatically or operates manually. Speeds: 16 $\frac{2}{3}$, 33 $\frac{1}{3}$, 45 and 78 rpm; automatic intermix operation. 15 x 13 $\frac{1}{8}$ "; requires 4 $\frac{3}{4}$ " above, 3" below mounting board. AC. Less base and dust cover (see below). Shpg. wt., 13 lbs.

SL65B. SL65B less cartridge

Net Each \$84.95

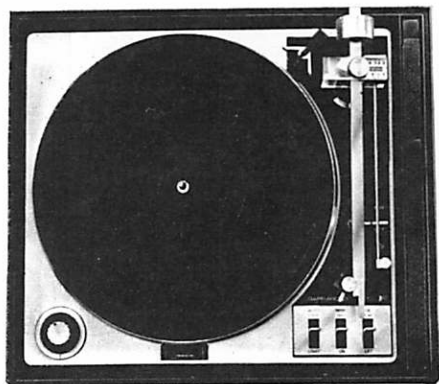


only \$5 more
SHURE M91E
Reg. 49.95

All Garrard Products Available From Audio — Order or Ask for Price

Garrard[®] AUTOMATIC TURNTABLES

Newest "Zero 100" —
The Ultimate in 2-Speed
Automatic Turntables
PERFECT TRACKING ON
ANY RECORD



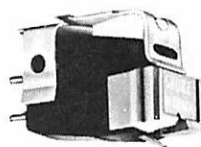
- Amazing "Zero" tracking error over entire record surface
- Minimal friction — as low as that of any separate tonearm
- Perfect 15° stylus-tracking adjustment lever.

MODEL 100 "ZERO 100"

Here is a truly revolutionary advance in record-playing equipment. It is the result of a remarkable breakthrough in tonearm design combined with other advances to make possible flawless record reproduction. In the "Zero 100" the cartridge housing is pivoted directly above the stylus tip, and the pivoting is controlled by a parallel articulating arm for true tangent tracking accuracy over the full record surface. The famous Synchro-Lab motor combines the power of an induction motor with the smoothness of a synchronous motor for absolutely unwavering turntable speed. Includes calibrated sliding weight for setting stylus force; tracks the most sensitive cartridges with precision. Also incorporates magnetic anti-skating control, with separate setting for elliptical and radial styli. Provides automatic or manual play at 33½ or 45 rpm; multiple-play spindle holds up to six records; single-play spindle rotates with record to prevent wear. Features ±3% variable pitch speed control for "tuning" records to synchronize with tape recorder or musical instruments. An unusual built-in feature is an illuminated prismatic stroboscope for continuous monitoring of speed settings. Has 15° vertical tracking adjustment for both manual and automatic play. With viscous-damped cueing and pause control. Exclusive built-in dust and lint remover automatically cleans record grooves ahead of stylus. Safety stop prevents tonearm descent onto plate. Full-sized 12" platter; safety platform for gentle 2-point record support. 15½ x 14¼"; requires 4⅜" above, 2½" below mounting board. Less base and dust cover. AC. Shpg. wt., 14 lbs.

100. "Zero 100" less cartridge

Net Each \$199.95



ONLY \$5 MORE
SHURE M91E
REG. 49.95

DELUXE ELLIPTICAL CARTRIDGE

ACCESSORIES

B2 Base. Single-unit, handsome plastic base for Garrard SL95B, SL72B, and Zero 100 units. Ebony pin-seal and silver highlights with walnut inset. With drawer slide mounting provision.

B2. Shpg. wt., 6 lbs.

Net Each \$6.95

B1. For Model SL65B

Net Each \$5.95

D2 Dust Covers. Molded of styrene. Practical and handsome. Shpg. wt., 5 lbs.

D2. For Models SL95B, SL72B, Zero 100

Net Each \$6.95

D1. For Model SL65B

Net Each \$5.95

Get Our Money-Saving Price on a Hi-Fi System With Components of Your Choice

COURTEOUS CONSULTATION / ENGINEERING SERVICE / COMPLETE PARTS SUPPLY / ACCESSORIES

**DUAL MODEL 1229****Auto/Professional Turntable**

With the new 1229, Dual has engineered the "no compromise" state of the automatic turntable. **Net Each \$199.50**

FEATURES:

Mode selector: Provides perfect vertical tracking in single play mode by lowering entire tonearm base so that it is parallel to the record. **Twin-ring gimbal suspension:** Tonearm centered within axis of each ring. Pivots vertically from inner ring and horizontally from outer ring. **7 lb. 12" dynamically balanced cast platter. Illuminated stroboscope:** Uniquely designed to provide clear wide-angle viewing. **Cue control:** Damped in both directions. **Pitch control:** 6% variation, no effect on motor speed or power. Compensates for off-pitch records, tunes record to live instruments. **Power synchronous/hi-torque motor:** Combines high starting torque with absolute speed constancy of synchronous element. **Conical/elliptical anti-skating:** Separately calibrated dials for conical and elliptical styli. **Rotating single-play spindle:** Provides superior concentricity, eliminates possibility of record-hole wear. Adjustable stylus overhang. Direct-dial stylus force. Multi-play spindle holds up to 6 records. Jamproof tonearm. Top/mount spring screws. Dimensions: W x D — 14 $\frac{3}{4}$ " x 12". Required clearance above: 5". Required clearance below: 3". Weight: 19 lbs.

**DUAL MODEL 1218****Auto/Professional Turntable**

The Dual 1218 is the most popular Dual ever made. It offers a wide range of design and operating features, many of them exclusive with Dual. **Net Each \$155.50**

FEATURES:

Twin-ring gimbal suspension: Tonearm centered within axis of each ring; pivots vertically from inner ring, pivots horizontally from outer ring. **Synchronous/hi-torque motor:** Combines high starting torque with absolute speed constancy of synchronous element. **One piece cast platter:** Non-ferrous, weighs four pounds. **Pitch-control:** 6% variation, no effect on motor speed or power. Compensates for off-pitch records, tunes record to live instruments. **Mode Selector:** Provides perfect vertical tracking in single-play mode and at center of stack in multiple-play mode. Simple, foolproof setting made with cartridge holder. **Conical/elliptical anti-skating:** Separately calibrated dials for conical and elliptical styli. **Rotating single-play spindle:** Provides superior concentricity, eliminates possibility of record-hole wear. **Damped cue-control:** Provides ultra-slow descent and ascent in automatic and manual starts. **Damped counterbalance:** Elastically isolated from tonearm shaft. Click-stops simplify balancing. Adjustable stylus overhang. Direct-dial stylus force. Multiple-play spindle holds up to 6 records. Jamproof tonearm. Top/mount spring screws. Dimensions: 13" x 10 $\frac{3}{4}$ ". Weight: 14 lbs.

**DUAL MODEL 1215S****3 Speed Auto/Standard Turntable**

The Dual 1215S offers precise engineering, features and reliability that hi-fi professionals insist on at a modest price. **Net Each \$109.50**

FEATURES:

Low-mass tubular tonearm: Tracks flawlessly as low as one gram. **Conical/elliptical anti-skating:** Separately calibrated scales for conical and elliptical styli. **Pitch control:** 6% variation compensates for off-pitch records and tunes record to live instruments. **Damped cue-control:** Provides ultra-slow descent in automatic and manual modes. Adjustable stylus overhang. Direct-dial stylus force. Multiple-play spindle holds up to 6 records. 3 $\frac{3}{4}$ lb. laminated platter. Dimensions: W x D — 13" x 1 $\frac{3}{4}$ ". Required clearance above: 5". Required clearance below: 2 $\frac{5}{8}$ ". Weight: 13 lbs.

BASES

WB-12 — For 1215S and 1218

WB-19 — For 1229

WB-19X — For 1229

DUST COVERS

DC-4 — For WB-12

DC-9 — For WB-19 and WB-19X

DC-9X — For WB-19 and WB-19X

COMBINATIONS — BASE AND DUST COVER

DCB-5 — For 1215S and 1218

DCB-6 — For 1229

Net Each \$10.95

Net Each \$14.95

Net Each \$29.95

Net Each \$12.95

Net Each \$14.95

Net Each \$29.95

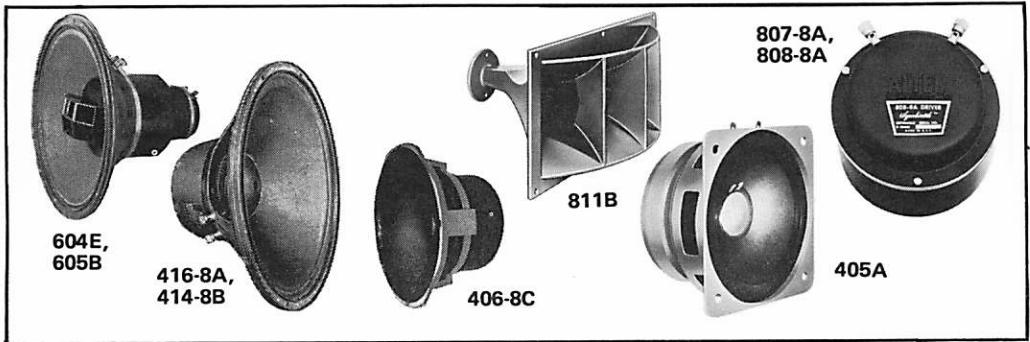
Net Each \$39.95

Net Each \$39.95

ACCESSORIES

CH-12 — Cartridge Holder for 1215S, 1218, 1229

CH-22 — Cartridge Holder for 1218 **Net Each \$3.95**AS-12 — 45 RPM Automatic Spindle for 1200 Series **Net Each \$9.95**AW-3 — 33 $\frac{1}{3}$ RPM Automatic Spindle for 1200 Series **Net Each \$6.95**MS-1 — Single Play Manual Spindle for 1215S **Net Each \$7.70**RS-1 — Single Play Rotating Manual Spindle for 1218 and 1229 **Net Each \$1.95**



DUPLEX® LOUDSPEAKERS

Fine coaxial speakers, combining two speakers mounted on a single frame for compactness, point source relation and simplified installation. Permanent viscous compliance camming on bass cone prevents standing waves; driven by edge-wound, double insulated ribbon bass voice coil with extremely deep magnetic gap for high flux density and efficiency throughout its excursion. Design utilizes a heavy Alnico V ring magnet for bass; an edge-wound aluminum voice coil; and a multi-cellular horn for fatigue-resistant, high frequency compliance. A massive dividing network provides smooth 12 dB per octave attenuation. External variable frequency shelving control permits balancing speaker to room characteristics.

Altec Lansing Model 605B 15" Duplex — Precisely engineered speaker with unusually smooth response in the high frequencies and extremely high linearity in the low frequencies. Imped., 8 or 16 ohms. Power: 35 watts, 50 watts peak. Frequency response, 20-22,000 Hz. Resonance, 25 Hz. Voice coil diameter, 3" (low frequency); 1 3/4" (high frequency). Distribution, 90° horizontal; 40° vertical. Magnet weight, 2 1/4 lbs. (low frequency); 1/2 lb. (high frequency). Size: 15 5/16" dia. x 10" d. Shipping Weight, 36 lbs., including network. **Net Each \$178.00**

Altec Lansing Model 601-8D 12" Duplex — Impedance, 8 ohms. Power: 20 watts; 30 watts peak. Frequency response, 30-22,000 Hz with resonance at 39 Hz. Voice coil dia., 3" low, 3/4" high frequency. Size: 12 1/2" dia. x 5 5/8" d. Shpg. Wt., 18 lbs., including network. **Net Each \$118.00**

SUPER DUPLEX® 15" 604E

Most efficient speaker offered to the home music market. Two-section dividing network; pure midrange; exceptional attack time; distortionless response through entire frequency range. With a dual magnetic structure that weighs 26 lbs., 13 oz. **Frequency Response:** 20-22,000 Hz. **Impedance:** 8 or 16 ohms. **Power:** 35 watts; 50 watts peak. Shpg. Wt., 40 lbs.

Altec Lansing Model 604E 15" Super Duplex **Net Each \$204.00**

FULL RANGE BIFLEX® SPEAKERS

Patented multiple compliance design achieves unusually wide frequency range by allowing a smaller center cone and aluminum dome to operate independently; improves efficiency of high frequency reproduction. Entire cone area functions to reproduce the lower frequencies. **Crossover:** Mechanical, at 1000 Hz through patented mid-cone compliance. **Impedance:** 8 ohms.

Altec Lansing Model 420A 15" Biflex — Frequency response, 25-14,000 Hz. Resonance, 27 Hz. Power rating, 25 watts. Alnico V magnet weighs 10 1/2 lbs. Size, 15 5/16" dia. x 7" d.; cut-out, 13 1/4". Shpg. Wt., 20 lbs. **Net Each \$76.00**

Altec Lansing Model 419-8B 12" Biflex — Frequency response, 30-15,000 Hz. Resonance, 32 Hz. Power rating, 20 watts. Alnico V magnet weighs 9 1/2 lbs. Size, 12 1/8" dia. x 5 5/8" d.; cutout, 10 1/4". Shpg. Wt., 16 lbs. **Net Each \$66.00**

755E "PANCAKE" WIDE-RANGE SPEAKER

High performance, extended range, single voice coil 8" speaker. Ideal for low cost hi-fi systems, as auxiliary speaker for existing hi-fi systems, or as extension speaker in multi-room systems. "Pancake" design provides smooth, wide-angle 90° distribution. Narrow depth permits mounting in limited space locations, even in walls or ceilings. **Frequency Response:** 40-15,000 Hz. **Impedance:** 8 ohms. **Power:** 15 watts. **Resonance:** 52 Hz. Wt., 3.75 lbs. **Altec Lansing Model 755E** **Net Each \$34.00**

405A FULL RANGE MINI-SPEAKER

Only 4" diameter, yet delivers high quality, full-range reproduction for high fidelity applications. Ideal for use in miniature bookshelves, auto-stereo tape systems and other uses requiring extremely small size. **Frequency Response:** 60-15,000 Hz. **Impedance:** 8 ohms. **Power:** 10 watts music power. Size: 4" dia. x 2 1/2" d. Shpg. Wt., 3 lbs. **Altec Lansing Model 405A Mini-Speaker** **Net Each \$12.00**

416-8A 15" WOOFER

The 15" woofer selected for the "Voice of the Theatre®" System. Has edge-wound copper ribbon voice coil. **Frequency Response:** 20-1,600 Hz. **Impedance:** 8 ohms. **Power:** 50 watts. Voice Coil, 3" dia. Size: 15 1/16" dia. x 7" d. Shpg. Wt., 19 lbs.

Altec Lansing Model 416-8A **Net Each \$70.00**

414-8B 12" WOOFER

Similar to 416-8A, but 12" version for use in full-size two-way systems. Exceptional linearity with high compliance, low distortion and high power capacity. **Frequency Response:** 30-4,000 Hz. **Resonance:** 30 Hz. **Impedance:** 8 or 16 ohms. **Power:** 50 watts. **Depth:** 5 3/4". Shpg. Wt., 16 lbs.

Altec Lansing Model 414-8B **Net Each \$61.00**

406-8C 10" WOOFER

Provides highest efficiency and exceptional bass response in small enclosures. May be front or rear mounted. Cast aluminum frame; powerful 9-lb., 7-oz. magnet. **Frequency Response:** 25-4,500 Hz. **Resonance:** 28 Hz. **Power:** 50 watts. **Impedance:** 8 ohms. Size: 10" dia. x 5 1/4" deep; cut-out, 9". Shpg. Wt., 16 lbs.

Altec Lansing Model 406-8C **Net Each \$60.00**

HIGH FREQUENCY DRIVERS AND HORNS

NEW 808-8A HIGH FREQUENCY DRIVER

The finest in high frequency drivers, meets broadcast studio standards. For use with 511B or 811B horns. New aluminum-polyimide Symbiotik™ diaphragm and field coil unit handles high power; temperature and fatigue resistant; replaceable without special tools. Smooth, peak-free response. Has 1.2-lb. magnet with gap flux of 15,250 gauss for 2 dB more efficiency than 807-8A. **Frequency Response:** 500-22,000 Hz. **Impedance:** 8 ohms. **Power:** 50 watts. Used with N501-8A crossover. Size: 4 1/2" dia. x 3 1/16" h. Shpg. Wt., 9 lbs.

Altec Lansing Model 808-8A **Net Each \$81.00**

NEW 807-8A HIGH FREQUENCY DRIVER

Identical to Model 808-8A, but 13-oz. magnet; 13,000 gauss. **Frequency Response:** 800-22,000 Hz. Shpg. Wt., 8 lbs.

Altec Lansing Model 807-8A **Net Each \$69.00**

811B HORN

Cast aluminum sectoral horn, for use with 808-8A or 807-8A drivers. 40° vertical and 90° horizontal distribution pattern. **Frequency Response:** 800 Hz (cut-off) to 22,000 Hz. Must be used with N-801-8A network. Size: 18 3/8" w. x 13 1/2" d. x 8 5/8" h. Shpg. Wt., 11 lbs.

Altec Lansing Model 811B **Net Each \$37.50**

511B HORN

Used with 808-8A or 807-8A drivers and N-501-8A network. **Frequency Response:** 500 Hz (cut-off) to 22,000 Hz. Distribution similar to 811B. Size: 23 5/16" w. x 18 1/2" d. x 10 5/8" h. Shipping Weight, 18 lbs.

Altec Lansing Model 511B **Net Each \$56.00**

DIVIDING NETWORKS

Altec Lansing Model N-801-8A — Dual, full-section, 800 Hz crossover; use with 807-8A driver on 811B horn and single or double 414-8B or 414-8A speakers. Smooth 12 dB/octave slope; variable high frequency shelving control, externally mounted, 1-10 dB. **Impedance:** 8 ohms. Size: 6" w. x 2 5/8" d. x 3 1/4" h. Shpg. Wt., 5 lbs. **Net Each \$56.00**

Altec Lansing Model N-501-8A — 500 Hz crossover for use with 808-8A driver on 511B horn and single or double 808-8A speaker. Four step, high frequency shelving attenuation, 1-10 dB. **Impedance:** 8 ohms. Size: 8" w. x 2 5/8" d. x 5 1/4" h. Shpg. Wt., 8 lbs. **Net Each \$65.00**

Electro-Voice® HI-FI COMPONENT SPEAKERS

8" SPEAKERS

MC8

Small enough to fit anywhere; mounted in wall or cabinet. Radax design provides extended highs and wider dispersion. Response, 50-13,000 Hz. Nominal resonance, 75 Hz. Crossover, 6000 Hz. 24 watts peak. 8 ohms impedance. EIA Sensitivity rating, 46 db. 8 3/4" diameter, 7" baffle opening, 3 3/16" depth behind panel. Net weight 4 lbs. **Net Each \$22.00**



LS8

Response, 45-14,000 Hz. Nominal resonance, 75 Hz. Crossover, 4500 Hz. 40 watts peak. 8 ohms impedance. EIA Sensitivity rating, 43 db. 8 3/4" diameter, 7 1/8" baffle opening, 3 1/2" depth behind panel. Net weight 3 3/4 lbs. **Net Each \$23.95**



SP8B

Response, 35-15,000 Hz. Nominal resonance, 60 Hz. Crossover, 4500 Hz. 40 watts peak. 8 ohms impedance. EIA Sensitivity rating, 47 db. 1 lb., 6 oz. ceramic magnet. 8 3/8" diameter, 7 1/2" baffle opening, 4 3/4" depth behind panel. Net weight 7 lbs. **Net Each \$38.50**



LT8

The unique tweeter employs a ring diaphragm which eliminates breakup distortion common in dome diaphragm designs. Response, 45-18,000 Hz. Nominal resonance, 65 Hz. Crossovers: 2000 Hz mechanical, 5000 Hz electrical. 40 watts peak. 8 ohms impedance. EIA Sensitivity rating, 45 db. 8 1/4" diameter, 7" baffle opening, 3 15/16" depth behind panel. Net weight 6 1/2 lbs. **Net Each \$43.00**



12" SPEAKERS

MC12

Disperses crisp, clear highs and powerful bass, yet is shallow enough for wall mounting. Response, 40-14,000 Hz. Nominal resonance, 60 Hz. 40 watts peak. 8 ohms impedance. EIA Sensitivity rating, 46 db. 12 1/4" diameter, 11" baffle opening, 3 1/2" depth behind panel. Net weight 5 lbs., 8 oz. **Net Each \$24.50**



MT12

Combines superb dual-cone 12" loudspeaker with unique ring radiator tweeter. Brilliance control to adjust highs. Response, 40-18,000 Hz. Nominal resonance, 60 Hz. Crossover, 4,000 Hz. 40 watts peak. 8 ohms impedance. EIA Sensitivity rating, 46 db. 12 1/2" diameter, 11" baffle opening, 5 1/2" depth behind panel. Net weight 7 lbs. **Net Each \$39.95**



LS12A

Response, 40-14,000 Hz. Nominal resonance, 60 Hz. Crossover, 4500 Hz. 40 watts peak. 8 ohms impedance. EIA Sensitivity rating, 46 db. 12 1/4" diameter, 11" baffle opening, 3 15/16" depth behind panel. Net weight 5 1/2 lbs. **Net Each \$29.95**



LT12

High quality, three-way speaker priced for the budget-minded. Response, 40-18,000 Hz. Nominal resonance, 60 Hz. Crossovers: 2000 Hz mechanical, 4000 Hz electrical. Brilliance control. 40 watts peak. 8 ohms impedance. EIA Sensitivity rating, 45 db. 12 1/2" diameter, 11" baffle opening, 5 1/4" depth behind panel. Net weight 8 lbs. **Net Each \$47.50**



SP12B*

Response, 35-15,000 Hz. Nominal resonance, 50 Hz. Crossover, 4500 Hz. 60 watts peak. 8 ohms impedance. EIA Sensitivity rating, 49 db. 1 lb., 6 oz. ceramic magnet. 12 1/4" diameter, 11" baffle opening, 6 3/4" depth behind panel. Net weight 11 1/2 lbs. **Net Each \$44.00**
*U.S. Design Patent No. 197,716



12TRXB

Response, 35-20,000 Hz. Nominal resonance, 3500 Hz. Crossovers: 2000 Hz mechanical and 3500 Hz electrical. With tweeter level control. 60 watts peak. 8 ohms impedance. EIA Sensitivity rating, 52 db. Magnets: woofer, 1 lb., 6 oz. ceramic; tweeter 3.16 oz. Alnico V. 12 1/4" diameter, 11" baffle opening, 7" depth behind panel. Net weight 14 lbs. **Net Each \$88.00**



SP12

Response, 30-15,000 Hz. Nominal resonance, 45 Hz. Crossover, 4000 Hz. 80 watts peak. 8 ohms impedance. EIA Sensitivity rating, 53 db. 3 lb. Alnico V magnet. 12 1/4" diameter, 11" baffle opening, 7 1/2" depth behind panel. Net weight 19 lbs. **Net Each \$85.00**



12TRX

Response, 30-20,000 Hz. Nominal resonance, 45 Hz. Crossovers: 2000 Hz mechanical and 3500 Hz electrical. With tweeter level control. 80 watts peak. 8 ohms impedance. EIA Sensitivity rating, 53 db. Magnets: woofer, 3 lb. Alnico V; tweeter, 6.8 oz. Alnico V. 12 1/4" diameter, 11" baffle opening, 7 1/2" depth behind panel. Net weight 21 lbs. **Net Each \$144.00**



MUSIC INSTRUMENT SPEAKERS

SRO/12

EIA sensitivity, 54 db. Power handling capacity, 60 watts continuous sine wave, 150 watts continuous program, 300 watts peak. 8 ohms impedance. Magnet: 3 lb. Alnico V. 12 1/2" diameter, 11" baffle opening, 7 1/2" depth behind panel. Net weight 19 lbs. **Net Each \$95.00**

SRO/15

EIA sensitivity, 55 db. Power handling capacity, 60 watts continuous sine wave, 150 watts continuous program, 300 watts peak. 8 ohms impedance. Magnet: 4 lb., 10 oz. ceramic. 15 1/2" diameter, 13 1/2" baffle opening, 8 3/8" depth behind panel. Net weight 25 lbs. **Net Each \$105.00**



30W 30" SUPER WOOFER

The only speaker manufactured today with the ability to reproduce cleanly and with adequate power the very lowest tones of the pipe organ, bass viol, and bass guitar. Produces sound that can be felt as well as heard. Response 15 to 300 Hz. Recommended crossover point, 100 Hz. Nominal resonance, 15 Hz. 200 watts peak. 8-16 ohms impedance. 4 ohms DC resistance. EIA sensitivity, 54 db. 9 lb., 4 oz. ceramic magnet. 29 3/4" diameter, 28 1/4" baffle opening, 13 3/8" depth behind panel. Net weight 34 lbs. **Net Each \$290.00**



Electro-Voice® HI-FI COMPONENT SPEAKERS

15" SPEAKERS



LS15
Response, 35-14,000 Hz. Nominal resonance, 50 Hz. Crossover, 4500 Hz. 40 watts peak. 8 ohms impedance. EIA Sensitivity rating, 47 db. 15 1/2" diameter, 14" baffle opening. 6 1/2" depth behind panel. Net weight 9 lbs. Net Each \$35.50



SP15B
Response, 30-15,000 Hz. Nominal resonance, 30 Hz. Crossover, 3500 Hz. 60 watts peak. 8 ohms impedance. EIA Sensitivity rating, 51 db. 1 lb., 6 oz. ceramic magnet. 15 1/8" diameter, 13 1/2" baffle opening. 9" depth behind panel. Net weight 12 lbs. Net Each \$59.00



15TRX
Response, 25-20,000 Hz. Nominal resonance, 25 Hz. Crossovers: 2000 Hz mechanical and 3500 Hz electrical. With tweeter level control. 80 watts peak. 8 ohms impedance. EIA Sensitivity rating, 55 db. Magnets: woofer, 4 lb., 10 oz. ceramic; tweeter, 6.8 oz. Alnico V. 15 1/8" diameter, 13 1/2" baffle opening. 8 1/4" depth behind panel. Net weight 27 lbs. Net Each \$166.00



15TRX MARK II
SP15
Equipped with exclusive L-C circuit with level control to extend high-frequency response. Response, 25-15,000 Hz. Nominal resonance, 25 Hz. Crossover, 3500 Hz. 80 watts peak. 8 ohms impedance. EIA Sensitivity rating, 53 db. 4 lb., 10 oz. ceramic magnet. 15 1/8" diameter, 13 1/2" baffle opening. 8 1/4" depth behind panel. Net weight 25 lbs. Net Each \$105.00

HIGH FREQUENCY HORNS/DRIVERS



T35
Response, 3500-20,000 Hz. 40 watts peak. 8 ohms impedance. EIA Sensitivity rating, 56 db. 6.8 oz. Alnico V magnet. 5 1/4" h. x 2" w. Pot diameter, 2 1/4". Overall depth, 3 3/4". Net weight 2 1/4 lbs. Net Each \$35.50



T350
Adds very high frequencies with reserve power, extra sensitivity. For use in deluxe multiway systems having extended bass range. Response, 3500-23,000 Hz. 100 watts peak. 8 ohms impedance. EIA Sensitivity rating, 60 db. 1 lb. Alnico V magnet. 7 1/2" h. x 2 7/8" w. Pot diameter, 3 1/2". Overall depth, 4 1/16". Net weight 7 lbs. Net Each \$72.00



BB1
Extends high-frequency response beyond limits of audibility, provides more precise definition of vhf waveforms, and improves high-frequency dispersion. Includes T35, X36, AT37, and wiring harness. Net weight 4 lbs. Net Each \$64.50



BB4
Includes all components for third step in building super system. Divides audio range for maximum efficiency, lowering both harmonic and IM distortion. Includes T25A, 8 HD, X8, AT37, and wiring harness. Net weight 13 lbs. Net Each \$133.00



MIDRANGE HORN DRIVER KITS



8HD
For use with T25A driver. Recommended crossover over point, 800 Hz with an appropriate crossover network such as E-V Model X8. Actual horn cutoff, 600 Hz. Size: 15" h. x 4 1/2" w. x 8 1/4" deep. Net weight 2 1/2 lbs. Net Each \$22.00



T25A
Response, 700-10,000 Hz. 60 watts peak. 8 ohms impedance. EIA Sensitivity rating, 57 db. 1 lb. Alnico V magnet. 3 3/4" diameter, 4 1/2" deep. Net weight 4 1/4 lbs. Net Each \$59.00



HF1
Can be added to any Wolverine or Michigan coaxial speaker. Consists of VHF driver, crossover/level control, wiring, mounting hardware, and instructions. Horn size: 5 1/4" x 2", pot diameter 2 1/4", overall depth 2 3/4". Net weight 2 1/2 lbs. Net Each \$34.50



MF1
For addition to Wolverine or Michigan speakers. Consists of treble driver, crossover/level control, wiring, mounting hardware, and instructions. Horn size: 4" x 10 1/2", pot diameter 2 3/8", overall depth, 9 3/8". Net weight 4 1/4 lbs. Net Each \$57.00

ACCESSORIES

X8
Crossover point, 800 Hz. Impedance 8 ohms. Size: 4 3/4" h. x 4 1/2" w. x 3 3/8" d. Net weight, 4 lbs. Net Each \$40.00

X36
Recommended for use with VHF drivers. Crossover point, 3500 Hz. Impedance 8 ohms. Size: 3 1/2" h. x 4 1/2" w. x 3 3/8" d. Net weight 1 1/2 lbs. Net Each \$17.50

X1020
Provides crossover point of 100 or 200 Hz to permit 30W to be used as "super-woofer" with any existing system. Impedance 8 ohms. Size: 11" h. x 11 3/4" w. x 2 3/4" d. Net weight, 9 lbs. Net Each \$83.00

X1835
Crossover points, 100, 800 and 3500 Hz. Used in Patricia 800 system. Impedance 8 ohms. Size: 17" h. x 9 1/2" w. x 3 3/4" d. Net weight, 8 lbs. Net Each \$175.00

SPEAKER SELECTION CHART

Basic Speaker	Nat. Adv. Price	Nominal Resonance	Recommended Min. Enc. Vol. Cu. Ft.	Recommended Expansion	
				Tweeter	Midrange
8" Coaxial					
MC8	20.00	75	1	HF1	—
LS8	22.00	75	1	HF1	—
SP8B	36.00	60	1	BB1	—
8" Three-Way					
LT8	40.00	65	1	—	—
12" Coaxial					
MC12	23.00	60	3	HF1	MF1
LS12A	28.00	60	3	HF1	MF1
SP12B	42.00	50	3 1/2	BB1	BB4
SP12	80.00	45	4	BB1	BB4
12" Three-Way					
MT12	35.00	60	3	—	—
LT12	44.00	60	3	—	—
12TRXB	83.00	50	3 1/2	—	BB4*
12TRX	133.00	45	4	—	BB4
15" Coaxial					
LS15	33.00	50	5 1/2	HF1	MF1
SP15B	55.00	30	10	BB1	BB4
SP15	100.00	25	10	BB1	BB4
15" Three-Way					
LT15	56.00	40	5 1/2	—	—
15TRXB	88.00	30	10	—	BB4*
15TRX	144.00	25	10	—	BB4

*Additional X36 required for proper tweeter operation

XT1
Provides monophonic signal from two stereo channels for mono speaker system, common full-range bass system, or to re-form the third or "center" channel originally used in many stereo recording techniques. Connect between amplifier outputs and speakers. Size: 4 3/4" h. x 4 1/2" w. x 3 3/4" d. Net weight, 2 1/2 lbs. Net Each \$22.00

AT38
8 ohm "L" pad. For use with mid-bass, treble, and VHF drivers in multiway systems or remote speakers. Adjusts output level to individual taste. Net weight, 5 oz. Net Each \$5.50

ENCLOSURE PLANS

BASS REFLEX TECHNICAL BULLETIN NO. 10A — Guide for properly matching any enclosure to Electro-Voice speakers. Net Each \$.25

PATRICIA 800 CONSTRUCTION BLUEPRINTS Net Each \$2.00

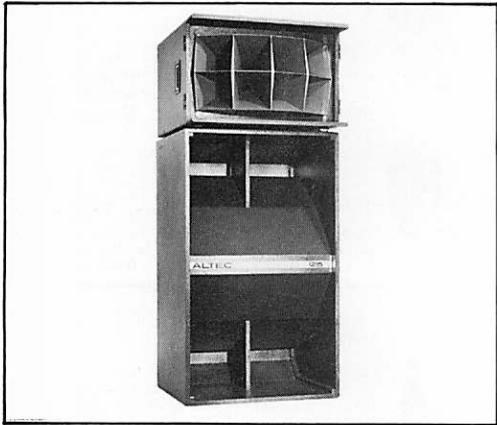
ARISTOCRAT CONSTRUCTION BLUEPRINTS (12-inch corner enclosure) Net Each \$2.00

MARQUIS CONSTRUCTION BLUEPRINTS (12-inch along-the-wall enclosure) Net Each \$2.00

REGENCY CONSTRUCTION BLUEPRINTS (15-inch corner enclosure) Net Each \$2.00

TB 1 plan for music instrument speaker enclosure for two SRO/15 15" speakers Net Each \$.50

TB 2 plan for speaker enclosure for one 30W 30" bass driver Net Each \$.50



MODEL 1225 Portable High Frequency Multicell System
Resilient epoxy finish with latching protective top cover. Recessed die cast handles. Power handling: 100 watts. Impedance: 8 ohms. Crossover frequency: 800 Hz. System components: 805 multicell, One 292-8A high frequency driver (290 type), N809-8A crossover network. Input connection: standard 1/4" phone jack. Dimensions: 28" W x 18" H x 29" D. Weight: 110 lbs. List Each \$495.00

MODEL 1215 Folded Horn Low Frequency Speaker System

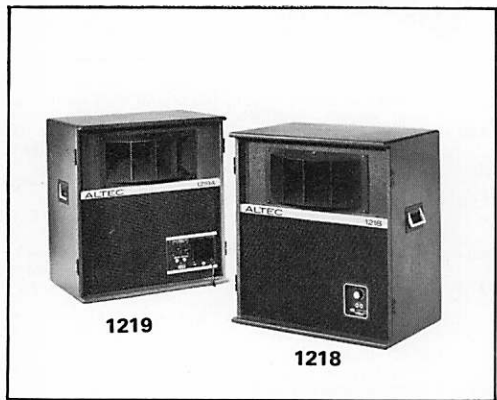
Resilient epoxy finish. Extended folded horn cabinet. Power handling: 150 watts. Speaker component: One 421-8H, low frequency woofer. Input connection: 2 paralleled standard 1/4" phone jacks. Impedance: 8 ohms. Dimensions: 48" H x 28" W x 24" D. Weight: 160 lbs. List Each \$495.00



MODEL 1220 Audio Control Console

- 10 microphone channels — Channel 11 aux input (all to +8) • 150/250 ohm transformer balanced microphone input • Slide volume (feedback type gain) • Rotary bass, treble, reverb and monitor control • Stereo output monitor select • Individual illuminated VU meter per channel • Slider master volume control • Master bass and treble • Master volume controls for stereo monitors • Master reverb gain and internal/external switch • Peak limiter with gain reduction control, fast or slow release time and on/off switch • Totally illuminated front panel with dimmer control • Built in electronic crossover, switchable 500 Hz or 800 Hz with power amp balance control • Master illuminated VU meter • Illuminated compression meter for limiter • Portable 1/2" plywood vinyl covered case with storage compartment and detachable legs • All modular plug-in preamp and master boards. **OUTPUTS:** • Main output (Cannon type) switchable 600 ohms line level or 150 ohms mic level • Electronic crossover (500 Hz or 800 Hz) outputs — low frequency, high frequency and full range all 600 ohms balanced line level (transformers built in) • Stereo monitor output — 600 ohms balanced line level • Input and output for external reverb or echo • Input and output for external equalizer • Output for reverb foot switch • Output for cascading mixers • On/off power switch • Automatic grounding sensor (Shockcheck™) • 2 additional power outlets • Input for 28 volt DC battery operation • Dimensions — 38" W x 12" H x 26" D • Weight with case — 120 lbs.

List Each \$1998.00



1219

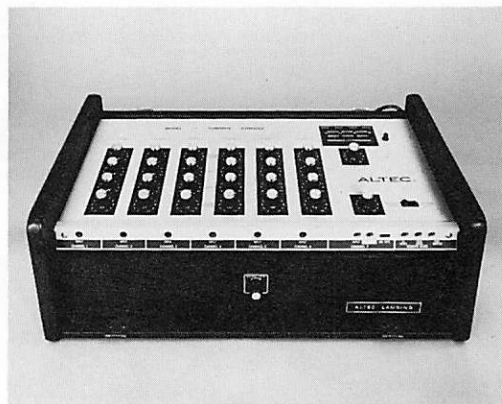
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MODEL 1219 Portable Biampified Speaker System

Resilient epoxy finish with latching cover. Recessed die cast handles. Biampifier power: low frequency 60 watts, high frequency 30 watts. Biamp input impedance: 80K ohms. Crossover frequency: 800 Hz. Speaker components: 422-8Z (418B type) low frequency speaker, 807-8Z high frequency driver, 811B horn. Biamp component: 771B Electronic Crossover Biampifier. Input connection: 2 paralleled 1/4" phone jacks. Dimensions: 30 1/4" H x 28" W x 19 1/4" D. Weight: 123 lbs. List Each \$850.00

MODEL 1218 Portable Speaker System

Resilient epoxy finish with latching cover. Recessed die cast handles. Power handling: 50 watts. Impedance: 8 ohms. Crossover frequency: 800 Hz. Speaker components: 422-8Z (418B type) low frequency speaker, 807-8Z high frequency driver, 811B horn, N809-8A crossover network. Input connection: standard 1/4" phone jack. Dimensions: 30 1/4" H x 28" W x 19 1/4" D. Weight: 110 lbs. List Each \$540.00

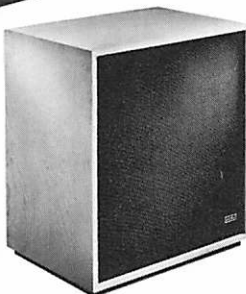


MODEL 1214 Low Impedance Control Console

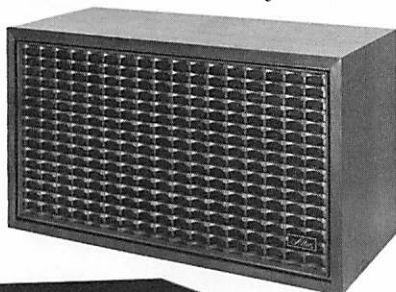
- 7 channels • 13 microphone inputs — 7 high impedance inputs • 6 low impedance balanced Cannon-Type inputs • 100 watt power amp • Individual volume, bass, treble and reverb gain controls • Locking top cover • Shockcheck™ automatic sensing grounding switch • Reverb lock • 600 ohm monitor output • Four 3-position feedback equalizer switches • Accessory in/out jacks for external equalizer • Powered speaker output jacks (line level) • Dimensions — 24" W x 13" H x 8" D • Weight — 42 lbs. List Each \$798.00



A7-8, A7-500-8



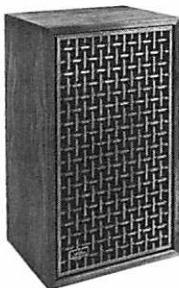
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890C



879A



874A

NEW MODEL A7-8 "THE VOICE OF THE THEATRE"[™] TWO-WAY SPEAKER SYSTEM

Improved version of the A7 system, long the motion picture theater industry standard as well as a great value for audiophiles. Model 807-8A high frequency driver with aluminum-polyimide Symbiotik[™] diaphragm assembly is virtually fatigue-free and highly temperature resistant, and allows the A7-8 to handle almost twice the power of its predecessor without losing any of its excellent frequency response. Voice coil wire of edge-wound flat aluminum ribbon. All components now 8 ohms for easy matching to transistorized amplifiers. Cast-aluminum 811B sectoral horn provides sound distribution of 90° horizontal, 40° vertical; 416-8A 15" woofer is mounted in front-loaded wooden exponential horn cabinet for faithful reproduction of orchestral lows. Model N-801-8A dividing network has 1-10 dB variable high frequency attenuator. **Frequency Response:** 30-22,000 Hz. **Power Rating:** 50 watts. **Impedance:** 8 ohms. **Crossover Frequency:** 800 Hz. **Size:** 30" w. x 24" d. x 42" h. (high frequency horn within enclosure). **Shipping Weight,** 154 lbs.

Altec Lansing A7-8 "The Voice of the Theatre" System — Utility.
Net Each \$378.00

Altec Lansing A7-500-8 "The Voice of the Theatre" System — Same as A7-8, but with 511B high frequency horn, 808-8A high frequency driver, and N-501-8A dividing network with 500 Hz crossover frequency for flatter response. **Shipping Weight, 160 lbs.
Net Each \$435.00**

MODEL 846 VALENCIA

The 846U unfinished Valencia features the famous A-7 component series. Large 15 inch bass driver with 3 inch voice coil of edge-wound copper ribbon, cast frame, and 10.5 magnet structure of Alnico V. "The Voice of the Theatre" high frequency driver operates from the important mid-range frequencies of 800 Hz to beyond 20,000 Hz. High efficiency air coupling and smooth accurate response are achieved with the massive sectoral horn of heavy cast-aluminum.

Specifications:
Frequency Response: 35 to 20,000 Hz. **Power Rating:** 50 Watts. **Impedance:** 8 Ohms. **Crossover Frequency:** 800 Hz. **Dimensions:** 29 3/4" H x 26 1/2" W x 18 1/2" D.

Model 846U Unfinished Net Each \$325.00
Model 846 Finished Net Each \$355.00

MODEL 890C BOLERO

The Bolero bookshelf system fills the largest rooms with full natural sound. The 406-8C high-compliance woofer with large voice coil and massive magnet structure for highest efficiency and clean lows. An Altec 10-inch free-suspension phase inverter augments the speaker wave forms for effortless low-end reproduction. Above 2000 Hz, a new extended-response compression driver coupled to a cast aluminum horn spreads silky highs throughout any room. A three-position control adjusts the high frequencies. A hand-rubbed walnut finish and its exclusive snap-on fretwork grille adds a sophisticated touch of three-dimensional sculptured curves.

Specifications:
Frequency Response: 40-20,000 Hz. **Power Rating:** 50 watts. **Impedance:** 8 ohms. **Crossover Frequency:** 2000 Hz. **Dimensions:** 25 1/2" H x 14 1/2" W x 11 1/2" D. **Shipping Weight:** 52 pounds.

Net Each \$179.00

MODEL 879A SANTANA

This two-way speaker system features Altec's patented 15-inch Biflex Speaker with a 10 1/2 pound magnet structure together with a high frequency tweeter. At comfortable listening levels, the 879A will reproduce an extremely clean, undistorted response when used with amplifiers rated as low as 5 watts per channel. High listening levels and greater dynamics can be achieved by using larger amplifiers. The power capacity of the 879A is such that volume levels generated by the system will be louder, in most cases, than you care to listen to before excessive power will damage the system.

Specifications:
Frequency Response: 35 to 18,000 Hz. **Power Rating:** 45 watts. **Impedance:** 8 ohms. **Speaker Components:** 420A Biflex, and Direct Radiating Tweeter. **Dimensions:** 24 1/4" H x 20" W x 17" D. 611mm-H x 508mm-W x 431mm-D. **Shipping Weight:** 52 pounds. 114 Kg.
Model 879A Net Each \$199.00

MODEL 874A SEGOVIA

The 3-way Segovia incorporates the Dynamic Force design concepts which are featured in Altec's larger floor standing systems. A completely new 12-inch Dynamic Force woofer capable of producing an extended low frequency range with very low distortion characteristics. The high frequency tweeter is a high quality dome radiator with excellent dispersion and virtually flat response to 20,000 Hz.

Specifications:
Frequency Response: 30 to 20,000 Hz. **Power Rating:** 60 watts. **Impedance:** 4 ohms. **Crossover Frequency:** 500 and 4,000 Hz. **Dimensions:** 25 3/8" H x 14 1/2" W x 11 1/2" D. **Shipping Weight:** 60 lbs.
Model 874A Net Each \$250.00



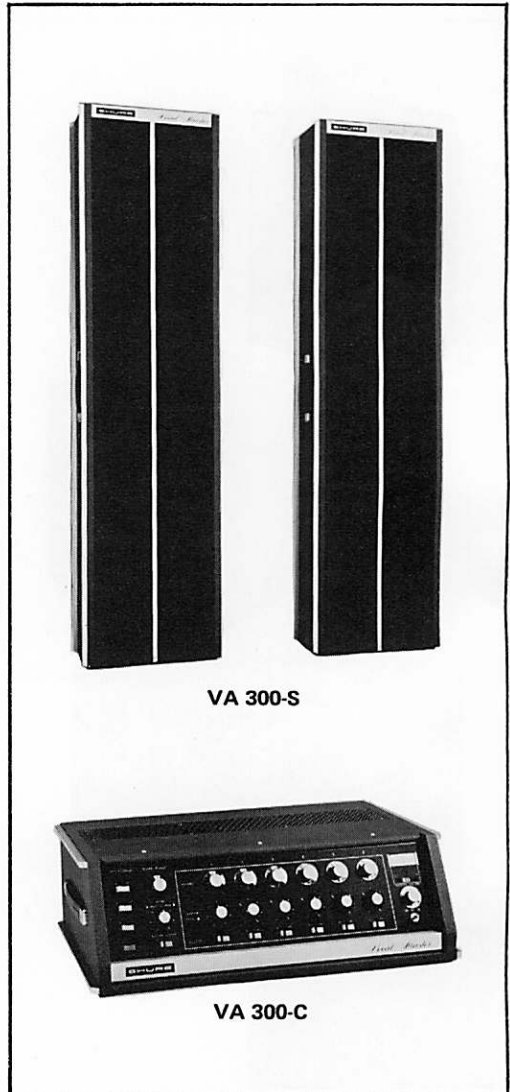
PROFESSIONAL AUDIO EQUIPMENT

NEW SHURE VOCAL MASTER PROFESSIONAL SOUND SYSTEMS

Total voice projection system meets all "in concert" requirements for amplification, projection, balance and feedback control. High penetration power solves problems of spacious auditoriums, night-clubs, ballrooms, etc. without clipping or sound deterioration. Has twice the sound pressure of conventional systems at 200 ft. distance. Full control versatility with six separate mike adjustments to balance lead vs background vocalists or instrumentalists. "Tone-tempered" reverb adjusts effects from full resonance sound to a crisp, piercing quality. Four anti-feedback switches in critical spectrums make feedback problems easy. Rugged-built with solid state circuitry for long life operation with rough treatment. UL Listed.

Shure Model VA300 Vocal Master System — Includes one VA300-C Control Console and two VA300-S Speaker Columns. See below for specifications on each. **Net per System \$998.00**

Shure Model VA302 Vocal Master System — Same, but Control Console is Model VA302-C. See below for specifications. **Net per System \$1140.00**



VA 300-S

VA 300-C

CONTROL CONSOLE AMPLIFIERS AND BOOSTER AMPLIFIER

Proven by top-name groups (The Association, 5th Dimension, Sergio Mendes), these control consoles provide high power performance and wide control versatility. Six input channels have individual adjustment for volume, treble, bass, reverb (and aux echo) controls. Each input takes standard phone plug and has mike/instrument selector switch. Master controls (not affecting individual settings) include volume, reverb in-out, reverb intensity, reverb treble and bass. Four anti-feedback switches on critical audio segments are supplied. High impedance output permits tape recording or use of Model PM300 booster. Protective circuits include automatic shut-off on thermal overload, shorts and open circuits. Can't be damaged by failure to connect speakers. **Power Output:** 100 watts rms continuous at 8 ohms (two VA300-S speaker columns); 300 watts peak voice power. **Power Gain:** 100 dB. **Frequency Response:** ± 2 dB, 40-20,000 Hz. **Power Required:** 400 watts max., 120 VAC, 60 Hz. **Size:** 25" w. x 14 $\frac{3}{4}$ " d. x 8 $\frac{3}{8}$ " h.

Shure Model VA300-C Control Console — Inputs are high impedance (60K ohms, mike; 120K ohms, Inst.) for high quality dynamic or ribbon mikes. Adapts to lo-Z mikes with plug-in transformer A95P available. Voltage Gain, 60 dB mike input at 8 ohms; 49 dB, instrument input. Weight, 38 lbs. **Net Each \$530.00**

Shure Model VA302-C Control Console — Offers several extra features: VU meter reads program output; high/low sensitivity switch for VU; inputs are female Cannon connectors; mike level output has impedance selector. Low impedance inputs (50 to 600 ohms) permit longer mike cable runs; use with high quality, dynamic, ribbon or condenser mikes (A95A transformer available to convert to hi-Z mikes). Voltage gain, 80 dB at 8 ohms, input attenuator out; 65 dB, attenuator in. Weight, 41 lbs. **Net Each \$670.00**

Shure Model PM300 Booster Amplifier — Use with above amplifiers to drive additional speaker, add 100 watts rms output for large areas, feed additional rooms, or drive on-stage monitor. Interconnecting cable supplied for plug-in ease; on-off and volume controls only. Voltage gain, 30 dB at 8 ohms. Size, 16 $\frac{7}{8}$ " w. x 9" d. x 7" h., less handle and feet. Weight, 22 lbs. **Net Each \$270.00**

SPEAKER COLUMN AND MONITOR SPEAKER COLUMN

Shure Model VA300-S Speaker Column — Designed to generate the penetration needed for the Vocal Master System. Special, tuned rear ports provide high directionality; permits aiming away from mike to reduce feedback danger. Each column contains two 10" and four 8" speakers for 358.14 sq. in. of cone area; crisp clarity of small cones combines with "body" of large cones for superior sound. Virtually uniform penetration over 140° horizontal and 65° vertical distribution. All speakers are automatically in phase. Rugged

3/4" ply cabinetry covered with scuff-resistant vinyl; braced with edge-protecting solid aluminum side rails. With heavy duty handles and 50-ft. cable. Impedance, 16 ohms. Size, 15 $\frac{3}{4}$ " w. x 8 $\frac{3}{4}$ " d. x 62 $\frac{3}{4}$ " h. Weight, 70 lbs. **Net Each \$255.00**

Shure Model VA301-S Monitor Speaker Column — For feedback-free monitoring on stage; performers can hear themselves at any volume level. Only half the size of VA300-S, contains one 10" speaker and two 8" speakers for 179.07 sq. in. cone area. Built-in volume control; 50-ft. cable supplied. **Net Each \$185.00**

COMPLETE SYSTEMS AND ACCESSORIES

Model	Description	Net Ea.	Model	Description	Net Ea.
A3PC	Zip-on cover set for either system	\$55.00	A95A	Plug-in transformer converts VA302-C for hi-Z mikes (1 per input needed)	\$12.60
A3PC-C	Cover for either console only	16.00	A95P	Same, but for lo-Z mike for VA300-C	13.80
A3PC-S	Cover for VA300-S column only	19.50	A3S-S	Tiltable, stable speaker stand	19.00
A31PC-S	Cover for VA301-S monitor only	17.50	A3S-C	Console stand w/rubber-tire casters	52.00
P300-R	19" rack mount for PM300 booster	11.00			



SONY MODEL 248-D
Quadradial Eight-Track Cartridge Playback Deck

FEATURES:

- Four-Channel/Two-Channel Eight-Track Playback • Illuminated Channel Indicator • Program Selector Switch • Automatic and Manual Track Selector • Auto AC System Shut-Off • TMS (Automatic Total Mechanism Shut-Off) • Three-Way Tape Eject System • Handsome Walnut Case.

Net Each \$169.95

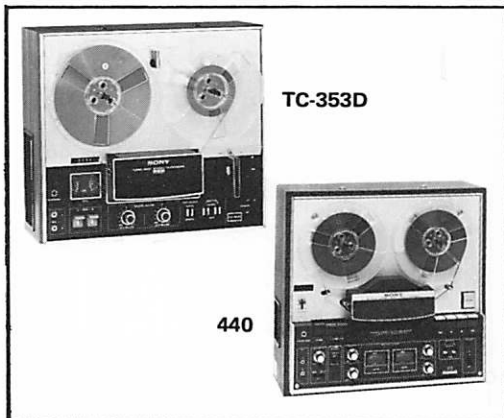
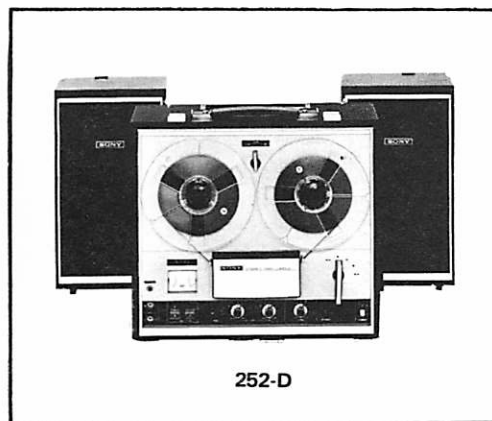
SONY MODEL 252-D
Solid-State Stereo Tape Deck

If you're on a limited budget, our lowest priced stereo reel-to-reel tape deck, the quarter-track 252-D is loaded with many features from more expensive machines. For example, you get a Retractable pinch roller for easy one-hand threading; Automatic Shut-Off at the end of the tape; Automatic Tape Lifters, which protect heads from wear during fast rewind; Stereo Headphone Monitor Jack for private listening; and much more. A really spectacular buy!

FEATURES:

- Sound-with-Sound • Sound-on-Sound Capability • Three Speeds • Vibration-Free Motor • Two VU Meters • Pause Control with Lock • Three-Digit Tape Counter • Vertical or Horizontal Operation • Walnut Base.

Net Each \$159.95



SONY MODEL TC-353D
Economy Three-Head Stereo Tape Deck

The TC-353D includes Vibration-Free Motor, Non-Magnetizing Record Head, Retractable Pinch Roller, Automatic Tape Lifters, Scrape Flutter Filter, Ultra-High Frequency Bias, Automatic Shut-Off, Vertical/Horizontal Operation, Sound-on-Sound Capability with MX-6S Mixer.

FEATURES:

- Built-In Jack Panel for Line Input and Line Output Jacks • Four-Digit Tape Counter with Reset Button • Dual VU Meter • Stereo Headphone Monitor Jack • Front-Panel Mic Input Jacks • Record Level/Microphone-Line Mixing Controls • Tape Select Switch • Three Speed Selector: 7½, 3¾, and 1½ ips • Built-In Reel Locks • Mode Selector for Rewind, Stop, Forward, Locking Pause Control and Fast-Forward • Tape/Source Monitor Switch.

Net Each \$219.95

SONY MODEL 440
Automatic Reverse Stereo Tape Deck with Roto Bi-Lateral Head

This is our economy reversing deck. With the new 440, you'll never have to flip a reel over again! A unique Roto Bi-Lateral Head revolves 180 degrees, to permit recording, monitoring and playback in both directions. But the 440 offers you more than convenience and low price. Extremely high performance is assured thanks to Closed-Loop Dual Capstan Tape Drive, a ServoControl Motor, and other unique professional features.

FEATURES:

- Foil-Activated Automatic Reverse • Automatic Total-Mechanism Shut-Off • Built-in Sound-on-Sound and Echo • Electrical Speed Change • Microphone/Line Mixing • Record Equalization Selector Switch • FET Amplifier • Servo-Controlled Back Tension • Ultra-High Frequency Bias • Two VU Meters • Four-Digit Tape Counter.

Net Each \$379.95



SONY MODEL TC-122

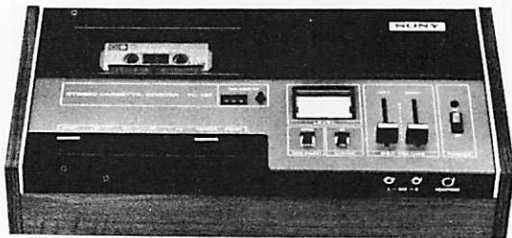
Economy Stereo Cassette Deck

Add the pop-in, pop-out convenience of a cassette deck to your stereo system! The TC-122 offers traditional Sony quality at an economical price.

FEATURES:

- Tape Select Switch for standard and new Chromium Dioxide Cassettes • Sonymatic Recording Control • Dual Level Meters • Pushbutton Operation • Tape Pilot Lamp indicates operating mode at a glance • Stereo Headphone Jack • Walnut Base • Locking Fast-Forward and Rewind Buttons • Microphone and Auxiliary Inputs.

Net Each \$115.95



SONY MODEL TC-127

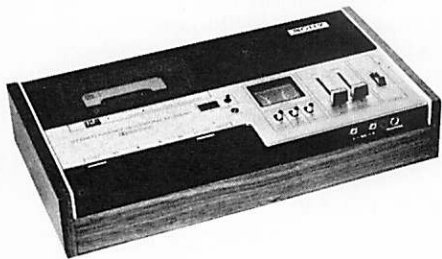
Stereo Cassette Deck

An excellent choice for today's advanced stereo enthusiast, the TC-127 adds high performance to cassette convenience.

FEATURES:

- Built-In Peak Limiter for Distortion-Free Recording • Tape Select Switch for standard and new Chromium Dioxide Cassettes • Dual Professional-Type VU Meters • Three-Digit Tape Counter • Pause Control with Lock • Stereo Headphone Jack • Microphone and Auxiliary Inputs.

Net Each \$159.95



SONY MODEL TC-134SD

Deluxe Stereo Cassette Deck with Dolby Noise Reduction System, Ferrite and Ferrite Head, and Automatic Total-Mechanism Shut-Off (TMS)

With no annoying tape hiss to mar your listening pleasure, the TC-134SD's highly refined Dolby Noise Reduction System makes for the quietest cassette performance ever. The precision-molded Ferrite and Ferrite Head, a Sony exclusive, lasts up to 200 times longer than a permalloy head and provides exceptional sound fidelity with new Chromium Dioxide cassettes. At end-of-tape, Automatic Total-Mechanism Shut-Off (TMS) turns the unit completely off — in any mode — reducing machine wear as well as eliminating the need for constant monitoring.

FEATURES:

- Three-Digit Tape Counter with Reset Button • Dual VU Meters • Record Volume Controls • Tape Select Switch for standard and new Chromium Dioxide cassettes • Peak Limiter prevents distortion from unexpected volume peaks while recording • Pause Control with Lock • Stereo Headphone Jack.

Net Each \$239.95



SONY MODEL TC-161SD

Advanced Stereo Cassette Deck with Dolby Noise Reduction System, Ferrite and Ferrite Head, Memory Tape Counter, and Automatic Total-Mechanism Shut-Off (TMS)

Here's the most advanced stereo cassette deck on the market! The TC-161SD's Dolby Noise Reduction System lets you enjoy the cleanest sound this side of the concert hall. And Closed-Loop Dual Capstan Tape Drive assures constant tape tension against the exclusive Ferrite and Ferrite Head for better all-around performance. The TC-161SD's Ferrite and Ferrite Head is a precision-molded, single piece of ferrite. What's more, the new Memory Tape Counter locates any desired selection on a cassette.

FEATURES:

- Memory Tape Counter • Tape Select Switch for standard and new Chromium Dioxide cassettes • Record Volume Controls • Peak Limiter prevents distortion from unexpected volume peaks while recording • Pause Control with Lock • Locking Fast-Forward and Rewind • Hysteresis Synchronous Motor for extremely accurate tape speed • Illuminated Cassette Compartment • Stereo Headphone Jack with Two-Position Headphone Level Switch.

Net Each \$299.95



SONY MODEL TC-377
Deluxe Three-Head Stereo Tape Deck with Automatic Total-Mechanism Shut-Off (TMS)

The new TC-377 offers a host of extra performance and convenience features, like Microphone Attenuator Switch, Long-Life Ferrite and Ferrite Heads, and Variable Line Output, and more.

FEATURES:

- TMS (Automatic Total-Mechanism Shut-Off) • Microphone Attenuator Switch • Long-Wearing Ferrite and Ferrite Heads for Ultra-High Performance • Variable Line Output • Reversible Slanted Walnut Base provides the perfect angle for either Horizontal or Vertical Operation • Ultra-High Frequency Bias • Pause Control with Lock • Three-Heads for Tape/Source Monitoring and wider Frequency Response • Servo-Controlled Tape Tension • Vibration-Free Motor • Sound-on-Sound Capability • Record Equalization Selector Switch allows optimum performance with either standard tape or Sony low-noise, high-output tape • Two VU Meters • Four-Digit Tape Counter.

Net Each \$299.95



SONY MODEL 640
Three-Head, Three-Motor Stereo Tape Deck

Ideal for mounting in bookshelves and other limited-space areas, the compact 640 is basically a simplified version of our exotic 650. At a moderate price, here are enough sophisticated features and performance to satisfy the most advanced stereo buff. Bold, distinctive styling will make it the main attraction in your stereo system.

FEATURES:

- Unique Lever-action Transport Control • Solenoid-Operated Transport Functions • Die-Cast Tape Guide and Head Block Mounting Frame • Hysteresis Synchronous Capstan Motor and Outer Rotor Reel Drive Motors • Four-Digit Tape Counter • Built-In Sound-on-Sound and Echo • Microphone/Line Mixing • Mechanical Memory Capability permits timer-activated record, playback, and stop modes • Hyperbolic Heads require no pressure pads • Record Equalization Selector Switch allows optimum performance with standard tape or Sony low-noise, high-output tape • Large, Illuminated VU Meters Calibrated to NAB Standards • Pause Control • Built-In Reel Locks • Scrape Flutter Filter • SLH Tape Sample Included.

Net Each \$379.95



650

850

SONY MODEL 650
Professional Quality Three-Head, Three-Motor Stereo Tape Deck

Behind the illuminated, color-coded pushbutton controls of the 650, you'll discover a full array of impressive professional features! For example, Solenoid-Operated, Logic Controlled Transport Functions make it impossible for you to ever break a tape again. And an optional plug-in head block assembly lets you switch easily from quarter-track to two-track operation.

FEATURES:

- Microphone/Line Mixing • Built-In Sound-on-Sound and Echo • Hysteresis Synchronous Capstan Motor • Microphone and Auxiliary Inputs • Plug-In Head Block Assembly • Die-Cast Tape Guide and Head Block Mounting Frame • Large, Illuminated VU Meters, calibrated to NAB Standards • Defeatable Tape Lifters for easy editing and high-speed cueing • Four-Digit Tape Counter • Record Equalization Selector Switch allows optimum performance with either standard tape or Sony low-noise, high-output tape • Precision Balanced Capstan and Impedance Flywheels • Scrape Flutter Filter • Built-In Reel Locks • Modular Plug-In Electronics.

Net Each \$499.95

SUGGESTED ACCESSORIES:

H-17-2S Two-Track Plug-In Head Block Assembly; H-17-4S Quarter-Track Plug-In Head Block Assembly; RM-16 Full-Function Remote Control.

SONY MODEL 850
Professional Quality Three-Motor Stereo Tape Deck with 10½" Reel Capacity

The 850 is the top of our line — the finest component stereo tape deck you can buy! Besides two giant 10½" reels for maximum record and playback time, the 850 incorporates every imaginable feature. For example, the Automatic Program Scanner locates and plays individual segments of music and eliminates rethreading. The 850 is available in both two-track and quarter-track versions, and has an additional playback head for both two-track and quarter-track playback. Here is the perfect nucleus of the most sophisticated stereo system!

FEATURES:

- Closed-Loop Dual Capstan Drive provides lowest wow and flutter • Die-Cast Tape Guide and Head Block Mounting Frame • Record Equalization Selector Switch allows optimum performance with either standard tape or Sony low-noise, high-output tape • Logic-Controlled Transport Functions for perfect tape handling characteristics • Defeatable Tape Lifters • 15, 7½, and 3¼ IPS Tape Speeds • Four-Digit Tape Counter • Fourth Head for Two-Track and Quarter-Track Playback • Three-Motor Transport with ServoControl Capstan Motor • Automatic Shut-Off • Modular Construction • Fully Accessible Bias and Equalization Adjustments • Front Panel Sound-on-Sound and Echo Control • Large, Illuminated VU Meters, Calibrated to NAB Standards • NAB Hub Adapters and SLH Tape Sample Included.

Net Each \$895.00

SUGGESTED ACCESSORIES:

H-60-21S Two-Track Plug-In Head Block Assembly; H-60-41S Quarter-Track Plug-In Head Block Assembly; RM-16 Full-Function Remote Control.



Sony/Superscope Monophonic Cassette-Corders®

SONY MODEL 110A
AC/DC Portable Cassette-Corder® with Built-In Condenser Microphone

The popular, all-purpose 110A is the overwhelming choice of news correspondents and business executives! The Built-In Condenser Microphone eliminates "mike fright", because it's tucked away, out of sight. Handy for dictation purposes, too, the 110A comes with a Remote Stop/Start Microphone. A Back-Space Review Button and Three-Digit Tape Counter make it easy to transcribe cassettes.

FEATURES:

- Built-In Electret Condenser Microphone
- Locking Fast-Forward and Rewind Buttons
- Built-In Recharging Circuit for Optional Nickel-Cadmium Battery Pack
- Sonymatic Recording Control
- Record Level and Battery Strength Indicator
- End-of-Tape Alarm
- Tone and Volume Controls
- Built-In Extended Range Speaker
- Operates in Any Carrying Position
- Optional Car Battery Operation.

Net Each \$129.95

SONY MODEL TC-66

AC/DC Personal Portable Cassette-Corder®

The TC-60, our lowest-priced Cassette-Corder®, is perfect for budget-minded students and housewives, for personal correspondence, or just for fun. Here is famous Sony performance and dependability at an economical price.

FEATURES:

- AC/DC Operation
- Push-Button Operation
- Locking Fast-Forward and Rewind Buttons
- Sonymatic Recording Control
- Microphone and Auxiliary Inputs
- Tone and Volume Controls
- Built-In Speaker
- Record Interlock
- Operates in Any Carrying Position
- Remote Stop/Start Microphone

Net Each \$59.95

SONY MODEL TC-40 (NOT SHOWN)

Miniature Battery-Operated Cassette-Corder® with Built-In Condenser Microphone

This is the world's finest miniature cassette recorder. Designed to travel in fast company, the TC-40 is small enough to fit snugly into one hand, or attache case. It features a Built-In Condenser Microphone, which picks up anything your ears can hear.

FEATURES:

- Built-In Electret Condenser Microphone
- Dual Differential-Balanced Flywheels eliminates variations in tape speed when unit is being carried
- Sonymatic Recording Control
- ServoControl Motor
- End-of-Tape Alarm
- Record Level and Battery Strength Indicator
- Built-In Speaker
- Operates in Any Carrying Position
- Optional Stop/Start Microphone
- Optional Car Battery Operation.

Net Each \$99.95

SONY MODEL 180-AV

Monophonic Cassette-Corder® for AV Applications

Specially designed for audio-visual use, the new 180-AV brings the simplicity of cassette recording and playback to educators and lecturers. A Built-In Extended-Range Speaker and powerful 5 Watt RMS amplifier fill even the largest room with full-fidelity sound. Solid-state circuitry assures dependable operation, year after year. The 180-AV is housed in a rugged, impact-resistant case.

FEATURES:

- Public Address/Microphone "Override" lets you mix "live" voice into pre-recorded presentation
- Two-Position Monitor Level Switch

- Two Mixable Microphone Inputs
- Sonymatic Recording Control with Defeat Switch and VU Meter
- End-of-Tape Alarm
- Pause Control with Lock
- Three-Digit Tape Counter
- Tone and Volume Controls
- Safety-Approved Three-Wire AC Power Cord
- Price includes Connecting Cord, Dust Cover/Accessory Case, and Plug Adapter.

Net Each \$169.96

SONY MODEL CF-200A

AC/DC Cassette-Corder® AM/FM Radio Combination

If you want a more compact unit with added performance, the new CF-200 is what you're after in a Cassette-Corder® AM/FM radio combination. Besides distinctive vertical styling, the CF-200 has fabulous Sonymatic recording control for perfect, distortion-free recordings.

FEATURES:

Recorder

- Sonymatic Recording Control
- Record Interlock
- Speaker Monitor Capability
- Record Level and Battery Strength Indicator.

Radio

- AM and FM Bands
- Telescopic FM Antenna
- Built-In Ferrite Bar AM Antenna.

Net Each \$94.95

SONY MODEL CF-350G

Deluxe AC/DC Cassette-Corder® AM/FM Radio Combination with Built-In Condenser Microphone

Extra features like a Built-In Condenser Microphone and a Back-Space Review Button make the new CF-300 our finest Cassette-Corder® radio combination. Take it everywhere! With modern design and truly outstanding sound quality, the CF-300 is great at home for relaxation and at the office for recording business conferences and dictation.

FEATURES:

Recorder

- Built-In Electret Condenser Microphone
- Sonymatic Recording Control
- Record Interlock
- Microphone and Auxiliary Inputs
- Record Level and Battery Strength Indicator
- Speaker Monitor Capability.

Radio

- AM and FM Bands
- Telescopic FM Antenna
- Built-In Ferrite Bar AM Antenna
- AFC with Defeat Switch.

General

- Built-In Recharging Circuit for Optional Nickel-Cadmium Lifetime Battery Pack.

Net Each \$129.95

SONY MODEL TC-55 (NOT SHOWN)

Electret Condenser Microphone

FEATURES:

- Record Interlock Button
- Locking Rewind Button
- Record Level/Battery Indicator
- Pause Control with Lock
- Earphone/Monitor Jack
- Carrying Strap
- 3 Digit Counter
- Built-In Condenser Microphone
- Sonymatic Level Control with Music/Speech Switch.

Net Each \$139.95

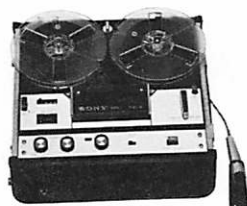
SONY MODEL TC-95A

Cassette-Corder

FEATURES:

- Built-In Condenser Microphone
- Back-Space Review Button
- Fast-Cueing
- Digital Tape Counter
- AC/DC Operation
- Microphone and Auxiliary Inputs
- Record Interlock
- Non-Magnetizing Record Head
- Sonymatic Recording Control
- Built-In Recharging Circuit for Optional Nickel-Cadmium Battery Pack
- Record Level and Battery Strength Indicator
- Tone and Volume Controls
- Automatic Shut Off.

Net Each \$119.95



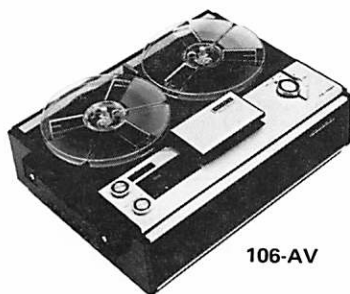
105A



800-B



270



106-AV



630

Sony/Superscope Tape Recorder Systems

SONY MODEL 105A

Deluxe Quarter-Track Monophonic Tape Recorder

With more features and performance than any other competitively-priced tape recorder, our all-purpose, AC-powered 105-A will help make your work easier. Offering virtually automatic operation and famous Sony quality, the 105-A is a favorite among students, teachers, and businessmen alike for its outstanding value.

FEATURES:

- 7½, 3¾, and 1½ IPS speeds • 7-inch Reel Capacity for up to 16 hours of recording and playback • Sonymatic Recording Control with Defeat Switch and VU Meter • Retractable Pinch Roller for quick, easy threading • Powerful Solid-State Amplifier • Pause Control with Lock • Three-Digit Tape Counter • Speaker Monitor Switch • Safety-Approved 3-Wire AC Power Cord • Price includes Dynamic Microphone and Personal Earphone. **Net Each \$199.95**

SONY MODEL 106-AV

Half-Track Monophonic Tape Recorder for AV Applications

From the classroom to the conference room to the lecture hall, the reel-to-reel 106-AV half-track recorder brings rugged construction, dependable service, and outstanding performance to every audiovisual application. The 106-AV features a powerful 5 watt (RMS) amplifier with a large extended-range speaker, to provide clear, room-filling sound.

FEATURES:

- 7½, 3¾, and 1½ IPS speeds • Sonymatic Recording Control with Defeat Switch and VU Meter • Automatic Tape Lifters • Retractable Pinch Roller • Two-Position Monitor Level Switch • Pause Control with Lock • Microphone and Auxiliary Inputs • Three-Digit Tape Counter • Speaker Monitor Switch • Safety-Approved 3-Wire AC Power Cord • Price includes Dynamic Microphone, Personal Earphone, Empty 7-inch Reel. **Net Each \$189.95**

SONY MODEL 800-B

ServoControl 4-Speed AC/DC Portable Recorder with Built-In Condenser Microphone

Here is Sony's completely portable reel-to-reel machine, designed to operate on either AC power or its own built-in batteries. For the busy executive who can't waste time fiddling around with a conventional microphone, the 800-B's hidden condenser microphone records at the touch of a button. Use it for business and pleasure. Versatility plus!

FEATURES:

- ServoControl Motor • Three-Position Microphone Mixing Switch • 7½, 3¾, 1½, and 15/16 IPS Tape Speeds • Built-In VariSpeed Pitch Control • Sonymatic Recording Control with Defeat Switch and VU Meter • 5-inch Reel Capacity • Digital Tape Counter • Battery

Strength Indicator • Speaker Monitor Switch • Built-In Extended Range Speaker • Optional Car Battery Operation • Price includes an additional Remote Stop/Start Dynamic Microphone, Personal Earphone and Batteries. **Net Each \$249.95**

SONY MODEL 630

Deluxe Stereo Tape System/Control Center

If you're a recording perfectionist, here is Sony's finest complete stereo tape system. For a surprisingly low price, the 630's remarkable array of features will satisfy the most advanced audio hobbyist. And 40 watts of dynamic music power, plus excellent frequency response will delight the serious listener. For a complete music system, just add a stereo tuner and record changer!

FEATURES:

- Three Heads for Tape/Source Monitoring • Built-In Sound-on-Sound and Echo • Professional Straight-Line Graphic Level Controls • Magnetic Phono, Tuner, and Auxiliary Inputs • Large, Illuminated VU Meters, Calibrated to NAB Standards • Vibration-Free Motor • Four-Digit Tape Counter • Ultra-High Frequency Bias • Stereo Balance Control, Tone and Volume Controls • Stereo Headphone Jack • Vertical/Horizontal Operation • Pause Control with Lock • Lid-Integrated, Full-Range Stereo Speakers • Noise Suppressor Switch • Speaker Mode Selector Switch • Scrape Flutter Filter for distortion-free performance • Price includes two Dynamic Microphones, Empty 7-inch Reel, RK-74 Stereo Patch Cord, two Reel Caps, AC Power Cord, and Head Cleaning Ribbon. **Net Each \$449.95**

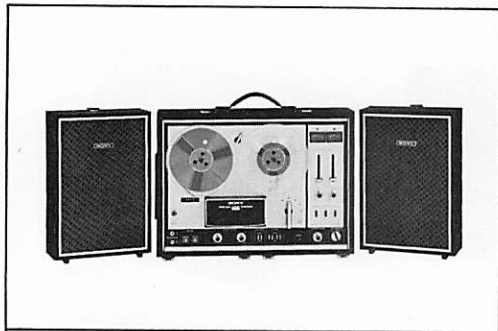
SONY MODEL 270

Economy Stereo Tape System

Want to make beautiful music, but hung up by a tight purse string? Sony's least expensive complete stereo tape system, the quarter-track 252, incorporates many features which are standard in our most expensive decks and systems. Like Retractable pinch rollers, for easy one-hand threading; Automatic Shut-Off at the end of each reel; Automatic Tape Lifters, to protect heads from wear during fast-forward and fast rewind; and a Stereo Headphone Monitor Jack, for private listening. With the 252, you get great sound at a great price!

FEATURES:

- Front Panel Sound-on-Sound Controls • Sound-with-Sound • Vibration-Free Motor • 12 Watts of Dynamic Music Power • Lid-Integrated, Full-Range Stereo Speakers • Two VU Meters • Four-Digit Tape Counter • Two Position Monitor Level Switch • Scrape Flutter Filter for distortion-free performance • Stereo Headphone Monitor Jack • Vertical/Horizontal Operation • Pause Control with Lock • Price includes two Dynamic Microphones and one RK-74 Stereo Patch Cord. **Net Each \$289.50**



SONY MODEL TC-353
Three-Head Stereo Tape Recorder

FEATURES:

- Playback Volume Controls • Bass Tone Control • Treble Tone Control • Sound-on-Sound and Echo Selector Switch • Speaker On/Off Switch • Speaker Mode Selector Switch • Selector Switch for Phono, Tuner, and Line Inputs • Four-Digit Tape Counter with Reset Button • Stereo Headphone Jack • Front Panel Mic Input Jacks.

Net Each \$349.95



SONY MODEL TC-10
Car Stereo Cassette Player

FEATURES:

- Single Action Cassette Eject • Compact • Balance Control • Tone Control • Rewind and Fast Forward • 6 Watts RMS Per Channel.

Net Each \$99.95



SONY MODEL TC-228
Eight-Track Stereo Cartridge Recorder and Playback Deck

FEATURES:

- Manual Recording Controls • Two Illuminated VU Meters • Mic & Auxiliary Inputs • Front Panel Headphone Monitor Jack • Three Way Cartridge Eject System • Locking Pause Control • Auto and Manual Program Selection • Auto All System Shut-Off.

Net Each \$169.95

SONY MODEL CF-620
Deluxe Cassette-Corder® AM/FM Stereo System

The magnificent top-of-the-line 620, with a full complement of professional-quality features, will give you more performance than any similar combination home entertainment system! Rich walnut-grained cabinetry encloses a superb quarter-track stereo cassette system, high-quality AM/FM tuner, stereo control center, and two remote full-range speakers.

FEATURES:

Recorder

- Straight-Line Volume and Tone Controls • Tape Select Switch for standard and new Chromium Dioxide Cassettes • Sonymatic Recording Control • Three-Digit Tape Counter • Stereo Headphone Monitor Jack • Tape Pilot • Locking Fast-Forward and Rewind Buttons • Microphone, Magnetic Phono, and Auxiliary Inputs • Speaker Monitor Switch • Speaker On/Off Switch • Two Tuning/Record Level Meters • AC Convenience Outlet.

Radio

- Low-Noise FET Circuitry • Solid-State IF Filters • Built-In Antennas • Stereo Indicator Light for FM Multiplex • AFC with Defeat Switch.

Speakers

- Two 6½" Extended Range Speakers • Price includes two Dynamic Microphones and C-60 Cassette.

Net Each \$329.95



SONY MODEL TC-126CS
AC/DC Portable Stereo Cassette-Corder® System

FEATURES:

- Three Digit Tape Counter • Record Level/Battery Indicator • Stereo Headphone Jack • Tone Control • Volume Control • Balance Control • Stereo/Mono Selector Switch • Tape Bias Switch • Locking Rewind Button • Locking Pause Control • Two High Quality Speakers with Cords Attached • Microphone and Auxiliary Inputs.

Net Each \$229.95

**Sony Model TC-277-4
Quadradiad Tape Deck**

Here is the lowest-priced quality four-channel reel-to-reel recorder on the market today. Besides having complete four-channel record and playback capability, which reproduces all of the vital dimensional aspects of music with full realism, the TC-277-4 is loaded with many other sophisticated features.

FEATURES:

- Complete Four-Channel Record and Playback
- Three Tape Speeds: 7½, 3¾ and 1½ ips
- Four-Channel/Two Channel Selector Switch
- Four Illuminated VU Meters
- Independent Four-Channel Level Controls
- Sound-with-Sound
- Record Equalization Selector Switch for standard or Sony SLH-180 low-noise, high-output recording tape
- Triple-Function Headphone Switch and Jack
- Retractable Pinch Roller
- Microphone and Auxiliary Inputs
- Automatic Shut-Off
- Sound-on-Sound Capability with Optional MX-6S Mixer

Net Each \$349.95



Sony Model TC-654-4 Three-Motor Quadradiad Tape Deck

Designed for advanced recording enthusiasts, the TC-654-4 is the first reasonably-priced, premium performance Quadradiad deck.

FEATURES:

- Logic-Controlled, Solenoid-Operated Three-Motor Transport
- Three Heads for Tape/Source Monitoring and wider Frequency Response
- Die-Cast Tape Guide and Head Block Mounting Frame
- Record Equalization Selector Switch for standard or Sony SLH-180 low-noise, high-output recording tape
- Microphone/Line Mixing
- Fully Accessible Bias and Equalization Adjustments
- Plug-In Head Block Assembly
- Two Stereo Headphone Monitor Jacks
- Defeatable Tape Lifters for precise editing, high-speed cueing
- Four VU Meters, Calibrated to NAB Standards
- Built-In Reel Locks

Net Each \$875.00



**Sony Model TC-854-4S
Professional-Quality Three-Motor Quadradiad Tape Deck**

Want to add the ultimate in four-channel sound to your stereo system? Take a look at the exciting TC-854-4S!

Featuring complete four-channel fully-synchronized record and playback capabilities and VariSpeed pitch control, here is the finest Quadradiad recorder you can buy!

FEATURES:

- 10½" Reel Capacity
- Automatic Program Scanner
- ServoControl Motor
- Syncro-Trak for fully-synchronized recording
- Three Heads for Tape/Source Monitoring and wider Frequency Response
- Closed-Loop Dual Capstan Tape Drive System for lowest wow and flutter
- 15, 7½, and 3¾ ips Speeds
- Record Equalization Selector Switch for standard or Sony SLH-180 low-noise, high-output recording tape
- Plug-In Head Block Assembly
- Die-Cast Tape Guide and Head Block Mounting Frame
- Four-Digit Tape Counter
- Four Illuminated VU Meters, Calibrated to NAB Standards
- Sound-on-Sound Capability
- Two Stereo Headphone Monitor Jacks
- Fully Accessible Bias and Equalization Adjustments
- Logic-Controlled, Solenoid Operated Three-Motor Transport
- Price includes NAB Hub Adapters and Dust Cover

... and here's more about the TC-854-4S

Although designed primarily for sophisticated home and hobby recordings, the TC-854-4S has acquired a reputation for outstanding performance in a wide variety of professional applications. For example, some of the best-known record producers and engineers in the country specify the TC-854-4S for both rack-mount studio console installations and "live" remote recording at concerts and night-clubs. • Musical groups, instrumentalists, and singers use the TC-854-4S to record and analyze performance and rehearsal sessions. • Radio stations find it ideal for the automated playback of pre-recorded programming. • Even computer films have found a place for the extreme reliability and stability of the TC-854-4S in complex data processing instrumentation!

Remember: if you won't accept less than concert hall realism, the TC-854-4S should be the nucleus of your audio system.

Net Each \$1795.00



REVOX STEREO MONO TAPE RECORDER



MODEL A77-MARK IIIB

Broadcast version of the renowned REVOX A77 stereo/mono tape recorder.

REVOX has been an innovator in tape recorder design for almost twenty years. Among the first to pioneer a three motor tape deck and: • An electronically regulated (servo) capstan motor • Capstan system of one revolving part construction. No belts or idler wheels are employed. Speed change effected electronically • Electromagnetic servo braking system • Optical end-of-tape switch • Electromagnetic pressure roller • 50 or 60 Hz operation without any adjustment. Other features: • Accurately calibrated VU meters with special lights to indicate record mode • Dual inputs for front or rear microphone connection plus switchable choice of matching impedance either high or low • Professional three-head design for on/off tape monitoring as well as provision for mixing, multi-track and echo effects • Reel motor defeat switch for manual reel handling during editing 10 1/2" reels for longer uninterrupted recording time • Exceptionally smooth fast forward and rewind speeds thanks to professional three motor design and servo braking system • Headphone monitoring available on front panel with stereo balance and volume control • Selectable tension for large or small spool operation.

Specifications:

Tape Speed: 3 3/4 and 7 1/2 IPS, max. deviation from nominal $\pm 0.2\%$.
Wow and Flutter: Total rms, weighted 0.04% at 7 1/2 IPS and 0.05% at 3 3/4 IPS. Weighted peak to peak flutter as per DIN 0.08% at 7 1/2 IPS and 0.1% at 3 3/4 IPS. **Tape Slip:** Not exceeding 0.2%. **Tape Spool Diameter:** Up to 10 1/2 inches (minimum hub diameter 2 3/8 inches). **Operating Position:** Horizontal or vertical. **Frequency Response:** Via Tape at 7 1/2 IPS: 30 Hz to 20 KHz +2/-3 dB; 50 Hz to 15 KHz ± 1.5 dB. Via Tape at 3 3/4 IPS: 30 Hz to 16 KHz +2/-3 dB; 50 Hz to 10 KHz ± 1.5 dB. **Equalization:** Record NAB, playback NAB and IEC (switchable). **Distortion:** Measured via tape at 1 KHz peak level and at 0 VU respectively, 7 1/2 IPS less than 3% or 1.0% respectively. **Signal to Noise Ratio:** Weighted readings via tape 7 1/2 IPS better than 61 dB (4-track 57 dB). 3 3/4 IPS better than 58 dB (4-track 54 dB). **Crosstalk at 1 KHz:** Mono better than 60 dB, stereo

better than 45 dB. **Inputs Per Channel:** Microphone, low impedance 50 to 600 ohms 0.15 mv, high impedance up to 100 k ohms 2.5 mv — Radio 2.5 mv — Auxiliary 35 mv. All inputs have an overload margin of 40 dB (1:100). **Outputs Per Channel:** Amplifier max. 2.5 V, internal impedance 600 ohms — Radio max. 1.2 V, internal impedance 2.5 k ohms — Headphones, volume adjustable, load impedance 200 ohms or more. **Power Requirements:** Voltage selector for 110 to 250 V, 50 to 60 Hz operation without need for consumption 70 . . . 100 watts. **Dimensions:** 19" rack panel, 14" high, 7 1/2" deep. **Weight:** 34 lbs. **Optional:** Mark III in carrying case, 7 1/2 — 15 IPS full track, Dolby "B", sel-sync, variable pitch, plug-in power amps, remote controls.

WARRANTY: Lifetime on all parts except for heads, capstan and pressure roller which have a 1 year warranty.

MODEL (Standard Speed)

1102 (2 Tr) 1104 (4 Tr) — Deck with wood cabinet.

Net Each \$749.00

1122 (2 Tr) 1124 (4 Tr) — Deck with wood cabinet and amplifiers.

Net Each \$839.00

1202 (2 Tr) 1204 (4 Tr) — Portable model with speakers, no amplifiers.

Net Each \$789.00

1222 (2 Tr) 1224 (4 Tr) — Portable model with amplifiers and speakers.

Net Each \$879.00

1302 (2 Tr) 1304 (4 Tr) — Deck with metal case for rack or custom mounting.

Net Each \$749.00

Stainless steel faceplate fitted on all above models . . . add \$10.00

Revox/Dolby B available in standard speed units shown below

1202 DB (2 Tr) 1104 DB (4 Tr) Net Each \$969.00

1102 DB (2 Tr) 1104 DB (4 Tr) Net Each \$969.00

1302 DB (2 Tr) 1304 DB (4 Tr) Net Each \$969.00

Dolby B with SSP . . . add \$10.00

HS77 Professional high speed machine (15/7 1/2 ips) add \$100.00 to above models. (Stainless steel faceplate included in price)

Full track unit available on high speed units only Add \$100.00

ACCESSORIES

Dustcover (tinted) Net Each \$12.95
 Power Amplifiers (Two, each, 8 watts RMS continuous)

Net Each \$80.00

Instruction Manual (included w/each machine) Net Each \$2.50

Service manual Net Each \$10.00

Stainless Steel Faceplate Net Each \$10.00

19" Rackmount (for 1300 type) Net Each \$15.00

NAB locking reel adaptors for 3" center reels (Two)

Net Each \$15.00

10.5" Revox reels (empty, standard center) Net Each \$3.25

REVOX 3400 dynamic microphones, stand, and case

Net Each \$59.00

Model 1605 Mechanical Remote Control 15ft. cord

Net Each \$29.00

Model 1610 Mechanical Remote Control 30ft. cord

Net Each \$35.00

Model 1705 Illuminated Remote Control 15ft. cord

Net Each \$49.00

Model 1705A Illuminated Remote Control, Automatic Rewind Function

Net Each \$65.00

Waterproof Cover Net Each \$9.95

Rigid Protective Carrying Case Net Each \$29.95

Deluxe Carrying Case Net Each \$49.95



500-A SERIES

Metrotech's new Series of professional audio Recorders and Reproducers, and Loggers. Retaining the symmetrical design[®] of the earlier models, the 500-A Series is new from the top-plate down, including the most advanced electronic and mechanical components available. You'll find the 500-A Series exceptionally clean, reflecting the basic engineering concept that good design results in functional simplicity. This, combined with heavy duty construction and careful workmanship, has made these new units outstanding performers — and assures you of dependable, trouble-free operation and long life. Typical of the many refinements to be found throughout the 500-A Series are the various elements concerned with tape handling. First, the tape threading path is straight, and tape is in contact with the heads and lifters only in the Record, Playback, Edit and Cue modes. Next, the hysteresis synchronous motor that powers the capstan has been effectively isolated, eliminating the possibility of transmitting any vibrations to the top plate, or of motor generated power-field interference with the head assemblies. There's a new capstan pinch roller too, made of solid polyurethane, the same as those used in high-performance computer transports. Unaffected by cleaning solvents and oils, this pinch roller has a very uniform density and a high coefficient of friction — qualities that contribute to the exceptionally smooth tape movement. So smooth, in fact, that at 15 ips flutter and wow are down to a conservative .06%.

[®]Patent Pending

Features:

RECORDERS, REPRODUCERS AND LOGGERS: Straight-Line Tape Threading — so easy it can be done with one hand. **Automatic Tape Lifters** — raise tape into head contact only in Record, Playback, and Edit and Cue modes. Release action frees tape of all contact, including lifters, in Fast Forward and Rewind. Reduces wear, improves performance. **Professional Performance on Quarter-Inch Tape** — uses either 10½" NAB or 7" (or smaller) EIA reels, with 1½ mil quarter-inch tape. **Operate Horizontally Or Vertically** — or at any angle in between. Ideal for console mounting. **Multiple Track/Channel Configurations** — available in full, half and quarter track formats, with 1, 2 or 4 channel electronics. **Single or Bi-Directional Operation** — new design geometry contributes to higher performance standards, and permits bi-directional operation to full specifications. **Automatic Reversing** — bi-directional models automatically reverse, providing from two to four times the unattended recording or playback capability. **Three Motor Drive System** — hysteresis synchronous motor powers the capstan, precision torque motors power each reel. **Solid State Accessible Electronics** — PC board electronics are modular, and are conveniently located behind a removable front panel for quick, easy adjustment of equalization or bias. **Mechanical Accessibility** — all mechanical components are easily reached, and all adjustments are independent of each other. **Remote Control** — all tape motion controls, including the solenoid operated capstan assembly, can be remotely operated by the use of a Metrotech accessory — or in an automation system.

Recorders			
Model	Track Layout	Transport	Net
531R	Full Track Mono	One Direction	\$1695.00
533R	Half Track Mono	One Direction	1695.00
534R	Half Track Mono	Auto Reverse	1895.00
543R	Half Track Stereo	One Direction	1995.00
545R	Quarter Track Stereo	One Direction	1995.00
546R	(2 Channel)	Auto Reverse	2195.00
547R	Quarter Track Stereo (4 Channel)	One Direction	2695.00

Reproducers			
Model	Track Layout	Transport	Net
514P	Half Track Mono	Auto Reverse	1295.00
516P	Quarter Track Mono	Auto Triple Reverse	1295.00
523P	Half Track Stereo	One Direction	1195.00
525P	Quarter Track Stereo	One Direction	1195.00
526P	(2 Channel)	Auto Reverse	1350.00

Loggers			
Model	Track Layout	Transport	Net
552L	1 Channel-Four Track	Auto Triple Reverse	1595.00
554L	2 Channel-Four Track	Auto Reverse	1695.00
555L	4 Channel-Four Track	One Direction	1945.00

Compatible Reproducers for Loggers			
Model	Track Layout	For Model	Net
516LP	1 Channel-Four Track	For Model 552L	1395.00
526LP	2 Channel-Four Track	For Model 554L	1395.00
527LP	4 Channel-Four Track	For Model 555L	1295.00

Accessories			
Type	Description	Used in	Net
BBT-500	Balanced Bridging Transformer	Rec., Log.	\$ 18.00†
BMT-500	Balanced Matching Transformer	Rec., Log.	18.00†
BOT-500	Balanced Output Transformer	Repro.	10.00† ^{***}
MPR-500	Microphone Pre-amplifier	Rec., Log.	75.00†
RCU-500PL-1	Remote Control Unit (1 pass)	Repro., Log.	115.00
RCU-500PL-2	Remote Control Unit (2 pass)	Repro., Log.	125.00
RCU-500PL-4	Remote Control Unit (4 pass)	Repro., Log.	135.00
RCU-500RC-½	Remote Control Unit (1-2 pass)	Rec.	125.00
RCU-500RC-4	Remote Control Unit (4 pass)	Rec.	135.00
VOX-500	Voice Operated Relay	Rec., Log.	60.00 [°]
MASP-500	Monitor Amplifier Speaker Panel	Log.	80.00
CON-500	Console Cabinet	Rec.	275.00
RCC-500	Recorder Carrying Case (1 and 2 Chan Models only)	Rec., Log.	80.00
MTCU-500	Monitor Transfer Control Unit	Log	495.00

^{***}Price includes factory installation, which is the suggested way of ordering, as this accessory is a wired-in type.

†One required per channel.

Nagra TAPE RECORDERS, ACCESSORIES

NAGRA® IV PROFESSIONAL TAPE RECORDER



World-famous professional tape recorder extensively used in radio news reporting, motion picture and TV production, automotive research, aviation, ornithology, linguistic research, photo facsimile recording, record production. Wherever it is important to bring studio-quality sound recording outdoors. The Nagra IV's completely self-contained portability, superb speed stability, low wow and flutter values, and host of other features and specifications, result from meticulous study of problems encountered in recording in the field, coupled with use of the most advanced technology and production methods. The recorder functions efficiently in any operating position, and is virtually unaffected by impact, humidity, tropical or polar climates, altitude, salt air and general outdoor use. Operating temperature range is from -4°F to $+160^{\circ}\text{F}$. Operates on 12 flashlight cells or optional AC power supply. Speed, wow and flutter, signal-to-noise and response values are well within NAB primary standards. Three mixing inputs for great versatility; microphone inputs are female Cannon XL types. Front-panel VU meter also measures battery reserve, motor current, bias, compression and sync signal. Sync system uses accepted standard neopilot sync; optional internal resolver for on-location sync playback; optional internal time sync generator to eliminate camera cables. Fading device does not pass signal until tape is up to speed. Motor is servo-controlled. Since the recorder was designed to be operated under the most unfavorable conditions by nontechnical personnel, all controls are positioned for easy manipulation whether the unit is being carried on the shoulder or placed on a table. A wide range of accessories are available to add even greater versatility to the Nagra IV recorder; see listing below.

NAGRA 4-2 TAPE RECORDER SPECIFICATIONS

Dimensions: 12.5" x 8.7" x 4.3". **Weight:** 11 lb. 9 oz. without tape or batteries. **Power Consumption:** In Test Mode, 105mA; In Playback Mode, 200mA; In Recording Mode, 250mA. **Batteries:** 12 Standard Flashlight "D" Cells. **Electronics:** All silicon transistors and tantalum condensers. **Tape Speed:** 15 ips, 7.5 ips, 3 3/4 ips. **Reel Diameter:** 7" with cover open, 5" with cover closed. **Recording Time:** 1/2 Mil Tape: 3 3/4 ips, 5" reel — 1 hour; 7" reel — 2 hours. 7 1/2 ips, 5" reel — 30 min; 7" reel — 1 hour; 15 ips, 5" reel — 15 min.; 7" reel — 30 min. 1 1/2 Mil Tape: 3 3/4 ips, 5" reel — 30 min.; 7" reel — 1 hour; 7 1/2 ips, 5" reel — 15 min.; 7" reel — 30 min. 15 ips, 5" reel — 7 1/2 min.; 7" reel — 15 min. **Speed Regulation:** 1% or better. 60 Cycle built-in stroboscope disc. **Rewind:** Fast rewind and fast forward controls. **Magnetic Heads:** 1 High frequency erase head with double gap, 1 Full track record head, 1 Full track playback head, 1 Neopilot sync track head with high frequency bias. **Equalization:** NAB. For standard tape and low noise tape. **Inputs:** A. Two Microphone inputs — Third microphone input with external preamplifier (see preamplifier listings). B. Unbalanced Bridging input 100K ohms impedance, .37 to 150 volts. Controlled by "Line" volume control. C. Accessory input for use with AMS, BS or BMT

when high level input is not required. D. Mixer input 560 MV. @ 9K ohms. (Not volume controlled in NAGRA) **Oscillator:** Frequency: 120 KHz. Bias level adjustable for various tape types. **Output Level:** +22 dbm at 1% distortion into 600 ohms. **Output Impedance:** 600 ohms. **Frequency Response:** Recorded at -20 db . At 15 ips 30 Hz to 20,000 Hz $\pm 2\text{ db}$. At 7 1/2 ips 30 Hz to 15,000 Hz $\pm 2\text{ db}$. **Signal to Noise Ratio:** Record-playback at 7 1/2 ips using ASA "A" filter normally 70 db depending on tape used. **Erase:** -80 db . Referred to maximum level of 800 Hz. **Temperature Range:** -4°F to $+160^{\circ}\text{F}$, -67°F to $+160^{\circ}\text{F}$ using external power and special belts. **Recorder Case:** Rugged lightweight metal. **Carrying Case:** Eveready leather case. **Loud Speaker:** Powered by 1.6 Watt amplifier. **Headphone Monitoring Level Adjustable:** 20-800 MV into 50 ohms load. **Speech Filter:** 6 Positions of equalization. 1. Flat; 2. Low frequency attenuation; 3. Increased low frequency attenuation; 4. Hi-pass at low frequency; 5. Hi-pass plus #2 above; 6. More severe hi-pass. **Reference Oscillator:** 1 KHz square wave at -10 on modulator. **Automatic Gain Control:** Switch position permits manual or automatic volume control of one or both microphone inputs.

NAGRA 4.2 INTERNAL ACCESSORIES

QHT "Eveready" leather case (for IV & 4.2) Net Each \$32.00
QHP "Eveready" leather case with pocket (For IV & 4.2) Net Each \$35.00
HTN "Eveready" leather case (For III) Net Each \$32.00
DH Portable 6 watt Amplifier-Loudspeaker (Specify recorder type) Net Each \$230.00
ATN Sync Transformer and Power Supply (For all types) Net Each \$58.00
External Microphone Preamplifiers For 3d mike on Nagra IV & 4.2; For 2d mike on Nagra III; BS Preamplifier (50-200 ohm dynamics) Net Each \$77.00
AMC Preamplifier (Neuman KM56, 63, 64) Net Each \$185.75
AMS Preamplifier (Sennheiser MKH 104, 404, 804) Net Each \$59.50
BMT 3 Microphone Mixer with input transformers (for all types) Net Each \$210.00
QCB In-line Amplifier to Adapt BMT to Nagra IV & 4.2 Net Each \$53.00
SLO Synchronizer for self-resolving (For III, IV & 4.2) Contains oscilloscope, marker system, and power supply Net Each \$558.00
QCL In-line amplifier to use SLO with Nagra IV & 4.2 Net Each \$53.00

NAGRA 4.2 EXTERNAL ACCESSORIES

NAGRA 4.2 L Synchronous Recorder (Note 1) Net Each \$1,735.00
SELECT INTERNAL MODULES ANYTIME BEFORE OR AFTER PURCHASE (Note 2)
 Add two pre-amplifiers
QPSE-200-XOYO (Can be strapped for 50 ohms.) General Use Net Each \$58.00
QPM-3-5 For Sennheiser Static 5 MKH 105, 405, 415, 805 & 815 Neumann Type KM 73, 74 & 76 Net Each \$58.00
QPM-3-4 For Sennheiser Static 4 MKH 104; 404 & 804 Net Each \$39.00
QPM-6 High Level Input (For Additional "Line Input") Net Each \$39.00
 Add **ALC** — For Automatic Mixing of Speeches, Meetings, Inter-

QCL-S In-line amplifier to use SLO with Nagra Stereo "S" Net Each \$53.00
QFC Couples two Nagra IV and/or 4.2's to make continuous recordings Net Each \$53.00
QSV Speed Varier (For IV Only) (Adjusts 3 3/4 — 7 1/2 — 15 IPS) Net Each \$77.00
QSV-2 Speed Varier (For 4.2 Only) (Adjusts 3 3/4 — 7 1/2 — 15 IPS) Net Each \$77.00
SV-7-5 Speed Varier (For III) (Use at 7.5 IPS) Net Each \$56.00
SV-15 Speed Varier (For III) (Use at 15 IPS) Net Each \$56.00
TSG 560 Time Sync Generator (For III) Net Each \$225.00
ALC Automatic Level Control (For Nagra IV & 4.2) Net Each \$196.00
QFM-60 Internal Camera Speed Indicator (For IV & 4.2) (50 Hz units also available) Net Each \$109.00
QSLI Internal Self-Resolver and Sync Playback (For IV & 4.2) Net Each \$116.00
QGX-60 Hz. Internal Time Sync Generator (For IV & 4.2) (can be strapped for 50 Hz.) Net Each \$228.00
QPC Sync Transformer/Filter for use with Multi-Duty Motors (For IV & 4.2) Net Each \$116.00

views But Not for Dramatic Sound Recording Net Each \$196.00
 Add **QFM-60** — Camera Speed & Flicker Indicator (50 Hz units also available) Net Each \$109.00
 Add **QSLI** — Self Resolver & Sync Playback Net Each \$116.00
 Add **QGX** — Time Sync Generator eliminating cables when working with crystal controlled camera (can be strapped for 50 Hz.) Net Each \$228.00

NOTE 1. All NAGRA 4.2 recorders are 3 speed and are equipped with Limiters under switch control.
NOTE 2. If possible, the selection of pre-amplifiers and ALC should be made at time of purchase to allow for a complete check at a service depot.

WRITE FOR DETAILED SPECIFICATIONS AND ADDITIONAL ACCESSORIES AVAILABLE

AUDIO DISTRIBUTORS, INC. / GRAND RAPIDS, MICHIGAN

Nagra TAPE RECORDERS, ACCESSORIES

NAGRA S

The NAGRA S is a two track, professional, high quality, portable tape recorder for use in making Master Tapes for disc, cassette and tape release. Two Kudelski high quality channels — modular and complete as delivered. Universal microphone input — switchable for most microphones. New preamplifier — low noise (2 db above thermal noise) and high overload position (600 mV) plus extra gain when required. Channels switchable between microphones and 600 ohm lines for external mixing. Elaborate system of filters to compensate for effect of microphone proximity and room resonances. Limiter, under switch control, to handle extra 6 db input level, also facilities for modern external low noise systems. Phase checking and correcting switches. NAB, or NAGRAMASTER recording selection available to best meet requirement. Two needle modulator that can also be switched to show maximum level on one needle and future width of stereo disc cut on the other. Clutch coupling of left and right channel mixing dials when desired. "Stereo-Mono" headset monitoring under pushbutton control. Exceptionally low FM modulation noise and reduction of AM modulation noise in NAGRAMASTER mode. Two or more recorders may be coupled for continuous recordings. Push-button 1 KHz square wave reference oscillator also used to check azimuth. Improved servo motor to further reduce Wow and Flutter. Adjustable equalizers for standard and low noise tape. Instant stop for editing. Remote start capability. Toggle switch "Direct-Tape" metering.

NAGRA SL STEREO RECORDER (non-sync) — Including: All necessary recorder modules and carrying handle. **Net Each \$1,985.00**

NOTE: When sync modules become available, all non-sync recorders can be modified if desired.

NAGRA SD SYNC RECORDER **Net Each \$2,385.00**

EXTERNAL ACCESSORIES

QHT "Eveready" Leather Case **Net Each \$32.00**
QHTP "Eveready" Leather Case with Pocket **Net Each \$35.00**
ATN Power Supply (plus sync transformer) **Net Each \$58.00**
PA Nickel Cadmium Batteries (set of 12) **Net Each \$98.00**
PAR Charging Attachment for Nickel Cadmium Batteries (use with ATN) **Net Each \$46.00**
DT-480 Beyer Stereo Headset (2 x 200 ohms) **Net Each \$75.00**

TECHNICAL DATA

Dimensions: 12.5" x 8.7" x 4.3". **Weight:** 11 lb. 9 oz. without tape or batteries. **Power Consumption:** In Record Mode 255 mA. **Batteries:** 12 Standard Flashlight "D" Cells. **Electronics:** All silicon transistors and tantalum condensers. **Tape Speed:** 15 ips, 7.5 ips, 3¾ ips. **Reel Diameter:** 7" with cover open, 5" with cover closed. **Recording Time:** ½ Mil Tape: 3¾ ips, 5" reel — 1 hour; 7" reel — 2 hours. 7½ ips, 5" reel — 30 min.; 7" reel — 1 hour. 15 ips, 5" reel — 15 min.; 7" reel — 30 min. 1½ Mil Tape: 3¾ ips, 5" reel — 30 min.; 7" reel — 1 hour. 7½ ips, 5" reel — 15 min.; 7" reel — 30 min. 15 ips, 5" reel — 7½ min.; 7" reel — 15 min. **Magnetic Heads:** 1 High frequency erase head with double gap. 1 Two-track record head. 1 Two-track playback head. **Equalization:** NAB. For standard and low noise tape. **Inputs:** A. Two Microphones; Each microphone input switchable to the following: 1. 50 ohm dynamic; 2. 200 ohm dynamic; 3. Phantom + 12 volts (AKG & Schoeps); 4. Phantom + 48 volts (Neumann); 5. Phantom — 12 volts (Schoeps); 6. Phantom "T" (Sennheiser & Neumann KM 73, 74 & 76). B. Line Inputs: 50 mV for "0" db. **Speed Regulation:** 1% or better. 60 Cycle built-in stroboscope disc. **Rewind:** Fast rewind and fast forward controls. **Oscillator Frequency:** 125 KHz. Bias level adjustable for various tape types. **Output Levels:** Two "line" outputs @ 1 volt across 500 ohms or more. **Frequency Response:** Recorded at —20 db. At 15 ips 30 Hz to 18,000 Hz ±2 db. **Signal to Noise Ratio:** Record-playback at 15 ips using ASA "A" filter normally 70 db depending on tape used. **Erase:** —80 db. Referred to maximum level of 800 Hz. **Temperature Range:** —4°F to +160°F. —67°F to +160°F using external power and special belts. **Recorder Case:** Rugged lightweight metal. **Carrying Case:** Eveready leather case. **Loud Speaker:** Powered by 1.6 Watt amplifier. **Headphone:** Adjustable level. Uses standard stereo jack. Uses quality 2 x 200 ohm stereo headset. **Filters:** Six positions: 1. Flat; 2. Music; 3. Music +

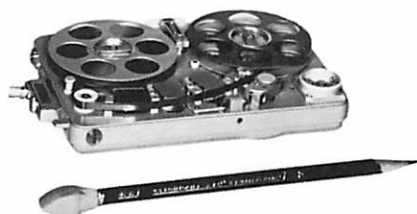
low frequency attenuation; 4. Speech; 5. Speech + low frequency attenuation; 6. Roll-off. **Reference Oscillator:** 1 KHz at —10 db on Modulometer.

MODEL SN

Dimensions: Cover closed. Without sockets, closing screw or control knob, 5.8" x 4" x 1.02". **Weight with batteries and tape:** 1.3 lb. **Normal Power Supply:** two type AA. — Average battery for Eveready type E 91 in continuous duty, 7½ hours. — External Power Supply, 2 to 3 V. Approximate current consumption on record, 125 mA at 3 V. **Microphone Input:** — Current input from 200 Ω or greater source, 3μA RMS; — Maximum level, 100 μA RMS. **Line Input at Fixed Level:** — For nominal modulation, level from 100 Ω Maximum source, 160 mV RMS. **Playback Output:** — Maximum load impedance 1 KΩ. — Playback Standard, 50 μs et 3180 μs (according to NAB Standard at 7.5"/s). **Performance:** — Record and Playback pass band with high-pass filter and external playback corrector ±2 db, 80 to 15,000 Hz. — Signal-to-noise ratio measured with ASA "A" filter, signal being at nominal level, 60 db. — Distortion at 400 Hz, at nominal level, 2%. — Wow and Flutter, peak value weighted according to DIN 45 507, ±0.1%. — 1000 Hz signal erasure, 70 db. — Usable Temperature Range. **SPECIAL FEATURES:** — Compression indicator and battery check meter. — Remote Control Start Stop. — Cinema synchronization device LPS. — Omnidirectional condenser microphone. **Net Each \$1,298.00**

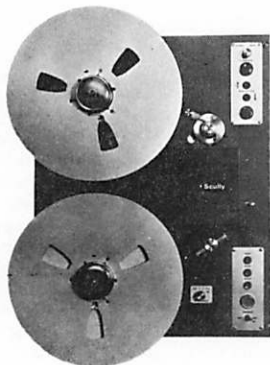


NAGRA S



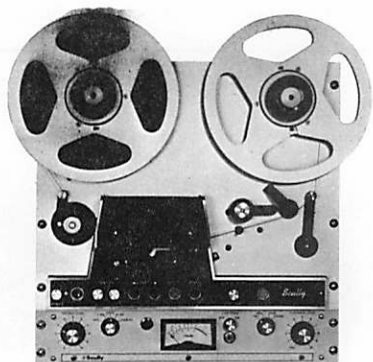
MODEL SN

▶ Scully TAPE REPRODUCERS, RECORDERS



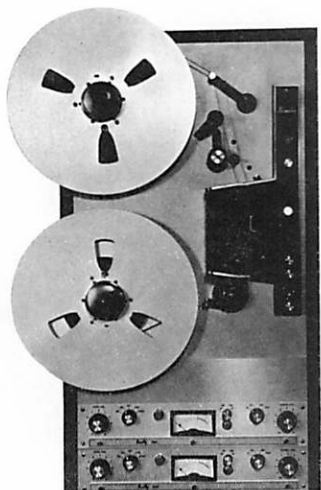
SCULLY 270 SERIES PROFESSIONAL TAPE REPRODUCERS

The Scully 270 Long Play Reproducer . . . is the standard of excellence in automated broadcasting. Designed to run trouble-free for long periods, the 270 is an extra-rugged, heavy-duty quality reproducer. Its features include: disc brakes; transistorized, plug-in amplifiers; one-piece solid frame construction; plug-in reel hubs; automatic start torque tension control; instant access; and reversing capability. Using $\frac{1}{4}$ " tape, the Scully 270 is a monophonic half or full-track, and stereo two or quarter-track unit. It accepts up to a 14" reel and is available at speeds of $3\frac{3}{4}$ & $7\frac{1}{2}$ ips, or $7\frac{1}{2}$ & 15 ips.



SCULLY 280 SERIES PROFESSIONAL TAPE RECORDERS

The Scully 280 Recorder . . . is another example of Scully professional craftsmanship. Included in its many high performance features are smooth action tape lifters with instant access to manual override; optional Motion Sensing; handsome control center designed with functions in operations-oriented sequence, including edit control switch, sweep loading tape path and hum shield lock. The solid state 280's have exclusive Scully plug-in head assemblies . . . for either mono or stereo recording. Patented disc brakes; optional selective synchronization for multi channel over dub effects; patented linearity circuit for super low distortion; scrape filter for recording excellence; and tapped transformers for lowest operating temperatures. Available unmounted, in console or portable case. 280 configurations include standard $\frac{1}{4}$ " mono and stereo plus 4 track for quadrasonic use.



SCULLY 280 SP/14 SERIES

The Scully 280 SP/14 Recorder . . . includes all the many features of the standard 280s and, in addition, accepts up to 14" reels. Complete information and technical specifications on each of the Scully Recorders and Reproducers in this Catalog are available.

SEE NEXT PAGE FOR PRICES/ACCESSORIES

Scully MASTER TAPE RECORDERS



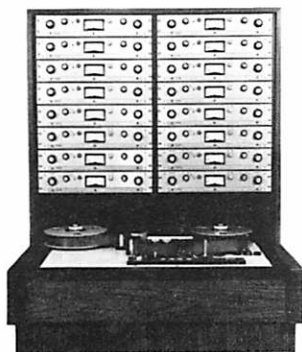
SCULLY 282 SERIES

1/2" 4 channel. 280 transport for 1/2" operation. Adjustable guides available for 1/4" Selective Synchronization standard. Motion Sensing optional.



SCULLY 284 SERIES

1" 4, 8 or 12 channel. Adjustable guides available for 1/2" operation. Selective Synchronization and Motion Sensing standard. Sync-Master* capability for remote control of record and sync function.



SCULLY 288 SERIES

2" 12, 16 or 24 channel. Adjustable guides available for 1" operation. New transport, designed specifically for smooth handling of wide tape. Offers all the advantages of the famed 280 series plus latest state-of-the-art innovations; including Motion-Sensing, exclusive tape-wiping control and Scully Sync-Master*

Reproducers

Model	Description	Net Each (unmounted)
270	Monaural full track (1/2")	\$1950.00
270-1	Monaural half track (1/4") reversing	1950.00
270-2	Stereo 2 track (1/4")	2050.00
270-44	Stereo 4 track (1/4") electronic switching	2400.00

Recorders

280	Monaural full track (1/2")	2300.00
280-1	Monaural 1/2 track (1/4")	2300.00
280-2	Stereo 2 track (1/4")	3000.00
280-4	Stereo 1/4 track (1/8")	3000.00
282-4	Stereo 4 track (1/2")	4850.00*
M/S 280	Monaural full track (1/2")	2450.00
M/S 280-1	Monaural 1/2 track (1/4")	2450.00
M/S 280-2	Stereo 2 track (1/4")	3100.00
M/S 280-4	Stereo 1/4 track (1/8")	3100.00
M/S 282-4	Stereo 4 track (1/2")	5200.00*
M/S 280 (SP/14)	Monaural full track (1/2")	2650.00
M/S 280-1 (SP/14)	Monaural 1/2 track (1/4")	2650.00
M/S 280-2 (SP/14)	Stereo 2 track (1/4")	3250.00
M/S 280-4 (SP/14)	Stereo 1/4 track (1/8")	3250.00
	(console mounted)	
284-8	Eight track (1")	11,500.00
288-8	Eight track (1") for expansion to sixteen track (2")	17,950.00
288-16	Sixteen track (2") (All 288 series machines include Sync/Master Remote Control)	24,950.00
	Transfer Master with advance head, reproduce head and four reproduce amplifiers for disc mastering	3950.00

Accessories

Model	Description	Part No.	Net Each
Console Mount			
280	Monaural	502400100	\$280.00
280-2	Two channel	502400200	320.00
282-3	Three Channel	502400300	360.00
282-4	Four channel (Additional Configurations available on request)	502400400	380.00
Portable Cases			
280/280-2	Monaural or Two channel	502500000	260.00
282-4	Four channel	502500000-01	350.00
Remote Control			
	Standard Remote Control	502210100	125.00
	Deluxe Remote Control (with tape lifter control — available only on Models with Motion Sense Control)	504210100-01	145.00
Motion Sense Control			
M/S	Exclusive Scully development for increased tape handling facility — factory installation on 275 and 280 (SP/14) series (standard on 284 series)		200.00
Sync/Master			
S/M	Remote switching control for selective synchronization, includes deluxe control unit.		
	Four channel	502210000	850.00
	Eight channel	504210000	1150.00
Instruction Manuals			
270	Long Play Reproducer	000501000	12.50
280	Recorder/Reproducer	000502000	12.50
284	One inch Recorder	000504000	12.50
	Reproducer		
288	Two inch Recorder	000508000	18.00
	Reproducer		
Head Degausser Test Set			
RTS-1	Ferrogaph Test Set — Oscillator, AC VTVM, Distortion Analyzer, Drift & Flutter Meter	601020000	1050.00

*Includes selective synchronization

MODEL 1021X TRANSISTORIZED PROFESSIONAL RECORDER/REPRODUCER

Built to broadcasters' specifications, this fine monophonic instrument gives the ultimate in smooth tape handling and braking. Other exceptional provisions include a built-in cuing speaker with separate volume control and amplifier to drive an external speaker; one-hand "cue" button lifts tape to heads, releases brakes and puts a low, even torque on the reels. Remote start-stop operation in pre-set mode using only a SPST switch. **Control Features:** Switchable (NAB standard) equalization. Simultaneous record and playback facility. Front panel input selector; includes mixing auxiliary input. Monitoring from tape or source, with earphones. VU meter for record and playback level measurements. Pushbutton transport controls; record safety interlock. **Construction Features:** Handles 1/2-mil tape safely. Take-up and pay-out compliance arms; tape break shut-off; solenoid-operated tape gate, brakes and pressure roller. Double flywheel capstan drive with motor-stop when tape runs out. Hardened stainless steel capstan driven by two-speed hysteresis synchronous motor; separate reel drive motors. Military type differential band brakes. Built-in input and output transformers with adjustable impedance. Rugged, die-cast transport top plate. Finished in brushed aluminum. **Tape Speeds:** 3 3/4"/sec. and 7 1/2"/sec.; rewind time 1200 ft. in 80 seconds. **Heads:** Full-track erase, and record; 1/2-track play, provision for fourth head available. **Frequency Response:** ±2 dB; 35-8,000 Hz at 3 3/4"/sec.; ±2 dB, 45-18,000 Hz at 7 1/2"/sec. **Wow and Flutter:** 0.25% at 3 3/4"/sec.; 0.2% at 7 1/2"/sec. **Timing Accuracy:** ±0.2%. **Reel Size:** 5", 7", and 8" EIA hubs. **Signal-to-Noise Ratio:** 53 dB, both speeds. **Inputs:** Lo-Z mike, balanced

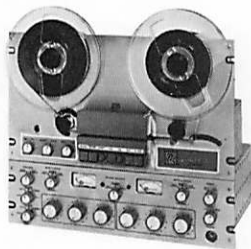


bridge, unbalanced bridge, mixing bridge and aux bridge. **Outputs:** 150/600-ohm balanced, unbalanced, aux A and aux B (+4 dBm). **Size:** 19" w. x 12" d. x 15 3/4" h. Wt., 47 lbs., uncased. **Magnecord Model 1021X** From \$972.00
Magnecord Model 1021RX — Same as above but includes full relay control. From \$1072.00

MODEL 1022X TRANSISTORIZED STEREO RECORDER/REPRODUCER

Stereo 1/2-track record and play plus 1/4-track playback recorder/reproducer features reliable, cool, solid state electronics with regulated power supply. **Control Features:** Controls include pushbutton transport controls, record safety interlock, "cue" transport control, front-panel input selectors, remote "start-stop" control with local-remote front panel switch, signal switching available at remote. NAB standard switchable equalization, separate channel gain controls separately arranged for record and playback functions, and large "operator" type knobs used throughout. VU meters for record-playback

level of each channel. Monitoring accomplished from tape or source. Simultaneous record and playback functions. Channel tally lights in record mode. **Construction Features:** Superior tape guiding system combines with take-up compliance arm, pay-out compliance arm and tape break shut-off for smooth tape handling. Large, rugged, hardened stainless steel capstan on double flywheel drive; capstan motor stops when tape runs out. Motor is two-speed hysteresis synchronous type. Ball-bearing inertial stabilizer; individual reel drive motors; military-type differential band brakes; solenoid operated tape gate, brakes and pressure roller. Built-in input and output transformers, auxiliary unbalanced inputs and outputs; connectors are standard broadcast type. Modular construction. Solid, die-cast transport top plate. Durable, brushed aluminum top panel. **Tape Speeds:** 7 1/2"/sec. and 15"/sec.; rewind time 1200 ft. in 80 seconds. **Heads:** Separate selectable two-channel erase, record and play plus 1/4-track play. **Frequency Response:** ±2 dB, 30-16,000 Hz at 7 1/2"/sec.; ±2 dB, 35-22,000 Hz at 15"/sec. **Flutter and Wow:** 0.17% at 7 1/2"/sec.; 0.15% at 15"/sec. **Timing Accuracy:** ±0.2%. **Reel Size:** 5", 7" and 8" EIA hubs. **Signal-to-Noise Ratio:** 53 dB, both speeds. **Inputs:** Lo-Z mike, balanced bridge, unbalanced bridge and aux bridge each channel. **Outputs:** 150/600-ohm balanced, aux A and aux B unbalanced (+4 dBm) each channel. **Size:** 19" w. x 12" d. x 15 3/4" h. Weight, 47 lbs. **Magnecord Model 1022X** From \$1149.00
Magnecord Model 1022RX — Same as above but includes full relay control. From \$1258.00



MODEL 1024X TRANSISTORIZED STEREO RECORDER/REPRODUCER

Straight-forward design employs the best engineering features developed during the last twenty years. Low heat, high efficiency, high reliability solid state circuitry. Provides all 1/4-track stereo functions with simplified ease while handling 1/2-mil tapes gently, smoothly and quietly; optional two-channel playback head available for installation in fourth (empty) head position. **Control Features:** Large "operator" type knobs for easy handling. VU meter for each channel, earphone monitor jack and mike jacks on front panel give exceptional convenience. Simultaneous record and playback functions with front-panel mode switch and tally lights; monitoring from tape or source. Pushbutton transport controls plus "cue" control; remote start-stop operation with signal switching available at remote socket; local-remote switch on front panel. Separate channel monitor and output switches. Switchable equalization. Record safety interlock. **Construction Features:** Smooth, quiet, safe tape handling system employs separate reel drive motors, hysteresis synchronous metering capstan drive and solenoid-operated tape gate, brakes and pressure roller. Capstan motor stops when tape runs out. Double flywheel capstan drive employs hardened, stainless steel capstan; ball-bearing inertial stabilizer flywheel. Take-up and pay-out compliance arms, plus tape-break shut-off. Military-type differential brakes. Emitter follower outputs for each channel, plus auxiliary. Auxiliary high impedance inputs; mixing inputs for high-level line. Sturdy die-cast main plate. Brushed aluminum finish. **Tape Speeds:** 3 3/4"/sec. and 7 1/2"/sec.; rewind time 1200 ft. in 80 seconds. **Heads:** Selectable 1/4-track erase, record and play; space provided for optional 1/2-track play head. **Frequency Response:** +2, -3 dB, 35-10,000 Hz at 3 3/4"/sec.; ±2 dB, 45-18,000 Hz at 7 1/2"/sec. **Flutter and Wow:** 0.25% at 3 3/4"/sec.; 0.2% at 7 1/2"/sec. **Timing Accuracy:**



±0.2%. **Reel Size:** 5", 7" and 8" EIA hubs. **Signal-to-Noise Ratio:** 47 dB at 3 3/4"/sec.; 50 at 7 1/2"/sec. **Inputs:** Mike, 50K ohms nominal; hi-Z mixing bridge; aux bridge each channel. **Outputs:** Emitter follower and aux emitter follower (0.5 V loaded) each channel. **Size:** Transport, 19" w. x 7 1/4" d. x 10 1/2" h.; amplifier, 19" w. x 12" d. x 5 1/4" h. **Magnecord Model 1024X** From \$932.00
Magnecord Model 1024RX — Same as above but includes full relay control. From \$1027.00
Optional 1/2-Track Playback Head No. A36C115-1 Net Each \$30.00
Transport Carrying Case Net Each \$50.00
Amplifier Carrying Case Net Each \$50.00

Magnecord Model 91E6786-2 — Remote control station for use with relay control units listed above.

Net Each \$58.00

TELEX TAPE DUPLICATORS



MODEL 235-1 OPEN REEL DUPLICATING SYSTEM

Solid state, plug-in modular system designed for educational, broadcast and commercial tape duplicating. Basic table-top console includes one master and one slave transport; accepts up to 10 slave units, two in each additional console. Easy operation with single power switch. Entire system is operated from the master transport pushbuttons when recording or duplicating, for click-free operation. All tracks of a master tape can be simultaneously copied in one pass. Available in full-, half- or quarter-track; one, two or four channels. Heavily-duty transports have w-speed hysteresis capstan drive, separate reel drive motors and differential braking, plus photoelectric run-out and speed switch. Master unit includes digital counter, provision for remote control. Interlock stops entire system if master tape breaks. Solid state amplifier modules with illuminated VU meters permit use of 10 slaves without signal drop. Bias oscillator provides 260 kHz bias for clean recording of 40 kHz and beyond. Equalization control permits use with tapes from 1 1/2 to 15 ips. Basic system in single console includes master and one slave transport, amplifier chassis with space for 5 plug-in modules, bias oscillator module, and one, two or four slave record amplifier modules, one for each channel in the system. One or Three systems includes two additional slaves in another console. **Tape Speed:** 7 1/2 and 15 ips. **Frequency Response:** ±3 dB, 80-40,000 Hz at 15 ips; 40-20,000 Hz at 7 1/2 ips; 40-10,000 Hz at 3 3/4 ips; 40-5000 Hz at 1 1/2 ips. **Signal-to-Noise Ratio:** 55 dB peak; less than 3 dB degradation from master. **Crosstalk:** Better than -50 dB. **Distortion:** Less than 1% THD at 1 kHz, 0 VU. **Speed Regulation:** 0.5%. **Wow and Flutter:** 0.17% rms at 15 ips; 0.2% at 7 1/2 ips. **Reel Size:** 7" max. **Heads:** Laminated hyperbolic ground; no pressure pads needed. **Power Required:** 340 watts max., 105-130 VAC, 50/60 Hz for basic system; additional slaves, 150 watts max. **Console Size:** 21" w. x 18" d. x 32" h.; transports mounted at 67° angle.

MASTER CONSOLES

Telex Model	Catalog Number	No. of Slaves	Track	No. of Channels	Net Each
	86782-01	One			\$1943.00
	86782-02	Two			2431.00
	86782-03	Three			2783.00
	86782-04	Four			3344.00
235-11-1	86782-05	Five	Full	One	3806.00
	86782-06	Six			4368.00
	86782-07	Seven			4830.00
	86782-08	Eight			5392.00
	86782-09	Nine			5854.00
	86782-10	Ten			6416.00
	86780-01	One			1890.00
	86780-02	Two			2357.00
	86780-03	Three			2704.00
	86780-04	Four			3248.00
235-21-1	86780-05	Five	Half	One	3692.00
	86780-06	Six			4236.00
	86780-07	Seven			4680.00
	86780-08	Eight			5224.00
	86780-09	Nine			5668.00
	86780-10	Ten			6212.00
	86781-01	One			2095.00
	86781-02	Two			2562.00
	86781-03	Three			2830.00
	86781-04	Four			3381.00
235-22-1	86781-05	Five	Half	Two	3833.00
	86781-06	Six			4376.00
	86781-07	Seven			4828.00
	86781-08	Eight			5379.00
	86781-09	Nine			5831.00
	86781-10	Ten			6375.00
	86779-01	One			2095.00
	86779-02	Two			2562.00
235-42-1	86779-03	Three	Quarter	Two	2830.00
	86779-04	Four			3381.00
	86779-05	Five			3833.00

MASTER CONSOLES (CONT'D)

Telex Model	Catalog Number	No. of Slaves	Track	No. of Channels	Net Each
	86779-06	Six			\$4384.00
	86779-07	Seven			4835.00
235-42-1	86779-08	Eight	Quarter	Two	5387.00
	86779-09	Nine			5838.00
	86779-10	Ten			6389.00
	86783-01	One			2793.00
	86783-02	Two			3250.00
	86783-03	Three			3649.00
	86783-04	Four			4237.00
235-44-1	86783-05	Five	Quarter	Four	4725.00
	86783-06	Six			5313.00
	86783-07	Seven			5801.00
	86783-08	Eight			6389.00
	86783-09	Nine			6878.00
	86783-10	Ten			7466.00

ADDITIONAL CONSOLES

Identical in size to master consoles. Each console holds two slave units.

Telex Catalog No. 86471-03

Net Each \$108.00

ADDITIONAL SLAVE MODULES

For Telex Model	Catalog Number ^a	Track	No. of Channels	Net Each
235-11-1	86767-	Full	One	\$462.00
235-21-1	86775-	Half	One	444.00
235-22-1	86776-	Half	Two	451.00
235-42-1	86777-	Quarter	Two	451.00
235-44-1	86778-	Quarter	Four	488.00

^aSpecify position for correct cable length by adding suffixes to catalog numbers: Position 1, suff. -01; pos. 2 or 3, suff. -02; pos. 4, suff. -03; pos. 5, suff. -04; pos. 6, suff. -05; pos. 7, suff. -06; pos. 8 or 9, suff. -07; pos. 10, suff. -08.

MODEL 235CS-1 CASSETTE DUPLICATING SYSTEM

Master unit remains the same as in the open reel duplicating system above. Systems consist of one master open-reel module and one or more cassette modules. Each cassette slave module contains three cassette transports; complete system will accommodate up to three slave modules (nine cassette transports) plus master without additional electronics. Equalization for various tape speeds is preset by clearly marked selector switches. In addition, 235CS-1 slave mod-

ules can be added to existing Model 235-1 open reel duplicating systems without additional amplifiers or costly modifications; module simply plugs into existing system. Available in configurations ranging from half-track single channel to four-track four channels. Master tape speed is 15 ips or 7 1/2 ips, cassette slave tape speed is 7 1/2 or 3 3/4 ips. All systems listed below are complete with master unit, indicated number of slave modules, all electronics and console.

Telex Model	Catalog Number	No. of Slaves ^a	Track	No. of Channels	Net Each	Additional Slave Modules	Net Each
235-21CS-1	86475-01	One			\$1860.00		
	86475-02	Two	Half	One	2365.00	86468-07	\$475.00
	86475-03	Three			2755.00		
235-22CS-1	86476-01	One			2070.00		
	86476-02	Two	Half	Two	2590.00	86468-05	495.00
	86476-03	Three			2920.00		
235-42CS-1	86476-16	One			2070.00		
	86476-17	Two	Quarter	Two	2590.00	86468-39	495.00
	86476-18	Three			2920.00		
235-44CS-1	86835-00	One			2795.00		
	86835-01	Two	Quarter	Four	3550.00	86836-05	695.00
	86835-02	Three			4210.00		

^aEach slave module has three cassette transports.



LEASE AND FINANCING PLANS AVAILABLE.

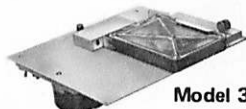
MODEL 1028 PROFESSIONAL STEREO RECORDER/REPRODUCER



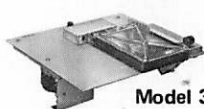
Advanced circuit design utilizes the latest tube types and printed wiring to insure uniform high performance from recorder to recorder. Advanced design heads attain superior performance; optically aligned with the tape gate on a precision comparator before the head assembly casting is installed. Solenoid-operated tape gate provides precision alignment of the tape centerline with the head centerline. **Other Features:** Interlocked pushbutton controls prevent accidental erasure or tape damage. VU meters are mounted to permit an easy check of levels and channel balance at a glance. Die cast main frame insures permanent mechanical stability; head mount

is also die cast to guarantee accurate, permanent alignment. Alternate, plug-in input and output transformers provide convenient change to suit users needs. Non-glare vinyl finish in neutral blue-gray harmonizes into any installation; scratch-resistant and cleans like new with a damp cloth. **Tape Speeds:** 7 1/2"/sec. and 15"/sec.; rewind time less than 100 secs. for 2400 feet. **Heads:** Selectable erase, two-channel record and two-channel play; accessory 1/4-track playback head available at extra cost. **Frequency Response:** ±2 dB, 35-16,000 Hz at 7 1/2"/sec.; 35-18,000 Hz at 15"/sec. **Flutter and Wow:** 0.15% at 7 1/2"/sec.; 0.1% at 15"/sec. **Timing Accuracy:** ±0.2%. **Reel Size:** 5", 7" and 10 1/2". **Signal-to-Noise Ratio:** 55 dB per channel. **Input Sensitivity:** -90 dBm to -30 dBm. **Inputs:** Hi-Z mike and hi-Z unbalanced bridge per channel. Lo-Z mike and hi-Z balanced bridge with optional input transformer. **Outputs:** Cathode follower, 2.0 volts; 150/600-ohm balanced, +4 dBm with output transformer (not supplied). **Size:** 17 1/8" w. x 11 1/8" d. x 12 1/8" h. (14 1/8" h., enclosed). **Weight,** 50 lbs. (60 lbs., cased).
Magnecord Model 1028-2X From \$1352.00

MODEL 1048 PROFESSIONAL STEREO RECORDER/REPRODUCER
Identical to Model 1028, except tape speeds of 7 1/2"/sec. and 3 3/4"/sec. All features and specifications same as Model 1028 except: **Tape Speeds:** 7 1/2"/sec. and 3 3/4"/sec.; rewind time less than 100 secs. for 2400 ft. **Frequency Response:** ±2 dB, 40-16,000 Hz at 7 1/2"/sec.; ±2 dB, 50-7,500 Hz at 3 3/4"/sec. **Flutter and Wow:** 0.15% at 7 1/2"/sec.; 0.25% at 3 3/4"/sec. **Signal-to-Noise Ratio:** 52 dB. **Input Sensitivity:** -90 dBm to -35 dBm. **Outputs:** Cathode follower, 2.5 volts (± 5 V), 150/600 ohms balanced, +3 dBm with output transformers. **Weight,** 50 lbs. (60 lbs., cased).
Magnecord Model 1048 From \$1352.00



Model 35



Model 36



Model 38

MODELS 35, 36 AND 38 TAPE CARTRIDGE TRANSPORTS

Ruggedly built, dependable tape cartridge transports available as basic mechanisms or as fully cased units, with or without amplifiers. All are recommended for horizontal operation. Manual Model 35, designed for background music applications, is lever operated. Semiautomatic Model 36 is intended for broadcasting and display automation; it is solenoid operated and may be remote controlled, either manually or by external switching electronics. Automatic Model 38 is ideally suited for broadcast or display automation, message repeaters and electronic teaching; it is designed for rapid changing of tape cartridges and remote-controlled start-stop operation. Transports utilize universal head bracket that accommodates three heads; bracket is adjustable for head penetration into the cartridge. Heads may be full, half or quarter track or a contactor head for foil-actuating control functions. Heads match all of the

tube-type and solid state amplifiers listed in these pages. Transports accept any tape cartridge made to NAB standards. **Tape Speeds:** 7 1/2" and 3 3/4" ips, single belt drive (single speed, multiple belt drive units available). **Frequency Response:** 40-14,000 Hz at 7 1/2" ips; 40-7000 Hz at 3 3/4" ips. **Signal-to-Noise Ratio:** 50 dB or better. **Long Term Speed Regulation:** 0.5%. **Flutter:** 0.3% or less. **Capstan Drive:** Flutter-filter belt drive off full-floated motor and heavy, dynamically balanced nonmagnetic flywheel; oil-impregnated bronze bearings (no lubrication required). **Motor:** 4-pole for 110-120 VAC, 50/60 Hz standard. **Motor Times:** (Models 36 and 38 only) actuation, 100 msec; stopping, 100 msec; start (standar motor), less than 2.0 sec. with capstan disengaged. **Size:** 9 1/4" w. x 10 7/16" d. with motor 4 1/8" max. below mounting board. Anodized aluminum finish. **Shipping Weight:** Model 35, 8 lbs.; others, 10 lbs.

Manual Model 35				Semiautomatic Model 36			Automatic Model 38		
Heads	Model No. ^o	Catalog No.	Net Each	Model No. ^o	Catalog No.	Net Each	Model No. ^o	Catalog No.	Net Each
1	35P	3501-21-500	\$ 86.00	36P	3601-21-500	\$ 99.00	38P	3801-21-500	\$126.00
2	35R	3502-21-500	92.00	36R	3602-21-500	105.00	38R	3802-21-500	132.00
3	35RM	3503-21-500	102.00	36RM	3603-21-500	114.00	38RM	3803-21-500	142.00
1/2	35B	3509-21-500	95.00	36B	3609-21-500	108.00	38B	3809-21-500	136.00
1/2	35S	3515-21-500	102.00	36S	3615-21-500	117.00	38S	3815-21-500	139.00
1/2	35Q	3521-21-500	99.00	36Q	3621-21-500	111.00	38Q	3821-21-500	136.00
1/4	35QQ†	3524-21-500	117.00	36QQ†	3624-21-500	129.00	38QQ†	3824-21-500	157.00

^oSuffix to Model No. indicates head configuration: Suffix P, mono 1/2-track play; R, mono 1/2-track erase, record/play; RM, mono 1/2-track erase, record, play or monitor; B, mono staggered 1/2-track play; S, stereo 1/2-track play; Q, stereo 1/4-track play; QQ, stereo staggered 1/4-track play. Other configurations available on special order. †Use with SP44 stepping relay accessory, below.

OPTIONS FOR MODELS 35, 36 AND 38

To order factory-installed options, specify and add price shown below to that of transport.

Catalog No.	Description	Add to Net
—	Single-speed 7 1/2 ips 2-belt drive	\$ 2.00
—	Single-speed 3 3/4 ips 3-belt drive	3.00
—	110 VAC, 60 Hz hysteresis sync motor	26.00
80165	Contact head	7.50
1300-01-614	Kit 114 automatic-stop control box	43.00
1300-01-161	SP44 stepping relay for 4-track mono continuous play in 1, 2, 3, 4 sequence; for use only with QQ models with contactor head	42.90

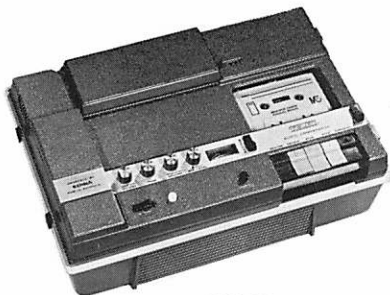
OPTIONS (CONT'D)

Catalog No.	Description	Add to Net
1700-00-500	D1020 walnut cabinet with decorator head cover; 14 1/2" w. x 15 1/2" d. x 7 1/4" h.	\$44.50
1700-00-503	D190F vinyl-covered cabinet; 11 1/2" w. x 12 3/4" d. x 7" h.	23.60

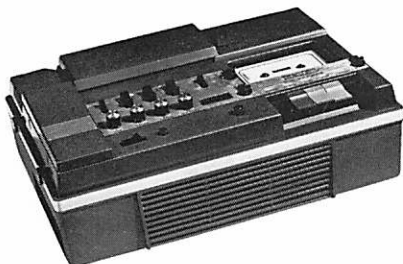
EMPTY TAPE CARTRIDGES

Catalog No.	Description	Net Each
1800-00-504	M4 cartridge for 3' to 400' tape	\$ 5.70
80258-02	Tape loading adapter ring for above	1.50
1800-00-506	M6 cartridge for up to 750' tape	8.10
1800-00-508	M8 cartridge for up to 1500' tape	8.82
80258-00	Tape loading adapter ring for M6 and M8	1.50

TELEX INSTRUCTIONAL CASSETTES



87528-00



87990-00

EDUCATIONAL CASSETTE AUDIO-COMPARATOR

Cassette unit with master track playback and student track record and play for individualized instructions. Features two-motor AC transport, automatic stop, color and braille coded operating keys, review control, AGC, recording meter, pause control and counter. 5 Watt rms power amplifier, speaker and headset jacks included. Pencil style dynamic microphone in concealed compartment. Detachable cover holds spare cassettes. Retracting carrying handle.

Model 87528-00

Net Each \$249.95

Model 87658-00 (Uncased)

Net Each \$234.95

SLIDE SYNC CASSETTE RECORDER

Slide sync cassette recorder with complete control for tape and slide projector. Provides individual record capability for audio and sync tracks. Unique review function allows backing-up program without losing tape and slide sync. Remote focus, slide advance/reverse, tape stop/start, monitor control, sync on/off. Can also be used as P.A. system. Heavy duty design with die-cast mainframe, two motors (hysteresis synchronous drive), two capstans, 5 watt RMS amplifier, built in speaker, flame retardant case.

SLIDE SYNC RECORDER

Model 87990-00

Net Each \$399.95

SLIDE SYNC PLAYER

Model 87991-00

Net Each \$329.95

CASSETTE COPIER

Desk top cassette copier for use by non-technical personnel. Simple two button operation (Rewind & Copy) with track selector for copying track 1 or track 2 or both. Add-on capabilities. Automatically turns on with insertion of original cassette, automatic rewind after copying is completed and automatically shuts off when original cassette is removed. Duplicating speed — 30 ips, rewind speed — 60 ips.

Model 88201-00

Net Each \$895.00

Model 88202-00

Net Each \$895.00

CASSETTE REWIND MODULE

Model 86830-00 (Not Shown)

Net Each \$124.95



88201-00

MODEL 230 VERSATILE TAPE TRANSPORT

Designed for advanced technology in industry, business, research or education. For use in monitoring radio broadcasts and in aviation or law enforcement communications centers. For use with reels up to 7" dia. and all types of 1/4" tape, especially for applications requiring instantaneous start and stop. Wide variety of head configurations; 4 head positions, one of which may be used with a second photo sensor for re-cuing or automatic cycling (captive tape) operations. Hyperbolic heads with tape lifters. Tape motions can be remote controlled with the accessory, momentary push-button remote connecting at the back. Three-motor transport includes separate 4-pole induction motors for each reel and two-speed hysteresis synchronous capstan drive motor for long term speed regulation independent of line voltage. Resettable 3-digit counter included. Solenoid activated brake system for all operating conditions including power failure. Built-in 24 VDC, full wave, 1 amp power supply. Relays are of the plug-in type with removable covers. **Heads:** Erase, Record, Play-or-Monitor; other head configurations available. **Wow and Flutter:** 0.2 rms at 7 1/2 ips. **Speed Regulation:** 0.5%. **Speeds Available:** Two-speed, specify: 15 and 7 1/2 ips, 7 1/2 and 3 3/4 ips, or 3 3/4 and 1 1/2 ips. **Fast Forward and Rewind Time:** 1200 ft. reel, 45 sec. **Controls:** Momentary pushbutton relay; Rewind, Stop, Play, Fast Forward. **Power Required:** 150 W. max., 115 VAC, 60 Hz. **Size:** 19" w. x 10 1/2" h. x 8" d., overall; 6" d. behind panel; fits standard relay racks. Stainless steel front panel. Wt., 22 lbs.

MODEL 230 SINGLE PHOTOCELL TRANSPORTS

Model*	Catalog No.	Tracks	Net Each
230FTRM	2306-25-500	Full, Mono	\$533.00
230RM	2303-25-500	2, Mono	484.00
230ESM	2313-25-500	2, Stereo	511.00
230RMQ	2322-25-500	4, Stereo	499.00
230QRM†	2325-25-500	4 Channels	671.00

*All configurations at low impedance for solid state electronics, 3 3/4 and 7 1/2 ips. †Simultaneous 4-channel; requires two RP120 amplifiers for operation.

Model RC23 Cat. No. 1900-00-523 Remote Control Accessory
Supplied with plugs; less cable. Net Each \$38.00

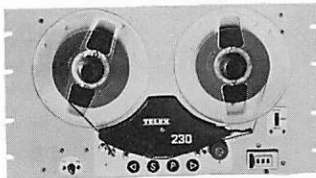
MODEL 87 TAPE TRANSPORT

High quality, two-motor, 2-speed tape transport ideal for most manually-controlled record/playback applications. Hyperbolic contour heads need no pressure pads; tape lifters protect heads in fast forward and rewind. Brake design permits use of dissimilar reel sizes (up to 7") without tape spillage. **Features:** "Erase-Protek" safety interlock prevents accidental erasure. Automatic run-out switch stops tape at end of reel or upon tape breakage. Digital tape counter. Flutter-filter belt drive with 2 lb., non-magnetic and dynamically balanced capstan wheel. Oil impregnated bearings need no lubrication. Concentric control for fast forward, rewind, neutral, play or cue. May be mounted vertically or horizontally. **Frequency Response:** ±3 dB, 30-18,000 Hz using Viking amplifiers and preamplifiers. **Tape Speeds:** 7 1/2 ips and 3 3/4 ips. **Flutter and Wow:** Less than 0.2% rms. **Power Required:** 110-115 VAC, 60 Hz.

Model	Catalog No.	Description	Net Each
87P	8701-21-500	1/2-tr. mono playback	\$166.00
87R	8702-21-500	1/2-tr. stereo and mono record and playback	172.00
87RQ	8728-21-500	1/2-tr. mono record; 1/4- and 1/2-tr. stereo and mono playback	189.00
87Q	8721-21-500	1/4- and 1/2-tr. stereo and mono playback	174.00
87ES	8712-21-500	1/2-tr. stereo and mono record and playback: Two heads	186.00
87ESM	8713-21-500	1/2-tr. stereo and mono record and playback: Three heads	206.00
87RMQ	8722-21-500	1/4-tr. stereo and mono record; 1/4- and 1/2-tr. stereo and mono playback	197.00

MODEL PA94F PLAYBACK AMPLIFIER

Model PA94F Catalog No. 9400-01-500 Playback Amplifier — Compact, low heat, solid state power amplifier. Perfect for background music and high fidelity use. Tape and mike inputs. Separate tape and mike volume controls. Frequency response, ±2 dB, 50-16,000 Hz. Signal-to-noise ratio, 60 dB mike; 50 dB tape. Output impedance, 4 and 8 ohms (screw terminals); 8-ohm and 70 V (3-pin socket). Power output, 8 watts IHFM at 2% total harmonic distortion. Power required, 110-120 VAC, 50/60 Hz, 30 watts max. Size, 8 1/2" w. x 6 1/4" d. x 2 1/4" h. Shpg. Wt., 7 lbs. Net Each \$91.25



RP 230

MODELS RP110 AND RP120 SOLID STATE AMPLIFIERS FOR USE WITH MODEL 230 TAPE TRANSPORTS

Monophonic and stereo tape recording and playback amplifiers are completely transistorized and incorporate latest modular design concepts. For use with electrically controlled transports with separate erase, record and play heads. Exceed NAB standards. Solid state circuitry on etched, glass epoxy plug-in boards. Two inputs per channel for line and microphone on rear panel. Two-speed equalization switch, "A-B" monitor switch, headphone jack, illuminated VU meter and record pushbutton (each channel). A 24 VDC record interlock with connecting cable is standard. Standard models supplied adjusted for half track optimum heads. **Frequency Response:** ±2 dB; 70-25,000 Hz at 15 ips, 40-16,000 Hz at 7 1/2 ips, 40-10,000 Hz at 3 3/4 ips, 40-6,000 Hz at 1 1/2 ips. **Signal-to-Noise Ratio:** 55 db or more below peak recording level at 7 1/2 ips. **Distortion:** 1% at 1000 Hz at 7 1/2 ips at 0 VU. **Power:** 20 W max., 110-120 VAC, 50/60 Hz. **Size:** Standard rack mount panel; 19" w. x 5 1/4" h. x 8" d. behind panel. Shpg. Wt., 19 lbs. Monophonic Model RP110 Catalog No. 1100-01-500 Net Each \$325.00

Stereophonic Model RP120 Catalog No. 1200-01-500 Net Each \$472.00

OPTIONS FOR RP110 AND RP120 AMPLIFIERS

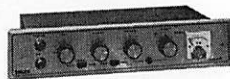
Add Suffix	Catalog No.	Description	Add to Net
E1	—	Equalization for 1 1/2 and 3 3/4 ips	
E2	—	Equalization for 7 1/2 and 15 ips	
L1	—	Balanced output line, 150-250 ohms, ±4 W nom.	No Extra Cost
H1	—	Adjustment for full track head for RP110	
H2	—	Adjustment for quarter track head for RP120	

ACCESSORY PLUG-IN INPUT MODULES —

Each of the inputs (2 for RP110, 4 for RP120) accepts any of the following options:

P2	1900-00-502	Balanced bridging, 10 K, transformer isolated for 150-600 ohm lines	\$27.17
P4	1900-00-504	Low imped. balanced microphone, 50-250 ohms, -70 to -30 dBm	30.00
—	—	Factory synchronized bias oscillator interconnection in 2 amplifiers for multiple channel operation	10.00

PREAMPLIFIERS



Model PB10 and PB10-22 Playback Preamplifier — Compact, solid state units include variable tape speed NAB equalization from 1 1/2 to 15 ips. For all high and low-impedance heads, 100 to 800 mH (4 mV max. output at reference level). Controls: Tone; Volume/Off. Power Required: 1 watt max., 110-120 VAC, 50/60 Hz (220 VAC, 50 Hz models available on special order at same prices). Size: 4" w. x 7" d. x 2 1/8" h. Shpg. Wt., 3 lbs.

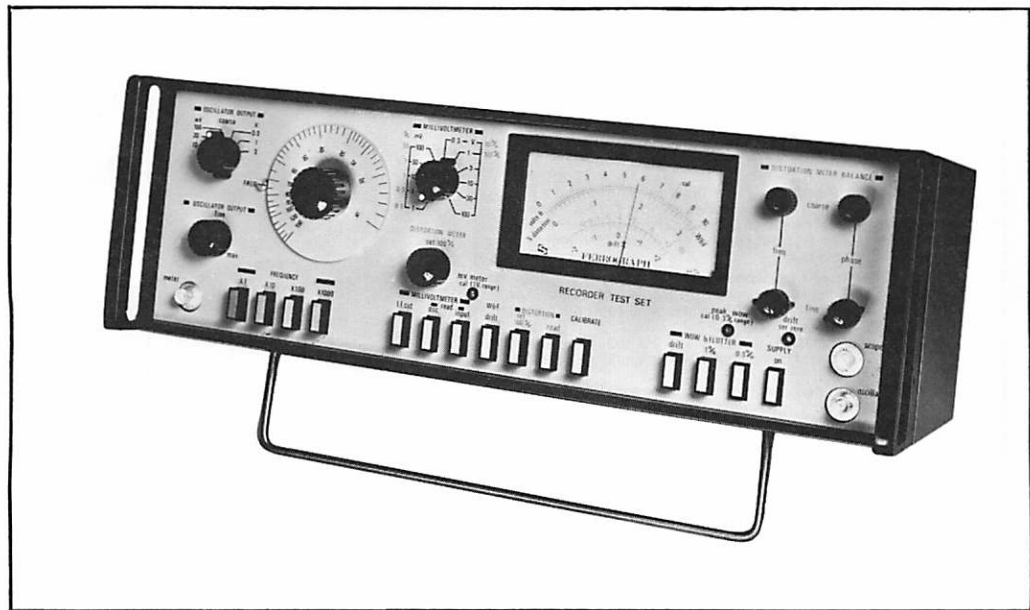
Model PB10 Cat. No. 1000-01-500 — Response: ±2 dB, 30-18,000 Hz at 7 1/2 ips. Output impedance: Below 13K ohms. Net Each \$46.20

Model PB10-22 Catalog No. 1000-01-501 — Includes output transformer for working into 600-ohm loads, with taps for 6/150/1500 ohms. Response: ±2 dB, 50-18,000 Hz at 7 1/2 ips. Net Each \$53.13

Model RP-84 Cat. No. 86841-00 Record/Playback Preamp — For 2- or 3-head decks; 80 kHz bias oscillator with sync jack when using two for stereo; source/tape monitoring; mike/line input mixing. Equalization for all speeds; 1 1/2 to 15 ips; solid state circuitry. Frequency response, ±3 dB, 30-18,000 Hz, 1% or less distortion. Signal-to-noise ratio, 55 dB min. Size, 13" w. x 5 1/2" d. x 2 3/4" h. Weight, 5 lbs. Net Each \$144.95

Ferrograph® RECORDER TEST SET

IF YOU WORK WITH MAGNETIC TAPE, YOU NEED THE FERROGRAPH RTS-1 RECORDER TEST SET.



RTS-1 RECORDER TEST SET

For performance, convenience, and economy, there is nothing to compare with the unique RTS-1 Recorder Test Set. This unique, easy-to-operate test facility is all you need to measure: • wow and flutter • frequency response • signal/noise ratio • gain • distortion • crosstalk • erasure • input sensitivity • output power • drift. The RTS-1 requires minimum setup. The four basic sections of the unit are interconnected in the correct sequence for any test, or for calibration checks, by a clearly labeled array of push buttons. Only two leads are required from the RTS-1 to the equipment being tested. The RTS-1 Test Set contains its own built-in facilities for checking calibration in each of its various modes without the need for external equipment.

GENERAL SPECIFICATIONS:

GENERATOR SECTION: Frequency Coverage: 15 Hz — 150 kHz in 4 ranges. Distortion: Less than 0.025% at 1 kHz; less than 0.08% over range 100 Hz — 20 kHz. Frequency Response: ± 0.2 dB from 15 Hz to 150 kHz. Output Level: Max. 3V into open circuit; +8.5 dBm into 600 ohm load. Output Attenuator: Coarse: Six 10 dB steps. Fine: Continuous over approx. 15 dB range. Output Impedance: Dependent on attenuator setting: max. 450 ohm.

MILLIVOLTMETER: Indication: Average reading meter calibrated in r.m.s. for sinusoidal inputs. Ranges: 11 in 10 dB steps from 1.0 mV to 100V full scale. Input Impedance: 2 M ohm (no DC path). Accuracy: Within $\pm 2\%$ full scale from 30 Hz to 20 kHz. Frequency Response: ± 0.2 dB from 10 Hz to 150 kHz.

WOW AND FLUTTER METER: Wow and flutter measurement using a carrier frequency of 3.15 kHz provided by an internal oscillator on RTS-1 option. Model RTS-1A is available to provide a carrier frequency of 3 kHz. Frequency Response: Weighted to D.I.N. 45507. Max. response at 4 Hz (3 dB points 1.2 Hz and 12 Hz). Meter Response: Average reading calibrated in peak values for approx. sinusoidal wow and flutter waveforms. Input Requirement: 35 mV — 5V. Sensitivity: 2 ranges: 0.3% and 1% peak full scale. Drift Measurement: Center reading of test frequency, scaled $\pm 2\%$ for measurement of speed changes in a recording; responding to slow speed cyclic wow rates (peak reading under 1 Hz).

DISTORTION SECTION: Total harmonic distortion measurement by rejection of a fundamental frequency from 500 Hz to 1500 Hz. Second Harmonic Rejection: Less than 0.25 dB. Bandwidth of Harmonic Measurement: Measures harmonics from 15 Hz to 20 kHz with optional low frequency cut (turnover 400 Hz approx.) for rejection of hum or low frequency noise components. Minimum Reading (from distortionless source): Less than 0.05%. Minimum Input Signal: 10 mV (smaller inputs may be used with increased minimum distortion reading). Input Impedance: 100 k ohm. Provision for use as variable sensitivity meter with bandwidth of 100 kHz by use of "set level" control, e.g., for frequency response measurements where no external gain controls exist.

GENERAL: Oscilloscope output provided for visual examination of waveform or for connection of external analyser or filters. Power Supply: 105 — 120 V 50-60 Hz; 200 — 250V 50-60 Hz. Dimensions: 17 $\frac{3}{8}$ in. wide x 10 in. deep over handles x 5 $\frac{1}{2}$ in. high. Weight: 14 lb. Net Each \$1,200.00

MODEL AG-600B Recorder/Reproducer

The AG-600B features a switchable two-speed motor that replaces the mechanical speed-change linkages of earlier models. A single indexed switch changes speeds and automatically changes equalization as well. The AG-600B provides the versatility of a rugged field recorder with the reliability of a studio machine. It is available in single-channel (full or half-track mono) or two-channel (two or quarter-track stereo) and portable or rack-mounting versions. Ideal for broadcast, industrial, educational, religious, medical and government applications.

FEATURES:

Two switch-selectable speeds, automatic equalization, three-digit counter, die-cast aluminum top plate, solid-state electronics, two inputs per channel, setup controls at front panel.

SPECIFICATIONS:

Frequency Response: 7½ in/s: +2 dB -4 dB from 40 Hz-15 kHz. 3¾ in/s: +2 dB -4 dB from 40 Hz-8 kHz. **Signal/Noise:** 7½ in/s: Full track 57 dB; half track 55 dB. 3¾ in/s: Full track 52 dB; half track 50 dB. **Crosstalk Rejection:** Better than 40 dB mid-frequency. **Flutter:** 7½ in/s: below 0.17%. 3¾ in/s: below 0.25%. **Size & Weight:** (In Portable Case) Single channel - 28 lb; 14¾ inches H x 13 inches W x 8¾ inches D. Dual channel - 42 lb; 19½ inches H x 13 inches W x 8¾ inches D.

MODEL AA-620 Amplifier/Speaker

A portable amplifier/Speaker designed primarily for remote or studio use where high-quality monitoring or sound reproduction in lightweight package is required. For use with professional portable recording equipment such as the AG-600B and AG-500, or as studio monitor. The AA-620 is ideal for broadcast, audio-visual applications.

FEATURES:

Two-speaker system in tuned enclosure, separate bass-treble equalizers, solid-state electronics, essentially flat from 65 Hz to 10 kHz, 15-watt output.

SPECIFICATIONS:

Overall Frequency Response (acoustical): Essentially flat acoustically, range better than 65 Hz-10 kHz. **Speakers:** 10-inch Woofer; 3½-inch Tweeter. **Power Output:** 15 watts into an 8-ohm resistive load. **Signal/Noise Ratio:** Amplifier noise (including hum), 80 dB below rated output. **Size & Weight:** Portable - 24½ lb; 14¾ inches H, 20½ inches W, 9 inches D.



AG-600B

AA-620

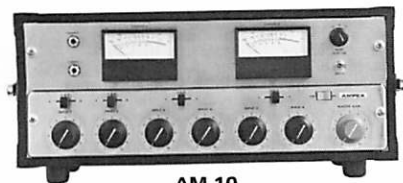
DESCRIPTION	CATALOG NO.	CATALOG NO.	NET PRICE
	60 Hz 117 VOLT	50 Hz 115/230 VOLT	
AG-600B-1, ONE-CHANNEL			
NAB, Full Track, Unmounted	4010135-01	4010135-05	\$ 695.00
Portable	4010135-02	4010135-06	795.00
Half Track, Unmounted	4010135-03	4010135-07	695.00
Portable	4010135-04	4010135-08	795.00
CCIR, Full Track, Unmounted	—	4010135-09	695.00
Portable	—	4010135-10	795.00
Half Track, Unmounted	—	4010135-11	695.00
Portable	—	4010135-12	795.00
AG-600B-2, TWO CHANNEL (½ Track Stereo)			
NAB, Two Track, Unmounted	4010136-01	4010136-05	995.00
Portable	4010136-02	4010136-06	1095.00
CCIR, Two Track, Unmounted	—	4010136-09	995.00
Portable	—	4010136-10	1095.00
AG-600B-4, TWO-CHANNEL, FOUR TRACK (½ Track Stereo)			
NAB, Tracks 1 & 3, Unmounted	4010136-03	4010136-07	995.00
Portable	4010136-04	4010136-08	1095.00
CCIR, Tracks 1 & 3, Unmounted	—	4010136-11	995.00
Portable	—	4010136-12	1095.00

ACCESSORIES

	CATALOG NUMBER	NET PRICE
Speaker/Amplifier - Model AA-620 (Portable)	4010070-03	\$259.00
Ideal companion unit to AG-600B, AG-500 series and other professional recorders, 10" woofer, 3½" tweeter and 15 watt solid state amplifier in one enclosure		
Portable Cases - For Single Channel AG-600B	4150233-01	100.00
For Two Channel AG-600B	4150232-01	130.00
For AM-10 and Meter Panel	4150330-01	59.00
Rack Mount Adaptors - For Single Channel AG-600B	4010078-01	21.00
For Two Channel AG-600B	4010079-01	29.00
Preamplifiers, Plug-in - Microphone, Low Impedance	4010066-01	55.00
For AG-600B, AG-500, Phono (RIAA) Magnetic	4010097-01	50.00
AL-500, AG-440, and AM-10		
Line Input Transformers - Balanced Bridge	4580200-01	25.00
Plug-in for AG-600B Matching 600 ohm	4580200-02	25.00
AG-500, AL-500, AG-440, and AM-10		
Operation and Maintenance Manual - AG-600B Series	4890302-01	7.00
One furnished with each unit AA-620 Series	4890177-02	1.25
AM-10 Series	4890178-02	1.25



AG-500



AM-10

MODEL AG-500 Recorder/Reproducer

A full studio quality solid-state professional recorder, the AG-500, is supplied in a rugged portable case or for rack mounting. It is available in single or two channels in a choice of dual speed arrangements. Designed for broadcast use, the AG-500 is also ideal for schools, motion picture studios, government operations and medical and industrial research.

FEATURES:

Precision milled die-cast top-plate, relay solenoid operated, remote controllable, eddy current clutches, front panel electronic adjustments, four position head assembly, two line inputs per channel.

SPECIFICATIONS:

Overall Frequency Response: 15 in/s: ± 2 dB, 30 Hz-18 kHz, $7\frac{1}{2}$ in/s: $+2$ dB -4 dB, 30 Hz-15 kHz, $3\frac{3}{4}$ in/s: $+2$ dB -4 dB, 40 Hz-8 kHz. **Signal/Noise Ratio:** 55 dB at 15 and $7\frac{1}{2}$ in/s (half track or two track); 60 dB at 15 and $7\frac{1}{2}$ in/s (full track); 55 dB at $3\frac{3}{4}$ in/s (full track). **Flutter and Wow:** Less than 0.15% rms at 15 in/s; 0.18% rms at $7\frac{1}{2}$ in/s; 0.25% rms at $3\frac{3}{4}$ in/s. **Weight & Dimensions:** 1 channel portable - 42 lb; 20 inches W x $9\frac{1}{4}$ inches D x $14\frac{1}{2}$ inches H. 2 channel portable - 52 lb; 20 inches W x $9\frac{1}{4}$ inches D x $18\frac{1}{2}$ inches H.

MODEL AM-10 Stereo/Mono Mixer

A professional quality, compact, six-position, two-channel mixer for studio or portable use, the AM-10 is ideal for broadcast studio, motion picture studio, schools, government, medicine, and industrial applications.

FEATURES:

All solid-state, regulated power supply, four mic and two line inputs feed A, B, or A and B output channels, separate gain controls, reset indicators, mixers can be coupled, rack or console overbridge mounting or case-mounted with an accessory meter panel.

SPECIFICATIONS:

Frequency Response: ± 1 dB, 30 Hz-20 kHz. **Distortion:** Microphone input: $+12$ dBm output level, less than 0.5% THD from 100 Hz-10 kHz. **Line Input:** $+12$ dBm output level, less than 0.5% from 50 Hz-10 kHz. **Crosstalk Rejection:** 65 dB at 500 Hz. Greater than 40 dB from 20 Hz-20 kHz.

Model	Volts and Hertz	Speed & Equalization ¹	Heads (Tracks)	Mounting	Order by Catalog Number	Suggested User Price
AG-500-1 SINGLE CHANNEL						
AG-500-1 One Channel Full or Half Track	117V 60 Hz	$7\frac{1}{2}$ and 15 ips NAB	FULL	Unmounted	4010048-02	\$1360.00
			TWO ¹	Portable	4010048-01	1465.00
		$3\frac{3}{4}$ and $7\frac{1}{2}$ ips NAB	FULL	Unmounted	4010048-04	1360.00
			TWO ¹	Portable	4010048-03	1465.00
				Unmounted	4010048-06	1360.00
				Portable	4010048-05	1465.00
				Unmounted	4010048-08	1360.00
				Portable	4010048-07	1465.00
AG-500-2 TWO CHANNEL						
AG-500-2 Two Channel Two Track ($1\frac{1}{2}$ Track Stereo)	117V 60 Hz	$7\frac{1}{2}$ and 15 ips NAB $3\frac{3}{4}$ and $7\frac{1}{2}$ ips NAB	TWO	Unmounted	4010049-02	1595.00
				Portable	4010049-01	1726.00
			TWO	Unmounted	4010049-06	1595.00
				Portable	4010049-05	1726.00
AG-500-2/4 TWO CHANNEL						
AG-500-4 Two Channel Four Track ($1\frac{1}{4}$ Track Stereo)	117V 60 Hz	$3\frac{3}{4}$ and $7\frac{1}{2}$ ips NAB	FOUR (Tracks 1 & 3)	Unmounted	4010049-08	1595.00
				Portable	4010049-07	1726.00
AG-500-4 4 Channel 4 Track $1\frac{1}{4}$ Track Stereo Play Head & Switch Kit, Factory Installed ² $1\frac{1}{2}$ Track Stereo Play Head & Switch Kit, Factory Installed ³	117V 60 Hz	$3\frac{3}{4}$ and $7\frac{1}{2}$ ips NAB	FOUR	Unmounted	4010188-01	2795.00
				Portable	4010188-02	2995.00
					4010090-01	120.00
					4010090-02	120.00

ACCESSORIES

MIXER - MODEL AM-10 (Unmounted)

METER PANEL FOR AM-10 MIXER

Contains two illuminated VU meters, level selector and monitor jacks

MICROPHONE PREAMPS

LINE INPUT TRANSFORMERS

REMOTE CONTROL

FOUR-DIGIT RESETTABLE COUNTER

Complete with mounting instructions and template

PORTABLE CASES

Description

117 V 50/60 Hz

Catalog Number

4010087-01

4010098-01

Net Price

\$499.00

167.00

60db, for both High and Low Output Microphones (low impedance input)

4010066-01

55.00

Balanced Bridge

4580200-01

25.00

Matching 600 ohm

4580200-02

25.00

Wired (in box with 30' cord)

0196510-02

85.00

Panel Type (less cord)

0196520-02

57.50

4012201-02

35.00

For AG-500

4150161-01

105.00

Single Channel Recorders

4150231-01

130.00

For AG-500

4150330-01

59.00

Two Channel Recorders

For AM-10 and Meter Panel

4150330-01

59.00

NOTES: 1. Two track heads are used in place of half track to permit later conversion to two-channel, $1\frac{1}{2}$ track stereo without changing heads.

2. For installation in AG-500-2 permitting switchable $1\frac{1}{2}$ and $1\frac{1}{4}$ track play.

3. For installation in AG-500-2/4 permitting switchable $1\frac{1}{2}$ and $1\frac{1}{4}$ track play.

4. Custom modifications, including other speeds, equalizations, etc., are also available.

AmpeX equipment may be purchased or leased under special AmpeX finance plans.

MODEL ABR-15

Designed specifically for broadcasters, the bi-directional ABR-15 is a symmetrical audio recorder. All mechanical and electrical devices are duplicated to provide complete bidirectional operation for flexibility in automated and semi-automated applications. Unidirectional models are also available. Quick tape start times allow more precise cue control. The ABR-15 accepts reels of up to 15 inches diameter for unattended program automatic systems.

FEATURES:

Bidirectional drive for flexible performance in broadcast automation application, direct drive system maintains precise tape speeds, variable fast forward/reverse, search control.

SPECIFICATIONS:

Signal/Noise Ratio: 7½, 15 in/s: 66 dB full, 63 dB half, and 57 dB quarter track. 3¾ in/s: 63 dB full, 63 dB half, and 57 dB quarter track. 1½ in/s: 45 dB half, and 42 dB quarter track. 15/16 in/s: ±2 dB, 40 Hz-18 kHz. 7½ in/s: ±2 dB, 40 Hz-15 kHz. 3¾ in/s: ±2 dB, 40 Hz-10 kHz. 1½ in/s: ±3 dB, 40 Hz-10 kHz. 15/16 in/s: ±3 dB, 100 Hz-5 kHz. **Flutter:** 15 in/s: 0.1%. 7½ in/s: 0.15%. 3¾ in/s: 0.18%. 1½ in/s: 0.25%. 15/16 in/s: 0.4%. **Start Time:** Operating speed attained in 0.1 second.

MODEL ABR-10

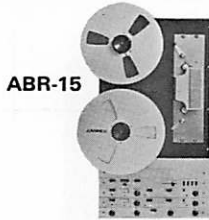
A reliable bi-directional recorder of symmetrical design — all mechanical and electrical devices are duplicated to provide trouble-free bi-directional operation (unidirectional models are also available). The ABR-10 offers dependable, unattended operation at low cost for today's automated broadcast systems. It accepts from 5-inch to 10½-inch reels, and can be ordered with your selection of adjacent speed pairs from a range from 15/16 in/s to 15 in/s. A completely separate servo-controlled tape tension system automatically adjusts reel motor torque to the correct tape tension. Quick tape start times permit more precise cue control.

FEATURES:

Bi-directional drive, precise, automatic tape speed control, variable fast forward/reverse search control, easy calibration and operation, quick stop/start times.

SPECIFICATIONS:

Signal/Noise Ratio: 7½, 15 in/s: 66 dB full, 63 dB half, and 57 dB



ABR-15



ABR-10

quarter track. 3¾ in/s: 63 dB full, 63 dB half, and 57 dB quarter track. 1½ in/s: 45 dB half, and 42 dB quarter track. 15/16 in/s: ±2 dB, 40 Hz-18 kHz. 7½ in/s: ±2 dB, 40 Hz-15 kHz. 3¾ in/s: ±2 dB, 40 Hz-10 kHz. 1½ in/s: ±3 dB, 40 Hz-10 kHz. 15/16 in/s: ±3 dB, 100 Hz-5 kHz. **Flutter:** 15 in/s: 0.1%. 7½ in/s: 0.15%. 3¾ in/s: 0.18%. 1½ in/s: 0.25%. 15/16 in/s: 0.4%. **Start Time:** Operating speed attained in 0.1 second.

MINI-MIXER

The Mini-Mixer (Cat. No. 4020279) is an ABR Series accessory similar in size and shape to the recorders' Control and Electronics modules. Its purpose is to add a mixing capability to an ABR recorder if the need arises. The input to a Mini-Mixer may be either a microphone, phonograph pick-up, or balanced or unbalanced line input. Up to four inputs are accepted, and accessory plug-in amplifiers or transformers can be added as required. The Mini-Mixer contains two dual-input amplifiers whose outputs may be separate or summed by means of a panel rocker switch, thus providing capability for four inputs to a single output or two inputs to each of two outputs. Active circuit mixing is used to minimize signal-to-noise degradation and power is obtained from the electronics chassis. To accommodate other than line level input signals, a microphone preamplifier or a phonograph preamplifier is required. Balanced line inputs may be accommodated with the use of 20,000 ohms bridging transformer or a 600-ohm matching transformer.

COMPONENTS		DESCRIPTION	CATALOG NUMBER	NET PRICE
Reel Module (one required)	10½-inch reel size 15-inch reel size		4020311 4020298	\$560.00 600.00
Component Package (one required)	For ABR-10 For ABR-15		4020313-01 4020313-02	50.00 50.00
UNIDIRECTIONAL CONFIGURATION				
Head Module (one required)	¼-track stereo	reproduce only record/reproduce	4020312-01 4020312-02	170.00 520.00
	Two-track	reproduce only record/reproduce	4020315-01 4020315-02	95.00 290.00
	Full-track	reproduce only record/reproduce	4020316-01 4020316-02	95.00 230.00
Capstan Drive	Drive Module (one required) Control Box (one required)		4020301-01 4020319-01	550.00 500.00
	Oscillator (one required)	bridge line lock crystal	4020317-01 4020317-03 4020317-05	100.00 100.00 160.00
BIDIRECTIONAL CONFIGURATION				
Head Module (one required)	¼-track stereo	reproduce only record/reproduce	4020312-03 4020312-04	465.00 790.00
	Two-track	reproduce only record/reproduce	4020315-03 4020315-04	255.00 430.00
Head Switcher (Repro. only; one required) (Rec/Repro; two required)			4020297-01	110.00
Capstan Drive	Drive Module (one required) Control Box (one required) Auxiliary Box (one required)		4020301-02 4020319-02 4020320-01	800.00 670.00 45.00
	Oscillator (one required)	bridge line lock crystal	4020317-02 4020317-04 4020317-06	100.00 100.00 160.00
ELECTRONICS				
Record/Reproduce Modules (Single Channel per module — two modules required for ¼- and 2-track stereo)	7½ ips and 15 ips (NAB) 3¾ ips and 7½ ips (NAB) 1½ ips and 3¾ ips 15/16 ips and 1½ ips		4020299-01 4020299-02 4020299-03 4020299-04	\$310.00 310.00 310.00 310.00
Reproduce Only Modules (Two channels per module)	7½ ips and 15 ips (NAB) 3¾ ips and 7½ ips (NAB) 1½ ips and 3¾ ips 15/16 ips and 3¾ ips		4020306-01 4020306-01 4020306-02 4020306-03	165.00 165.00 165.00 165.00
ACCESSORIES				
Mini-Mixer (without preamplifiers and transformers)			4020279	145.00
Microphone Preamplifier			4010066-01	55.00
Phonograph Preamplifier	The Mini-Mixer accepts up to four plug-in units		4010097-01	50.00
Transformers			4580200-01 4580200-02	20.00 20.00
	20,000 ohms bridging 600 ohms matching			

MODEL AG-440B Recorder/Reproducer

Long the standard of the broadcast industry, the AG-440B series is a complete family of rack mounted, console and heavy-duty portable recorders for the most exacting applications. Offering versatility and performance unsurpassed, the AG-440B consists of a three-motor, pushbutton relay-solenoid-operated, dual-speed transport; separate solid-state electronics chassis for each channel with separate plug-in record, reproduce and bias amplifiers; built-in SEL-SYNC® system; automatic equalization change and a high-quality Ampex four-position head assembly.

FEATURES:

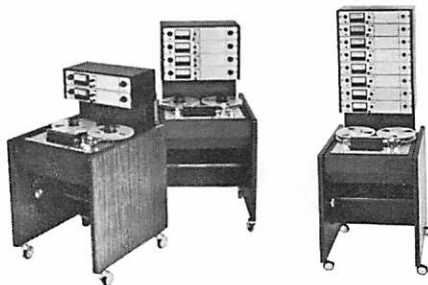
Die-cast aluminum top-plate, high speed conversion between 1/4-inch and 1/2-inch tape, low impedance heads, jewel bearing scrape flutter idlers, electronics modules plug-in from the front, set-up adjustments made from the front, plug-in equalizers, three edit modes, rapid maintenance, 10-1/2-inch reel capacity.

SPECIFICATIONS:

Signal/Noise Ratio: Speed: 15 in/s — Full Track, 66 dB; 2 Track, 63 dB; 4 Track, 60 dB. 7 1/2 in/s — Full Track, 66 dB; 2 Track, 63 dB; 4 Track, 60 dB. 3 3/4 in/s — Full Track, 63 dB; 2 Track, 56 dB; 4 Track, 56 dB. **Frequency Response — overall:** 15 in/s: ±2 dB; 30 Hz-18 kHz. 7 1/2 in/s: ±2 dB, 40 Hz-15 kHz. 3 3/4 in/s: ±2 dB, —4 dB, 50 Hz-7.5 kHz. **Flutter:** Speed: 15 in/s — Percentage below 0.08% rms. 7 1/2 in/s — Percentage below 0.1% rms. 3 3/4 in/s — Percentage below 0.15% rms. **Playback Timing Accuracy:** ±0.2% (±3.6 seconds in 30 minutes recording time).

MODEL AG-440-8 Master Recorder/Reproducer

The highly reliable AG-440 is available in an 8-track configuration



using one-inch tape. The ribbed, die-cast top plate provides rigidity essential to permanent tracking alignment. The new AG-440-8 has operating features of the 1- to 4-track units, plug-in high torque reeling motors and instrumentation type locking holddown knobs for NAB 10-1/2-inch reels.

SPECIFICATIONS:

Signal/Noise Ratio: 7 1/2, 15 in/s: 60 dB. **Frequency Response — overall:** 15 in/s: ±2 dB, 30 Hz-18 kHz. 7 1/2 in/s: ±2 dB, 40 Hz to 10 kHz; +2 dB, —4 dB, 40 Hz to 15 kHz. **Flutter:** 15 in/s: below 0.08% rms. 7 1/2 in/s: below 0.1% rms. **Crosstalk:** Better than 65 dB at 500 Hz.

Model	Speeds IPS NAB	Heads (Tracks)	Mounting	Order by Catalog Number 60 Hz	Net Each
SINGLE CHANNEL — 1/4" Tape Width					
			Unmounted	4010131-01	\$2249.00
			Unmounted Console	4010131-01	\$2249.00
			Unmounted Console	4010131-03	2649.00
	7 1/2-15	FULL	Portable	4010131-05	2449.00
			Unmounted	4010131-07	2449.00
		HALF	Console	4010131-09	2649.00
			Portable	4010131-11	2449.00
AG-440B-1 Recorder/Reproducer			Unmounted	4010131-13	2449.00
		FULL	Console	4010131-15	2649.00
	3 3/4-7 1/2		Portable	4010131-17	2449.00
			Unmounted	4010131-19	2249.00
		HALF	Console	4010131-21	2649.00
			Portable	4010131-23	2449.00
TWO CHANNEL — 1/4" Tape Width					
			Unmounted	4010132-01	2999.00
			Console	4010132-03	3429.00
	7 1/2-15	TWO	Portable	4010132-05	3199.00
			Unmounted	4010132-13	3069.00
		Plus Qtr. Track P.B.	Console	4010132-15	3499.00
			Portable	4010132-17	3269.00
AG440B-2 Recorder/Reproducer			Unmounted	4010132-07	2999.00
		TWO	Console	4010132-09	3429.00
	3 3/4-7 1/2		Portable	4010132-11	3199.00
		TWO	Unmounted	4010132-19	3069.00
		Plus Qtr. Track P.B.	Console	4010132-21	3499.00
			Portable	4010132-23	3269.00
FOUR CHANNEL — 1/2" Tape Width					
AG-440B-4 Recorder/Reproducer	7 1/2-15	FOUR	Unmounted	4010134-01	4499.00
			Console	4010134-03	4959.00
			Portable	4010134-05	4699.00
EIGHT CHANNEL — 1" Tape Width					
AG-440-8 Recorder/Reproducer	7 1/2-15	EIGHT	Console Only	4010138-01	8500.00

ACCESSORIES

AM-10 — 6 position Stereo Mixer —	117V 50/60 Hz	4010087-01	\$ 499.00
	115/230V 50/60 Hz	4010087-02	527.00
Meter Panel for AM-10		4010098-01	167.00
AA-620 — 15 watt Speaker/Amplifier		4010070-01	259.00
Remote Control — Desk type with 30 ft. cable		4010080-02	75.00
Microphone Preamp — Plug-in, Module		4010066-02	55.00
Balanced Bridging Input Trans. Plug-in		4580200-01	25.00
Line Matching Input Trans. Plug-in		4580200-02	25.00
Scrape Flutter Idler Kit		4010069-01	50.00
Console Rear Cover Assembly.		4010076-01	36.00
	— Single Channel	4010076-02	55.00
	— Two Channel	4010076-04	93.00
	— Four Channel	4020151-02	15.00
	— Reproduce	4020152-01	15.00
	— Record	4020153-01	15.00
	— Bias Amp	4020154-01	15.00
	— Power Supply	4020269-03	25.00
Extender Boards		4020084-06	400.00
Equalizers — Record — 7 1/2-15 CCR		4260404-02	9.50
Console Cabinet with Single Overbridge		4010086-01	200.00
Console Overbridge Riser Castings (Order two per electronics panel)		4010086-02	200.00
PORTABLE CASES		4010086-04	200.00
Set consisting of one Transport and one Electronics	— 1 Channel	4890301-02	10.00
with Installation Hardware and mounting instructions	— 2 Channel		
Operators and Maintenance Manual	— 4 Channel		

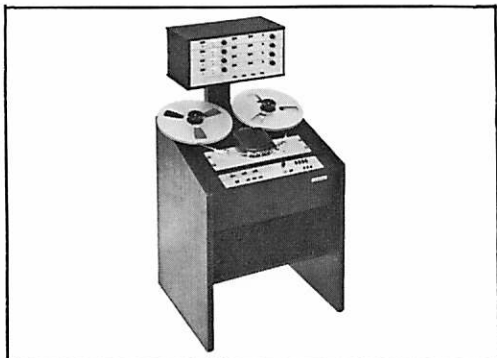
APPLICATIONS FOR POSITION OF CUSTOMER NOW BEING ACCEPTED



MODEL BLM-200 Tape Duplicator System

Designed for automatic high-speed duplication of multichannel cassette and cartridge tapes. Rewinding, stopping and rethreading of master tape is eliminated by use of an endless loop tape in master transport. All solid state electronics used throughout system. System consists of BLM-200 Bin Loop Master and up to 10 or, for cassettes, up to 20 3400 series slave units (20 slaves available in an optional configuration with additional electronics). The tape duplicator system is constructed on a flexible building block principle to provide for future expansion. BLM Masters are available in two models, BLM-200-8 and BLM-200-4. Model BLM-200-8 is an eight-channel version for cartridge duplication; will also duplicate four-channel cassette tapes by simply rotating slave tape guides and replacing plug-in slave head assemblies. Model BLM-200-4 is a four-channel version for cassette duplication; if purchased first, it can be field-converted to an eight-channel cartridge version by adding a bias amplifier, power supply and four more channels of electronics. Conversion of slave units is also easily done in the field because all BLM series slave units are already equipped with dual-width guides and use plug-in head assemblies. Installing eight-track head assemblies automatically programs correct tape tension. Working master tapes for both formats are recorded on 1" tape with 1.5-mil polyester backing at 7½ ips with NAB equalization. Recordings are made in four- to eight-track formats on eight-track recorders such as Ampex Model MM-1000-8 or Model AG-440-8. Cartridge master follows same track configuration as cartridge; cassette master is recorded on tracks 3 and 7 in both directions. **BLM-200 Master Assembly:** Consists of a bin-loop tape transport, a reproduce head and preamp assembly, reproduce amplifiers, record amplifiers and a bias oscillator/amplifier. Drives up to ten slaves at 16 times speed of original recording; provisions in master allow increasing no. of slaves to 20 for cassette duplication by adding record and bias amplifiers. Transport loads easily and has automatic self-cuing; all transport elements are mounted on a precision-milled casting frame. Tape storage bin design assures smoothest possible tape motion. Newly designed head produces higher output at mid-frequencies and greater efficiency at high frequencies. Preamplifiers are mounted on head assembly to avoid RF interference and to optimize the signal-to-noise ratio by reducing capacitive shunting of the head cables. **3400 Series Slave Assembly:** Transports are adapted versions of the successful and widely used Ampex Model 3200 Slave Assemblies; feature turn-around guides for 150-mil and ½" tape for easy tape width conversion and automatic tape tension programming to reduce the possibility of tape stretch or breakage. Plug-in head assemblies for both 4-track cassette and 8-track cartridge systems are ferrite-core types for long life; equipped with their own individual bias and record level controls (for each track) mounted on top of each head assembly to insure interchangeability

without resetting controls. No wiring changes required when changing from 4-track cassette to 8-track cartridge head assemblies. Master transport equipped with its own loading/unloading motor assembly to transfer tape directly from a reel to the storage bin; photocell assembly mounted in tape path automatically counts number of master passes and injects a 120-Hz or 320-Hz tone on the copies for cutting points. **MASTER ASSEMBLY SPECIFICATIONS:** **Tape Speed:** 120 ips, 60 ips tape loading. **Master Tape Format:** Eight tracks on 1" tape, 1.5 mil polyester, recorded at 7½ ips, NAB equalized. **Maximum Tape Capacity:** 1200 ft. **Flutter and Wow:** Less than 1% p-p, 0.5-10,000 Hz, unweighted; less than 0.1% rms, 0.5-200 Hz, ASA weighted. **Frequency Response:** Reproduce chain from a 7½-ips NAB equalized master: ±1 dB, 0.5-160 kHz (30-10,000 Hz reel speed); duplicated copies: ±2 dB, 50-8,000 Hz at 3¾ ips and 1½ ips; bias peaked at 15-mil wavelength. **Tailoring Tone:** Switchable 120 or 320 Hz, actuated by photocell, applied at saturation level to input of record amplifiers. **Crosstalk Rejection:** Greater than 50 dB, 200 Hz to 200 kHz, between tracks or between adjacent even or odd track pairs. **System Noise:** Better than 10 dB below blank, biased Ampex 404 low noise tape, 500-80,000 Hz (30-5,000 Hz reel speed); better than 6 dB up to 160 kHz (10 kHz reel speed). **Total Harmonic Distortion:** System, exclusive of tape, control and record electronics, 20 dB above operating level; reproduce electronics after level control, 17 dB. **Temperature Range:** 60° F to 105° F (16° C to 41° C). **Relative Humidity Range:** 50% to 90%. **Power Required:** 115 VAC ±10%, 50/60 Hz; 7 amps for 4-track and 9 amps for 8-track. **Size:** 42" w. x 27" d. x 61" h. **Weight:** 500 lbs. **SLAVE ASSEMBLY SPECIFICATIONS:** **Tape Speed:** 30/60 ips. **Slave Tape Format:** 8 tracks on 250-mil wide tape, 1.5-mil or 1-mil polyester or acetate; 4 tracks on 150-mil wide tape, 0.5-mil tensilized polyester. **Maximum Reel Size:** 14" dia.; hub dia. smaller than 4.5" (NAB size) not recommended for 150-mil tape. **Flutter and Wow:** Less than 1% p-p, 0.5-10,000 Hz, unweighted; less than 0.1% rms, ASA weighted. **Power Required:** 115 VAC (±10%), 50/60 Hz; 2 amps per slave assembly. **Size:** 26" w. x 26" d. x 31" h. **Weight:** 150 lbs. with metal cabinet. **Ampex Master Bin Loop Assembly** — For 4-track cassette only. **Net Each \$19,600.00** **Ampex Master Bin Loop Assembly** — For 4-track cassette and 8-track cartridge. **Net Each \$21,500.00** **Ampex Slave Transport Assembly** — Less heads. **Net Each \$2400.00** **Ampex Head (Ferrite) Assembly** — For 4-track cassette slave (0.150"). **Net Each \$1125.00** **Ampex Head (Ferrite) Assembly** — For 8-track slave (0.250"). **Net Each \$1550.00** **Ampex Head (Metal) Assembly** — For 8-track slave (0.250"). **Net Each \$550.00**



MODEL AD-15 Duplicator System

The AD-15 offers outstanding performance in a wide range of formats. Additional heads and guides permit changes from reel-to-reel formats to 8-track cartridge formats to cassette formats. Each slave can be equipped with a tailoring device to deliver a completed product. All transports accept reels as small as five inches and reels or pancakes as large as 15 inches. Each master drives up to three slaves; with three slaves, a system produces 168 1200-foot copies in one 8-hour shift. An internal reference oscillator protects tape speed from line power shifts.

FEATURES:

The industry's best through-the-reel timing accuracy for any duplicator: $\pm 0.08\%$. Copies all major 150-mil and quarter-inch formats. Automatic system stop/master rewind. Accepts reels or pancakes from 5 to 15 inches diameter. Cassette/cartridge tailoring available. Servo-controlled tape tension. Internal reference oscillator for accurate tape speed. One master drives up to 3 slaves. Attractive console design, convenient control bridge.

SPECIFICATIONS:

Frequency Response: Maximum deviation from master tape: $+2-4$ dB at following speeds and frequency ranges:

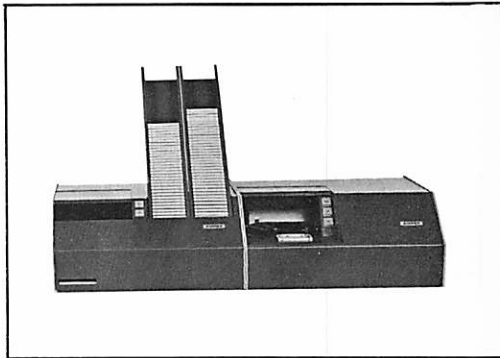
Crosstalk Rejection: 50 dB or better except between stereo pairs.
Signal-to-Noise Ratio: Will not introduce more than 3 dB noise on duplicate. **Flutter and Wow:** 30 in/s: 0.05%. 15 in/s: 0.07%. $7\frac{1}{2}$ in/s: 0.1%.

	Frequency Range	Master Speed	Slave Speed
	$7\frac{1}{2}$ in/s	30 in/s	30 in/s
	$3\frac{3}{4}$ in/s	15 in/s	15 in/s
	$3\frac{3}{4}$ in/s	30 in/s	30 in/s
	Cassette	$7\frac{1}{2}$ in/s	$7\frac{1}{2}$ in/s
	Cassette	15 in/s	15 in/s
	$3\frac{3}{4}$ in/s [†]	30 in/s	15 in/s
	Cassette [‡]	30 in/s	$7\frac{1}{2}$ in/s

[†] $7\frac{1}{2}$ in/s NAB master.

DESCRIPTION	NUMBER	PRICE
MASTER		
Transport — 2T (without heads)	4010196-01	\$2,995.00 [‡]
Transport — 4T (without heads)	4010196-02	3,595.00 [‡]
Transport — 8T (without heads)	4010196-03	4,850.00 [‡]
ARQ	4030295-01	90.00
MASTER HEAD ASSEMBLIES		
2T Staggered & Inline	4020345-01	\$ 130.00
$\frac{1}{4}$ T Staggered	4020345-02	195.00
2T Cassette Monaural	4020345-04	195.00
4% Cassette Stereo	4020345-05	350.00
8T Cartridge	4020345-03	620.00
SLAVE		
Slave less heads	4010197-01	\$1,950.00
Cassette/Cartridge Adapter	4010195-01	150.00
SLAVE HEAD ASSEMBLIES		
2T Inline + Full Track	4010346-01	\$ 215.00
$\frac{1}{4}$ T Staggered	4010346-02	245.00
2T Cassette Monaural	4010346-04	285.00
4T Cassette Stereo	4010346-05	365.00
8T Cartridge	4010346-03	690.00

[‡]Includes console.



MODEL CD-200 Automatic Cassette Copier

A high-speed, high-quality, automatic tabletop copier. Vacuum columns completely isolate tape from the cassette mechanism. Professional duplicator heads are used. The result is the highest-fidelity sound produced by any cassette copier, along with high copying speed. The CD-200 can turn out 375 C-30 cassette copies per hour; a loader option makes it fully automatic. CD-200 also rewinds cassettes to the start before copying, and senses and ejects defective cassettes. Two-track mono and four-track stereo/two-track mono versions available.

FEATURES:

Copies 375 C-30, 225 C-60, or 120 C-120 cassettes per hour. Automatic loader option holds 100 cassettes; can be loaded in 7 seconds. Duplicates all tracks at a single pass. Automatically rewinds to start before copying; senses defective cassettes and ejects them separately. One Master controls up to 5 slaves. Vacuum chambers and reel servos provide high quality at high speed.

SPECIFICATIONS:

Frequency Response: (Referenced to 1.875 in/s playback speed). System: ± 2 dB, 30 Hz to 12 kHz. Typical Copy: ± 2 dB, 50 Hz to 8 kHz, using Ampex 361 Cassette, biased for maximum long wavelength sensitivity. **Crosstalk Rejection:** 20 dB (min) at 1000 Hz playback between adjacent tracks of stereo pair. 50 dB (min) between programs. **Overall Signal-to-Noise Ratio:** 3 dB maximum degradation in 30 Hz to 10 kHz band. **Flutter:** Less than 0.05% RMS NAB weighted. **Tape Speed:** 75 ($\pm 0.2\%$) in/s throughout length of C-60 cassette. **Rewind Speed:** Internally adjustable from 100 to 300 in/s. **Size and Weight (Master or Slave):** 22 inches wide x 21 inches deep x $10\frac{3}{4}$ inches high; 35 pounds.

MODEL	FORMAT	PRICE	
SYSTEMS			
Master & 1 Slave (Auto)	2T, 60 or 50 Hz	\$ 9,400 [‡]	
Master & 1 Slave (Auto)	4T, 60 or 50 Hz	10,500 [‡]	
MODEL	FORMAT	CATALOG NO.	USER PRICE
UNITS			
Master	2T, 60 Hz	4940358-01	\$4,250
Master	4T, 60 Hz	4940358-02	4,700
Master	2T, 50 Hz	4940358-03	4,250
Master	4T, 50 Hz	4940358-04	4,700
Slave — Automatic Load	2T, 60 Hz	4940359-01	5,150
Slave — Automatic Load	4T, 60 Hz	4940359-02	5,800
Slave — Automatic Load	2T, 50 Hz	4940359-05	5,150
Slave — Automatic Load	4T, 50 Hz	4940359-06	5,800
Slave — Manual Load	2T, 60 Hz	4940359-03	4,450
Slave — Manual Load	4T, 60 Hz	4940359-04	4,900
Slave — Manual Load	2T, 50 Hz	4940359-07	4,450
Slave — Manual Load	4T, 50 Hz	4940359-08	4,900

[‡]Master is capable of driving up to five slaves. Total cost of any system is ascertained by adding the unit costs of slaves to that of the master.

MODEL MM-1000 RECORDER/REPRODUCER

The standard of the industry, for both multichannel creative features and sheer quality. A dependable, highly versatile machine for complete sound production capability. Now includes as standard a Capstan Servo Unit that offers better tape speed control and permits the use of several important accessories. The MM-1000 is available as an 8, 16, or 24-channel unit; 8 and 16-channel models are expandable. The transport, basically an Ampex videotape transport, is field-proven on some 3000 video recorders. It handles one and two-inch tape with ease. Modular electronics simplify maintenance, enhance the machine's outstanding dependability.

FEATURES:

Transport convertible from one-inch to two-inch tape; tape motion sensing with logic and memory circuits; automatic tape lifters with manual override; accepts reels in 10½, 12, and 14-inch sizes; re-settable tape position index; remote SEL-SYNC® capability on all channels; capstan servo system.

SPECIFICATIONS:

Signal/Noise Ratio: 7½, 15 in/s: 60 dB min, 8- and 16-channel; 55 dB min, 24-channel. Frequency Response-overall: 15 in/s: ±2 dB, 30 Hz-18 kHz. 7½ in/s: ±2 dB, 30 Hz-15 kHz. Flutter: 18 in/s: below 0.08% rms. 7½ in/s: below 0.17% rms. Third Harmonic Distortion: 7½, 15 in/s: below 1.1% at normal operating level. Crosstalk: 50 dB min, 8 and 16 channels at 500 Hz. 45 dB min, 24 channels at 500 Hz. Timing Accuracy: ±0.1% (±1.8 seconds in 30-minute record time). Start Time: Tape at full speed in less than 0.5 second. SEL-SYNC™ Ampex Corporation.

MODEL MM-1005 REPRODUCER

New flexibility for mix-down creative sessions is now available with a playback-only version of the proven MM-1000 Recorder/Reproducer. The MM-1005 meets the most exacting specifications and enjoys complete compatibility with the MM-1000 and other professional multichannel recorders.

MM-1000 ACCESSORIES

Capstan Servo Accessories

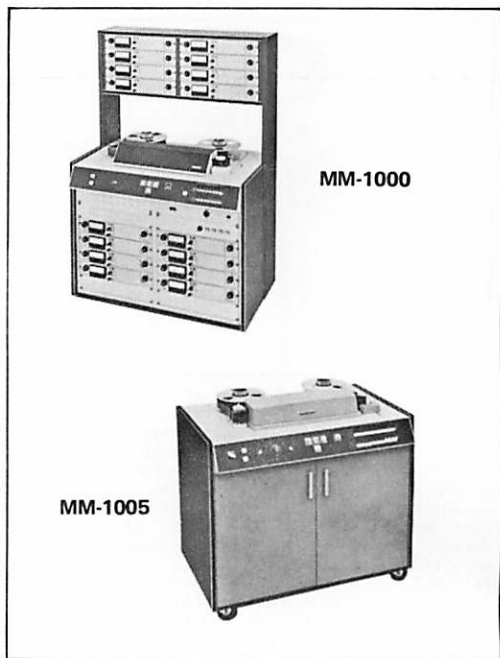
A capstan servo unit is now a standard feature of every MM-1000, and can be retrofitted to earlier models. The servo makes possible the use of these capability-extending accessories: Tape Lock eliminates timing and pitch errors to give perfect playback. Sync Lock synchronizes tapes to a TV station's reference signal for video/audio tape sync. Variable Speed provides continuous or incremental speed changes for special effects or tone control. Film Lock synchronizes the MM-1000 to a 16 or 35mm film projection system to augment film sound production capabilities.

Auditec System

Links the MM-1000 to the Ampex RA-4000 Automatic Programmer for teleproduction frame-by-frame synchronization of the MM-1000 to Ampex videotape recorders. Up to six audio or video recorders can thus be operated synchronously. Provides true random-access cueing, previewing, and synchronization of audio with video tapes.

Remote Transport/Sel-Sync® Control Panel

Provides complete mode controls, Sel-Sync controls, and indicator



lights that simplify recording and playback. Its special Sel-Sync controls are not duplicated on the MM-1000. The Sel-Sync system, either on the transport or through the remote control, permits a vocalist to rehearse by singing into a microphone while, with a headset, hearing previously recorded music through a headset. Also available: • Expansion kits add channels to MM-1000's • A two-inch to one-inch conversion kit • A plug-in microphone pre-amplifier that accepts both high and low-impedance microphones • A plug-in transformer for 600-ohm line matching • Extender boards • Eight, 16, and 24-channel head assemblies • A foot switch that releases transport torque motor brakes for easier loading and cueing • A speed change kit that changes transport speeds from 7/15 in/s to 15/30 in/s.

Ampex Model MM-1000-8 8-Channel Recorder/Reproducer No. 4940139-01 — For 1" tape. Net Each \$17,000.00

Ampex Model MM-1000-16 16-Channel Recorder/Reproducer No. 4940139-02 — For 2" tape. Net Each \$25,000.00

Ampex Model MM-1000-24 24-Channel Recorder/Reproducer No. 4940139-03 — For 2" tape. Net Each \$34,000.00

MM-1005 SERIES MASTER REPRODUCERS

Playback-only version of MM-1000 Series; ideal for mix-down creative sessions, leaving the MM-1000 free for studio sessions. Specifications, where applicable, same as for MM-1000 except: Power Required: 117 VAC, 60 Hz, single phase; 50 Hz also available. MM-1005-8, 1.6 kVA max.; MM-1005-16, 1.8 kVA max. Weight: MM-1005-8, 350 lbs.; MM-1005-16, 400 lbs.

Ampex Model MM-1005-8 8-Channel Reproducer No. 4010046-01 — For 1" tape. Net Each \$11,500.00

Ampex Model MM-1005-16 16-Channel Reproducer No. 4010046-02 — For 2" tape. Net Each \$16,570.00

Ampex Model MM-1005-24 24-Channel Reproducer No. 4010046-03 — For 2" tape. Net Each \$22,750.00

*For 7.5/15 ips version; 15/30 ips is \$1200.00 extra.

MM-1000 AND MM-1005 ACCESSORIES

Ampex Number	Description	Net Each
4940147-01	Capstan motor drive amplifier; to reference tape to internal or ext. std.	\$ 1,660.00*
4940161-02	Sync lock	1,740.00
4940173-01	8-ch. remote transport/SEL-SYNC control; all function controls in one desktop unit; for MM-1000 Ser. only	2,090.00
4940173-02	16-channel version of above	3,650.00

4940173-03 24-channel version of above 5,210.00
1805179-01 Digital readout w/control panel; displays elapsed or remaining time, turns on other equipment automatically 2,500.00

1805325-01 Luminous readout only (less panel) 500.00
4940150-01 8 to 16 channel conversion kit with electronics, head assembly, wiring harness; for MM-1000 Series only 10,400.00

4940150-03 16 to 24 channel conversion kit 12,575.00
4940187-01 8-tr. 1" kit for MM-1000-16; w/head assembly, tape guides, reels, spacers 2,400.00

4010137-01 8-tr. 1" kit for MM-1005-16 1,400.00
4952309-01 8-ch. head assembly (w/record, repro. and playback heads) for MM-1000 Ser. 2,000.00

4952398-01 16-ch. head assembly for MM-1000 Ser. 3,575.00
4952518-01 24-ch. head assembly for MM-1000 Ser. 4,950.00

4020305-01 8-channel playback head assembly for M-1005 Series 1,000.00

4020308-01 16-ch. head assembly for MM-1005 Ser. 2,275.00
4020308-02 24-ch. head assembly for MM-1005 Ser. 3,350.00

4010066-01 Plug-in mike preamp for MM-1000 Ser. 55.00
4580200-01 Plug-in balanced bridging transformer for MM-1000 Series 20.00

4580200-02 Plug-in line matching transformer for MM-1000 Series 20.00

4020151-01 Reproduce extender board 15.00
4020152-01 Record extender board for MM-1000 Ser. 15.00

4020153-01 Bias amplifier ext. bd. (MM-1000 Ser.) 15.00

*When bought with No. 4940161 Sync Lock, \$1510.00

ALIGNMENT

WIDTH (INCH)	SPEED (IN/S)	EQUALIZATION (TIME CONSTANTS)	STANDARD	TRACKS	CATALOG NO.	PRICE
1/4	3.75	90 μs & 3180 μs	NAB	Full	4690037-01	\$ 23.95
		120 μs & 3180 μs	EIA*	Full	01-31331-01	
		200 μs & 3180 μs	Amplex**	Full	01-31334-01	
	7.5	50 μs & 3180 μs	NAB	Full	01-31321-01	
		50 μs & 3180 μs	NAB	2	4690010-01	
		50 μs & 3180 μs	NAB	1 & 3 (of 4)	01-31321-04 ¹	
1/2	15	50 μs & 3180 μs	NAB	Full	01-31311-01	44.00
	60	50 μs & 3180 μs	NAB	2	4690009-01	
	7.5	3200 Series Duplicator	Special	Full	6878	38.50
		50 μs & 3180 μs	NAB	Full	01-31321-05	
		70 μs & ∞	IEC	Full	4690015-01	
	1 ²	15	50 μs & 3180 μs	NAB	Full	01-31311-05
50 μs & 3180 μs			NAB	8	4690007-01	
7.5		50 μs & 3180 μs (BLM-200)	NAB	8	4690007-02 ³	165.00
		50 μs & 3180 μs (BLM-200)	NAB	8	4690041-01 ⁴	
30		50 μs & 3180 μs	NAB	Full	4690005-01	150.00
		50 μs & 3180 μs	NAB	8	4690006-01	
	17.5 μs & ∞	AES	Full	4690048-01		
2 ²	7.5	50 μs & 3180 μs	NAB	Full	4690025-01	275.00
		50 μs & 3180 μs	NAB	16	4690022-01	
	15	50 μs & 3180 μs	NAB	Full	4690024-01	325.00
		50 μs & 3180 μs	NAB	16	4690018-01	
	30	17.5 μs & ∞	AES	Full	4690047-01	
		17.5 μs & ∞	AES	16	4690039-01	

* (1959) Obsolescent ** (1953-1958) Obsolete

FLUTTER

WIDTH (INCH)	SPEED (IN/S)	FREQUENCY (Hz)	UNWEIGHTED RMS FLUTTER (%)	TRACKS	CATALOG NO.	PRICE
1/4	3.75	3000	<.03	Full	01-31336-01	\$23.95
		3150	<.03	Full	4690013-01	
	7.5	3000	<.03	Full	01-31326-01	
		3150	<.03	Full	4690012-01	
	15	3000	<.03	Full	01-31316-01	
		3150	<.03	Full	4690011-01	

LEVEL

WIDTH (INCH)	SPEED (IN/S)	FREQUENCY (Hz)	LEVEL	TRACKS	CATALOG NO.	PRICE
1/4	7.5	700	Operating	Full	01-31325-01	\$19.50
	15	700	Operating	Full	01-31315-01	

PROGRAM SEQUENCES

IN/S	FREQUENCY	ALIGNMENT		DURATION	IN/S	FREQUENCY	ALIGNMENT		DURATION
		REPRODUCER OUTPUT VOLTAGE LEVEL	REPRODUCER OUTPUT VOLTAGE LEVEL				REPRODUCER OUTPUT VOLTAGE LEVEL	REPRODUCER OUTPUT VOLTAGE LEVEL	
3.75	500 Hz	10 dB below operating level	15 seconds	700 Hz	10 dB below operating level	15 seconds			
	7.5 kHz	10 dB below operating level	30 seconds	15 kHz	10 dB below operating level	30 seconds			
	5 kHz	10 dB below operating level	10 seconds	12 kHz	10 dB below operating level	10 seconds			
	2.5 kHz	10 dB below operating level	10 seconds	10 kHz	10 dB below operating level	10 seconds			
	1 kHz	10 dB below operating level	10 seconds	7.5 kHz	10 dB below operating level	10 seconds			
	500 Hz	10 dB below operating level	10 seconds	5 kHz	10 dB below operating level	10 seconds			
	250 Hz	10 dB below operating level	10 seconds	2.5 kHz	10 dB below operating level	10 seconds			
	100 Hz	10 dB below operating level	10 seconds	1 kHz	10 dB below operating level	10 seconds			
	50 Hz	10 dB below operating level	10 seconds	500 Hz	10 dB below operating level	10 seconds			
	500 Hz	Operating level	15 seconds	250 Hz	10 dB below operating level	10 seconds			
	700 Hz	Operating level	15 seconds	100 Hz	10 dB below operating level	10 seconds			
	15 kHz	Operating level	30 seconds	50 Hz	10 dB below operating level	10 seconds			
12 kHz	Operating level	10 seconds	700 Hz	Operating level	15 seconds				
10 kHz	Operating level	10 seconds							
7.5 kHz	Operating level	10 seconds							
15 & 30	5 kHz	Operating level	10 seconds	3.75	2 dB above operating level	30 minutes			
	2.5 kHz	Operating level	10 seconds		7.5	2 dB above operating level	15 minutes		
	1 kHz	Operating level	10 seconds		15	2 dB above operating level	7.5 minutes		
	500 Hz	Operating level	10 seconds						
	250 Hz	Operating level	10 seconds						
	100 Hz	Operating level	10 seconds						
50 Hz	Operating level	10 seconds	7.5	Operating level	10 minutes				
30 Hz	Operating level	10 seconds	15	Operating level	5 minutes				

NOTES: 1. Has additional 1-min, 3-kHz signal at operating level as first tone. 2. One-inch tapes, except for 4690041-01, have two times the duration shown, and two-inch tapes have four times the duration shown. 3. Tape 4690007-02 is identical to 4690007-01, except is recorded on back-treated tape. 4. Tape 4690041-01 has the following program and levels at 7 1/2 in/s: durations shown are at 240 in/s: a. 700 Hz, operating level, 12.5 seconds. b. 700 Hz, 10 dB below operating level, 7.5 seconds. c. 10 kHz, 10 dB below

operating level, 12.5 seconds. d. 5 kHz, 10 dB below operating level, 5 seconds. 3. 2.5 kHz, 10 dB below operating level, 5 seconds. f. 50 Hz, 10 dB below operating level, 5 seconds. 5. All tapes are supplied in boxes, on the following size and type reels: 1/4-in.; 7-in., plastic, 4-in. hub. Catalog No. 6878: 8-in., NAB. 1/2-in.; 8-in., NAB. 1-in.; 8-in., NAB. 2-in.; 8-in., Precision (10.5-in. precision for 30 in/s). 6. Accompanying each tape is a technical brochure describing the use and care of the tape.

300/350/351/354 SERIES SPARE PARTS

Amplex Number*	Description	Net Price
4030127-10	Capstan Assembly 15, 30, 60 ips	\$150.00
4030127-30	Capstan Assembly 7 1/2, 15 ips	150.00
4030127-40	Capstan Assembly 3 3/4, 7 1/2 ips	150.00
4100131-50	Capstan Dust Cap 1 1/2"	7.30
4100131-30	Capstan Dust Cap 7/8"	20.00
4440247-10	Capstan Fell Washer-Dust Seal	.10
430-050	Capstan TRU-ARC Retainer	.75
4030279-17	Capstan Idler Assembly 7 1/2, 15 ips	19.75
4030279-05	Capstan Idler Assembly 3 3/4, 7 1/2 ips, 1/4"	19.00
4330106-10	Capstan Idler Arm	13.00
4200126-10	Capstan Idler Arm Bearing	6.60
4590063-10	Capstan Idler Solenoid	7.40
4270176-10	Capstan Solenoid Return Spring	5.40
4270162-10	Capstan Idler Adjusting Spring	.10
4030131-05	Drive Motor 60 cps 3 3/4, 7 1/2 ips	180.00
4030131-08	Drive Motor 60 cps 7/8, 15 ips	180.00
4030131-07	Drive Motor 60 cps 15, 30 ips	180.00
4030131-12	Drive Motor 50 cps 7 1/2, 15 ips	180.00
4030131-11	Drive Motor 50 cps 15, 30 ips	180.00
4270179-10	Drive Motor Return Spring-Console	1.00
4270180-01	Drive Motor Return Spring-Rack	1.00
4590063-10	Drive Motor Solenoid	7.40
4270175-10	Drive Motor Pressure Adjusting Spring	.50
4030114-10	Take Up Brake Assembly, 1/4"	50.00
4030114-10	Take Up Brake Assembly, 1/2"	75.00
4030114-20	Rewind Brake Assembly, 1/4"	49.00
4030114-40	Rewind Brake Assembly, 1/2"	55.00

Parts common to Take Up and Rewind Assembly

4850050-02	Motor Assembly	\$100.00
4040414-10	Brake Band-Raybestos	3.70
4040467-01	Brake Band-Fell	1.30
4270164-10	Brake Band Leaf	4.45
4590067-10	Brake Solenoid	4.80
4330116-10	Turntable	3.80
4130105-20	Turntable Pad-Cork	.60
4030135-20	Rotary Tape Guide, 1/4"	65.00
4030135-10	Rotary Tape Guide, 1"	65.00
4040469-10	Reel Guard-10 1/2"	10.00
4110172-10	Reel Guard-14"	2.80
4030111-80	Take Up Tension Arm, 1/4"	34.00
4030111-10	Take Up Tension Arm, 1/2"	40.00
4210183-20	Tape Guide, Tension Take Up Arm, 1/4"	3.00
4210183-10	Tape Guide, Tension Take Up Arm, 1/2"	3.40
4230158-10	Hook Guide, Tension Take Up Arm	1.15
4040407-15	Reel Idler Assembly 7 1/2, 15 ips, 1/4"	75.00
4040407-08	Reel Idler Assembly 7 1/2, 15 ips, 1/2"	70.00
4040407-03	Reel Idler Assembly 3 3/4, 7 1/2 ips, 1/4"	75.00
4290272-10	Base, Reel Idler Assembly	12.00
4040408-50	Reel Idler Pulley 7 1/2, 15 ips	25.00
4040408-10	Reel Idler Pulley 3 3/4, 7 1/2 ips, 1/4"	25.00
4210188-20	Reel Idler Assembly Tape Guide, 1/4"	3.80
4210188-10	Reel Idler Assembly Tape Guide, 1/2"	4.50
4250115-10	Reel Idler Flywheel	20.75
4100132-10	Guard, Record Pushbutton	1.30
4100124-10	Guard, Stop & Start Pushbutton	.80
230-010	Knob, Speed Change	.90
230-002	Knob, Mode Selector	1.10
133-005	Pilot Lamp Base, Amber (single track 300)	7.40
132-006	Pilot Lamp Base, Red	4.37
132-011	Pilot Lamp Base, Amber (multichannel 300)	4.40

Parts common to all Transports

4040590-01	Capacitor, Drive Motor 5MF	\$ 8.80
4540292-30	Capacitor, Rewind Motor, 60 cps	3.00
4540292-10	Capacitor, Take Up Motor, 60 cps	5.40
420-006	Relay	11.00
120-062	Switch, Safety	4.00
122-014	Switch, Speed	8.00
120-003	Switch, Power	2.10
122-029	Switch, Mode Selector	14.00
120-014	Switch, Pushbutton, Stop	1.10
120-013	Switch, Pushbutton, Record	1.15
120-025	Switch, Pushbutton, Play	8.30
581-001	Rectifier	4.00

*If only one part number with same suffix is shown, it is the same for either 1/4" or 1/2" equipment.

300 MULTICHANNEL 30960-11 AND -12 ELECTRONIC PARTS — All for 1/4" equipment

Amplex Number	Description	Net Price
4050124-01	Power Supply Board	\$ 55.00
4050122-06	Record Board	65.00
4050125-03	Reproduce Board	47.00
4590061-01	Relay, Record	14.00
020-066	Relay	24.00
582-031	Rectifier, Bias Coupling Relay	2.20
581-001	Rectifier, Selenium	4.00
4140012-01	Meter, VU	44.00
62-0130	Switch, Rotary Input Transfer	1.60
62-0132-01	Switch, Equalization	3.90
62-0133-01	Switch, Meter and Output	2.90
122-016	Switch, Line Termination	1.20
120-005	Switch, Power	1.20
120-013	Switch, Record	1.15
132-003	Light, Record Indicator	1.20
4580022-01	Transformer, Input	29.00

Amplex Number	Description	Net Price
4040340-10	Transformer, Output	24.00
4040341-01	Transformer, Power	25.00
4580115-10	Transformer, Oscillator	16.00
4580122-10	Transformer, Microphone	42.00

350 SERIES TRANSPORTS — All for 1/4" equipment

4850049-01	Drive Motor, 7 1/2, 15 ips, 60 cps	\$200.00
4850049-05	Drive Motor, 7 1/2, 15 ips, 50 cps	170.00
4850049-04	Drive Motor, 3 3/4, 7 1/2 ips, 60 cps	200.00
4850049-03	Drive Motor, 3 3/4, 7 1/2 ips, 50 cps	200.00
4040591-02	Drive Motor Capacitor	8.30
4250114-10	Drive Motor Flywheel, Bodine	12.00
4250113-10	Drive Motor Flywheel, Ashland	12.00
591-001	Drive Motor Fan	.75
4040406-20	Capstan Dust Cap 7 1/2, 15 ips	6.20
4040406-10	Capstan Dust Cap 3 3/4, 7 1/2 ips	15.00
120-014	Switch, Stop	1.10
120-013	Switch, Play, Fast Forward, Rewind	1.15
020-006	Relay	11.00
582-016	Rectifier	3.30

300 AND 350 SERIES HEAD ASSEMBLY REPLACEABLE PARTS — All for 1/4" equipment

4270166-10	Gate Spring	\$.45
409-066	Gate Pin	.05
4210181-30	Glass Rod — 1/2" long	.15
4210181-10	Glass Rod — 3/16" long	.11
4030189-01	Gate — 1/4" Tape	50.00
4030189-06	Gate — 1/2" long	60.00

ELECTRONICS — All for 1/4" equipment

4050124-01	Power Supply Board	\$ 55.00
4050122-01	Record Board 7 1/2, 15 ips	55.00
4050122-02	Record Board 3 3/4, 7 1/2 ips	55.00
4050125-01	Reproduce Board 7 1/2, 15 ips	47.00
4050125-02	Reproduce Board 3 3/4, 7 1/2 ips	48.00
4590061-01	Relay, Record-351	14.00
020-066	Relay, Bias Coupling	24.00
4590088-10	Relay, Record-350	10.00
582-031	Rectifier, Bias Coupling	2.20
581-001	Rectifier, Selenium	4.00
132-003	Lamp, Record Indicator	1.20
4140012-01	Meter, VU	44.00
62-0130	Switch, Input	1.60
62-0131-01	Switch, Equalization	9.00
62-0132-01	Switch, Meter & Output	27.00
122-016	Switch, Line Termination	1.20
120-005	Switch, Power	1.20
120-013	Switch, Record	1.15
4040492-10	Hold Down Knob	13.50
4030145-10	Editing Knob	10.00
4330143-10	Reel Centering Adapter	3.10

SERIES PR-10 SPARE PARTS

4030185-10	Capstan Assembly 3 3/4, 7 1/2 ips	\$190.00
4030185-20	Capstan Assembly 7 1/2, 15 ips	190.00
4030141-10	Capstan Idler Assembly	11.00
4590090-10	Solenoid, Capstan Idler	11.00
4310051-10	Belt, Capstan Drive	5.50
4230121-10	Fork, Speed Shift, 3 3/4, 7 1/2 ips	3.60
4040326-10	Motor Assembly, Drive 7 1/2, 15 ips	180.00
4310052-20	Belt, Clutch Drive	2.10
4590018-10	Solenoid, Brake	4.40
4590050-10	Relay, Transport	3.90
4620144-10	Switch, Pushbtn (Forward/Rewind/Play)	2.60
120-138	Switch, Safety	1.90
4850090-01	Pulley, Belt Idler	16.00
4030183-10	Belt, Separator Assembly	19.00
4140013-01	Meter, VU	32.00
4520138-10	Pot. Assembly (Level Control PR-10-2)	7.80
4520138-20	Pot. Assembly (Level Control PR-10-1)	6.30
4590050-10	Relay, 3PDT	3.90
4620125-01	Switch, Record-Select	9.30
4580115-10	Transformer, OSC	16.00
4580118-01	Transformer, Output	3.30

SERIES 601 AND 602 SPARE PARTS

4030024-10	Capstan Idler Assembly	\$ 7.50
4040174-10	Pulley Assembly	6.20
4250068-10	Pulley, 7 1/2 ips, 60 cps	26.00
4250068-30	Pulley, 3 3/4 ips, 60 cps	26.00
4250044-10	Clutch, Play Takeup	1.10
4040165-10	Disc Assembly	9.00
4040165-20	Disc Assembly	9.00
4040166-10	Clutch Assembly	9.50
4040160-10	Shock Relief Assembly	2.80
4040161-10	Wheel, Idler Capstan	2.50
05-0245-01	Switch Deck Assembly (602)	15.00
05-0037-01	Switch Deck Assembly (601)	7.70
05-0245-02	Switch Deck Assembly (602-2)	15.00
4620035-20	Switch Mechanism	1.90
4040157-10	Flywheel Assembly, Capstan	14.00
4310007-10	Belt, Drive, 60 cps, 7 1/2 ips	3.50
4310007-20	Belt, Drive, 50 cps, 7 1/2 ips	4.70
432-010	Belt, Takeup	.75
060-013	Bulb, Neon	.85
4130028-10	Knob, Reel Holdown	1.00
4140003-10	Meter, VU	38.00
4580118-01	Transformer, Output (602)	3.30
4580144-10	Transformer, Oscillator (602)	10.00

AMPEX COMPONENTS

TAPE TRANSPORTS — POWER REQUIRED 117 V

Amplex Number	Used in Series	Description	Speed fps	Freq. Hz	Prof. User Net
02-7870-01	3200	14" Reel Cap.	30-60	60	\$2090.00
02-7870-02	3200	14" Reel Cap.	30-60	50	2090.00
4020271-01	AG-440/445	1/4 and 1/2-inch	7 1/2, 15	60	1295.00
4020271-02	AG-440/445	1/4 and 1/2-inch	3 3/4, 7 1/2	60	1295.00
4020271-04	AG-440/445	1/4 and 1/2-inch	3 3/4, 7 1/2	50	1295.00
402061-01	AG-500	3/4 and 1/2-inch	7 1/2, 15	60	840.00
402061-03	AG-500	3/4, 7/8	15	60	840.00
4020187-01	AG-600	3 3/4, 7/8	60	365.00	
4020187-02	AG-600	3 3/4, 7/8	50	365.00	

Note: Transports do not include heads, hold-down knobs, reels, AC cord or manuals. Electronics do not include cables, plugs, etc., unless captive or otherwise specified. All components listed may not be interchanged with units delivered earlier; if replacements are desired, consult the appropriate manual.

HEAD ASSEMBLIES: NEW AND REBUILT

Under heading, Description, E = Erase, R = Record, P = Playback.

ONE CHANNEL, FULL TRACK, 1/4" TAPE WIDTH

Amplex Number	Used in Series	Description	Prof. User Net	
			New	Rebuilt
4020475-02	300	ERP	\$250.00	\$135.00
4020261-02	AG-300/350	ERP	250.00	147.00
4020475-18	350/351	ERP	275.00	135.00
4020475-23	352	Playback only	150.00	91.00
4020272-01	AG-440	ERP	245.00	147.00
4020261-04	AG-355	Playback only	150.00	93.00
4020272-04	AG-445	Playback only	155.00	93.00
4020101-10	600/601	ERP	125.00	—
4020242-01	602	ERP	138.00	—
4020191-01	AG-600	ERP	115.00	—

ONE CHANNEL, HALF TRACK 1/4" TAPE WIDTH

Amplex Number	Used in Series	Description	Prof. User Net	
			New	Rebuilt
4020261-01	AG-300/350	ERP	\$395.00	\$147.00
4020475-17	350/351	ERP	350.00	125.00
4020475-22	352	Playback only	170.00	88.00
4020261-03	AG-355	Playback only	170.00	93.00
4020101-20	600/601	ERP	138.00	—
402042-02	602	ERP	138.00	—
4020191-02	AG-600	ERP	115.00	—

TWO CHANNEL, 1/4" TAPE WIDTH

Amplex Number	Used in Series	Description	Prof. User Net	
			New	Rebuilt
2-30028-01	300/350	FT, Erase; 2T, RP	\$309.75	\$195.00
2-30028-02	300/351-354	2T ERP	341.25	204.00
4020262-01	AG-300/350	2T ERP	395.00	195.00
4020272-02	AG-440	2T ERP	325.00	195.00
02-0102-01	600-2/601-2	2T ERP (FT, Erase)	200.00	—
4020243-01	602-2	2T ERP	121.00	—
2-96620-03	300/350-1.4	2T ERP, 1/2T Playback	414.75	248.00
2-96620-05	AG-350	2T ERP, 1/2T Playback	420.00	252.00
2-96620-04	352-2	2/4T Playback	288.75	173.00
2-30028-04	352-2	2T Playback	183.75	110.00
4020272-05	AG-445	2T Playback	225.00	105.00
4020272-06	AG-445	2/4T Playback	225.00	105.00
4020262-02	AG-355	2T Playback	170.00	105.00
4020192-01	AG-600	2T ERP	138.00	—

THREE CHANNEL, THREE TRACK, 1/2" TAPE WIDTH

Amplex Number	Used in Series	Description	Prof. User Net	
			New	Rebuilt
2-30471-04	300	ERP	\$546.00	\$327.00
4020263-01	AG-300	ERP	595.00	300.00
4020273-01	AG-440	ERP	500.00	300.00
4020273-03	AG-445	Playback only	395.00	—

FOUR CHANNEL, FOUR TRACK, 1/2" TAPE WIDTH

Amplex Number	Used in Series	Description	Prof. User Net	
			New	Rebuilt
2-30055-01	300	ERP	\$735.00	\$441.00
4020264-01	AG-300	ERP	615.00	369.00
4020273-04	AG-445	Playback only	295.00	—

DUPLICATORS, 1/4" TAPE WIDTH

Amplex Number	Used in Series	Description	Prof. User Net	
			New	Rebuilt
4020475-26	3201	P dual staggered	\$250.00	\$141.00
4020475-28	3202	R dual staggered*	295.00	170.00

TWO CHANNEL, TWO TRACK, 1/4" TAPE WIDTH

Amplex Number	Used in Series	Description	Prof. User Net	
			New	Rebuilt
1815668-01	3201	Playback inline	\$250.00	—
1815667-01	3202	Record inline	295.00	—

FOUR CHANNEL, FOUR TRACK, DUAL 2T STAGGERED

Amplex Number	Used in Series	Description	Prof. User Net	
			New	Rebuilt
2-80000-01	3301	Playback, 1/2" tape	\$546.00	\$327.00
2-80001-01	3302	Record, 1/4" tape	498.75	299.00

*Plus full track record.

HEAD STACKS

Number	Used in Series	Description	Net Each
4040076-04	601/600	2T Playback	\$ 42.00
4040076-05	601/600	2T Record	42.00
4040076-06	601/600	2T Erase	42.00
4040084-10	601/600	FT Erase	40.00
4040084-20	601/600	FT Record	40.00
4040084-30	601/600	FT Playback	40.00
4040084-40	601/600	1/2T Erase	48.00
4040084-50	601/600	1/2T Record	48.00
4040084-60	601/600	1/2T Playback	48.00
4040684-03	602	2T Playback	42.00
4040684-04	602	2T Record	42.00
4040684-05	602	2T Erase	42.00

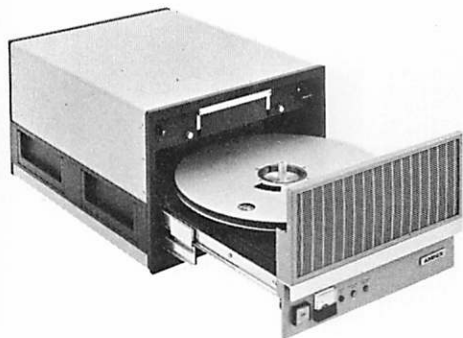
Number	Used in Series	Description	Net Each
4040684-06	602	FT Erase	\$ 48.00
4040684-07	602	FT Record	48.00
4040684-08	602	FT Playback	48.00
4040684-09	602	1/2T Erase	48.00
4040684-11	602	1/2T Playback	48.00
4040684-12	602	1/2T Record	48.00
2-96170-01	PR-10	2T Playback	74.00
2-96170-02	PR-10	2T Record	74.00
2-96170-03	PR-10	2T Erase	68.00
2-96192-01	PR-10	FT Playback	63.00
2-96192-02	PR-10	FT Record	63.00
2-96192-03	PR-10	FT Erase	53.00
4020228-01	CL-10/PR-10-4	1/2T Playback, 1 & 3	70.00
4020228-02	CL-10/PR-10-4	1/2T Record, 1 & 3	70.00
4020228-03	CL-10/PR-10-4	1/2T Erase, 1 & 3	70.00
2-96170-07	PD-10	2T Playback	79.00
2-96170-08	PD-10	2T Record	84.00
4040438-63	300	FT Erase	50.00
4040438-52	350/351/AG-350	FT Playback	50.00
4040438-57	350/351	FT Record	50.00
4040438-64	350/351	FT Erase	75.00
4040534-01	300-3	3T Playback, 100 mil*	150.00
4040534-02	300-3	3T Record, 100 mil*	150.00
4040553-01	300-3	3T Erase*	150.00
4040558-01	300-4	4T Playback*	170.00
4040558-02	300-4	4T Record*	170.00
4040564-01	300-4	4T Erase*	179.00
4040438-51	AG-300	1/2T Playback*	70.00
4040438-66	AG-350	1/2T Erase*	70.00
4040438-67	AG-350	FT Record	50.00
4040829-01	AG-350	FT Erase	75.00
4040437-01	300/351/354	2T Playback	70.00
4040426-01	300/351/354	2T Erase	100.00
4040437-02	300/351/354	2T Record	70.00
4040437-03	300/351/354	2T Record	70.00
4040831-01	AG-350	2T Erase	100.00
4040534-04	AG-300	3T Playback, 100 mil*	150.00
4040534-05	AG-300	3T Record, 100 mil*	150.00
1231886-01	AG-300	3T Erase*	150.00
4040558-04	AG-300	4T Record*	170.00
4040558-05	AG-300	4T Playback*	170.00
1231888-01	AG-300	4T Erase*	170.00
1231757-01	AG-350/AG-355	2T Playback (Stereo)	70.00
4040829-02	AG-440/445	FT Erase	100.00
4040438-67	AG-440/445	FT Record	50.00
4040438-68	AG-440/445	FT Playback	45.00
4040831-02	AG-440/445	2T Erase	100.00
4040437-05	AG-440/445	2T Record	70.00
4040437-06	AG-440/445	2T Playback	70.00
1231886-03	AG-440/445	3T Erase*	125.00
4040534-05	AG-440/445	3T Record*	150.00
4040534-04	AG-440/445	3T Playback*	150.00
1231888-03	AG-440/445	4T Erase*	170.00
4040558-05	AG-440/445	4T Record*	170.00
4040558-06	AG-440/445	4T Playback*	170.00
1815109-01	AG-500	FT Erase	45.00
1815111-01	AG-500	2T (1/2T) Erase	45.00
1815108-02	AG-500	FT Record	45.00
1815110-02	AG-500	2T (1/2T) Record	45.00
1815108-01	AG-500	FT Reproduce	45.00
1815110-01	AG-500	2T (1/2T) Reproduce	45.00
1815112-03	AG-500	1/2T Erase	45.00
1815112-02	AG-500	1/2T Record	45.00
1815112-01	AG-500	1/2T Reproduce	45.00
1232357-01	AG-600	FT Erase	37.00
1232358-01	AG-600	FT Record	37.00
1232359-01	AG-600	FT Reproduce	37.00
1232360-01	AG-600	1/2T Erase	48.00
1232361-01	AG-600	1/2T Record	48.00
1232362-01	AG-600	1/2T Reproduce	48.00
1232363-03	AG-600	1/2T Erase	48.00
1232363-02	AG-600	1/2T Record	48.00
1232363-01	AG-600	1/2T Reproduce	48.00
4040438-54	3200	1/2T Playback upper	58.00
4040438-53	3200	1/2T Playback lower	58.00
4040438-59	3200	FT Record	58.00
4040438-61	3200	1/2T Record lower	58.00
4040438-61	3200	1/2T Record upper	58.00
4040542-10	3300	2, 4T Record	158.00
4040542-20	3300	1, 3T Record	158.00
4040519-03	3300	1, 3T Playback*	179.00
4040519-04	3300	2, 4T Playback*	179.00

*Tape width, 1/4"

RECORDER/REPRODUCER ELECTRONICS

Number	Used in Series	Description	Net Each
02-30637-03	3200/3300	Master Repro. Amplifier	\$ 425.00
02-30638-01	3200/3300	Master Bias Oscillator	746.00
02-30639-01	3200/3300	Record Amplifier	1029.00
4020269-01	AG-440	Rec. Equalizer, 7/4-15	25.00
4020269-02	AG-440	Rec. Equalizer, 3 3/4-7 1/2	25.00
4020269-03	AG-440	Rec. Equalizer, CCLR	25.00
4020270-01	AG-440	Playback Equalizer	25.00
4020274-01	AG-440	Power Supply	225.00
4050434-01	AG-440	Rec. Elec. Bd. w/o Equal.	125.00
4050098-01	AG-600	2-Ch. interconn. cable	20.00

PRICES SUBJECT TO CHANGE WITHOUT NOTICE



MODEL SE-20 Automatic Tape Degausser

A fully automatic, heavy duty, bulk tape degausser. The SE-20 is simple to operate: place a reel on the spindle, close the drawer, and press the START button. In 30 seconds, a DEGAUSS COMPLETE indicator lights up. Exceeds government requirements to deliver 96 dB minimum erasure on tapes up to one inch wide, 86 dB on two-inch tapes. Accepts up to 16-inch reels with standard NAB hubs. The SE-10 has its own table-top enclosure with rack-mounting adapters; it can be moved easily to service recorders in different locations. Cat. No. 620260-01 **Net Each \$2,700.00**

MODEL MM-1100 Series Recorder/Reproducer

A high-quality, low-cost "little brother" to the MM-1000. Puts many of the MM-1000's features in a compact recorder that is ideally suited to mixdown, dubbing, and location work. Eight, 16- and 24-channel models available, each with torque motors, reel hubs, and plug-in record, reproduce and bias amplifier cards proven on the MM-1000. Tape loading is simplified; all heads are interchangeable; and you can remove the transport and mode controls in one cluster for remote use. The MM-1100 matches MM-1000 and AG-440B electronics specifications for tape interchangeability.

Features:

Accepts up to 14-inch reels; compact size; borrows many MM-1000 engineering features; dynamic braking with fail-safe mechanical brakes; transport and mode controls removable for remote use; records tapes interchangeable with MM-1000 and AG-440B.

Specifications:

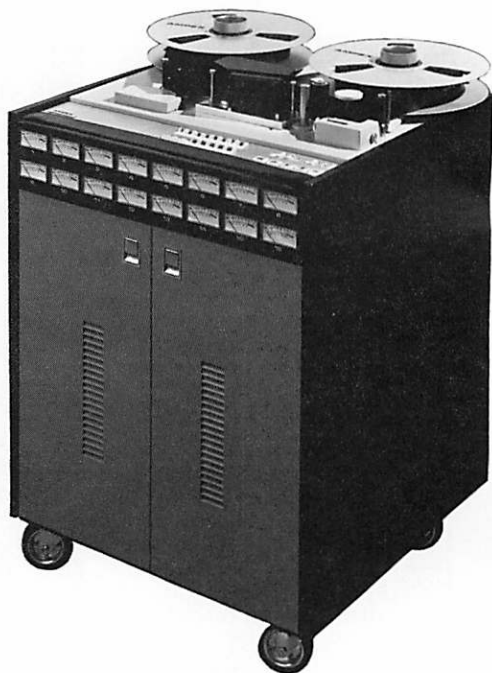
Signal-to-Noise Ratio: 15/30 in/s, 60 dB minimum. **Frequency Response:** Reproduce & Sync: 15 in/s = ± 2 dB, 30 Hz to 18 kHz; 30 in/s = ± 2 dB, 50 Hz to 20 kHz. **Flutter:** 15/30 in/s: below .08% RMS. **Crosstalk:** 50 dB minimum at 500 Hz. **Timing Accuracy:** $\pm 0.1\%$. **Start Time:** Play speeds in less than .5 second.

16 Track

Net Each \$16,500.00

8 Track

Net Each \$12,500.00



MODEL AG-440/445 Capstan Servo Kit

The Capstan Servo Kit provides a high precision tape drive for all Ampex AG-440/445, AG-350, and older 350 series machines, and direct drive Scully machines. A precise crystal oscillator provides low flutter and maintains speed accuracy regardless of power line voltage and frequency variations. An external reference frequency input permits variable speed operation. Any two of the four available tape speeds can be selected by jumper plugs. The kit is available as an easily installed field conversion kit or as a factory installed accessory on new machines.

Specifications:

Speeds: $3\frac{3}{4}$, $7\frac{1}{2}$, 15, 30 in/s. **Capstan Speed Accuracy:** $\pm .1\%$ for line voltage of 105-130 volts, 50/60 Hz. **Wow and Flutter:** .06% DIN weighted @ 15 in/s. **External Reference Frequency:** Accepts sine and square wave inputs 5V-50V p-p. 9600 Hz produces nominal speed.

Servo Kit for AG-440's in the field

Net Each \$650.00

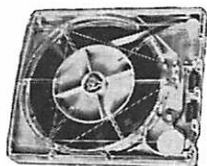
Servo Kit installed on AG-440 at Factory at time of order

Net Each \$325.00

TAPE ACCESSORIES

FIDELIPAC® AUTOMATIC TAPE CARTRIDGES

- NAB STANDARD
- RIBBED CONSTRUCTION FOR STRUCTURAL STRENGTH
- UNIQUE TAPE GUIDE AND PRESSURE PAD INSURE SMOOTH TAPE FLOW AND PROPER HEAD CONTACT
- AUTOMATIC BRAKE SPRING PREVENTS TAPE CREEPING WHEN NOT OPERATING



Extreme versatility in programming for broadcast automation, data storage, language laboratories, background music and other industrial and commercial applications. Continuous, self-contained single reel tape magazine operates on an endless loop principle. Tape is automatically rewound after passing the playing or recording head. Programs can be played from seconds to hours by varying tape length and speed. For instance, 300' of tape repeats itself every 8 minutes when set at 7 1/2 ips tape speed. Double your repeat time by simply cutting tape playback speed in half; time may be doubled again with double coated tape using Moebius loop. Operates from barely perceptible speed to highest commercial standard record speed. Will operate in all NAB, and most automobile cartridge machines.

Note: Cartridges are available loaded to any specified length on request, for pricing, take next highest standard cartridge price.

EMPTY CARTRIDGES

Fidelipac Type	Description	Tape Lgth. Can Hold	Net Each★
Series 300	Empty Cartridge	394 ft.	\$1.50
Series 600	Empty Cartridge	600 ft.	2.65
Series 1200	Empty Cartridge	1163 ft.	3.75

STANDARD CARTRIDGES WITH TAPE

Fidelipac Type	Tape Length, Feet	Playing Time at 7 1/2 ips	Net Each★
	13	20 seconds	\$1.90
	25	40 seconds	1.95
	44	70 seconds	2.00
	63	100 seconds	2.15
	88	140 seconds	2.25
Series 300	132	3 1/2 minutes	2.40
	207	5 1/2 minutes	2.75
	320	8 1/2 minutes	3.55
	394	10 1/2 minutes	3.70
Series 600	470	12 1/2 minutes	5.30
	600	16 minutes	5.95
Series 1200	975	26 minutes	9.05
	1163	31 minutes	9.95

DL CARTRIDGES WITH TAPE

For use with Spotmaster delay machines.

Fidelipac Type	Playing Time	Net Each★
DL Cartridge	5 seconds to 2 minutes	\$ 5.00
	2:01 minutes to 5 minutes	7.50
	5:01 minutes to 8:30 minutes	10.00
	8:31 minutes or more	On Request

★ANY ASSORTMENT, NO MINIMUM ORDER

EDITall® TAPE EDITING AND SPLICING BLOCKS

Used by professionals all over the world because it is the only precision editing block especially designed with a curved groove that takes the time and inconvenience out of tape editing. Each block contains two guide slots: Diagonal, for editing sound; vertical for editing information-recorded tape. Never gouges; provides neat, smooth splices that will not separate, faster splicing, without trimming. Tape is held perfectly straight and will not stick together. Spliced tape may be used over and over. Tiny bits of tape can be reassembled and spliced. Instruction folder included.



Blocks are brushed aluminum unless otherwise noted.

- EDITall Model P-2** — Plastic block only for 1/4" tape. Net Each \$1.50
- EDITall Model KP-2 Kit** — For professional results. Includes: Plastic editing block, 30 splicing tapes, demagnetized razor blade, grease pencil, tape guide and instructions. Net Each \$3.50
- EDITall Model S-2** — Block only for 1/4" tape. Fits on compact machines. Adhesive bottom, no mounting holes. Size, 4" x 3/4" x 1/4". Net Each \$7.50
- EDITall Model KS-2 Kit** — For 1/4" tape. Includes S-2 block, marking pencil, roll of 1/32" wide splicing tape, cutting blade and instruction folder. Net Each \$8.50

EDITall Model S-3 — Block only for 1/4" tape. Fits on console machines. Countersunk 1/8" mounting holes. Size, 5 3/4" x 1" x 3/8". Net Each \$9.00

EDITall Model KS-3 Kit — For 1/4" tape. Includes S-3 block, marking pencil, 1/4" splicing tape, cutting blade and instructions. Net Each \$10.00

EDITall Model S-3.5 — Block only for 1/2" tape. Countersunk 1/8" mounting holes. Size, 5 3/4" x 1 1/4" x 3/8". Net Each \$25.00

EDITall Model KS-3.5 — Kit for 1/2" tape. Includes block, splicing tape, carbon pencil, cutting blade, instructions. 5 3/4" x 1 1/4" x 3/8". Net Each \$26.00

EDITall Model S-3.75 — Countersunk 1/8" mtg. holes. For 3/4" tape. 5 3/4" x 1 1/2" x 3/8". Net Each \$30.00

EDITall Model KS-3.75 — Kit for 3/4" tape. Includes block, splicing tape, carbon pencil, cutting blade and instructions. 5 3/4" x 1 1/2" x 3/8". Net Each \$31.00

EDITall Model KS-4 — Kit for 1" tape. Includes block, splicing tape, carbon pencil, cutting blade and instructions. 5 3/4" x 1 3/4" x 3/8". Net Each \$35.00

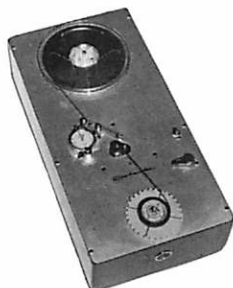
EDITall Model CX-1 EDITab Kit — Package of 50 precision splicing tabs. Joins spliced tape easily without overlap or overflow gunk. Net Each \$1.50

EDITall Model S-1 — Block only for 1/8" tape. Net Each \$9.00

EDITall Model MP Marking Pencil Net Each \$2.25

EDITall Model TCB "Your Tape Recorder" Booklet Net Each \$1.00

SPOTMASTER TAPE CARTRIDGE WINDER



- FREES CONVENTIONAL TAPE EQUIPMENT FROM USE FOR NON-STOCK CARTRIDGE LOADING
- HANDLES SUPPLY REELS TO 3600', TAKEUP REELS UP TO 7 1/4" DIAMETER
- FOR REPLACING WORN TAPE IN OLD CARTRIDGES OR WINDING NEW OR OLD CARTRIDGES TO NON-STOCK LENGTH
- CALIBRATED TAPE TIMER AVAILABLE

Rugged, dependable, field tested tape cartridge winder makes it possible for stations to use non-stock cartridge sizes without tying up conventional tape equipment for loading. Handles supply reels with up to 3600 feet of 1 mil lubricated tape; loads onto takeup reels up to 7 1/4" diameter. Four-pole induction motor winds at 22 1/2 ips. Worn tape in old cartridges is easily replaced; new or old cartridges can be wound to any length desired. Optional tape timer is available factory installed or as an accessory. **Power Required:** 30 watts, 117 VAC, 50/60 Hz. Size: 10" w. x 20" d. x 6 3/4" h. Weight, 9 1/2 lbs. **Spotmaster Model TP-1B Tape Cartridge Winder** Net Each \$124.50 **Spotmaster Model TP-1B Tape Cartridge Winder with Timer** Net Each \$149.50



RECORDING TAPES, CARTRIDGES, CASSETTES, REELS AND CLIPS

NO. 201 DYNARANGE®

Provides increased signal-to-noise ratio. For mastering and sub-mastering uses; superb fidelity at slow speeds. Anti-static treated; 1/2-mil plastic base.

Scotch Number	Lgth., Ft.	Reel	List Price	Net Each, Lots of	
				1-11	12 Up
201-1/4-600	600	5" plastic	\$ 2.80	\$ 2.05	\$ 1.84
201-1/4-1200	1200	7" plastic	4.10	3.08	2.77
201-1/4-2500H	2500	NAB hub	9.55	6.36	5.72
201-1/4-2500RO°	2500	10 1/2" metal	12.55	8.38	7.54

NO. 202 DYNARANGE EXTRA STRENGTH

Same as No. 201 but with 1/2-mil polyester backing for added strength; resists extreme temperature and humidity.

202-1/4-600	600	5" plastic	\$ 2.85	\$ 2.09	\$ 1.88
202-1/4-1200	1200	7" plastic	4.75	3.50	3.15
202-1/4-2500H	2500	NAB hub	9.55	6.36	5.72
202-1/4-2500RO°	2500	10 1/2" metal	12.55	8.38	7.54

NO. 203 DYNARANGE EXTRA LENGTH, EXTRA STRENGTH

Same recording characteristics as No. 201, plus 1-mil polyester backing for 50% more recording time.

203-1/4-900	900	5" plastic	\$ 4.05	\$ 2.97	\$ 2.68
203-1/4-1800	1800	7" plastic	6.85	5.05	4.54
203-1/4-3600H	3600	NAB hub	14.65	9.75	8.78
203-1/4-3600RO°	3600	10 1/2" metal	17.65	11.77	10.60

NO. 156 FOR CONTINUOUS LOOPS

Externally lubricated. Single play; 1-mil polyester, coated on one side.

156-1/4-1800	1800	7" plastic		\$ 4.14	\$ 3.76
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NO. 175 ALL PURPOSE, HEAVY DUTY

Heavy duty coating on 1/2-mil Tenzar® base; lasts 15 times longer than ordinary tapes. Colored 5" and 7" reels available; specify red, blue, green, yellow or clear (standard).

175-1/4-600	600	5" plastic	\$ 2.50	\$ 1.68	\$ 1.51
175-1/4-1200	1200	7" plastic	3.85	2.58	2.32
175-1/4-2500H	2500	NAB hub	8.45	5.63	5.07
175-1/4-2500RO°	2500	10 1/2" metal	11.35	7.55	6.80

NO. 102 STANDARD LENGTH, EXTRA STRENGTH

Especially suited for irreplaceable recordings on long term storage; 1/2-mil polyester base, unaffected by temperature and humidity.

102-1/4-600	600	5" plastic	\$ 2.80	\$ 1.86	\$ 1.67
102-1/4-1200	1200	7" plastic	4.40	2.91	2.63
102-1/4-2500H	2500	NAB hub	8.80	5.87	5.28
102-1/4-5000H	5000	NAB hub	19.05	12.70	11.43
102-1/4-5000R	5000	14" NAB	25.75	17.17	15.45

NO. 111 STANDARD LENGTH

For all general recording needs. Base, 1/2-mil plastic. Colored 5" and 7" reels available; specify red, blue, green, yellow or clear (standard).

111-1/4-150	150	3" plastic	\$ 0.85	\$ 0.55	\$ 0.49
111-1/4-300	300	4" plastic	2.15	1.42	1.27
111-1/4-600	600	5" plastic	2.70	1.77	1.60
111-1/4-1200	1200	7" plastic	4.00	2.67	2.40
111-1/4-2500H	2500	NAB hub	8.10	5.39	4.85
111-1/4-2500RO°	2500	10 1/2" metal	11.10	7.42	6.67
111-1/4-5000H	5000	NAB hub	14.85	9.89	8.90
111-1/4-5000R	5000	14" NAB	22.00	14.66	13.19

NO. 131 LOW PRINT

Minimizes print-through to a point below noise level of most professional machines. Has 1/2-mil plastic backing.

131-1/4-600	600	5" plastic	\$ 2.95	\$ 1.96	\$ 1.76
131-1/4-1200	1200	7" plastic	4.55	3.02	2.72
131-1/4-2500H	2500	NAB hub	9.55	6.36	5.72
131-1/4-2500RO°	2500	10 1/2" metal	12.60	8.38	7.54
131-1/4-5000H	5000	NAB hub	17.45	11.64	10.48
131-1/4-5000R	5000	14" NAB	24.60	16.41	14.77

NO. 138 LOW PRINT, EXTRA STRENGTH

Same magnetic and recording characteristics as No. 131 but with extra tough 1/2-mil polyester base.

138-1/4-1200	1200	7" plastic	\$ 5.25	\$ 3.50	\$ 3.15
138-1/4-2500H	2500	NAB hub	9.55	6.36	5.72
138-1/4-2500RO°	2500	10 1/2" metal	12.60	8.38	7.54
138-1/4-5000H	5000	NAB hub	17.45	11.64	10.48
138-1/4-5000R	5000	14" NAB	24.60	16.41	14.77

NO. 150 EXTRA STRENGTH, EXTRA LENGTH

Extra tough 1-mil polyester backing. Super potent oxide for greater response, crisper tones.

150-1/4-900	900	5" plastic	\$ 3.60	\$ 2.40	\$ 2.16
150-1/4-1800	1800	7" plastic	6.20	4.11	3.70
150-1/4-3600H	3600	NAB hub	11.75	7.82	7.05
150-1/4-3600RO°	3600	10 1/2" metal	14.80	9.86	8.87
150-1/4-7200R	7200	14" NAB	31.90	21.25	19.13

NO. 200 DOUBLE LENGTH, DOUBLE STRENGTH

Provides twice the playing time of conventional tapes. High potency oxide on 1/2-mil tensilized polyester backing.

Scotch Number	Lgth., Ft.	Reel	List Price	Net Each, Lots of	
				1-11	12 Up
200-1/4-1200	1200	5" plastic	\$ 5.85	\$ 3.87	\$ 3.49
200-1/4-2400	2400	7" plastic	10.05	6.68	6.02
200-1/4-4800RPS	4800	10 1/2" EIA†	22.65	15.11	13.60

NO. 206 "POSI-TRAK" BACKING

High output-Low noise. 1.5 mil.

206-1/4-R60	60 Min.	7"	\$ 6.10	\$ 4.49	\$ 4.04
206-1/4-2500H	2500	Hub	10.64	7.10	6.38
206-1/4-2500RO	2500	10 1/2"	14.03	9.36	8.42

NO. 207 "POSI-TRAK" BACKING

High output-Low noise. 1 mil.

207-1/4-R90	90 Min.	7"	\$ 7.70	\$ 5.69	\$ 5.12
207-1/4-3600H	3600	Hub	16.33	10.89	9.80
207-1/4-3600RO	3600	10 1/2"	19.72	13.15	11.83

NO. 208 "POSI-TRAK" BACKING

Low print-Low noise. 1.5 mil.

208-1/4-2500-H	2500	Hub	\$ 9.98	\$ 5.99	\$ 5.39
208-1/4-2500-RO	2500	10 1/2"	11.90	7.94	7.14

NO. 209 "POSI-TRAK" BACKING

Low print-Low noise. 1 mil.

209-1/4-3600-H	3600	Hub	\$13.80	\$ 9.20	\$ 8.28
209-1/4-3600-RO	3600	10 1/2"	16.70	11.14	10.02

NO. 290 TRIPLE LENGTH

For maximum recording time on given size reel. Ideal for recording meetings, etc.; 1/2-mil tensilized polyester backing.

290-1/4-1800	1800	5" plastic	\$ 7.40	\$ 4.92	\$ 4.43
290-1/4-3600	3600	7" plastic	11.99	7.99	7.19

"LIVING LETTERS" TAPES AND ACCESSORIES

Three tape lengths on 3" reels. Plastic container doubles as reusable mailer or storage unit.

111-1/4-150LL	150	3" plastic	\$ 1.05	\$ 0.72	\$ 0.65
111-1/4-300LL	300	3" plastic	2.05	1.46	1.31
290-1/4-600LL	600	3" plastic	2.95	1.99	1.79

LL-1/4-3	Empty box	.45	.30	.27
RL-1/4-3	Reel and box	.60	.40	.36

NO. 23 AND 24 PLASTIC LEADER AND TIMING TAPE

For identification of ends of tape and selections within roll.

23W-1/4-1000	1/4" x 1000'	\$4.50	\$3.00	\$2.70
24W-1/4-100	1/4" x 100'	.90	.60	.54
24Y-1/4-100	1/4" x 100'	.90	.60	.54

NO. 41 SPLICING TAPE

Self-sticking, for neat, noiseless splices. In metal dispensers.

41-1/2-S	1/2" x 150"	\$0.39	\$0.39	\$0.35
41-1/2-66	1/2" x 66"	.76	.76	.68
41-3/4-66	3/4" x 66"	1.01	1.01	.91
41-3/2-66	3/2" x 66"	.57	.57	.51

NO. 51 ALUMINIZED SENSING TAPE

For recorders with electronic sensing controls. This thin, flexible, strong conductive foil tape has a pressure-sensitive adhesive.

51-1/2-S	1/2" x 150"	\$1.89	\$1.89	\$1.70
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NO. PRST-7 SELF-THREADING REEL

Handy plastic reel for instant, fumble-free threading. Threads all tape thicknesses, with or without leaders. Each reel comes with plastic collar and labels.

PRST-7	7" plastic reel	\$1.50	\$1.00	\$0.90
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NO. 12-1/4-10 END-OF-REEL TAPE CLIP

Clips onto tape end and fits into reel, preventing spilling. Tapered, smooth edges can't harm tape. Card of 10 clips.

List per Card, 49¢. Net per Card, Lots: 1-11, 33¢; 12 Up, 29¢.

CASSETTES FOR ALL CASSETTE RECORDERS

Tensilized polyester base. Mailer refers to white opaque plastic postal-approved mailing container. Album refers to plastic case with wine-colored bottom and clear plastic hinged top.

Scotch Number	Description	List Price	Net Each, Lots of	
			1-11	12 Up
S-C-30	Cassette album	\$2.30	\$1.70	\$1.53
S-C-30	Cassette mailer	2.40	1.80	1.63
S-C-60	Cassette album	2.75	2.01	1.81
S-C-60	Cassette mailer	2.85	2.11	1.91
S-C-90	Cassette album	4.05	3.04	2.73
S-C-90	Cassette mailer	4.20	3.14	2.83
S-C-120	Cassette album	5.50	4.07	3.67

*Standard NAB type; also available on 10 1/2" plastic reel with 3" NAB center hole (RPL) or with 1/2" EIA center hole (RPS) at same price. †Plastic with 1/2" EIA center hole. Empty reels and boxes available.

CATALOG NUMBER	DESCRIPTION	CTN QTY	SUGG LIST	Net Each	CATALOG NUMBER	DESCRIPTION	CTN QTY	SUGG LIST	Net Each
406 SERIES 1.5 MIL POLYESTER					611 SERIES 1.5 MIL ACETATE				
406-151111	1/4" x 1200' (7" P)	12	\$ 5.30	\$ 3.17	611-131111	1/4" x 600' (5" P)	12	\$ 2.36	\$1.27
406-173111	1/4" x 2500' (10 1/2 NAB)	12	14.05	8.41	611-151111	1/4" x 1200' (7" P)	12	3.61	1.95
406-176111	1/2" x 2500' PH (bulk)	10	9.68	5.82	611-173111	1/4" x 2500' (10 1/2" NAB)	12	11.12	5.56
406-272111	1/2" x 2500' (MH)	6	22.95	15.29	631 SERIES 1.5 MIL POLYESTER				
406-273111	1/2" x 2500' (10 1/2 NAB)	6	26.68	17.79	631-131111	1/4" x 600' (5" P)	12	2.78	1.50
406-572111	1" x 2500' (MH)	6	44.95	29.98	631-151111	1/4" x 1200' (7" P)	12	4.38	2.36
406-573111	1" x 2500' (10 1/2 NAB)	6	48.72	32.48	631-173111	1/4" x 2500' (10 1/2" NAB)	12	11.54	6.29
406-97G111	2" x 2500' (10 1/2 Prec)	2	103.60	69.10	641 SERIES 1.0 MIL POLYESTER				
407 SERIES 1.0 MIL POLYESTER					641 SERIES 1.0 MIL POLYESTER				
407-151111	1/4" x 1800' (7" P)	12	8.46	5.07	641-131111	1/4" x 900' (5" P)	12	3.68	1.89
407-173111	1/4" x 3600' (10 1/2 NAB)	12	19.70	11.65	641-151111	1/4" x 1800' (7" P)	12	6.39	3.19
407-176111	1/4" x 3600' PH (bulk)	10	13.01	7.79	641-173111	1/4" x 3600' (10 1/2" NAB)	12	14.78	7.83
407-272111	1/2" x 3600' (MH)	6	32.65	21.74	651 SERIES 0.5 MIL TENSILIZED POLYESTER				
407-273111	1/2" x 3600' (10 1/2 NAB)	6	36.35	24.23	651-131111	1/4" x 1200' (5" P)	12	5.72	3.09
407-572111	1" x 3600' (MH)	6	64.28	42.86	651-151111	1/4" x 2400' (7" P)	12	9.79	5.28
407-573111	1" x 3600' (10 1/2 NAB)	6	68.05	45.34					
407-97G111	2" x 3600' (10 1/2 Prec)	2	142.25	103.10					

291 SERIES EDUCATOR CASSETTES

CATALOG NUMBER	DESCRIPTION	CTN QTY	SUGG LIST	Net Each
291-C30	150 mil x 141'	24	1.21	1.09
291-C60	150 mil x 282'	24	1.54	1.29
291-C90	150 mil x 425'	24	2.08	1.83

Each cassette carton contains one packet of 48 type-on pressure sensitive cassette labels for rapid program identification.

★LARGER QUANTITIES AVAILABLE ON REQUEST
AMPEX SERIES 291, 404 and 600 MAY BE
INTERMIXED FOR MAXIMUM QUANTITY PRICES

AUDIO TAPE ACCESSORIES

Catalog No.	Description	Sug. Professional User	
		List	1-11 12+
EMPTY PLASTIC 1/4" REELS			
A-41397	5" plain reel	\$.38	\$.22 \$.20
A-41467	7" reel	.45	.25 .23
EMPTY FLUTTER FREE PLASTIC 1/4" REELS			
A-51397	5" plain reel with 3" hub	\$.60	\$.35 \$.33
A-51497	7" plain reel with 4" hub	.68	.38 .35

EMPTY REELS AND BOXES

EMPTY NAB REELS IN BOXES			
A-1171	1/4" x 10 1/2" aluminum hub and flanges	\$4.50	\$2.79 \$2.65
A-1191	1/4" x 14" aluminum hub and flanges	8.70	5.15 4.90
A-1271	1/2" x 10 1/2" aluminum hub and flanges	6.10	3.80 3.61
A-1291	1/2" x 14" aluminum hub and flanges	9.50	5.73 5.44
EMPTY BOXES			
8-31267	1/4" x 5" box	\$.20	\$.15 \$.14
8-31367	1/4" x 7" box	.25	.19 .18

QUOTATIONS ON LARGER QUANTITIES
AVAILABLE ON REQUEST

APPLICATIONS FOR POSITION OF CUSTOMER NOW BEING ACCEPTED

VEGA WIRELESS MICROPHONE SYSTEMS

MODEL 55/56

Vega's Model 55/56 Professional wireless microphone system incorporates entirely new and technically advanced design and, as a result, performs reliably to the highest quality standards available anywhere. It consists of a Model 55 Transmitter and Model 56 Receiver. The transmitter accepts both low impedance and high impedance microphones and transducers. The transmitter weighs five ounces and is small enough to fit into a shirt pocket. It is powered by a small readily available battery to radio sounds to a remote Vega receiver. A flexible wire 18 inches long serves as the transmitter's antenna. The receiver has a meter and a 3-position selector switch for monitoring audio level, R.F. carrier level, and primary power (self-contained battery or A.C. line). In addition, a phone jack and volume control are provided for monitoring the sound itself with headphones. An indicator light provides visual proof that transmissions are being received. Microphones may be hand-held or lavalier type. An electret condenser mike lends itself to concealment in costumes or it can be taped to the body along with the transmitter and antenna. A switch on the transmitter permits the user to turn transmissions ON and OFF.

Specifications The Model 55/56 consists of one Model 55 Transmitter and one Model 56 Receiver.

MODEL 55/56 SYSTEM Audio Specifications (overall system):

Frequency response: ± 2 dB 40 to 15,000 Hz. **Signal-to-noise ratio:** better than 60 dB. **Total harmonic distortion:** less than 1%. **General Operating temperature range:** -20 to $+60^{\circ}$ C. **R.F. carrier:** 70 to 200 MHz standard; 40 to 70 MHz and 200 to 220 MHz on special order. Customer to specify. **Frequency stability:** 0.005% (crystal controlled). **Modulation:** ± 12 kHz deviation frequency modulation with 100 μ sec transmitter pre-emphasis and matching receiver de-emphasis. **Transmitter/receiver range:** 50 ft. in virtually all conditions; 1000 ft. on clear channels. **FCC compliance:** type accepted under part 91.555. Meets requirements of part 74.401. **General Audio inputs:** Two inputs: one for -40 to -65 dBm 150 ohm microphone; one for high impedance (20k) pick-ups. An internal mike level control is provided. **Battery life:** 10 to 15 hours with 8.4 volt mercury battery. See operating manual for other alternatives. **Antenna:** 18" flexible wire antenna is standard. **Weight:** 5 ounces including battery. **Dimensions:** 3.5" long, 2.75" wide, .85" thick. **Connectors:** miniature phone plugs with threaded locking collars. **Controls:** External: ON/OFF switch; Internal: mike level control. **Construction:** glass-epoxy circuit board is rubber shock-mounted to heavy aluminum case.

MODEL 55

Wireless Transmitter on specified customer frequency between 70 and 200 MHz (other frequencies on special order). Comes with short flexible antenna, battery and audio input plugs. Less Microphone. **Net Each \$495.00**

MODEL 56

Wireless Receiver on specified customer frequency between 88 and 200 MHz (other frequencies on special order). Comes with power and audio cables, and whip antenna. **Net Each \$650.00**

MODEL 56A

Same as 56 Receiver but equipped with internal "Vegatrol" signal activated relay for remote control. **Net Each \$685.00**

MODEL 56B

Same as 56 Receiver but equipped with internal rechargeable nickel-cadmium battery. **Net Each \$800.00**

MODEL 56AB

56 Receiver with both "Vegatrol" and rechargeable battery. **Net Each \$835.00**

ACCESSORIES

MODEL 106

Sony ECM-16 miniature condenser microphone with connector to plug into Model 55 transmitter. **Net Each \$35.00**

MODEL 107

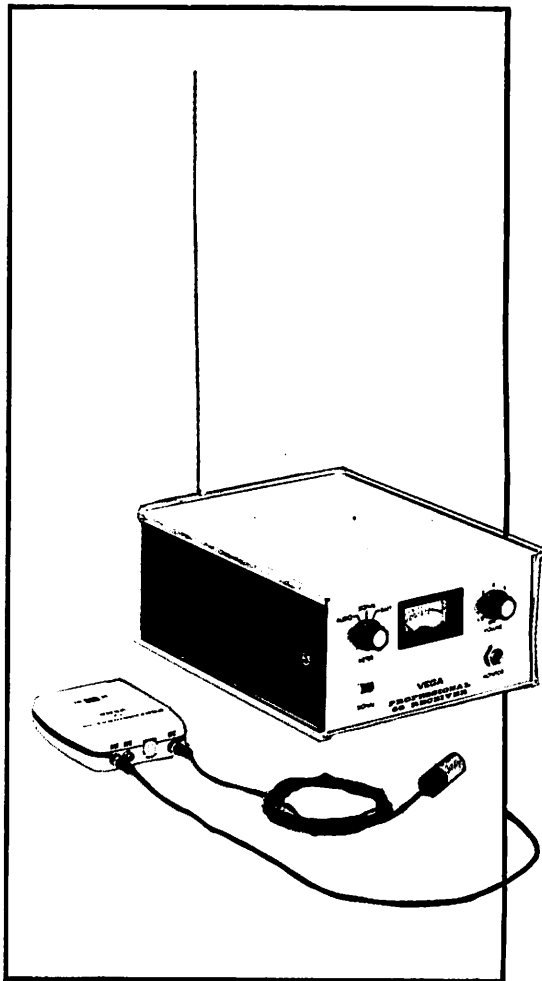
Five-foot cable with one end that plugs into 55 transmitter and other end terminated with Switchcraft A3F or equivalent (XL type) 3-pin female microphone connector. For use with hand-held microphones equipped with male connector. **Net Each \$12.00**

MODEL 108

Five foot cable interconnects 55 Transmitter to musical instrument pickup. Cable terminated with phone plug. **Net Each \$8.00**

MODEL 109

AKG D-109 hand-held/lavalier dynamic microphone. 5 foot cable plugs into 55 Transmitter. **Net Each \$57.00**



MODEL 110

AKG D-110 hand-held/lavalier dynamic microphone. Shock mounted rugged version of 109. Five foot cable plugs into 55 Transmitter. **Net Each \$87.00**

MODEL 112

Attractively styled Samsonite® carrying case for a wireless system consisting of: a 55 Transmitter, 56 Receiver, and associated cables and small accessories. **Net Each \$50.00**

MODEL 113

Leather carrying case with over-the-shoulder strap, for 56 Receiver. **Net Each \$50.00**

MODEL 114

Rack mounting adapter for two Model 56 Receivers. Occupies $5\frac{1}{4}$ inches of relay rack space. **Net Each \$60.00**

MODEL 120

Headset-antenna to increase range of the 55 Transmitter. The single 600-ohm earphone can plug into a monitor or cueing receiver. May also be used as receiving antenna by the on-the-move soundman carrying portable recording equipment. Specific frequency and application. **Net Each \$65.00**

MODEL 121

Coaxial receiving antenna for fixed installations. Mounts on $\frac{3}{4}$ inch pipe. Comes with 25 foot cable that plugs into 56 Receiver. Antenna bandwidth is 3%. Specify frequency between 50 and 220 MHz. **Net Each \$65.00**



WIRELESS MICROPHONES



PM-1



ST-3

RUNABOUT LAVALIER-TYPE PM-1

EDCOR's 2-in-1 RUNABOUT is a lavalier or clip-type sensitive pickup element with transmitter in belt-clip hand-held unit which provides superb quality and drift-free operation. Its miniature size is especially adaptable for situations where it is desirable to conceal the microphone and/or where it is necessary to have both hands free. Lavalier unit cord unplugs from belt-clip unit and automatically activates it as a hand-held wireless mike.

Microphone pickup element: Omnidirectional capacitive. **Frequency response:** 50-14,000 Hz. **Transmitter:** All silicon transistor circuitry for stable operation. Tunable at factory from approximately 30 MHz to 47 MHz. Built-in pre-emphasis to match EDCOR receivers. Gives drift free, feed-back free operation; provides flat frequency response from 20 to 20,000 Hz. **Frequency response:** Circuit has standard broadcast equalization and is limited only by the response characteristics of the microphone pickup element. **RF power:**

100 Milliwatts. **Antenna:** Fully enclosed ferrite type. **Battery life:** 35 hours. **Net Each \$249.50**

EDCOR SENSATUNER ST-3

The EDCOR Sensatuner is a companion instrument for use with wireless mikes. The finer tuner receives signals from the wireless mike and conveys the sound into a connected public address system or into portable EDCOR speakers. The sensatuner works with any sound system, regardless of make or type. A compact, rugged set with transistorized circuits and balanced for the included whip antenna. Built-in circuits automatically damp out static and cut off background noise when microphone is not in use.

Sensitivity: 2 microvolts for 20 db quieting. **Selectivity:** 250 Kc. **Signal-to-noise ratio:** 55 db or better. **Limiting:** Full above 3 microvolts. **Net Each \$237.00**

**SONY MODEL ECM-19B****Electret Cardioid Condenser Microphone**

Designed to replace the dynamic microphones used with most tape recorders, the ECM-19B is one of Sony's lowest-priced condenser microphones. Perfect for recording voice and music, this fine microphone is ideal for the budget-minded recording enthusiast who wants to bring out the full potential of his home recorder. Attractively-finished in textured, brushed aluminum, the ECM-19B comes complete with a swivel mount desk stand, 1.5 volt battery, and a 10-foot cord with mini-plug.

Net Each \$29.95**SONY MODEL ECM-16****Tie-Clasp/Lapel Electret Condenser Microphone**

Ideal for teachers, lecturers, clergymen, and others who require an unobtrusive microphone for high-quality sound reinforcement or recording purposes, the tiny ECM-16 features the superior performance of condenser design at a surprisingly low price. Comes complete with tie-clasp mount and battery, and is fitted with a mini plug.

Net Each \$29.95**ECM-22P****ECM-21****SONY MODEL ECM-22P****Electret Cardioid Condenser Microphone**

Used regularly in professional recording studios from coast to coast, the exceptional ECM-22P has gained a reputation for recordings which rival the original performance. A special three-position switch turns the microphone on or off, and adjusts frequency response for either voice or music. Finished in textured, brushed aluminum, the ECM-22P operates on either an internal battery or an external phantom power supply.* Comes complete with a swivel mount stand adapter, wind screen, vinyl case, and a 20-foot cadmium-bronze, two-conductor shielded cable.

Net Each \$99.95**SONY MODEL ECM-21****Electret Cardioid Condenser Microphone**

Here's a versatile, high-quality microphone with a moderate price tag. The ECM-21 is perfect for use with tape recorders, for rock groups, for demanding PA applications, and for lectern use in churches and schools. Beautifully finished in textured, brushed aluminum, the ECM-2 comes complete with a swivel mount desk stand, wind screen, 1.5 volt battery, and a 20-foot two-conductor shielded cable, which may be fitted with a phone plug, mini-plug, or Cannon connector.

Net Each \$49.95



Neumann



MICROPHONES



Neumann Model KM-85 Miniature Condenser Microphone — Similar to Model KM-84, except frequency response rolls off to 12 dB attenuation at 50 Hz; designed for PA and studio use to eliminate low frequency interference such as wind and mechanical noise. Complete with stand mount swivel, cable and foam pop screen. **Net Each \$292.00**

KMS-85 NEW CARDIOID un-poppable vocalist microphone isolated against finger noise; cable. **Net Each \$355.00**

MODEL KM-86 FET CONDENSER MICROPHONE

Head assembly contains two separate cardioid elements to provide three separate, switchable pickup patterns: cardioid, omnidirectional or bidirectional. Omnidirectional and bidirectional low frequency pickup is excellent even for distant sources; unusual for dual element microphone. Switch attenuates incoming signal 10 dB ahead of FET to prevent overload by high-level sound sources. **Frequency Response:** 40-20,000 Hz. **Output Impedance:** 150/250 ohms. **Sensitivity:** Approx. 0.7 mV/ μ bar across 1K; -41 dBm effective output level ref. 10 μ bars; -140 dBm EIA. **Weighted Noise Level:** 4 μ V or less, peak value, using DIN 45 405. **SPL Limit:** At least 200 μ bars (approx. 120 dB), normal sensitivity, or 650 μ bars (approx. 130 dB) with sensitivity reduction, for 0.5% THD at 40 Hz, 1 kHz and 5 kHz. **Power Required:** 48 VDC (+6, -8 VDC), 0.4 mA; external power supply. **Size:** $\frac{7}{8}$ " (min.) and $1\frac{1}{4}$ " (max.) dia. x $7\frac{1}{2}$ " long. **Weight,** $7\frac{1}{2}$ oz.

Neumann Model KM-86 Condenser Microphone — With stand mount swivel, cable. **Net Each \$378.00**

MODEL U-47 FET

The U 47 fet continues the tradition of the world famous Model U 47, built from 1947-1960, which rightfully is credited with revolutionizing the world's recording and broadcasting industries. Its exterior strongly resembles its predecessor, but its technical properties represent the state-of-the-art today. It is protected against wind and pop interference, its capsule is elastically mounted to isolate it against mechanical shock disturbances; it features both a 10 dB overload protection switch at the input of its internal electronics and a 6 dB switchable output pad to permit matching to highly sensitive microphone input circuits. A low-frequency roll-off of 12 dB at 50 Hz is provided by a third switch. The result is a versatile unit which will take most microphone applications in stride. The dual membrane capsule is a pressure-gradient transducer with cardioid characteristic.

Specifications:
Frequency range: 40-16,000 Hz. **Output impedance (needs floating ampl. input.):** 150 Ohms balanced. **Power supply:** +48 (+6, -8) VDC, 0.5 mA. **Operating time with battery-supplies, approx.:** 160 hours. **Net Each \$390.00**

SWIVELS: (All equipped with $\frac{1}{8}$ -27 thread)

KV-22 Swivel mount for all KM type microphones. **Net Each \$5.05**
MKV-6 Fast disconnect swivel mount for KMS-85 but applicable to any KM series microphone. **Net Each \$5.05**
SG-367 Swivel mount for U-87 microphone only. **Net Each \$22.00**

WIND AND POP SCREENS:

Z-118 Plastic miniature wind screen for KM-83/84/85/88 $1\frac{1}{2}$ " diameter; extremely effective for its size. **Net Each \$25.40**
WS-21 Acoustic foam WIND screen for KM-83/84/85/88 — 3" diameter; charcoal gray. **Net Each \$5.90**
WNS-21 Acoustic foam POP screen for KM-83/84/85 (replacement) Specify gray, blue, red, green or yellow color. **Net Each \$2.50**
WS-47 Acoustic Foam WIND & POP screen for U-47fet. **Net Each \$9.45**
WS-87 Acoustic Foam WIND & POP screen for U-87. **Net Each \$9.45**
WS-86 Acoustic Foam WIND & POP screen for KM-86. **Net Each \$12.10**

POWER SUPPLIES:

N-4521 117VAC portable supply for powering one or two microphones. **Net Each \$105.00**
BS-451 Battery Box: 2 x 22 $\frac{1}{2}$ V batteries (not supplied). **Net Each \$52.00**
NK-48 117VAC plug-in card for centrally supplying up to 40 microphones. **Net Each \$136.50**
6.8K 1% precision powering resistors for "PHANTOM" power. **Net Each \$.45/pair**

SUSPENSIONS: (All equipped with $\frac{1}{8}$ -27 thread)

EA-21 Elastic Suspension for KM-83/84/85/86/88 microphones. **Net Each \$26.00**
EA-47 Elastic Suspension for U-47fet microphone. **Net Each \$39.40**
Z-48 Elastic Suspension for U-87 microphone. **Net Each \$39.40**
Z-68 Auditorium cable hanger; fits all light weight microphones. **Net Each \$12.80**
MNV-21 Auditorium cable hanger for KM series microphones only. **Net Each \$7.60**

Neumann "FET-80" Series Condenser Microphones are a logical development of the world-famous Neumann tube condenser microphones. The development of the high-impedance FET has enabled Neumann to reduce the size, weight and power requirements of these condenser microphones while retaining all the qualities that have made them standards of the broadcast and recording industries. All FET-80 microphones are supplied with a 25' interconnecting cable and XLR type connector. Microphones must be powered by external power supply except for Model U-87, which can operate on internal batteries; all can be "Phantom" powered.

MODEL U-87 FET CONDENSER MICROPHONE

Corresponds in size and specifications to former Model U-67. Condenser elements have evaporated gold coated polyester membranes to resist both heat and age. Three separate switches below mike element control directional characteristic, frequency response and sensitivity; pattern is either omnidirectional, bidirectional or cardioid. High frequency response in both cardioid and bidirectional modes is linear even for direct incident sound fields; allows mike to be used very close to source without overly sibilant sound quality. Frequency-dependent feedback circuit reduces response below 30 Hz at FET gate while keeping response above 40 Hz linear to prevent amplifier blocking caused by wind or mechanical shock. Frequency response switch raises 3-dB point of low frequency roll-off to 200 Hz for close voice pickup; also restores low-frequency linearity at amplifier input when mike is 1 ft. or less from source. Sensitivity switch reduces sensitivity 10 dB before FET to prevent overload with high level sound sources. Unscrewing base ring opens mike to allow access to two 22 $\frac{1}{2}$ -volt batteries; battery life is approximately 200 hours. **Frequency Response:** 40-16,000 Hz. **Output Impedance:** 150/250 ohms, switchable, nominal. **Sensitivity:** Approx. 1 mV/ μ bar across 1K; -38 dBm effective output level ref. 10 μ bars; -137 dBm EIA. **SPL Limit:** At least 200 μ bars (approx. 120 dB) or 650 μ bars (approx. 130 dB), with sensitivity reduction, for 0.5% THD at 40 Hz, 1 kHz and 5 kHz. **Power Required:** 48 VDC (+6, -8 VDC), 0.4 mA; supplied by two 22 $\frac{1}{2}$ -volt batteries or external power supply. **Size:** $2\frac{1}{4}$ " dia. x 8" long. **Weight,** 1 lb. 4 oz. **Neumann Model U-87 Studio Condenser Microphone** — With stand mount swivel, cable. **Net Each \$395.00**

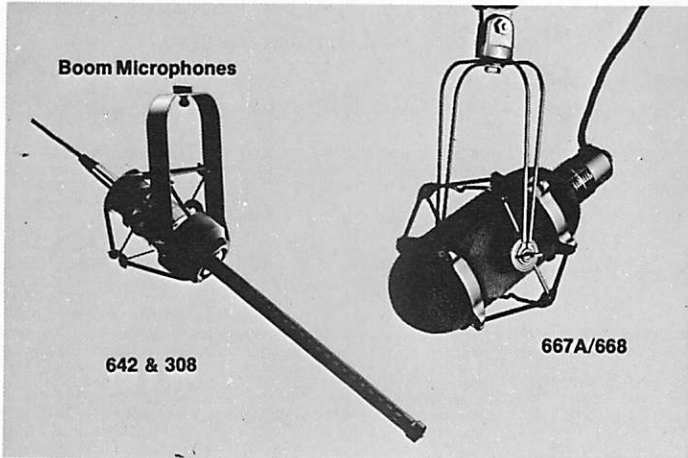
KM SERIES FET

MINIATURE CONDENSER MICROPHONES

Condenser elements have evaporated gold coated polyester membrane and wide frequency response. Switch on microphone reduces input signal 10 dB ahead of FET to prevent overloading when mike is used near high level sources. All models use the same amplifier; condenser heads are mechanically identical and can be used interchangeably. **Frequency Response:** KM-83, 20-20,000 Hz; KM-84 and KM-85, 40-20,000 Hz. **Output Impedance:** 150/250 ohms. **Sensitivity:** Approx. 1 mV/ μ bar across 1K; -38 dBm effective output level ref. 10 μ bars; -137 dBm EIA. **Weighted Noise Level:** 4 μ V or less, peak value, using DIN 45 405. **SPL Limit:** At least 200 μ bars (approx. 120 dB), normal sensitivity, or 650 μ bars (approx. 130 dB), with sensitivity reduction, for 0.5% THD at 40 Hz, 1 kHz and 5 kHz. **Power Required:** 48 VDC (+6, -8 VDC), 0.4 mA from external power supply. **Size:** $\frac{7}{8}$ " dia. x $4\frac{3}{8}$ " long. **Weight,** 3 oz. **Neumann Model KM-83 Miniature Condenser Microphone** — Omnidirectional pressure transducer. Frequency response is flat except for deliberate high end peak; ideal for overall pickup of large orchestras. Complete with stand mount swivel, cable and foam pop screen. **Net Each \$257.00**

Neumann Model KM-84 Miniature Condenser Microphone — Cardioid pressure gradient transducer. Gradual low-frequency rolloff compensates for low frequency boost common to all pressure gradient transducers close to sound source. Frequency response is essentially uniform over cardioid pattern; sound quality remains unchanged although level changes. Complete with stand mount swivel, cable and foam pop screen. **Net Each \$292.00**

TRADE-INS ACCEPTED



Boom Microphones

642 & 308

667A/668

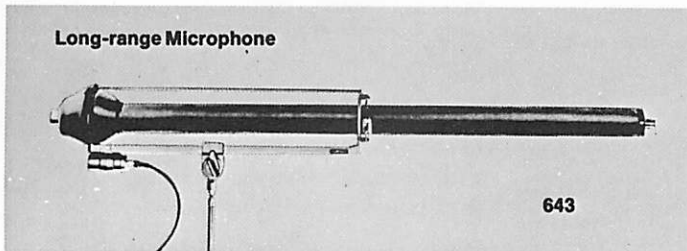
642: Most used professional quality microphone for boom, floor stand, or special mounting where "on mike" sound at extended working distance is required.* Nominal acceptance angle (for speech and vocals) 80°. Two position low-frequency compensation. Response: 40 to 10,000 Hz. Impedance: 50, 150, 250 ohms. Output level: -48 dB. Finish: Nonreflecting gray. Must be used with 308 or 324. \$272.40

APPLICATIONS: TV studio booms/Sound track recording/Dialogue and vocals/Multiple footlight mounting for theatrical productions/Educational classroom television.

668: "Continuously Variable-D"* microphone designed for boom and fishpole use for broadcast and motion pictures.† Extremely smooth cardioid pattern for maximum reduction of ambient noise and reverberation. Built-in equalizer provides choice of 36 response variations to tune microphone to environment. Acceptance angle: 150°. Frequency response: 40 to 10,000 Hz. Impedance: 50, 150, and 250 ohms selectable. Output level: -51 dB. Finish: TV gray. \$318.00

APPLICATIONS: Boom use in TV and on motion picture location/Fishpoled for dialogue in motion picture recording/Professional public address to control effects of auditorium resonance and reverberation.

667A: 668 with six response variations for less demanding applications. \$222.00




Long-range Microphone

643

643: A highly directional dynamic microphone combining the best characteristics of cardioid and distributed front-opening principle* for more specialized and extended long range pickup. Provides cardioid pickup pattern up to 100 Hz and is highly directional over balance of range. Impedance: 50, 150, and 250 ohms selected by changing internal connector pin. Light weight extruded and cast aluminum case with integral shock mount and removable wind filter. Output: -48 dB. Response: 30 to 10,000 Hz. \$1095.00

† U.S. Patent No. 3,115,207

*U.S. Patent No. 3,095,484

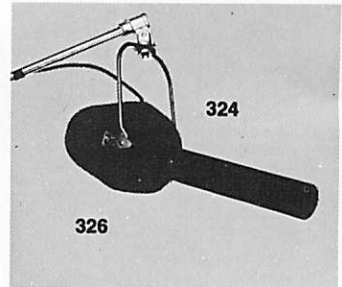
Electro-Voice 

Professional Microphones

Special Application

Boom Mike Accessories

308: Suspension shock mount for 642. \$25.70



324

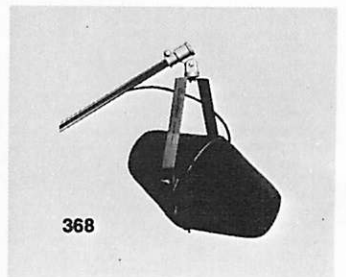
326

324: Boom suspension mount for model 642, will accept windscreen. \$43.80

326: Acoustifoam™ windscreen blast filter for 642. \$32.10

327: Kit includes 324 and 326. \$73.80

See Model 302, Page 8, for additional shock protection.



368

368: Windscreen for 667A & 668 used outdoors. Also fits over 307 or 309 mount. \$62.70

Electro-Voice



Professional Microphones

Omnidirectional Dynamic

Miniature Headset Microphone



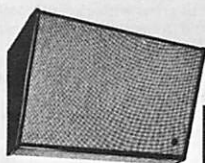
RE51: Unique dynamic microphone allows hands-free announcing. Mike assembly clips on eyeglass frame or headband furnished.

Avoids clothing and handling noise; provides clear, unchanging voice pickup and background noise reduction. Transistor amplifier has on/off switch, cough button, battery test lamp, output level adjustment. Battery life virtually as long as shelf life. Response: 80 - 10,000 Hz. Output: -56 dB (max.) Lo-Z. Non-reflecting black finish. \$80.40

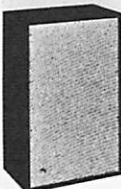
Studio Monitor Loudspeakers

SENTRY IA: Wall or ceiling mounted system designed specifically for monitor use in recording and broadcast studios. Extremely wide, very flat response. Walnut finished cabinet. Frequency response: 30 to 20,000 Hz. 8 ohms impedance. Permits precise monitoring and use as reference standard. Size: 21½" h., 37" w., 16-3/8" d., 82 lbs. \$195.00

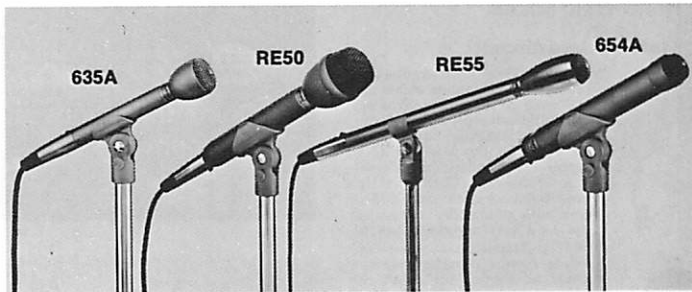
SENTRY IIA: Floor model, similar to Sentry IA above. For free standing floor position. Size: 32" x 20" x 13" d. 63 lbs. \$195.00



SENTRY IA



SENTRY IIA



635A: Most popular professional quality performer's microphone. Smooth, carefully shaped response yields "flat effect" when used close up. Built-in four-stage pop and breath blast filter. Cable and mounting clamp furnished. Response: 80 to 13,000 Hz. Lo-Z. Output level: -55 dB. Finish: Fawn beige Micomatte. \$56.70

APPLICATIONS: Stage performance/Wide dynamic range, freedom from proximity effect, assures consistent results regardless of working distance/No windscreens necessary.

RE50: Noiseless Hand & Stand—For vocals, interviewing, instrumental broadcast, and recording. Extremely low susceptibility to mechanical shock, handling and cord noise, or breath pops due to unique double case design separated by rubber isolation mounting. Non-reflecting fawn beige Micomatte finish. Same ruggedness and electrical characteristics of the 635A. Cable and mounting clamp furnished. Response: 80 to 13,000 Hz. Output: -55 dB. Impedance: Lo-Z. \$77.10

RE55: Smooth, peak free wide-range response combined with functional styling makes this the most versatile professional quality omnidirectional dynamic ever offered. Cable and mounting clamp furnished. Response: 40 to 20,000 Hz. Output level: -55 dB. Finish: Fawn beige Micomatte. \$141.30

APPLICATIONS: Recording symphony orchestra/Close instrument miking/Hand held for audience participation and interview use/On-the-spot news coverage.

654A: Slim-trim broadcast dynamic, can be used stand mounted, hand held, or as lavalier. Matches all low impedance inputs. Cable and mounting clamp furnished. Frequency response: 50 to 15,000 Hz. Output level: -57 dB. Non-reflecting gray finish. \$67.50

Professional Lavalier Microphones



RE85: Quiet Lavalier—extremely free from friction or shock noise. Internal element suspended in compliant rubber; hard, smooth case finish; specially designed, smooth cable isolated from inner capsule. Extremely flat response in chest-lavalier position: 90 to 10,000 Hz. Output: -61 dB. Omnidirectional. Lo-Z. 30' cable. Finish: Nonreflecting champagne. Length, 2-5/8". Dia., 15/16". Neck cord assembly, tie clasp assembly, belt clip, and zipper pouch furnished. \$85.50

649B: Smallest dynamic lavalier only 2¼" l., ¾" dia. Designed for the most demanding professional applications. Response is carefully tailored to compensate for lavalier acoustic conditions so resulting signal perfectly matches signal from other microphones. Response: 70 to 10,000 Hz. Impedance: 150 ohms. Output level: -61 dB. 30' cable. Finish: Nonreflecting gray. With neck cord, belt clip, mounting clamp, and suede pouch. \$73.50

APPLICATIONS: Live performances, allows artist greatest freedom of movement/Concealed on person or in set/Consistent "on mike" sound through accurately tailored response.

Hand-Held Mikes

Transistorized Aircraft



602FTR: Transistorized noise cancelling dynamic mobile with built-in transistor amplifier. Provides level for direct replacement of carbon units. Maximum output: -43 dB with 250 ohm load and 27 V supply. Output adjustable from exterior. Response: 100 to 5,000 Hz. Press-to-talk switch and coiled cord with phone plug at terminal end. Lo-Z. FAA approved. \$48.30



603TR: Transistorized noise cancelling mobile providing all dynamic advantages for direct replacement of carbon units. Built-in transistor amplifier matches level of carbon circuits. Output adjustable with internal potentiometer up to -44 dB. FAA approved for aircraft applications. Response: 200 to 4,000 Hz. Lo-Z. Press-to-talk switch and coiled cord. Magnetic hanger bracket furnished. \$94.50



602TR: Similar to 603TR but different case design. Uses conventional hanger bracket. Fixed output level: -48 dB (carbon equiv.) Response: 100 to 5,000 Hz. FAA approved. \$68.70

Carbon Units



205STCKK: Noise cancelling single button carbon for aircraft and emergency communications. FAA approved. Blastproof, waterproof, and shock resistant. Output at 1/4": -50 dB. Lo-Z. Black phenolic case. Press-to-talk switch and coiled cord. \$36.90

205STCKKP: Same as above with PI-068 phone plug. \$40.50

210E: Similar to 600E but single-button carbon. Output: -50 dB. Lo-Z. Press-to-talk switch closes microphone and relay circuit. Coiled cord. \$25.80

Dynamic Units



600E: Dynamic mobile of rugged construction. Lo-Z has "open circuit" wiring for multiple paging installation. Hi-Z provides "straight-through" circuit for VOX operations. Output level: -55 dB. Response: 100 to 7,000 Hz, matched to high intelligibility requirements. Gray. With hang-up bracket. Specify 600EH (Hi-Z) or 600EL (Lo-Z) \$28.80



602F: Similar to 602FTR, less transistor amplifier. For circuits designed for dynamic microphones. Output: -60 dB. Specify 602FH (Hi-Z) or 602FL (Lo-Z). \$41.70

Ceramic Units

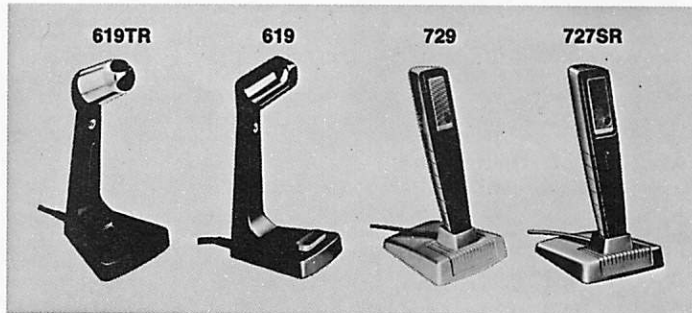


714: Ceramic hand-held omni unit for paging, ham radio, and CB. Cylolac case for long life and protection from shock. High impedance output: -55 dB. Response tailored for high intelligibility: 100 to 7,000 Hz. DPDT switch. Coiled cord. Bracket included. \$12.00

717: Similar to 714, except cardioid pickup. Aperture on either side of diaphragm provides attenuation of sound arriving from rear and sides. Output: -55 dB. Response: 100 to 7,000 Hz. \$14.10

Electro-Voice

Communications and Paging Microphones



Dynamic Transistorized Compressor

619TR: Base-station microphone has transistor amplifier and speech compressor. Provides high value of average modulation (P.E.P.). Use with any impedance or input level. Controls for level and degree of compression. Rugged die-cast stand in non-reflecting gray with chrome plated die-cast head. Grip-to-talk switch in stand riser has locking "on" position, compression meter in base. Switch operates mike and relay. Response: 150 to 10,000 Hz. Output (at compression threshold): Hi-Z -42 dB; 3000 ohm -44 dB; 150 ohm -58 dB; (Maximum output: -40 dB). Coiled cord cable extends to 5'. Size: 4 1/2" w., 9 3/4" h., 4 3/4" d. Net weight: 2 lbs. \$48.60

Base Station

619: Similar to 619TR less compressor and amplifier. For base station paging and two-way. Press-to-talk switch in base movable to upper stand for grip-to-talk use. Switch allows relay operation has locking "on" position. Response: 70 to 10,000 Hz. Output: -57 dB. Specify 619H (Hi-Z) or 619L (Lo-Z). \$34.20

719: Similar to 619 with ceramic element. Response 70 to 7,000 Hz. Output: -57 dB. \$19.20

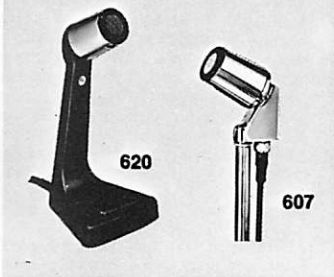
729: Inexpensive ceramic cardioid reduces random noise. For p.a., paging, home recording, and general communications. Tailored for single sideband. Output: -60 dB. Response: 60 to 8,000 Hz. Hi-Z. 8 1/2' cable. Table stand and floor stand adapter supplied. \$17.40

729SR: 729 with relay switch. \$18.90

727: Omnidirectional, similar in appearance to 729. Withstands extremes of temperature and humidity. Hi-Z. Response: 60 to 8,000 Hz. Output: -55 dB. \$14.55

727SR: 727 with relay switch. \$15.75

Noise-cancelling Base Station



607: Differential dynamic is close talking, noise cancelling. Accepts sounds of close origin (1/4") and rejects sound of distant origin. For use in areas with exceptionally high background noise levels. Response: 300 to 3,800 Hz. Output at 1/4": -54 dB. Acoustalloy® diaphragm. Stud mount with built-in connector. Chrome finish. Specify 607H (Hi-Z) or 607L (Lo-Z). Cable furnished. \$37.20

620: Noise cancelling base station microphone, similar to 607 built into rugged die-cast stand. Push-to-talk switch in base may easily be moved to riser for grip-to-talk operation. Switch shorts microphone in "off" position and provides for relay operation. Nonreflecting gray stand, chrome finished Cylolac head. Specify 620H (Hi-Z) or 620L (Lo-Z). With integral cable. \$45.00

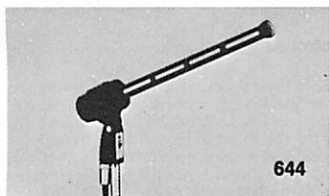
Electro-Voice



**Microphones for
P.A., Tape Recording,
Entertainers,
Experimenters**

Dynamic Cardioid

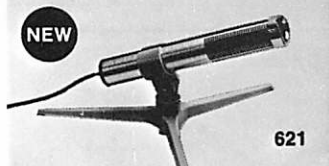
Unidirectional Line Mike



644

644: Combination cardioid and distributed front opening* instrument, making it the most directional p.a. microphone available. Better than 2½ times working distance of pressure types with virtually no change in response. Extremely high rejection of noise from sides and rear, reducing reverberation and feedback. Narrow front angle of acceptance for best isolation. Very low response to wind noise and shock. Response is smooth from 40 to 10,000 Hz. Output: -53 dB. Dual Lo-Z and Hi-Z. E-V QC™ -4M cable connector permits impedance change without tools by moving a single pin. High pressure die cast case, nonreflecting gray finish. Acceptance angle: 90°. \$78.15

Tape Recording Cardioid



621

621: Single-D cardioid with very high performance specifications at surprisingly low cost. Emphasizes bass when used close up. Greatly reduced sensitivity at sides and rear for excellent recording and p.a. use in uncontrolled acoustic environment. Use hand held on its own tripod folding table stand or with mounting clamp furnished. Ruggedly built, matte satin finish. Integral cable. Response: 150 to 12,000 Hz. Output: -60 dB. Specify 621H (Hi-Z) or 621L (Lo-Z). \$19.95

*U.S. Patent No. 3,095,084
†U.S. Patent No. 3,115,207

Variable-D® Cardioids



674

676

664

674: New "backbone" design brings truly professional quality to public address, recording, communications, and other general purpose microphone applications. An exclusive Continuously Variable-D microphone† which assures uniform symmetrical cardioid pattern at all frequencies, eliminates "proximity effect" (bass boost when used close up). Highest discrimination against feedback and unwanted sound. Exclusive three-position switch offers controlled low-frequency attenuation to overcome rumble and feedback when microphone is used at a distance. Slim design permits full view of person speaking. Rugged high pressure die-cast construction. Dual Lo-Z and Hi-Z. E-V QC™ -4M cable connector allows easy change of impedance without tools by moving a single pin. Stud mount with on/off switch. Frequency response: 60 to 15,000 Hz. Output: -57 dB. Satin chrome finish. Cable furnished. \$61.35

674A: 674 with nonreflecting gray finish. Shipped connected Lo-Z. \$61.35

674G: 674 with gold finish. \$64.20

674P: 674 wired Hi-Z with phone plug at end of cable. \$63.00

676: Similar to 674, without mounting stud and on/off switch. For use with stand mounting clamp (supplied) so microphone can easily be removed and used hand-held during performance. Very uniform polar pattern across audio spectrum. Three position bass tilt selector adjusts low-frequency response to suit environment. Response: 60 to 15,000 Hz. Output: -57 dB. Dual Lo-Z and Hi-Z. New E-V QC™ -4M cable connector allows easy change of impedance without tools by moving a single pin. Cable furnished. \$61.35

676A: 676 with non-reflecting gray finish, shipped connected Lo-Z. \$61.35

676G: 676 with gold finish. \$64.20

676P: 676 wired Hi-Z with phone plug at end of cable. \$63.00

664: Designed for quality tape recording, communications, and public address applications. Cardioid at all frequencies, with Variable-D feature†. Permits close talking without "booming" or bass emphasis. Better discrimination against unwanted sound. Blast filter minimizes wind effect. Acoustalloy® diaphragm shielded from dust and magnetic particles. Response: 60 to 15,000 Hz. Output: -58 dB. Stud mount with on/off switch. Dual Lo-Z and Hi-Z. E-V QC™ -4M cable connector allows easy change of impedance by moving a single pin. Cable furnished. \$57.00

664A: 664 with nonreflecting gray finish. Shipped connected Lo-Z. \$57.00

664G: 664 with gold finish. \$61.20

664P: 664 wired Hi-Z with phone plug at end of cable. \$59.10

"Single-D" Entertainers' Microphones



670V

627A

626

670: Deluxe "Single-D" cardioid provides bass boost when used close up. Use on stand or hand held. Lightweight, but rugged, with new Top Brass finish. Resistant to damage with hardest use. Built-in superior pop filter. Very high degree of cancellation of sounds from sides and rear of microphone plus extremely smooth and flat response reduce feedback and allow increased gain from sound system. Unique air-damped head greatly reduces shock and cable noises. On/off switch. Response: 60 to 14,000 Hz. Output: -58 dB. Hi-Z or Lo-Z selectable. With cable and stand clamp. \$45.90

670P: Model 670, wired Hi-Z with phone plug on end of cable. \$48.00

670V: Volume Control Microphone—Identical to 670 with volume control instead of on/off switch. Control knob easily operated by thumb while using microphone. Control turns microphone off in lowest position. \$50.10

670VP: Model 670V, wired Hi-Z with phone plug at end of cable. \$52.20

627A: Improved response and increased output level. Lightweight, rugged construction with built-in pop and dust filter. Response shaped for voice presence. On/off switch, black satin chrome finish. Response: 60 to 13,000 Hz. Output: -58 dB. Specify 627AH (Hi-Z) or 627AL (Lo-Z). With cable and stand clamp. \$38.70

627AP: 627A, wired Hi-Z with phone plug at end of cable. \$40.20

626: Similar to 627A but for less exacting applications. Cable integral with microphone. Impedance: Dual Hi-Z or Lo-Z (unbalanced to ground), selectable. Response: 70 to 12,000 Hz. Output: -58 dB. Fawn beige Micomatte finish. \$31.50

626P: 626, wired Hi-Z with phone plug at end of cable. \$33.90

Electro-Voice



General Purpose and Special Microphones

Miniature Headset Microphone



651: Unique dynamic microphone which allows hands-free and "walk-around" use for lecturing, sports announcing, paging, etc. Mike assembly clips on eyeglass frame or headband furnished. Avoids clothing and handling noise; is always same distance from mouth for clear, unchanging voice pickup; provides background noise reduction. Transistor amplifier has on/off switch, cough button, battery test lamp. Uses two AA cells (not furnished). Battery life virtually as long as shelf life. Response: 80 to 8,000 Hz. Output: -56 dB. Dual Hi-Z and Lo-Z, selectable. Nonreflecting black finish. \$60.00

651C: Similar to 651, especially designed for two-way radio and amateur communications use. Response shaped for maximum intelligibility. Small preamplifier box may be worn on belt or mounted on desk stand (optional), has push-to-talk relay button, cable connector, on/off and battery test switch, and battery condition lamp. May be operated VOX. (Takes two AA batteries, not furnished.) Response: 200 to 4500 Hz. Mike Output: -76 dB, preamp output 2½ volts max. (adjustable). Impedance adjustable to match standard inputs. \$69.00

Two-way Radio Headset Mike

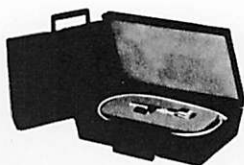


451: Desk Stand. \$9.75

451: Desk Stand. \$9.75

For those "On-The-Go" Microphones in Handy Carrying Case

Sturdy plastic case holds single microphone and cable. Microphone nests in contoured foam plastic insert for complete protection from bumps and scrapes.



- 626PC:** One 626 (Hi-Z) with phone plug in carrying case\$36.00
- 627APC:** One 627A (Hi-Z) with phone plug in carrying case\$42.60
- 631PC:** One 631 (Hi-Z) with phone plug in carrying case\$42.60
- 664PC:** One 664 (wired Hi-Z) with phone plug in carrying case\$62.40
- 670PC:** One 670 (wired Hi-Z) with phone plug in carrying case\$50.10
- 670VPC:** One 670V (wired Hi-Z) with phone plug in carrying case\$54.30
- 674PC:** One 674 (wired Hi-Z) with phone plug in carrying case\$66.00
- 676PC:** One 676 (wired Hi-Z) with phone plug in carrying case\$66.00



456: Single case only with foam insert. Specify for model 626, 627A, 631, 664, 670, 670V, 674, or 676.\$5.40

457: Deluxe double music instrument type case only with foam insert. Holds two microphones and cables. Specify for 626, 627A, 631, 664, 670, 670V, 674, or 676.\$15.00

Lavaller Microphones



647A: Smallest high quality lavalier in p.a. field delivers big microphone performance. Extremely rugged construction assures long life. Response: 70 to 10,000 Hz. Output: -60 dB. Weighs only 2 oz. Nonreflecting gray finish. Specify 647AH (Hi-Z) or 647AL (Lo-Z). \$57.90

624: Most economical dynamic lavalier on the market. For chest or hand use. Response: 100 to 7,000 Hz. Output: -56 dB. Wire mesh head acoustically treated for wind and moisture protection. Nonreflecting gray finish. Specify 624H (Hi-Z) or 624L unbalanced (Lo-Z). \$31.50

924: Crystal lavalier. Same in appearance as 624, except has chrome finish. Response: 60 to 8,000 Hz. Output: -60 dB. Hi-Z. \$16.80

Lifetime Warranty

All Electro-Voice microphones are guaranteed for the life of the microphone to be free of factory defects in materials and workmanship, and will be repaired or replaced (at our option) at no charge if exhibiting malfunction from this cause. Microphones for warranty repair must be shipped prepaid to Electro-Voice, Sevierville, Tenn., or an authorized service agency, and will be returned prepaid. Warranty does not cover finish or appearance, operation at other than specified ratings, normal wear and tear, or abuse, and will be voided if repair is attempted by other than E-V or its authorized agency.

Pilot's Miniature Headset Microphone



967M: Transistorized dynamic microphone for hands-free private aircraft communications. Clips on eyeglass frames or headband furnished. Clear, unchanging voice pickup; background noise reduction. Dynamic element is rugged, provides audio quality superior to magnetics. Transistor amplifier built into PJ-068 type plug matches Lo-Z carbon inputs. Response: 300 to 4300 Hz. Output level: -40 dB (¼" from tip of tube). Nonreflecting black finish. FAA approved. \$73.20

967ME: Same as model 967M with addition of earphone for talkback. For backup to or in aircraft not having a cabin speaker. \$84.30



367: Push-to-talk switch for 967M and 967ME, mounts on steering post. Energizes microphone and relay circuits. \$15.00

Dynamic Handsets



625TRSCK: Transistorized noise canceling handset. Phenolic case holds Lo-Z microphone and 150 ohm magnetic receiver. FAA approved. Response: 100 to 5,000 Hz. Output: -48 dB (carbon equiv.). 5-conductor coiled cord. \$90.90

625SCK: Same as 625TRSCK but without transistor amplifier. Output: -55 dB. \$63.00

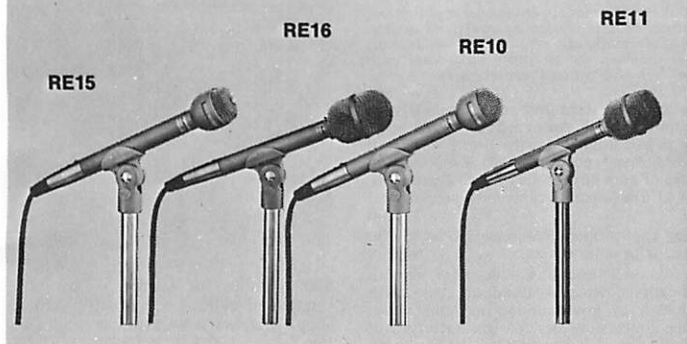
Electro-Voice



Professional Broadcast, P.A. and Recording Microphones

Cardioid Dynamic

Super-Cardioids



RE15: Highest quality professional super cardioid "Continuously Variable-D"* (maximum off-axis rejection at 150° from front).† Most uniform polar pattern at all frequencies ever offered in a cardioid microphone. Integral bass compensation switch. Cable and mounting clamp furnished. Response: 80 to 15,000 Hz. Impedance: Lo-Z. Output level: -56 dB. Finish: Fawn beige Micomatte. \$169.80

APPLICATIONS: On stand, hand-held, or portable boom use/Fishpoled for dialogue in motion picture recording/Individual instrument (or section) pickup for orchestral recording/In professional public address controls effects of resonance and reverberation.

RE16: Similar to RE15 except has integral blast and pop filter around head. For close-up vocal use on stand or hand-held. Virtually eliminates pickup of breath noises. Strong metal screen prevents damage. Specs same as RE15. \$176.70

RE10: Similar in design and construction to RE15, but for applications with slightly less rigid performance tolerances. Response: 80 to 13,000 Hz. Impedance: Lo-Z. Output: -55 dB. \$99.60

RE11: Similar to RE10 except with integral blast and pop filter around head. Virtually eliminates breath noises when used for close-up vocals. Strong metal protective screen around filter. Same specifications as RE10. \$106.50

†U.S. Patent No. 3,115,207

Performance Guaranteed

All E-V Professional-line microphones are guaranteed unconditionally against malfunction for two years from date of purchase. Within this period, Electro-Voice will repair or replace, at its option, any E-V Professional microphone exhibiting any malfunction regardless of cause, including accidental abuse.

Single-D Cardioid

NEW



DS35

DS35: Newly designed "single-D" cardioid dynamic for exacting performing and recording applications. Emphasizes low frequencies when used close up, sound preferred by many entertainers. "Volumetric" hologram-developed foam diaphragm provides exceptionally wide linear response. Unique new ported air-damped head greatly reduces pickup of shock and cable noise. Highly effective built-in pop filter. Rugged turned steel case, non-reflecting fawn beige Micomatte finish. Cable and mounting clamp furnished. Response: 60 to 17,000 Hz. Lo-Z. Output: -58 dB. \$81.00

Wide-range Cardioid



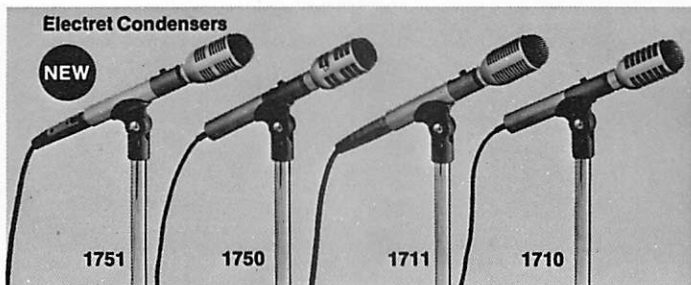
RE20

RE20: Wide-Range Cardioid—Rugged, high quality unit. For exacting studio recording of voice and instruments as well as broadcast and p.a. use. Widest, most uniform response curve of any cardioid dynamic microphone, comparable to high quality condensers. Excellent transient response. Uniform cardioid polar pattern; off-axis response virtually identical to on-axis, maximum rejection. Built-in shock mounting and electrical shielding. Handles extremely high sound input. Stable characteristics. Built-in pop filter, bass tilt-down switch, mounting clamp. Cable furnished. Finished in non-reflecting fawn beige Micomatte. Response: 45 to 18,000 Hz. Impedance: 50, 100, 150 ohms (selectable). Output: -57 dB. \$272.40



309: Suspension shock mount for RE20. For boom or stand. \$29.70

See Model 302, Page 8, for additional shock protection.



ELECTRET CONDENSER MICROPHONES

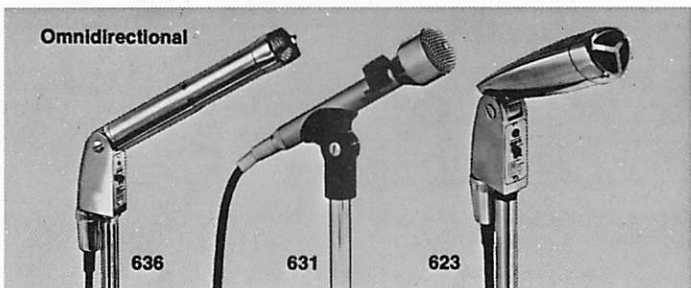
Latest engineering breakthrough. Genuine condenser mikes with superior performance specifications at surprisingly low cost. Generating element permanently charged eliminating costly and troublesome power supply electronics. Ruggedness and long life previously available only in dynamic microphones. Excellent frequency response, transient response, and sensitivity make these units suitable for professional and serious home recording and high quality sound reinforcement.

1751: Cardioid pickup pattern reduces sensitivity from sides and rear. Single-D type emphasizes bass used close up. Rugged aluminum case with permanent anodized beige finish. On/off switch. Low handling or shock noise. Built-in breath filter. Has small internal impedance matching circuit with AA-size battery (not furnished). Response: 60 to 15,000 Hz. Lo-Z balanced to ground. (Because of high output may be used with low, medium, or high impedance inputs.) Output: -43 dB. Separate cable with professional connector and mounting clamp furnished. \$75.00

1750: Cardioid, similar to 1751 for less exacting applications. Response: 80 to 13,000 Hz. Output not balanced to ground. Cable integral with microphone. \$45.00

1711: Omnidirectional, picks up sound equally from all directions. Wide-range, smooth response for highest quality recording applications. Rugged aluminum case with permanent anodized beige finish. On/off switch. Very low handling or shock noise. Built-in breath filter. FET circuit for impedance conversion uses AA-size battery (not furnished). Response: 60 to 15,000 Hz. Impedance: Lo-Z balanced. (May be used with high, medium, or low impedance inputs.) Output: -50 dB. Separate cable with professional connector and mounting clamp furnished. \$59.70

1710: Omnidirectional, similar to 1711 for less exacting applications. Response: 80 to 13,000 Hz. Output not balanced to ground. Cable integral with microphone. \$39.75



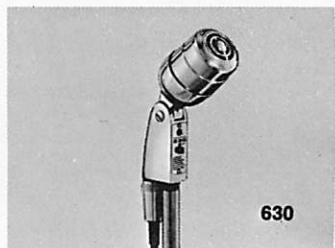
636: Slim dynamic, exceptionally fine for p.a., recording, and general use. Response: 60 to 13,000 Hz. Output: -58 dB. Pop-proof head and wide pickup range. On/off switch. Satin chrome finish. Dual Lo-Z and Hi-Z. E-V QC™-4M cable connector allows easy change of impedance by moving a single pin. Cable furnished. \$52.20

631: High quality hand or stand dynamic is lightweight, rugged, and shockproof. Effective 4-stage filter allows close up use without blasting, pops, or distortion. Silent, magnetic on/off switch with removable actuator button. Satin chrome, one-piece case. Response: 80 to 13,000 Hz. Output: -55 dB. Specify 631H (Hi-Z) or 631L (Lo-Z). Cable furnished. \$38.70

631P: 631 wired Hi-Z with phone plug at end of cable. \$40.20
623: Ideal for p.a., recording, and general use. Stud-mount with on/off switch and tiltable head. Response: 60 to 12,000 Hz. Output: -56 dB. E-V QC™-4M cable connector allows easy change of impedance without tools by moving a single pin. Satin chrome finish. Acoustalloy® diaphragm. Cable furnished. \$38.70

**Microphones for
P.A., Tape Recording,
Entertainers,
Experimenters**

Omnidirectional Microphones



630: Famous for quality at low cost. Unaffected by heat or humidity. Acoustalloy® diaphragm and tiltable head. Dual Lo-Z or Hi-Z. E-V QC™-4M cable connector allows easy change of impedance by moving a single pin. Response: 60 to 11,000 Hz. Output: -55 dB. On/off switch. Satin chrome finish. Cable furnished. \$37.20

611: Traditional styling, fine performance. Response: 50 to 9,000 Hz. Output level: -55 dB. Omnidirectional. On/off switch, satin chrome finish. Dual Lo-Z and Hi-Z. Cable furnished. \$30.30

641: Modern dynamic. Integral on/off switch. Wide-range response: 70 to 10,000 Hz. Output level: -57 dB. With cable. Case is chrome plated die-cast zinc and gray high impact plastic. Specify 641H (Hi-Z) or 641L (Lo-Z). \$28.20

634A: Similar to 641 less stud and on/off switch. Fits any stand, boom, or gooseneck with complete cable concealment. Ideal for electronic teaching aids, amateur and commercial communications, and paging systems. 6' integral cable. Specify 634AH (Hi-Z) or 634AL (Lo-Z). \$21.30

648: Extremely versatile paging, intercom, or talk-back microphone. Omnidirectional with Acoustalloy® diaphragm. Non-reflecting gray. Does not include cable. Use on gooseneck or riser. Response: 50 to 10,000 Hz. Output: -58 dB. Specify 648H (Hi-Z) or 648L (Lo-Z). \$40.20



Electro-Voice



Microphone Accessories

and Miscellaneous

Crystal Microphones



920



805

920: Omnidirectional pickup. Strong wire-mesh head acoustically treated for wind and moisture protection. High capacity, moisture sealed crystal. Hi-Z. AC-DC insulated (case not grounded). Satin chrome finish. Frequency response: 60 to 10,000 Hz. Output: -50 dB. Excellent for group or conference applications or use where wide angle pickup is desired. \$19.20

805: Contact mike. For guitar, banjo, other stringed instruments. Hi-Z. Sealed crystal. Chrome finish. 15' cable. \$14.55

Low-cost Ceramic Mikes



721



715

721: Inexpensive omnidirectional ceramic features high output level and light weight for recording, experimenting, and general use. High impact gray plastic case. May be used handheld or with integral fold-out stand. Response: 100 to 5,000 Hz. Output: -52 dB. Hi-Z. 5' cable included. \$4.65

715: Omnidirectional. 60 to 7,000 Hz response. Output: -55 dB. Hi-Z. 5' cable. Nonreflecting gray finish. Rugged, lightweight. AC-DC insulated. With 5/8"-27 adapter. \$10.50



NEW

381: Switch-connector and cable. SPST switch built into professional connector mates with all E-V Professional hand-held microphones, also 670, 670V, 1711, 1751. Provides switch right at mike for user control. 18' cable. Replaces regular cable supplied with mike. \$16.50



380: Attenuator. For use in mike line, attenuates signal 10 dB, does not affect response. Prevents overloading of electronics due to extremely high level inputs. Mates with E-V Professional mike connectors. \$16.80



418: Desk stand for microphones with small type studs such as 611, 623, 630, 641, 636, 674, and new style (after early 1968) 644 and 664. \$9.30

418S: 418 with switch. \$12.90

418G: 418 in gold finish. \$11.55

419: Desk stand for microphones having large type studs such as 665 and older style (before early 1968) 644 and 664. \$9.30

420: Die-cast stand for use with 666, 654A, 655C, 670, 670V, 676, RE50, or other 1" to 1-1/8" mikes without tools. \$14.10

420G: 420 in gold finish. \$18.60



314



335A



337



ELECTRICAL ACCESSORIES

502B: Transformer. Matches Lo-Z microphones to Hi-Z inputs. Use in series with mike line. Broadcast quality—shielded against hum, response 30 to 20,000 Hz. \$11.25



513: Filter for use with low impedance microphones has switch to match 50, 150, or 250 ohms. When used in line between microphone and preamp, sharply cuts off frequencies below 100 Hz to reject unwanted noise, reduce feedback. Terminals provided for cable connections. \$68.10



DESK STANDS

421: Small size. Interchangeable rubber shock mounts to accept 3/4" or 1" stand clamps. \$12.00

422: Similar to 421 but larger to accommodate heavier microphones. \$12.00

423A: 5-1/8" dia. base with 5" riser. 5/8"-27 thread. Holds on rubber base buttons. Gray. \$4.50

428: 5-1/8" round base with grip-to-talk switch in riser. 7" high. Lever type DPDT switch. Closes or opens instantly or locks in "talk" position. Standard 5/8"-27 thread. Gray. \$21.30



ACOUSTIFOAM™ WINDSCREENS

Effective, specially formulated cellular material is transparent to normal sounds, but stops sudden air blasts as caused by wind, movement of microphone, and voice "p" and "t" pops. Unaffected by temperature extremes, water resistant, protects against mechanical shock and pickup of dust, magnetic particles.

Model	For Mikes	Price
314 ^a	RE10, RE11	\$9.00
335A	630, 641, 634A	9.00
337	626, 627A	5.25

^aZippered for easy installation.

Model	For Mikes	Price
355	RE55, 654A, 623, 636	\$8.10
376	674, 676	10.20



376

STAND-MOUNTING CLAMPS

301: New design for 1" to 1-1/8" diameter microphones, 5/8"-27 mounting thread. Holds microphone firmly for stand use, but allows easy, quiet snap-out for hand-held use. Black. \$4.80

301A: Same as 301 except gray as used on professional microphones. \$4.80

312: New design for 3/4" dia. microphones. Holds microphone firmly, yet allows easy snap-in, snap-out use. Black. \$4.20

312A: 312 in gray. \$4.20

310: Clamp for 3/4" diameter microphones, 5/8"-27 mounting thread. Holds mike firmly, may be slipped in and out for hand-held use. Black. \$4.20

310A: Same as above except gray, as furnished with professional microphones. \$4.20



NEW



302

SUSPENSION SHOCK MOUNTS

307: Suspension mount adapts any microphone with 3/4" dia. shank to boom or shock-mounted use. Takes 314 windscreen. \$22.20

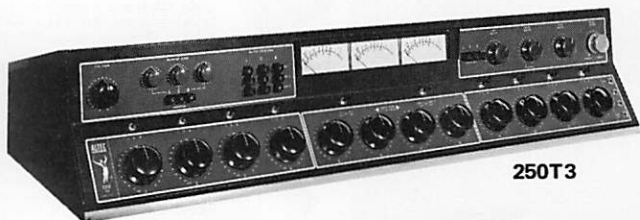
306: 13-7/16" extension for 307, 308, and 309. \$9.00

302: Specially designed spring-wire bail with lead mounting knobs which replaces regular bail on 307. (May also be used with 308 or 309). Increases shock isolation as knobs add mass to lighter mikes and bail absorbs vibration. \$16.50

306



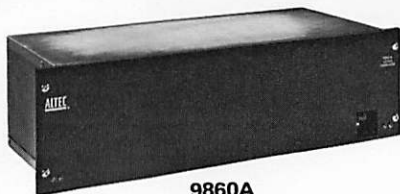
9845A



250T3



8050A



9860A

MODEL 9845A MONITOR/PLAYBACK SPEAKER SYSTEM

The most carefully designed, acoustically excellent studio, equipped with the finest professional equipment available and complemented with the most exacting of professional personnel, is of small value without the best monitor speaker system available. With this thought in mind and as a result of hundreds of requests by the professional recording industry for a deluxe monitor system, ALTEC Engineers have developed the new ALTEC 9845A Monitor/Playback Speaker System.

Features:

- Complete Two-Way Monitor Speaker System • From 25 to 22,000 Hz Range • Wide Angle, Uniform 40° x 90° Distribution • Acoustically Engineered • Adjustable HF Shelving Control • Dual Full-Section Crossover Network • Low 500 Hz Crossover Frequency • Field Replaceable HF Diaphragm and Voice Coil • Compression HF Driver • Heavy Cast Aluminum Sectoral HF Horn • 13 Ply Imported Finnish Birch Cabinet.

Specifications:

Power Rating: 50 Watts. **Frequency Response:** 25-22,000 Hz. **Impedance:** 16 ohms. **Pressure Sensitivity:** 97 dB SPL at 4 feet with 1.0 Watt electrical power or 114.0 dB SPL at 4 feet with 50 Watts electrical power applied at a warble frequency range from 600 Hz to 2500 Hz. (SPL 0 dB reference .0002 dynes/cm²) EIA efficiency rating 50 dB. **Horizontal Distribution:** 90 degrees. **Vertical Distribution:** 40 degrees. **Crossover Network:** 500 Hz, dual full section, switchable shelving control 0 dB to -6 dB in 1.5 dB steps located on front panel. **Input Terminals:** Thumb screw type located on rear panel. **Dimensions:** 40 inches wide x 28 inches high x 24½ inches deep. **Finish:** Studio gray lacquer. **Weight:** 130 pounds.

Net Each \$464.00

MODEL 8050A REAL TIME AUDIO ANALYZER

The ALTEC 8050A is a truly compact real-time analyzer for the audio spectrum. The instrument covers the frequency range from 40 Hz to 16 kHz with 27 parallel bandpass filters as shown in Figure 1. Detectors following the filters convert the ac filter outputs to dc levels proportional to the rms value of the ac signals. An internal scanner sequentially connects the 27 detector outputs to the CRT display screen of the instrument through a log converter and simultaneously generates a linear ramp at the "X" deflection. The gain of the preamplifier circuit in the 8050A is continuously variable from -20 dB to +20 dB, permitting shifting of the 20 dB display from the range of 70-90 to 110-130 dB. An overload lamp on the front panel of the instrument indicates preamplifier overloads as brief as 100 µs.

Features:

- Designed to Highest Quality Standards • Allows Acoustica-Voicing® Process to be Completed in Less than 10 Minutes • Makes Room Tests (Demonstrations) Practical with Less than 10 Minutes Tuning • Reduces Amount of Required Test Equipment • 27 Contiguous ½-Octave Bandpass Filters • 40 Hz to 16,000 Hz • 20 dB Display Range • Self-Contained CRT Display Screen • Fast and Accurate — Scans All Channels in Approximately 30 ms • Simple Controls — Easy to Use • Easily Rack Mounted • Preamplifier Gain is Continuously Variable from -20 dB to +20 dB. Net Each \$3,256.00

MODEL 250 T3 CONTROL CONSOLE

For all Stereo and Universal Functions. The 250 T3 Console has twelve input positions. All of the input positions are equipped with

"bus" switches and mixer control attenuators, providing a means of selecting and mixing ten of the twelve input lines. Eight of the input positions may be used for either high level or level sources by inserting the proper Altec input device. Located above each mixer control attenuator is a three-position select or key switch which permits placing the output of the attenuator on Left, Center or Right channel.

Features:

- Flexibility of design • Solid state circuitry throughout • Frequency response = 0.5 dB, 30 to 20,000 Hz. • Microphone input to line output gain = 99 dB • Three channel stereo operation • Four dual inputs with ganged mixer controls for two channel turntable and tape stereo • Key selector TT1 and TT2 or Tape 1 or Tape 2 with "auto-cue" on dual inputs • Eight single mixers with cue positions on four • Choice of single, dual or three channel operation • Console fully wired for three channels 12 connected inputs • Microphone level or "high level" on any input • 9475A plug-in type Amplifiers used in all positions except turntable and high level • Low impedance mixing • Push button switches for flexibility in connection of Left, Center or Right channels to any outgoing line • Ambient lighted push-button switches and illuminated meters • Three channel monitoring by headphone or speakers • Microphone inputs 150 or 600 ohms RIAA standard equalization.

250 T3 Basic Altec Console (1)

Net Each \$2,560.00

542A Power Supply (1)

Net Each \$234.00

9475A Preamplifiers (a) One for each microphone input (8 max.); (b) One for each channel (3 max.). Net Each \$165.00

9475A Program Amplifiers (3 max.). One for single-line/single-channel, two for two-channel/two-line or stereo and three for three-channel/three-line, or three-channel stereo or three-channel/two-channel stereo. Net Each \$165.00

13387 Utility Input Device One for each high level input. Sum of 3a above and 5 cannot exceed 8. Net Each \$48.00

1579B Equalized Phono-Amplifiers (a) 2 for each stereo turntable input (4 max.) Net Each \$23.00

15095 Transformers (a) 2 for each stereo tape input (4 max.). Net Each \$18.25

41222 VU Meters: (1 furnished with basic console). (Max. 3) (a) 1 additional for two-channel operation; (b) 2 additional for three-channel operation. Net Each \$51.00

MODEL 9860A ACTIVE EQUALIZER

26 active band-rejection filters (ISO ½-octave center frequencies from 40 Hz to 12.5 kHz) provide up to 15 dB attenuation at center frequencies. Each filter section is skirted to cross over with adjacent sections at -7 dB, combining to give ripple-free response over 85% of their range. Fewer filters would be insufficient for smooth equalization; more filters would not increase equalization flexibility enough to justify the added cost. A front-panel detented slide attenuator restores equalization losses, eliminating the need for an external booster.

Features:

- Lightweight, Compact and Reliable; No Warmup Time Required • Offers the Widest Range of Equalization of Any System Available Today • Additional Band Smoothing; Elimination of Floor/House Vibrations and Air Conditioning Noises • Instantaneous Before and After Comparisons Can Be Made • Virtually Fail Safe Operation Assured Under All Conditions • Easy Installation and Maintenance. Net Each \$772.00



9063B



9477A



1592A



1591A

MODELS 9061A AND 9063B PROGRAM EQUALIZERS
Provide for continuously variable equalization at selectable low and high frequencies for sound recording and transmission; corrects for losses in the frequency spectrum in network relays or remote pickups. Has +12, -16 variable equalization at 40 and 100 Hz (low frequency settings) and at 3, 5, 10 or 15 kHz (high frequency settings); calibrated attenuation frequency fixed at 10 kHz. Model 9061A includes mounting frame for console installation so unit can be plugged in or removed as desired; 9063B is identical in circuitry, but designed for 19" rack mount where space is not a problem.

Altec Lansing Model 9061A Program Equalizer Net Each \$325.00
Altec Lansing Model 9063B Program Equalizer Net Each \$475.00

MODELS 9067B, 9068B and 9069B VARIABLE HIGH AND LOW PASS FILTERS

Variable filters are ideal for all phases of broadcasting, recording and reproduction of sound; unsurpassed as special effects or sound effects components. Model 9067B Variable Low Pass and High Pass Filter combines the Model 9068B Low Pass Filter and the Model 9069B High Pass Filter into a single unit; entire filter or either or both sections can be switched in and out of line. Individual filters are electrically identical to filters in combination unit. **Low Pass Cut-Off Frequencies:** 70, 100, 150, 250, 500, 1,000, 2,000, 3,000, 5,000 and 7,500 Hz. **High Pass Cut-Off Frequencies:** 25, 5, 1, 2, 3, 4, 5, 6, 8 and 10 kHz. Model 9067B is totally enclosed with rear-mounted input and output terminals normaled through front panel jacks; rack mounting. Individual units are for custom mounting. **Size:** 9067B, 19" w. x 5 1/4" d. x 3 1/2" h.; 9068B and 9069B, 2 1/4" w. x 5 1/2" d. x 3" h., four 1/4" mounting holes. **Weight,** 9067B, 15 lbs.; 9068B and 9069B, 2 lbs. each.

Altec Lansing Model 9067B Variable High and Low Pass Filter Net Each \$440.00
Altec Lansing Model 9068B Low Pass Filter Net Each \$170.00
Altec Lansing Model 9069B High Pass Filter Net Each \$170.00

MODEL 1592A MIXER-AMPLIFIER

Ideal all-purpose mixer-amplifier for use where multiple inputs are needed and unsurpassed performance is required. Built-in features include tone generator for level setting and monitor output headphone jack with volume control. Plug-in units are available for impedance matching, preamplification and equalization to allow any of the 5 inputs in each 1592A to be used for low or high impedance microphones, magnetic phono pickups or high level sources. In addition, each channel has its own Speech/Music switch to provide dialog equalization; master gain control has Normal/Bright switch for +3 dB rise in response at 5 kHz for improved articulation. Separate bass and treble tone controls can be bypassed with a switch located behind front panel. Amplifier output is transformer-isolated and will accommodate load impedances of 150 and 600 ohms, with levels up to +21 dBm. **Frequency Response:** ±1 dB, 20-20,000 Hz. **Source Impedance:** 150/250 ohms nom. with 1588B preamp; 150 to 20K ohms with 1578A preamp; up to 50K with 1579B phono preamp; 600 to 15K ohms with 15095 transformer. **Noise:** -120 dBm equivalent input, 80 dB below full output with master gain control closed. **Input Connectors:** Five Cannon XLR type. **Power Required:** 120/240 VAC, 50/60 Hz, 10 W; or 24 VDC, 0.17A; or 12 VDC, 0.16A. **Size:** 19" w. x 5 1/4" d. x 5 1/4" h. **Weight,** 12 lbs. Case and VU meter optional.

Altec Lansing Model 1592A Mixer-Amplifier Net Each \$346.00

MODEL 9477A RECORDING AMPLIFIER

Designed to satisfy the demands of modern studios; offers complete stability, extremely low noise, low distortion and wide frequency range. First high-power solid state amplifier specifically designed for the recording industry; has more than ample audio power to drive standard type cutting lathes. Hinged front panel facilitates servicing; plug-in PC card contains all active input and driver circuitry; output transistors and associated drivers are mounted on an easily accessible heat sink on rear of chassis. Active dissipation-sensing circuit immediately senses severe output downward mismatch and prevents output transistors from operating until output malfunction is corrected; amplifier recovers normal function automatically. **Input Sensitivity:** 0.8 V rms for rated output. **Power Output:** 100 watts at less than 1.0% THD, 85 watts at less than 0.5% THD, 20-20,000 Hz. **Frequency Response:** ±0.5 dB, 20-20,000 Hz. **Load Impedance:** 4, 8 or 16 ohms. **Load Voltage:** 20, 28 or 40 V. **Noise Level:** -45 dBm; 95 dB below rated output. **Power Required:** 120/240 VAC, 50/60 Hz or 28 VDC battery. **Size:** 19" w. x 8 1/2" d. x 7" h. **Weight,** 37 lbs.

Altec Lansing Model 9477A Recording Amplifier Net Each \$450.00

MODEL 1591A COMPRESSOR AMPLIFIER

Designed to operate from microphone or line-level sources with separate gain controls to allow mixing. Provides gain reduction of up to 35 dB; compressor action can be switched off for linear amplifier operation. Octal sockets on rear panel accommodate optional low level mike preamps, line isolation transformer and equalized phono preamp. **Frequency Response:** ±1 dB, 20-20,000 Hz. **Power Output:** +18 dBm as straight amplifier. **Harmonic Distortion:** Less than 0.5% at +18 dBm, 30-20,000 Hz; less than 1% at 25 dB compression and less than 2% at 35 dB compression, 40-20,000 Hz. **Noise:** -120 dBm equivalent at mike input; 70 dB below full output with gain controls at minimum. **Max. Compression:** 35 dB. **Attack Time:** 30 msec (63%). **Release Time:** Selectable, 0.5 or 1.5 sec (63% recovery). **Threshold:** Selectable, 0 dBm or +8 dBm output. **Compression Ratio:** 10:1 at 0 dBm; 10:1 or 5:1 at +8 dBm. **Power Required:** 120/240 VAC, 50/60 Hz, 10 watts; 12 VDC, 0.16 A; 24 VDC, 0.17 A. **Size:** 19" w. x 5 3/4" d. x 3 1/2" h. **Weight,** 8 lbs., 5 oz.

Altec Lansing Model 1591A Compressor Amplifier Net Each \$280.00

ACCESSORIES

Altec Lansing No.	Description	For Model	Net Each
15095	Line bridging input transformer	A, B, C, D	\$18.25
15335	Line bridging and matching input transformer	C	20.00
15356	Line matching input transformer	B	18.25
1588B	Isolated mike input preamp	A, B	26.75
1579B	Equalized magnetic phono preamp	A, B	23.00
1578A	Mike preamp	A, B	18.25
41222	VU meter	A	51.00
12866	Carrying case	A	91.00

*A = 1592A; B = 1591A; C = 9477A. D = 1594A and 1593A.

WRITE FOR COMPLETE CATALOG AND PRICES FOR THE FOLLOWING ALTEC COMPONENTS:

- Mixer Networks • Rotary Mixers • Straight Line Mixers • Calibrated Attenuators • Calibrated Grid Control Pots • VU Meter Range Extenders • VU Scale • Precision Measuring Equipment • Precision Decade Attenuators • Fixed Loss Pads • Precision Impedance Matching Networks • Minimum Loss Matching Pads • Bridging Pads • Motion Picture Projection and Turntable Faders • Stereo Pan Potentiometers • Rotary Differential Attenuator.

MODEL E-802 IC STEREO AUDIO MIXER

Designed for use in any high quality recording or broadcasting application. Uses all-silicon IC amplifiers operating well below maximum gain capacity in a closed loop with substantial amounts of feedback for extremely low distortion and high circuit stability. Mixer has 8 inputs that can be switched either to the left, right or center (both) output channels. Inputs 1 and 2 can be switched for stereo input operation; when in stereo mode, both channels of a stereo source connected to inputs 1 and 2 are controlled by potentiometer 1. In this mode potentiometer 2 becomes the stereo balance control; same mode of operation also provided for inputs 3 and 4. Microphone input module M-100 features four switch-selectable gain settings for optimum use of microphone preamp for various microphone levels and recording applications. Gain is changed by varying the feedback of the amplifier so that the microphone input is not loaded at any time; virtually eliminates the possibility of mike preamp overload while using condenser or dynamic mikes for high-level applications. Useful 1-kHz tone oscillator provided for output level calibration, switchable into input 8. All input and output connectors are Cannon XL type. Fully regulated power supply is self-contained. **Inputs:** 2 stereo, 4 mono or 8 mono; high or low level. **Outputs:** Two channels, controlled by two-gang master control; individual VU meters for each channel. **Program Output:** +30 dBm max. each channel. **Gain:** Mike, 80 dB; lines, 30 dB. **Frequency Response:** ± 1 dB, 30-20,000 Hz at any level up to +30 dBm each channel. **Distortion:** Less than 0.5% at +30 dBm output. **Noise:** Equivalent to -127 dBm input, unweighted, 20-20,000 Hz. **Output Isolation:** Over 70 dB between outputs into 600 ohms. **Low Frequency Equalization:** 100 Hz; switchable in steps of 0, ± 2 , ± 4 , ± 6 , ± 9 and ± 12 dB. **High Frequency Equalization:** 10 kHz; switchable in steps of 0, ± 2 , ± 4 , ± 6 , ± 9 and ± 12 dB. **Power Required:** 105-125 VAC, 50/60 Hz. **Size:** 19" w. (rack mount) x 11" d. x 5 1/4" h. **Weight,** 19 lbs. Supplied with input cards for 10K unbalanced line input.

Electrodyne Model E-802 IC Stereo Audio Mixer

Net Each \$1080.00

Electrodyne Model M-100 Mike Preamp — For 50 or 200 ohm mikes. Gain selectable for 0, -10, -20 and -30 dB increments.

Net Each \$57.00

Electrodyne Model P-100 Magnetic Phono Preamp — RIAA equalized.

Net Each \$45.00

Electrodyne Model B-100 Matching Transformer — 600 ohms.

Net Each \$35.00

MODELS CA-700 AND CA-702 IC

LIMITER/COMPRESSOR AMPLIFIERS

Combines the functions of both a limiter and a compressor in a single system that is both more efficient and more reliable than old-fashioned separate units that take up twice as much space. Four slopes and continuously variable release time assure operation tailored to programming requirements. Model CA-702 is a compact version of the CA-700 designed to be used as a console module; has all features of the larger version except for output level control and VU meter. Circuitry uses FET's and IC's for maximum reliability and quality. Both units have 3-position selector "de-essing" switch to reduce or eliminate sibilant distortion. Model CA-700 has self-contained power supply; Model CA-702 requires external 24-volt power supply. Two units are readily coupled for stereo operation. **Input Impedance:** 600 ohms, balanced or unbalanced. **Input Level:** -24 to +8 dBm with input level (threshold) control. **Maximum Gain:** 30 dB. **Maximum Output Level:** CA-700, +30 dBm; CA-702, +18 dBm. **Output Noise Level:** Below -70 dBm. **Frequency Response:** ± 1 dB, 30-20,000 Hz. **Harmonic Distortion:** Less than 0.5% from 30-20,000 Hz throughout normal control range. **Metering:** CA-700, one meter for compression dB and one meter for input and output level; CA-702 module, one meter for compression dB. **Slopes:** 30:1, 40:20, 30:15 and 20:10. **Attack Time:** 50 μ sec throughout entire audio spectrum and with any program content. **Release Time:** Continuously variable from 100 msec to 5 sec. **Power Required:** CA-700, 105-125 VAC, 50/60 Hz; CA-702, 24 VDC, 150 mA. **Size:** CA-700, 19" w. x 7" d. x 3 1/2" h.; CA-702, 1 1/2" w. x 4 1/8" d. x 6" h.

Electrodyne Model CA-700 Limiter/Compressor Net Each \$575.00

Electrodyne Model CA-702 Limiter/Compressor Module

Net Each \$000.00

AUDIO EQUALIZER/AMPLIFIER INPUT MODULES

The new Electrodyne 812 Graphic Equalizer is designed for installation in consoles where compactness and dense packaging is desired, but maintaining easy to operate and understandable controls. Nine specific frequencies have been selected for optimum flexibility



E-802



CA-700

CA-812



CA-712L



in music and speech equalization. By using multiple frequencies, or octaves, shaping of the audio spectrum is accomplished with minimum phase shift and related distortion.

Features and specifications:

Frequencies: 50, 100, 200, 400, 800, 1600, 3200, 6400, and 12,800 Hz. **Boost:** +2, 4, 6, 9, and 12 dB. **Attenuate:** -2, 4, 6, 9, 12 and 15 dB. No insertion loss, may be strapped for 10 or 20 dB gain. Less than 1.5 dB ripple between neighboring boosted or attenuated frequencies. Equalization in-out switch with indicator lamp. Modular plugin package, completely shielded and enclosed. Calibrated dB steps with read out window, numerals color coded: Yellow attenuate, Red boost. Lever positions visually indicate spectrum shape. Improved discreet component circuits result in better performance specifications, improved reliability, and easier repairs. Reliable Gold switch contacts with self cleaning wiping action. Extra durable formica front panel, colors available. **Noise:** -90 dBm at the output. **Distortion:** .2% THD. **Frequency Response:** ± 5 dB 30-20,000 Hz. (No EQ). **Power Requirements:** +24 VDC Regulated .40 MA. **Input Unbalanced:** 10K Ohms. **Output Unbalanced:** designed to operate into 600 Ohms, Max +18 dBm. **Dimensions:** Panel 1 1/2" x 7", depth from front of panel 3 1/8".

Net Each \$550.00

AMPLIFIER INPUT MODULES

712L 9-frequency graphic equalizer-mic amplifier with input switch & new silent action attenuator. Net Each \$705.00

711L 8-frequency equalizer-mic amplifier with input switch and straight line slide wire attenuator. Net Each \$545.00

611L 8-frequency equalizer-line amplifier with straight line slide wire attenuator. Net Each \$425.00

511L 2-frequency equalizer-mic amplifier with straight line slide wire attenuator. Net Each \$370.00

411L 2-frequency equalizer-line amplifier with straight line slide wire attenuator. Net Each \$325.00

311L Mic amplifier with straight line slide wire attenuator. Net Each \$295.00

211L Line amplifier with straight line slide wire attenuator. Net Each \$225.00

INPUT MODULE OPTIONAL FEATURES

Add suffix to Electrodyne Number and add to price as indicated. Q Cue position on attenuator on models 211L through 712L

Net Each \$10.00

C Separate, isolated cue output on models 211L through 711L

Net Each \$28.00

E For two echo output positions on models 211L through 711L

Net Each \$50.00

Colored formica panels on input modules 211L through 711L

Net Each \$15.00

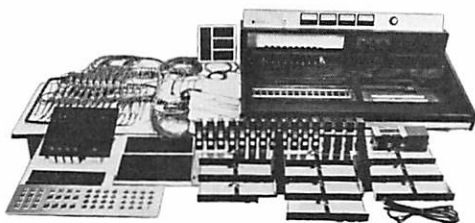
Colored formica panels on all other Electrodyne modules

Net Each \$12.00

Specify color when ordering.



DC-1000



ACC-1204

DC-1000 I.C. Electronic Stopwatch

Now a more advanced way to solve the timing problem you may now be handling with an old fashioned stopwatch, or even by squinting at "the old clock on the wall." The DC1000 is excellent for any application from the recording or broadcasting studio, to timing the Olympic Games. Count up from zero or any preset time. Count down from 99:59 or any preset time, the DC1000 will automatically stop at 00:00. Five simple lever controls are provided for start, stop, preset, count up/down, and reset. An on-off switch is located on the back panel. The DC1000 uses newly available inline flatpack decoder drivers in conjunction with seven segment digivac fluorescent display tubes to give you space age accuracy and dependability in big, bright digital readouts. The unit is completely enclosed in a rugged steel cabinet reducing interference problems.

Net Each \$585.00

Features:

- Integrated circuit logic • Large, bright digital readouts • Switches are feather touch action • Counts up or down from zero or any preset time • Times up to one hour and forty minutes. **Dimensions:** 10 $\frac{3}{4}$ " wide, 2 $\frac{3}{4}$ " high, 6 $\frac{1}{8}$ " deep. **Cabinet Dimensions:** 11 $\frac{1}{16}$ " wide, 3 $\frac{1}{16}$ " high, 7 $\frac{7}{8}$ " deep. **Panel Cut Out Size:** 10 $\frac{3}{4}$ " wide, 2 $\frac{3}{4}$ " high. **Weight:** 4 pounds. **Power Requirements:** 105-125 V/60 Hz. **Fuse:** Twist lock type located on back panel. **Panel Finish:** Aluminum, brushed and clear satin anodize.

ACCESSORIES

Walnut Cabinet: Finish is gunstock grain walnut formica for durability combined with a look of excellence. **Remote Control:** Consists of 5 professional quality push button switches for start, stop, preset, up/down, and reset functions. Switches are mounted on a frame and 6" x 1 $\frac{1}{2}$ " black formica covered aluminum panel with 25' cable and connector to plug into the back of the DC1000. **Panel Mount Brackets:** For custom installation in consoles, racks, and panels.

COMPLETE ACC 1204 KIT

Designed for high quality recording, broadcasting, sound reinforcement and motion picture work. Uses IC amplifiers in plug-in modules exclusively for maximum reliability and efficiency. Has 12 mike or line inputs (wired for 15); 4 program output channels with individual illuminated VU meters; complete 7-position equalization

with echo send and cue on each channel. Channel and cue switches for each input are illuminated pushbuttons for unmistakable identification; front edge of console is foam padded to eliminate "mixer fatigue". **Input Level:** Switch selection for line or mike; mike input -10, -20 or -30 dB. **Frequency Response:** ± 1 dB, 30-20,000 Hz, without equalization, at any level up to output of +30 dBm. **Noise:** Equivalent to input signal of -127 dBm, 20-20,000 Hz. **Distortion:** Less than 0.5% THD at +30 dBm output. **Echo Output:** +14 dBm maximum into a 600 ohm load. **Program Output Busses:** +30 dBm maximum into 600 ohms. **Source Impedance:** 50 or 200 ohm balanced microphone and 600 ohm line. **Input Impedance:** Nominally 5 times related source impedance. **Output Impedance:** 600 ohms, balanced or unbalanced, all outputs. **Low Frequency Equalization:** Selectable at 40, 100 or 300 Hz; switchable in steps of 0, +2, +4, +6, +9 and +12 dB. **High Frequency Equalization:** Selectable at 1.5, 3.5 or 10 kHz; switchable in steps of 0, +2, +4, +6, +9 or +12 dB. **High and Low Attenuation:** 100 Hz and 10 kHz in steps of 0, -2, -4, -6, -9 and -12 dB. **Output Isolation:** Over 70 dB between echo and program output. **Controls:** 12 straight-line input level controls, 12 input level select switches, 12 echo send level controls, 12 echo send pre/post switches, 12 low and high frequency equalizers, 12 five-position channel switches with cue, 4 echo return controls, 4 straight-line channel submaster controls, 1 four-gang straight line master control, 1 four-gang rotary monitor control, 1 mode switch for direct or tape output monitor, 1 built-in talkback mike and switch. **Power Required:** 105-125 VAC, 50/60 Hz; all power supplies self-contained. **Size:** 49 $\frac{1}{2}$ " w. x 34" d. x 10 $\frac{1}{2}$ " h.; for table top.

Electrodyne Model ACC-1204 Audio Control Console — Factory wired.

Net Each \$14,300.00

Electrodyne Model ACC-1204 Audio Control Console Kit — Basic components package, unwired.

Net Each \$12,000.00

MODEL ACC-1608 AUDIO CONTROL CONSOLE

Similar in general design and specifications to Model ACC-1204 above, but for more complex and extensive operations. Has 16 inputs (wired for 20) with 8 output channels; free-standing.

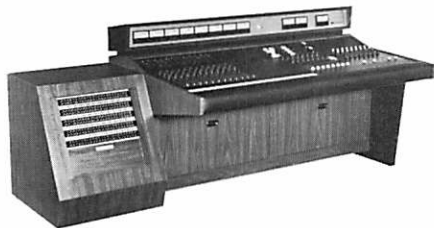
Electrodyne Model ACC-1608 Audio Control Console — Factory wired.

Net Each \$30,000.00

Electrodyne Model ACC-1608 Audio Control Console Kit — Basic components package, unwired.

Net Each \$22,620.00

CONSOLE BUILDING AND ENGINEERING SERVICES



Our aim is to meet your requirements — precisely. That's why we're fully staffed to assure you superior design, engineering and fabrication of custom audio control consoles for any application. What's more, we'll furnish engineering assistance — at no cost — to any customer using ELECTRODYNE modules to build his own console. Shown at left is an ACC-1608C Audio Control Console with patching and all modifications.



BC-8A STEREO AUDIO CONTROL CONSOLE

Stereo Audio Control Console featuring FM Stereo broadcasting, with or without AM transmitters. The moderately sized console has 8 full-stereo mixing channels; left and right stereo output channels; an optional separate monaural output channel; a stereo audition output; two stereo monitor outputs with muting and on-the-air lamp relays; a cueing amplifier; a talk-back switch; stereo headphones; and two power supplies, either of which is capable of handling the power requirements of the console. Primarily developed for use by the emerging radio station featuring FM stereo broadcasting, with or without AM transmitters. Compact console has 8 stereo input mixers and separate stereo and mono outputs. Up to 10 remote lines are accommodated on the first two input mixers using two five-position switches; each of these two inputs has a stereo balance control to vary right channel sensitivity ± 4 dB over left channel. Circuits for the remaining 6 utility (general) inputs are provided by plug-in modules for microphone inputs, magnetic phono input (RIAA equalization), bridging inputs and line terminating inputs. Two-position lever switch permits stereo (normal) or mono transmission from each of the 6 utility inputs. Mixer controls are straight line dual-circuit type; cue circuits are controlled by pushbutton switches. Operator can feed the mono program line mixed down from stereo left and right channels either prior to or after equalization for simultaneous broadcasting or provide a different mono program from other sources independently of stereo programming.

Inputs: 8 dual (stereo), each with cue. **Program Outputs:** Stereo left, stereo right and mono, balanced, +4 VU nominal, +18 VU max. undistorted. **Monitor Outputs:** Dual channel for stereo or mono programs or audition monitoring and single cue monitor; 4 watts max. into 8 ohms; three dual monitor output circuits, each with muting provisions controlled by any one of 6 input controls.

Frequency Response: ± 1 dB, 30-15,000 Hz, without equalization, from mike or line input to program output. **Equalization:** +2, +4, +6, +9 or +12 dB at 40, 100, 300, 1,500, 3,000, 5,000 or 10,000 Hz; -2, -4, -6, -9 or -12 dB at 100 Hz and/or 10 kHz; for both stereo program lines. **Distortion:** 0.5% THD max. at +18 VU output at any frequency between 30 and 15,000 Hz. **Signal-to-Noise Ratio:** At least 70 dB, 30-15,000 Hz, +4 dBm output, -50 dBm mike input. **Channel Isolation:** 50 dB minimum crosstalk isolation between stereo left and right channels and between stereo and mono channels. **Balance:** Left and right channel levels balanced within ± 2 dB for all mixer settings between 0 and 40 dB attenuation; remote inputs can be compensated for input imbalances up to ± 4 dB with two balance controls for compensation of all 10 lines. Console comes complete with 2 mike preamp modules, 2 RIAA equalized phono modules and four 600-ohm matching transformer modules.

Electrodyne "Broadcaster 70" Stereo/Mono Broadcast Console
Net Each \$5250.00

ROBINS® BULK TAPE ERASERS

HEAVY DUTY BULK TAPE ERASERS FOR AUDIO/VIDEO AND INDUSTRIAL TAPES

Meets the requirements of industrial users. Erases Video and Audio from recording tape up to 1" wide in one operation. Tape up to 2" wide can be erased by performing erase procedure on both sides of reel. Models TM-100 and TM-120 have safety features: Overheat Indicator, Individually Fused Circuits, Heavy Duty Switches, and Power Cord.



TM-100

TM-100 AUDIO/VIDEO BULK TAPE ERASER

Erases tape on reels to 10½" dia. Reel is rotated slowly 3-4 seconds to erase tape. Reduces background noise levels of tape from 50-90 db below saturation minimum. Size: 3¾" x 12" x 4". Operation: 115 volt 50-60 Hz A.C. Duty cycle: 5 min. On/10 min. off. TM-100 Net Each \$86.00



TM-120

TM-120 AUDIO/VIDEO BULK TAPE ERASER

Erases tape on reels to 17" dia. Reel is rotated slowly 3-4 seconds to erase tape. Reduces background noise levels of tape 50-90 db below saturation minimum. Size: 3¾" x 12" x 4". Operation: 115 volt 50-60 Hz A.C. Duty cycle: 10 min. On/10 min. Off. Features built-in blower cooling system. TM-120 Net Each \$174.00



TM-99

TM-99 HEAVY DUTY PROFESSIONAL UL LISTED BULK TAPE ERASER

Erases entire reel of tape in seconds. Removes recorded and unwanted signals. Reduces background noise levels of tape from 3 to 6 db below normal erase head level. Easy operation — tapes are erased by simply placing reel on spindle and rotating. For reels up to 10½" dia., tapes to ½" wide. Size: 5¼" x 6¾" x 3¾". Operation: 110-120 volt, 5 amps, 50-60 Hz A.C. TM-99 Net Each \$41.25



TM-77

TM-77 DELUXE BULK TAPE ERASER

Reduces background noise levels of tape from 2 to 4 db below normal erase head level. Tapes are erased by simply placing reel on spindle and rotating. For ¼" wide tapes on reels up to 7" dia. Size: 2⅝" x 3¾" x 6¼". Operation: 110-120 volt 50-60 Hz A.C. TM-77 Net Each \$23.00



TM-44

TM-44 LOW COST BULK TAPE ERASER

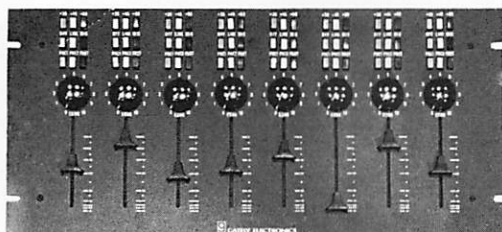
Economical, efficient Bulk Tape Eraser erases recordings from tape in seconds. For ¼" tape on reels to 7" dia. Reduces background noise levels of tape to below normal erase head level. Size: 5¼" x 2⅝" x 3⅝". Operation: 110-120 volt 50-60 Hz A.C. Duty cycle: 10 min. On/5 min. Off. TM-44 Net Each \$15.75

TM-88 ECONOMICAL HAND HELD BULK TAPE ERASER

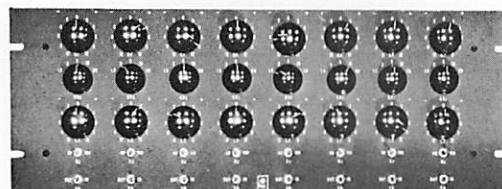
Handle has built-in momentary contact switch. Permits tireless erasing of unwanted recordings from an entire reel of tape in seconds without rewinding. Erase tapes by moving unit over each side of reel. Background noise levels are erased to below normal erase head level. For use with any size reel. Size: 4" x 2¼" x 4¼". Wt. 2 lbs. 4 oz. Operation: 4 amps, 110-120 volts 50-60 Hz A.C. TM-88 Net Each \$15.15



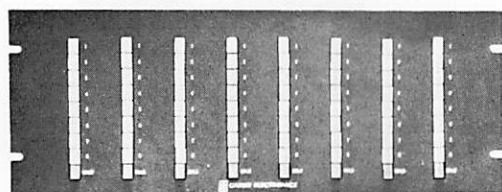
TM-88



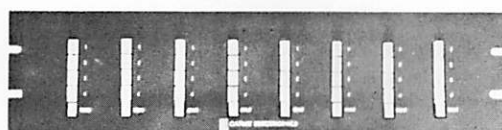
IPM-8



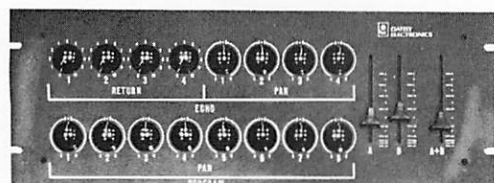
EQ-8



MS-8



MS-4



CM-8

WRITE FOR DETAILS AND PRICES CONCERNING COMPLETELY WIRED AND TESTED AUDIO CONSOLES UTILIZING GATELY SERIES 7 AND SERIES 8 CONSOLE MODULES.

SERIES 8 CONSOLE MODULES

Designed to be the basic electronic building blocks in 4, 8 or 16 track recording consoles; available separately in console kits or wired assemblies. Each module consists of eight identical and independent subassemblies on a single console panel. All modules feature integrated circuits for high reliability, low noise, compactness and long life. Additional Series 8 modules are available, including 4, 8 and 16 track monitor panels with monitor sync and submaster panels with and without echo return; write for details and specifications. **SPECIFICATIONS COMMON TO ALL MODULES:** **High Level Input Impedance:** 10K. **Low Level Input Impedance:** 150 ohms bridging. **Output:** +22 dBm into 150 ohms or greater load. **Distortion:** Less than 0.5% at +22 dBm. **Output Impedance:** Less than 50 ohms. **Frequency Response:** ±1 dB, 30-20,000 Hz at any level up to +22 dBm. **Noise:** Microphone inputs, below -127 dBm; summing amplifiers, below -90 dBm; program amplifiers, below -80 dBm. **Power Required:** ±18 VDC bipolar regulated power supply.

MODEL IPM-8 INPUT MODULE

Designed to process eight line or mike signals; uses IC operational amplifiers for amplification and output isolation. Module selects input and mike preamp gain and sends echo signal; channel gain controlled with linear attenuator. Optional cue switch on slide attenuator available at extra cost. **Inputs:** 8 line level, 8 mike level. **Outputs:** 8 line level program; 8 line level echo; 8 patching at line level for adding EQ-8 equalizer or conventional patching before program gain control; optional line level cue. **Mike Input Gain:** 80, 65 and 50 dB, switch selectable. **Line Input Gain:** 20 dB. **Input Level:** Line, mike or off selector; mike preamp gain front panel switch selectable at 30, 45 and 60 dB. **Controls:** All switching uses pushbutton switches; linear potentiometer for program gain; rotary potentiometer for echo gain. **Echo Send:** Three-position pushbutton selector; before patch point (before equalizer), after patch point (after equalizer) or after program gain control. **Size:** 19" w. x 7 1/2" d. x 8 3/4" h.

Gately Model IPM-8 Input Module

Net Each \$1595.00

MODEL EQ-8 EQUALIZER MODULE

Each of 8 equalizers in module contains peaking type high frequency equalizer section and a shelving type low frequency equalizer. Both boost and cut curves are symmetrical; equalization can be added in steps of 2, 4, 6, 9 and 12 dB. **Gain:** 0 dB in flat position. **Low Frequency Equalization:** Selectable at 40 or 100 Hz boost or cut. **High Frequency Equalization:** Selectable at 1.5, 3, 5, 10 or 20 kHz boost or cut. **Size:** 19" w. x 7 1/2" d. x 7" h.

Gately Model EQ-8 Equalizer Module

Net Each \$1595.00

MODEL MS-8 MATRIX SWITCHER AND ACTIVE COMBINER MODULE

Designed to assign any input channel to any output or combination of output channels. Accommodates 8 input channels and 9 output channels; ninth output channel is intended for solo or cueing purposes. Activating the solo switch closes an extra set of contacts that can be used to activate a relay. All switching done with push-button switches; mixers use summing-type IC operational amplifiers. Model MS-82 is identical to Model MS-8 with the addition of a separate double push-push switch for each input channel and two additional summing amplifiers; allows echo signals from all 8 input channels to be switched between two echo buses. Two extra inputs included on each summing amplifier available on rear panel; permit simultaneous slating of all channels and permit two units to be operated in parallel for 8 x 16 matrix switching. **Signal Phasing:** 0°; permits patching at both input and output. **Gain:** 0 dB. **Size:** 19" w. x 7 1/2" d. x 7" h.

Gately Model MS-8 Matrix Switcher

Net Each \$1195.00

Gately Model MS-82 Matrix Switcher

Net Each \$1495.00

MODEL MS-4 MATRIX SWITCHER AND ACTIVE COMBINER MODULE

Similar to Model MS-8, except 8 input channels and only 5 output channels; fifth channel for solo or cue functions. Intended for channel assignment in 4 track systems or echo bus assignment in larger systems. Model MS-42 is equivalently similar to Model MS-82. Both models include extra inputs for paralleling and slating. **Size:** 19" w. x 7 1/2" d. x 4 1/4" h.

Gately Model MS-4 Matrix Switcher

Net Each \$795.00

Gately Model MS-42 Matrix Switcher

Net Each \$1095.00

MODEL CM-8 CONTROL MODULE

Used for final mixdowns and monitoring while recording. Designed to take output signals from matrix switcher, add echo return signals, pan program and echo signals as required and mix signals down to stereo and mono information. Unit accepts and pans up to 8 input signals; also amplifies, controls level of and pans up to 4 echo return signals as required. Stereo and mono master gain controls are slide type; other controls are rotary. Outputs for stereo channels A and B and derived mono signal A + B. Uses any high level type echo device directly; low level types (spring types) require optional echo return amplifier. **Gain:** 40 dBm max., program channels. **Size:** 19" w. x 7 1/2" d. x 7" h.

Gately Model CM-8 Control Module

Net Each \$1295.00



GATELY AUDIO EQUIPMENT

MODEL PM-1 SIX-CHANNEL STEREO MIXER

Portable; designed for use in schools, professional recording, and broadcasting. Completely self-contained, may be operated anywhere or may serve as a valuable standby. Main features are small compact size, plug-in phono preamp., plug-in tape head preamp., plug-in hi or lo gain mike preamps., plug-in line isolation networks, plug-in VU meter calibration networks, plug-in hi output line amp., plug-in bridging transformer, output of both channels monitored by true illuminated VU meters, balanced or unbalanced transformer output, master gain controls for both channels simultaneously, stainless steel front panel, XLR type input and output connectors, built-in 600 ohms line terminate switch, large broadcast type knobs, dB markings around knobs for accurate resetting of levels, and removable cover. **Power Required:** 10 watts, 117 VAC, 60 Hz. **Inputs:** Six low level; two inputs switchable to high level; all inputs switchable to either/or both output channels. **Output Capability:** 24 dB into 600-ohm load, 20-20,000 Hz. **Signal-to-Noise Ratio:** 100 dB, extremely low noise circuitry. **Distortion:** Less than .5% at 8 dB into 600-ohm load, 20-20,000 Hz. **Frequency Response:** ± 1 dB, 20-15,000 Hz. **Function Switching:** All six input channels can be switched to output "A", output "B", output "A" and "B", and "off". **Input Impedance:** Mike inputs, 150 ohms bridging; hi level, 33K ohms; tape head preamp., 330K ohms; mag. phono preamp., 47K ohms; balanced line bridging transformer, 30K ohms. **Output Impedance:** 600 ohms balanced or unbalanced, may be restrapped for 150 ohms. **Gain:** High level input, -37 dBV nominal; low level inputs, 80 dBV nominal for 40 dB preamp., 100 dBV nominal for 60 dB preamp. **Size:** 18" x 12 1/4" x 5 1/4". Black or olive case, stainless steel front panel.



Model PM-1 — With six preamplifiers.

Net Each \$695.00

Model PM-1 — Without preamplifiers.

Net Each \$469.50

Model PM-1C — Console version in Formica walnut, without preamps. Complete with transformers.

Net Each \$725.00

MODEL 1800 AUDIO LIMITER

Equipped with a console which protects every input against unexpected peak and permit the amount of limiting on each channel to be controlled. All transistor and FET circuitry provides reliability, dependability, and long life. **Gain:** 20 dB (± 1 dB) nom.; internally adjustable 14 dB to 28 dB max. **Output Level:** +28 dBm rated into 600 ohms. **Limiting Ratio:** 35 dB min. at midfrequencies, 25 dB min. at 50 Hz and 15 kHz. **Attack Time:** 1 μ sec. **Release Time:** 0.1 to 5 secs, depending on amount of previous limiting. **Distortion:** 0.5% THD 20-20,000 Hz at +8 dBm; 1.0% THD 25-20,000 Hz at +28 dBm; 1.0% THD 50-15,000 Hz at +8 dBm 10 dB (limiting). **Frequency Response:** ± 1 dB, 20-20,000 Hz, no limiting; ± 2 dB, 30-20,000 Hz, 10 dB limiting. **Noise:** -70 dBm measured over 20-20,000 Hz bandwidth -60 dBm measured to 1 MHz. **Input Level:** 30 dBm max. **Input Impedance:** 100K ohms, unbalanced. **Output Impedance:** Either 600 ohms or 150 ohms, internal impedance less than 10% of rated load. **Power Requirement:** 45 V regulated at 40 mA quiescent, 120 mA at +31 dBm out; 300 V regulated at 17 mA. **Controls:** Front Panel: Gain Limiting, and Weston Illuminated Gain Reduction meter; Rear Panel: Line Terminate switch, 600 ohms, -45 V fuse, 4A-8AG, Input Connector, Output Connector, and Power Connector. Provision included for inter-connection of stereo or multichannel installations in order to maintain interchannel balance under limiting conditions. **Size:** 1.50" x 5.25" x 7.0", max. depth over connectors 8.38". Eight limiters and associated power supply fit into a space of 19" w. x 5 1/4" h. x 9" d. Clear alodine on aluminum body; front panel black with white markings; other colors available on special order. Model 1850-4 Power Supply to power one to four units; Model 1850-8 Power Supply to power one to eight units optional.



Model 1800 Audio Limiter — Four outputs. **Net Each \$299.00**

Model 1850-4 Power Supply — Four outputs. **Net Each \$150.00**

Model 1850-8 Power Supply — Eight outputs. **Net Each \$175.00**

MODEL EM-7 STEREO ECHO MIXER

The basic building block in mixing applications for each addition or equalization of signals to be mixed. Designed with modular plug-in printed circuit cards to allow a variety of applications. Echo send and receive cards allow direct driving of Hammond type echo springs. Four mixing channels may be individually pushbutton switched to Off, Output A, Output B or Output A + B. Inputs may be switched between low level mike or high level unbalanced. Each channel has an associated echo send control; assignment of a channel to either output simultaneously switches the echo send signals. Each output has individual gain and echo return controls. For more than 4 inputs, two or more mixers may be stacked and interconnected. Mixers may be also cascaded to permit mix downs from multiple sources (e.g., 16 channels down to 8, 4, 2 and 1 channels). Broadcast type knobs marked in dB for accurate resetting of levels. **Inputs:** 4 low level or 4 high level. **Outputs:** Two high level, 600/150 ohms; +20 dBm into 600 ohms without clipping. **Distortion:** Less than 0.5% at +8 dBm into 600 ohms, 20-20,000 Hz. **Noise:** -70 dBm, master gain closed. **Gain:** Greater than 35 dBV, high level; 80 dBV nominal, 40 dB preamp. Up to 15 dB boost or cut at 20 Hz and 20 kHz can be added when used with EQ-7 equalizer. **Power Required:** 15 watts, 117 VAC. **Size:** Stainless steel 19" w. (rack panel) x 9 1/2" d. x 5 1/4" h. (commercial notching). **Gately Model EM-7 Basic Mixer** — With power supply, 2 booster amps, 2 line amps (less preamps and echo amps).

Net Each \$655.00

Gately Model EM-7 Echo Mixer — With 4 mike preamps, stereo echo send and receive amplifiers. **Net Each \$895.00**

Gately Model EM-7S — Similar to EM-7 except six slide pots for program levels. Also has pan pots on all four input channels. **Height, 7"** **Net Each \$1095.00**

Gately Mike Preamp, Echo Send Amp, or Echo Receive Amp **Net Each \$30.00**

Gately Echo Springs — Hammond Type. **Net Each \$20.00**

METER PANELS

Choice of 1-, 2- or 4-meter panels, matching EM-7 and EQ-7 in appearance and styling. Both include a transformer for lighting and appropriate VU meter calibration resistors. Meters are API-361 VU's. Zero level +4 dBm standard; +8 dBm optional. Stainless steel panel 19" w. x 3 1/2" h. (commercial notching).

Gately Model MP-1 — With 1 meter. **Net Each \$90.00**

Gately Model MP-2 — With 2 meters. **Net Each \$125.00**

Gately Model MP-4 — With 4 meters. **Net Each \$250.00**

MODEL EQ-7 FOUR-CHANNEL EQUALIZER



Plugs directly in EM-7 to provide up to 15 dB boost or cut at 20 Hz and 20 kHz on all four mixing channels. Independent equalization on each channel. Separate controls for high and low frequency equalization. Latest FET circuitry uses plug-in printed card construction, provides essentially unity gain. **Output:** 10 V rms at less than 1% THD into 10K ohms load. **Gain:** -6 dB at mid-frequencies. **Power Required:** +45 dB at 12 mA, supplied by EM-7. **Size:** Stainless steel 19" w. x 6 3/4" d. (excluding mating connector) x 3 1/2" h. (commercial notching). Supplied with mating connector harness. **Gately Model EQ-7 Equalizer** **Net Each \$275.00**

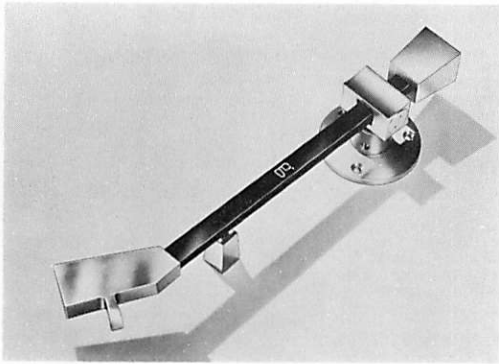
Gately Model EQ-7B Equalizer — Same as EQ-7, but utilizes IC's for greater output and 20 dB less noise. **Net Each \$375.00**

Gately Model PEQ-7 Equalizer — Four-channel peaking type equalizer similar to EQ-8 (see adjacent Gately page) in specifications, except adapted for operation with EM-7. Matches EM-7 in styling. **Size, 19" w. x 7 1/2" d. x 7" h.** **Net Each \$875.00**

MODEL PP-4 FOUR-CHANNEL PAN POT

Accessory 4-input pan pot adds applications to Gately Series 7 mixer-equalizer equipment. Will receive four inputs and pan them to any position in the stereo output signal. Automatic level compensation holds signal constant at any point in the stereo image. Stereo master gain control adjusts the overall signal level. **Inputs:** Four. **Outputs:** Two. **Panning:** Any input can be panned from full output, Channel A to center to full output, Channel B; ALC incorporated. **Output Level:** Below 0.5% at +24 dBm; unmeasurable at +10 dBm. **Gain:** +20 dB. **Noise:** Below -75 dBm. **Input Impedance:** 10K ohms, bridging unbalanced; barrier strip connection. **Output Impedance:** 600 ohms balanced or unbalanced; barrier strip connection. **Power Required:** 110 VAC, 15 watts. **Size:** 19" w. x 7 1/2" d. x 5 1/4" h.; stainless steel front panel matches EM-7 and EQ-7 in styling. **Gately Model PP-4 Pan Pot** **Net Each \$395.00**

STONE ARMS AND ACCESSORIES



GRAY MODEL 303 MICRO-TRAK® 12" PROFESSIONAL TONE ARM

"Micro-Trak"® — A term created by Gray's Research Team to properly name the finest professional tone arm series ever created. With proper tracking capabilities as low as 1/10 gram, resonance less than 10 Hz and the greatest possible reliability: What other product could be considered by the professional user. The impregnated wood body, laminated for high strength, the plug-in memory balancing head, the sapphire jewel bearings for virtually frictionless vertical rotation, the fluid anti-skate mechanism, the rugged simplicity all contribute to make the "Micro-Trak"® series the best buy available today. Whether you relate in dollars per operating hour or in highest transduction quality, you have it all with "Micro-Trak"®.

MICRO-TRAK® SPECIFICATIONS 303 12" PROFESSIONAL TONE ARM

Dimensions: 12½" overall (317.5 MM); 8⅞" spindle to pivot (211.1 MM); 2⅞" from pivot to back of arm (73 MM). **Weight:** 1 lb. (.454 kg). **Overhang:** 0.682" spindle center to stylus. **Resonance:** Less than 10 Hz ½ Gram at 30x10⁻⁶ CM/DYNE Compliance. **Tracking Error:** 3.0 in radius 0° 0'; 3.75 in radius 1° 28'; 4.75 in radius 0° 0'; 5.5 in radius 2° 0'. **Micro-Trak**® is also available in a longer version for 16" turntables, for EMT turntables, and in special lengths for custom table sizes.

Net Each \$75.00

MODEL 306-16" Net Each \$82.50

SHURE PROFESSIONAL TONE ARM

A quality arm at an unexpectedly low price. Full range of adjustments for static and dynamic balance, cartridge overhang, arm height, etc. Exceptionally easy to install from the top of the motor-board.

MODEL M232 for 12" recordings

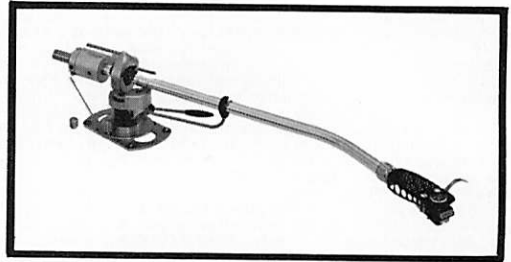
Net Each \$33.00

MODEL M236 for 16" recordings

Net Each \$36.00

MODEL A23H extra plug in head

Net Each \$3.00



SHURE SME SERIES II

"the best pickup arm in the world"

The Shure-SME, Series II, the ultimate in independent tone arms, provides features and quality unattainable in any other tone arm. Manufactured to singularly close tolerances and standards by skilled British craftsmen. Utterly accurate adjustments are provided for every critical factor relating to perfect tracking, such as height, overhang, length, tracking force and bias (anti-skating). These arms accept cartridges weighing 3 to 17 grams and allow tracking forces from ¼ of a gram to 5 grams to be used. Because the Shure-SME tone arms realize the full potential of the cartridge and the record, they are especially suited for use in combination with any Shure cartridge. Highly recommended for use in the very finest component high fidelity systems. Some of its many features include: • Virtually frictionless knife-edge bearings • Wood-lined arm puts resonances outside recorded range • Effective "anti-skating" bias adjuster counterweight • Hydraulic cueing device.

MODEL 3009 for 12" recordings

Net Each \$117.50

MODEL 3009HE (horizontal cable entry)

Net Each \$123.75

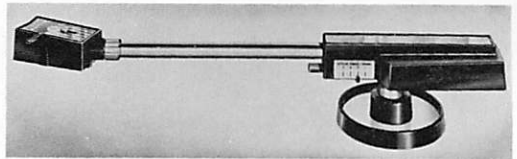
MODEL 3012 for 16" recordings

Net Each \$128.00

MODEL S2 SME Lightweight shell

Net Each \$7.50

NOTE: SME tone arms are distributed by Shure in the U.S.A. and Canada.

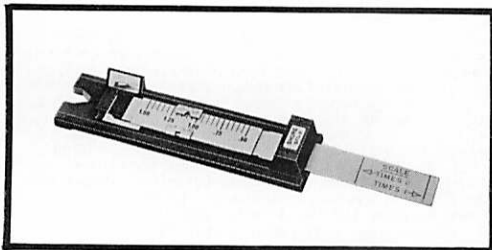


SHURE SFG-2 STYLUS FORCE GAUGE

Low-cost, precision stylus force gauge is a must for the serious audiophile. Detects excessive or insufficient tracking force; allows precise resetting of stylus force to maintain optimum trackability and sharply reduce wear on records and stylus tip. Especially valuable when cartridges are switched. Accuracy to within 1/10th of a gram in ½ to 1½ gram primary operating range; extended range to 3 grams. The SFG-2 uses friction-free, stainless steel pivot points and easy-to-read reference bars in a permanently accurate "balance" system — no springs to weaken or wear out. Special tilted mirror reflects reference bar positions for effortless, accurate reading. Greater accuracy in measurement is obtained because the SFG-2 is used with the tone arm in actual playing position.

MODEL SFG-2 Stylus Force Gauge

Net Each \$4.95



ADI TURNTABLES, PREAMPLIFIERS



RUSSCO CUE-MASTER

Weight of entire unit..... 16 pounds
 Weight of platter..... 5½ pounds
 Chassis dimensions..... 15½ by 15½ inches
 Depth requirements below chassis..... 6½ inches

• The unit is powered by a heavy duty pole induction motor.
 • Drive system is by a neoprene idler wheel transmitting power direct from the stepped capstan on the motor shaft to the inside platter rim. • Three speeds — 33, 45, 78 RPM's. • Acceleration is extremely fast, average results are 1/16 revolution of platter at 33 RPM's . . . 1/10 revolution at 45 . . . 1/2 revolution at 78. • Oilite bronze bearings throughout for longer maintenance free service. • Chassis adaptable to any 12" tone Arm. • Wow and flutter, less than 3/10 of 1%. • Rumble (both vertical and lateral) minus 36 DB

down from standard NAB level. • Standard color is pearl grey with grass green felt platter cover. Special felt colors to match studio decor available on special order at slight additional cost. **Net Each \$152.00**

RUSSCO STUDIO-PRO

Weight of entire unit..... 20 pounds
 Weight of platter..... 6½ pounds
 Chassis dimensions..... 15½ by 15½ inches
 Depth requirement below chassis..... 7½ inches

• Unit is powered by a heavy duty synchronous motor (also available for 50 cycle operation). This model not available with 4 pole induction motor. • Drive system is by a neoprene idler wheel transmitting power direct from the stepped capstan on the motor shaft to the inside platter rim. • 2 Speeds — 45 & 33 RPM's. • Oilite bearings are used throughout for extra long service life. • Detachable tone arm mounting plate adaptable to any 12" tone arm. • Acceleration, extremely fast, average results, 1/16 revolution of platter at 33 RPM's, 1/10 revolution at 45 RPM's. • Wow and flutter — less than 3/10 of 1%. • Rumble (both vertical and lateral) minus 38 DB down from standard NAB level assures the finest sound reproduction. • Standard color is pearl grey with grass green felt platter cover. Special felt colors to match studio decor available on special order at slight additional cost. **Net Each \$198.00**

SHURE M64 SERIES UNIVERSAL STEREO PREAMPLIFIERS AND MODEL SE20 SOLID STATE STEREO TRANSCRIPTION PREAMPLIFIER



MODEL M64:

Low-cost, versatile, compact, low distortion and low noise stereo preamplifiers that provide gain, equalization, and choice of output impedances and levels. Can be used in a broad variety of preamplification and equalization applications: as a high-quality, low-cost magnetic phono preamplifier in broadcast applications; to provide 7½ IPS NAB equalization for tape decks containing no electronics; to give nonequalized amplification wherever a boost in microphone output level is required. When used in conjunction with the A95 Series In-Line Transformers, an output of approximately -20 dbm is available. Three switch-selected equalization positions: RIAA for magnetic stereo cartridges; FLAT for high-impedance microphones or for use as buffer amplifier; NAB for tape head equalization. Built-in power supply (M64 operates on line voltages of 108-132V, 50/60 Hz; M64-2E operates on 216-264V, 50/60 Hz). M64 and M64-2E may be operated from 24 to 36 V DC battery power supply (such as Shure A67B Power Supply). Minimum of 50 db isolation between channels. All silicon transistor circuit for ultra-quiet operation and complete freedom from microphonics. High level, high impedance outputs; or low level, low impedance unbalanced outputs. Attractive, small case with provisions for permanent installation.

M64 Stereo Preamplifier. For 103-132 Volts A.C., 50-60 Hz.
Net Each \$34.00

M64-2E Stereo Preamplifier. For 216-264 Volts A.C., 50-60 Hz.
Net Each \$34.00

Specifications:

Input Impedance: 50,000 ohms and 350 pF for all functions. **Output Impedance:** High level, high impedance: minimum recommended load 22,000 ohms. Low level, low impedance: 600 ohms unbalanced. **Frequency Response:** Flat — ±2 db from 20 Hz to 20,000 Hz. Phono — ±2 db of the standard RIAA Curve from 40 Hz to 15,000 Hz. Tape — ±2 db of the 7½ IPS NAB Curve from 50 Hz to 15,000 Hz. **Gain at 1 kHz:** To a high level, high impedance output: RIAA 34.5 db; Flat 37.0 db; NAB 27.5 db. To a low level, low impedance output: 23.5 db lower than high level output. **Distortion:** Under 1% total harmonic distortion for an output of 2 volts at 1,000 Hz in phono, flat & tape positions. **Hum and Noise:** Phono — Better than 71 db below 10 mv input, from 20-20,000 Hz. Flat — Better than 64 db below 10 mv input, from 20-20,000 Hz. **Channel Separation:** 50 db or better at 1,000 Hz. **Channel Balance:** Channels matched to within 2 db at 1,000 Hz. **Dimensions:** 5½" wide x 2¾" high x 4½" deep. **Weight:** 1¼ lbs.

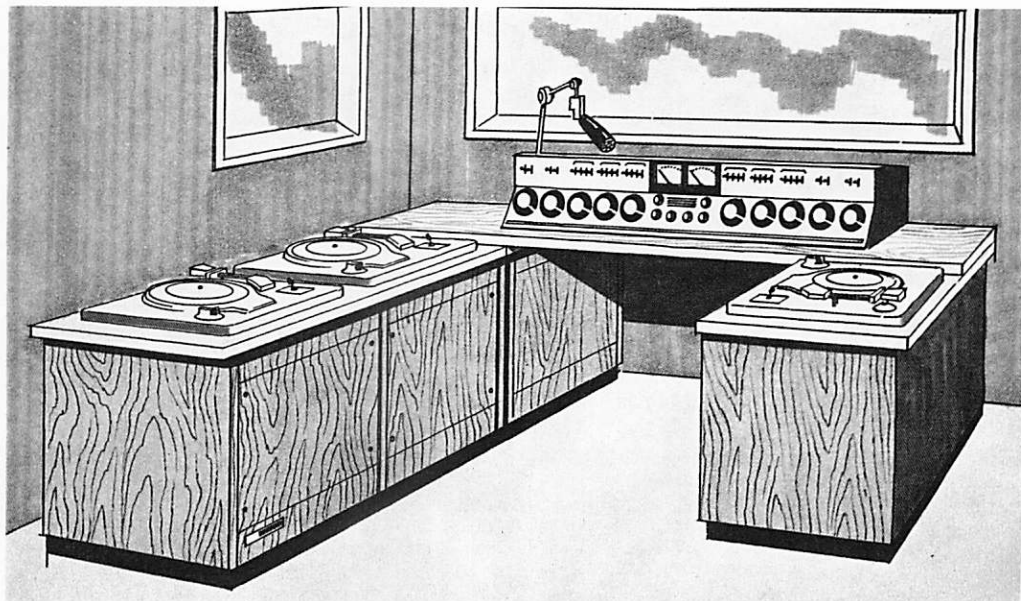
MODEL SE-20:

A self-contained, high level, equalized stereo preamplifier specifically designed for highest quality disc reproduction in broadcasting and recording studios. Precise RIAA/NAB equalization. Noise and RF susceptibility are extremely low. Full line output capability to +20 dbm. Under 0.5% distortion at +20 dbm! Individual high and low frequency equalization trimmers on each channel. Individual channel level controls. Excellent channel separation permits use as two separate monaural channels. **Net Each \$366.00**

Specifications:

Frequency Response: ±1 db from 30 to 15,000 Hz. (RIAA/NAB disc playback characteristic). **Gain:** 53 db, adjustable. **Distortion:** Less than 0.5% THD at +20 dbm from 20 to 20,000 Hz. **Channel Separation:** Greater than 50 db. **Hum and Noise:** At least 60 db below +6 dbm output. **Input Impedance:** 47,000 ohms. **Output Impedance:** For 600 or 150 ohm balanced line. Approximately 80 ohms, actual. **Operating Temperature:** Within 0.5 db of all specifications at 20 to 135° F. **Operating Voltage:** 120 volts ±10% at 50/60 Hz. 220 volts ±10% at 50/60 Hz. **Dimensions:** Panel Opening 3¾" x 7". 9¼" deep. **Weight:** 7 lbs., 10 oz.

ADI MODULAR STUDIO FURNITURE



A new look is offered in the Series "L" studio furniture. This modular design provides a unique solution to the problem of providing functional workspace for the broadcast engineer or disc jockey in a group of mix or match equipment cabinets and console mounting tables. Turntables, tape cartridge machines, cueing, and switching control panels may all be located within arms reach of the main control board. This "human engineered" system provides almost ultimate flexibility in a group of off the shelf components used to

make your custom studio installation. Durable, color keyed, suede formica covered side panels, in a summer pecan wood grain finish, and tops, in a contrasting adobe gold, create an exciting attractiveness totally fitting the tempo of the modern broadcast studio. Formica, with its inherent resistance to damage from coffee stains, cigarette burns, and the like insures that your Series "L" furniture will maintain its initial beauty for many years service with a minimum of care.

Specifications:

DOUBLE BAY CABINET: Size: $41\frac{3}{4}$ " wide x 22" depth x 27" height. **Finish:** Summer pecan wood grain formica on vertical surfaces, autumn gold formica on cabinet top. (Special colors available on order at extra cost.) **Construction:** Panels fabricated from high density particle board $\frac{3}{4}$ " thick (front and rear closure panels $\frac{5}{8}$ " thick) with formica press bonded using urea type heat activated adhesive. **Panel Space:** Two $17\frac{1}{2}$ " high panel openings front and rear to accommodate standard 19 inch E.I.A. style equipment panels on steel mounting rails. **Weight:** 117 lbs. Includes complete cabinet with wood grained closure panels for front and rear openings. **CONSOLE TABLE SURFACE:** Size: 80" wide x 24" depth x $1\frac{1}{2}$ " thick. **Finish:** Adobe gold formica. **Mounting:** Mounts on top of single or double bay cabinets with brackets provided, or on separate bright metal legs. **Height Mounted:** 29 inches. **SINGLE BAY CABINET:** Size: 22" wide x 22" depth x 27" height. **Finish:** "Summer Pecan" wood grain formica on vertical surfaces, "Adobe Gold" formica on cabinet top. (Special colors available on order at extra cost.) **Construction:** Panels fabricated from high density particle board $\frac{3}{4}$ " thick (front and rear closure panels $\frac{5}{8}$ " thick) with formica press bonded using urea type, heat activated adhesive. **Panel Space:** $17\frac{1}{2}$ " high openings front and rear to accommodate standard 19 inch E.I.A. style equipment panels on steel mounting rails. **Weight:** 66 lbs. Includes complete cabinet with wood grained closure panels for front and rear openings.

TURNTABLE ACCESSORY FURNITURE

Series L Single Single Bay Cabinet Net Each \$165.00
 Series L Double Double Bay Cabinet Net Each \$265.00
 Series L CB Console Board (72" x 24" x $1\frac{1}{2}$ ") (Note: Cabinet tops are solid. Add 10.00 each for Turntable cutouts.) Net Each \$99.50

PRODUCT ACCESSORIES

PROFESSIONAL CARTRIDGES

M44-7 Shure, .7 Mil Diamond Net Each \$19.95
 N44-7 Shure Stylus, for MDD-7 Net Each \$9.75

ZONE ARM ACCESSORIES

MICRO TRAK ACCESSORIES — Models 303 and 306

75932 Cartridge Shell for 303 Net Each \$10.50
 75942 Cartridge Shell for 306 Net Each \$10.50
 75961 Micro Trak Weight Kit Net Each \$2.30
 75908 Anti-Skate Fluid (5 tube Package) Net Each \$6.25
 Instruction Manual Net Each \$.50
 Mounting Template Net Each \$.25

ACCESSORIES FOR VISCOUS DAMPED ARMS (Models 206 and 208)

75792 8-S Standard Slide Kit Net Each \$7.09
 75743 Slide Only Net Each \$3.95
 75799 Weight Kit Net Each \$2.65
 75800 Weight (for VR11) Net Each \$1.00
 75051 Viscous Fluid (5 tube package) Net Each \$6.25
 Instruction Manual Net Each \$.50
 Template Net Each \$.25

PREAMPLIFIER ACCESSORIES

MC1303L Integrated Circuit Net Each \$5.50

CARTRIDGE SELECTION

Since contemporary stereo cartridges tend to be designed for lighter tracking forces, it is necessary to consider what kind of operator "feel" or handling characteristic is desired for professional use. This factor, of course, relates to the tracking force requirement of the individual cartridge and to the tone arm which is to be used. The Shure Standard Series cartridges are the most widely used pickups in stereo and stereo compatible monophonic broadcasting. They feature exceptionally good sound, unusual uniformity and stand up best under hard usage. Wide choice of models, including spherical or elliptical styli; light or heavy tracking; special 78 RPM stylus is available.

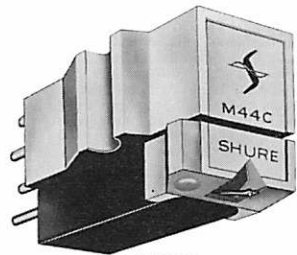
MODEL M44C:

0.7 mil spherical stylus, 3 to 5 grams tracking. Intended for older, heavier broadcast arms, or to allow a heavier feel with lighter arms. The M44C is ideally suited to "combo" operations, and is the lowest cost cartridge in the Standard Series. **Net Each \$17.95**

Model M44C Replacement Stylus

Net Each \$9.70

Tracking Force: Heavy, 3 - 5 grams. **Type of Stylus:** Spherical. **Stylus Size:** .0007".



M44C

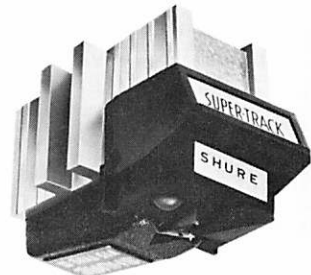
MODEL M44-7:

Similar to the M44C, but with a lower tracking force range of 1½ to 3 grams. The lighter tracking force minimizes record wear, and is recommended for arms permitting less than 3 grams tracking force, and when heaviest feel is not required. **Net Each \$19.95**

Model M44-7 Replacement Stylus

Net Each \$9.75

Tracking Force: Medium 1½ - 3 grams. **Type of Stylus:** Spherical. **Stylus Size:** .0007".



V-15

MODEL M44E:

Similar to the other Standard Series cartridges, but features a Biradial (Elliptical) stylus to minimize tracing distortion, especially in inner grooves. The moderate tracking force range of 1¾ to 4 grams permits proper operation in many existing arms. A range of interchangeable styli is offered, including the N44-3 for 78 rpm recordings. All N44 Series styli may be interchanged in any M44 Standard Series cartridge.

Net Each \$24.95

Tracking Force: Medium 1¾ - 4 grams. **Type of Stylus:** Biradial (Elliptical). **Stylus Size:** .0004" x .0007". **N44-3 Tracking Force:** Medium, 1½ - 3 grams. **Type of Stylus:** Spherical. **Stylus Size:** .0025".

Model M44E Replacement Stylus

Net Each \$12.50

Model N44-3 Replacement Stylus

Net Each \$10.00

Specifications:

Frequency Response: From 20 to 20,000 Hz. **Channel Separation:** More than 25 db at 1,000 Hz.

V-15 TYPE II IMPROVED SUPER-TRACK CARTRIDGE

Tracks difficult passages cut at highest velocities, including harpsichords, orchestral bells, cymbals, glockenspiels, vocal "S" sounds, etc. at forces as low as ¼ gram. Eliminates breakup and FM overmodulation due to tracking distortion. Smooth and clean. Extended high end... resonance well beyond 20 KHz. Especially recommended for FM good music stations and recording studios.

Net Each \$67.50

Model V-15 Type II Improved Super-Track Cartridge.

Net Each \$27.00

Model VN15E Improved Biradial (Elliptical) Stylus — fits all V-15 Type II or V-15 II-7.

Net Each \$62.50

Model V-15 II-7 Super-Track Cartridge with .0007" Spherical Stylus.

Net Each \$62.50

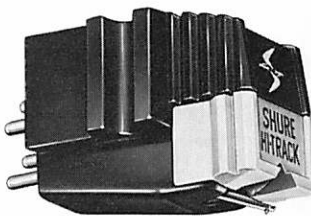
Model VN7 Stylus — .0007" Diamond Stylus fits all V-15 Type II and V-15 II-7 Cartridges.

Net Each \$24.00

Specifications:

Frequency Response: 20 to 25,000 Hz. **Channel Separation:** Over 25 db at 1,000 Hz. Over 17 db from 500 to 10,000 Hz. **Channel Balance:** Output from each channel within 2 db. **Tracking Force:** ¾ to 1½ grams.

NOTE: To realize the full performance capability of the V-15 Type II Improved, it must be used in tone arms specifically designed for proper tracking at less than 1½ grams. The Shure SME Series II is recommended.



M93E

MODEL M91E HI-TRACK CARTRIDGE

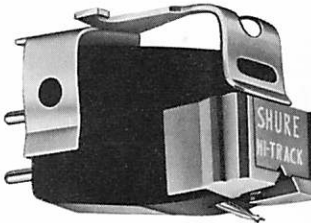
Second only to the incomparable V-15 Type II in tracking ability and clean sound... and costs about 30% less. A definite hearable step in upgrading sound quality — particularly in FM and FM Stereo operations. Elliptical stylus, ¾ to 1½ grams tracking.

Net Each \$49.95

Specifications:

Frequency Response: From 20 to 20,000 Hz. **Channel Separation:** More than 25 db at 1,000 Hz. **Stylus Replacement:** N91E Biradial (Elliptical) with diamond tip .0007 in. x .0002 in. **Tracking Force:** ¾ to 1½ grams.

Net Each \$24.50



M91E

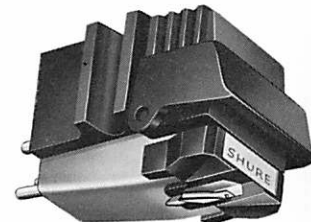
MODEL M93E BIRADIAL (ELLIPTICAL) STYLUS HIGH TRACKABILITY CARTRIDGE:

For moderate tracking at 1½ to 3 grams. .0007 in. x .0004 in. Biradial (Elliptical) diamond stylus. Very rugged and well designed for back cueing and robust operation.

Net Each \$39.95

Model M93E Elliptical replacement stylus.

Net Each \$19.50



M75-6

MODEL M75-6 SPHERICAL HIGH TRACKABILITY CARTRIDGE

The M75-6 is a member of the new generation of Shure High Trackability cartridges that provide significantly improved tracking of heavily modulated passages. With .0006" spherical stylus, 1½ to 3 grams tracking. Recommended for excellent FM and FM Multiplex operation where fine sound is required, but cost is a factor.

Net Each \$24.50

Model M65-6 replacement stylus.

Net Each \$11.35

MODEL N75-3 STYLUS FOR 78 RPM RECORDS

Fits any of the above cartridges, or V-15 Type II and V-15 II-7. .0025 in. stylus. 1½ - 3 grams tracking.

Net Each \$10.00

MODEL M68 SERIES MICROPHONE MIXER

A practical and efficient way of increasing the efficiency and flexibility of public address and paging systems, or tape recorders using more than one microphone. Each microphone or other sound source can be cut in or out of the system without loss of output level. Independent volume controls for each input, plus a master control for gain of all inputs. Unit is lightweight and portable, and easy to operate with any PA system. **Frequency Response:** 30-20,000 Hz. **Hum and Noise:** 70 dB below rated output. **Inputs:** Four microphone: Cannon XLR-type connectors for dynamic or ribbon microphone (not recommended for crystal or ceramic mikes); auxiliary input for high level tape recorder, phono or tuner. **Input Impedance:** High or low impedance, balanced or unbalanced, selected by slide switch for each input. **Outputs:** High or low impedance to mike input of PA amplifier or tape recorder; high impedance, high level output for power amplifier requiring 0.5 to 2 volts. Can be used with any type of amplifier. **Controls:** 5 input volume controls; master volume control; on-off switch for AC power or DC when used with A688 battery power supply. **Size:** 11 $\frac{3}{8}$ " wide x 5 $\frac{1}{4}$ " deep x 2 $\frac{1}{8}$ " high. **Shipping Weight,** 4 lbs.

Shure Model M68 Mixer — Male Cannon XLR-3-14 type input connections (mate with XLR-3-11C type connectors). **Net Each \$84.00**

Shure Model M68P Mixer — Same as M68 but four microphone phone jack inputs for high impedance mikes. **Net Each \$69.00**

Shure Model M68FC Mixer — Female Cannon XLR-3-13 type input connections (mate with XLR-3-12C type connectors). **Net Each \$90.00**

Shure Model M68RM Mixer — Same as M68FC but adjustable reverberation to stimulate natural reverberation or echoes of a large concert hall. **Net Each \$117.00**

MODEL M67 PROFESSIONAL MIKE MIXER

For recording, studio or remote broadcasting amplification. Provides 4 balanced mike inputs, one line input. Headphone monitor jack, two-level, illum. VU. AC or battery power. Noiseless, automatic switchover to battery if AC fails. **Frequency Response:** ± 2 dB, 20-20,000 Hz. **Gain:** 90 dB max., 150-ohm mike into 600-ohm line. **Noise:** -125 dBV. **Distortion:** Under 1%, 20-20,000 Hz. **Output Level:** $+18$ dBm max., 600-ohm line; -44 dBV max., mike. **Size:** 11 $\frac{3}{8}$ " w. x 7 $\frac{1}{2}$ " d. x 2 $\frac{1}{2}$ " h. **Wt.,** 4 lbs., 3 oz.

Shure Model M67 Mixer **Net Each \$162.00**

MODEL M63 AUDIO MASTER

For correction of room acoustics, etc. Separate continuously variable high- and low-pass filters and bass and treble tone controls. Five outputs: 600-ohm balanced line; high imp., high level; high imp., mike level; low imp., mike level, headphone monitor jack. **Frequency Response:** ± 2 dB, 20-20,000 Hz. **Distortion:** Under 1% THD at $+8$ dBm output. **Tone Controls:** Bass, $+14$, -19 dB at 100 Hz; treble, $+16$, -19 dB at 10,000 Hz. **Filters:** 6 dB/octave. **Size:** 11 $\frac{3}{8}$ " w. x 6" d. x 2 $\frac{1}{2}$ " h. **Weight,** 3 lbs., 2 oz.

Shure Model M63 Audio Master **Net Each \$96.00**

MODEL M62V "LEVEL-LOC" AUDIO LEVEL CONTROLLER

Transistorized, variable-gain amplifier that creates a "sound control zone", keeping signals coming from microphone at predetermined level — output from PA system is always smooth, intelligible, and comfortable to the ear even if the speaker shouts, talks overly close, or moves around. Unit can be powered by its self-contained battery, either M68 mixer, or from an auxiliary DC power supply. Separate on-off switch permits bypassing the Level-Loc, if desired. **Frequency Response:** ± 2 dB, 40-20,000 Hz. **Input Impedance:** 50,000 or 300 ohms. **Output Impedance:** High, 5K min. load; low, 25 ohms; aux, 10K. **Distortion:** 3% max. **Size:** 11 $\frac{3}{8}$ " w. x 5 $\frac{1}{4}$ " d. x 2 $\frac{1}{8}$ " H. **Wt.,** 2 $\frac{1}{8}$ lbs.

Shure Model M62V "Level-Loc" Controller **Net Each \$60.00**

MODEL M688 SERIES MICROPHONE MIXERS

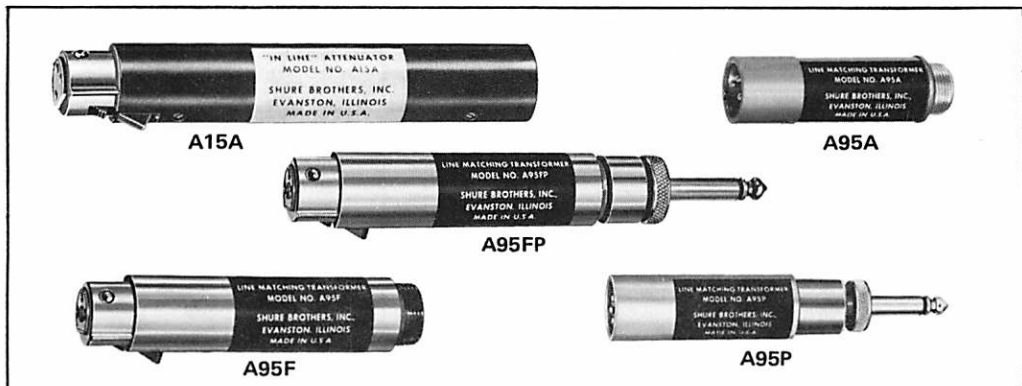
The Model M688 Stereo Microphone Mixer provides unusual versatility and excellent audio control in (1) audio-visual and multimedia presentations in which a stereo music source is used in the input "mix"; (2) for high quality amateur recording with tape recorders that do not have mixing capability; (3) for high quality, versatile sound reinforcement systems that call for simultaneous stereo recording; and (4) for location stereo recording of musical or dramatic events; and (5) for mixing sound-on-sound tape recordings. **Inputs and Outputs:** The M688 accepts four high or low impedance dynamic, ribbon or capacitor (condenser) microphones through four microphone inputs, each with its own individual volume control. Inputs #1, #2 and #3 have slide switches for "left channel" or "right channel" output; input #4 features a pan control which adjusts the apparent location of Mic. #4 to the left channel, the right channel, or anywhere in between. Stereo high-level auxiliary inputs accept signals from a tape recorder, tuner, or the output of a stereo magnetic phono preamplifier, such as the Shure M64 Series Preamplifiers. A ganged stereo master volume control simultaneously adjusts the level of all inputs. Additional inputs may be added by paralleling an M67 Mixer or additional M688 unit via the mix bus jacks. Outputs include stereo auxiliary output jacks which feed a power amplifier or the auxiliary or tuner inputs of an amplifier or tape recorder. A high or low impedance mono microphone level output ("mixed" L + R of all sources) feeds an amplifier or



tape recorder microphone level input. The auxiliary outputs may be converted to mono output by a Mono-Stereo selector switch M688. **Model M688 Mixer.** For 120 Volts AC $\pm 10\%$ 50/60 Hz. **Net Each \$190.00**

MODEL M675 BROADCAST PRODUCTION MASTER

Extremely low in noise and RF susceptibility, with wide frequency response. Four inputs, each with its own individual gain control and its own switchable "Cue" mode; two line inputs are convertible to magnetic phono inputs (RIAA equalization) through front-panel slide switches, and the other two line inputs are switchable between high impedance bridging and 600 ohm terminating line inputs. Four monitoring facilities: (1) an internal speaker built into the front panel for cue and program monitor (automatic program ducking when any channel is placed in the "Cue" position); (2) a rear-panel eight-ohm speaker output jack with the same material as the internal speaker, and with provision for external muting; (3) a front-panel headphone jack that provides an automatic muting of the internal (or external) speaker output for headphone cueing and monitoring; and (4) a rear-panel headphone jack which monitors program material only. Brackets for stacking with either the M67 or M63 are included. **Net Each \$150.00**



SHURE MICROPHONE ACCESSORIES

MICROPHONE CASES

Black plastic, impact-proof microphone cases ideal for carrying the mike, cable and accessories from place to place conveniently and safely. Foam inserts hold contents securely.

Shure Model	For Microphone Model	Net Each
AC54	545, -SD, 548, -SD	\$7.20
AC54S	545S, 548S	7.20
AC55	55S, 55SW	7.20
AC56	56S, -SD, 585, 533	7.20
AC56S	565S	7.20
AC57	576, 578	7.20
AC58	515, 580	7.20

MICROPHONE SWITCHES

On-off switches that can be easily attached to any cable-connector type mike.

- Shure Model A83B — Rotary-type on-off switch. Net Each \$7.80
- Shure Model A84B — Momentary press-to-talk on-off switch. Net Each \$7.80

MICROPHONE ATTENUATORS, EQUALIZERS, ADAPTERS

A series of 7 in-line microphone attenuators, equalizers and adapters plug-in to give instant modification of response and performance. Size: 3/4" dia. x 4 1/2" long. Color-coded nameplates; 3-pin female input, male output Cannon XL connectors.

- Shure Model A15A Microphone Attenuator — Prevents input overload. Net Each \$15.00
- Shure Model A15PR Phase Reverser — Reverses the phase of a balanced line. Net Each \$15.00
- Shure Model A15HP High Pass Filter — Provides a low frequency cut-off. Net Each \$15.00
- Shure Model A15LP Low Pass Filter — Provides a high frequency cut-off. Net Each \$15.00

MIXER AND CONTROLLER ACCESSORIES

QUICK-DISCONNECT ISOLATION UNITS

For easy removal of mike from stand for hand-held use. Molded rubber insert isolates mike from vibration.

- Shure Model A45 — For mikes with isolation assembly (i.e., Models 330, 546, 556) or using A25B swivel adapter. Satin aluminum finish. Net Each \$7.80
- Shure Model A45B — Same as A45, but black finish. Net Each \$7.80
- Shure Model A47 — For mikes with std. 5/8"-27 thread such as Models 55S, 545S, 565S, etc. Net Each \$7.80

MIXER AND CONTROLLER ACCESSORIES

- Shure Model AC60 Attache Carrying Case — Handsome slimline vinyl leatherette case holds mixer, microphones and cables. Size, 18 3/8" w. x 11 3/8" d. x 3 3/8" h. Fits M63, M67, M62 or M68 Series. Net Each \$24.00
- Shure Model A68B Battery Power Supply — Eliminates need for 115-VAC hookup. Requires U20 30-volt battery (not supplied). Use with M68 Series. Net Each \$7.50
- Shure Model A67B Battery Power Supply — For M67 mixer. May

- Shure Model A15PA Presence Adapter — Adds "presence" to vocals or instrumentals. Net Each \$15.00
- Shure Model A15RS Response Shaper — Provides sibilance filtering. Net Each \$15.00
- Shure Model A15LA Line Input Adapter — Converts balanced low impedance mike input to line level input. Net Each \$15.00

SWIVEL ADAPTERS

- Shure Model A25B Swivel Adapter — For 415, 430, 515, 530, 545, 548, 565, 580 or 585 mikes with desk or floor stand. Black finish. Net Each \$3.90
- Shure Model A57S Slip-In Swivel Adapter — For 576, 578 or 570 3/4"-dia. mikes. Net Each \$4.20
- Shure Model A57R Slip-In Swivel Adapter — For Model 571 mike. Net Each \$4.20

CABLE-TYPE TRANSFORMERS

High quality transformer for connecting low impedance mike (35-50 and 150-250 ohms) to high impedance amplifier input. Solves problem of excessive high frequency loss and hum when long lengths of cable are used. Frequency Response: 20-20,000 Hz. Size: Models A95A, A95P: 3/4" dia. x 2 1/2" lg. Models A95F, A95FP: 3/4" dia. x 3 1/2" lg. Magnetically shielded.

- Shure Model A95A — Male Cannon XL-3-12 input and Amphenol MC1M plugs installed. Mating connectors supplied. Net Each \$12.60
- Shure Model A95F — Same as above but female Cannon XL-3-13 input. Net Each \$14.40
- Shure Model A95P — Male Cannon XL-3-12 input with mating connector supplied. High impedance output terminates in phone plug with locking ring. Net Each \$13.80
- Shure Model A95FP — Same as above but female Cannon XL-3-13 input. Net Each \$15.60

be used as power source, or for standby during AC operation. Net Each \$15.00

- Shure Model A68C Output Cable Kit — Use with M68 Series, M67 or M62 to connect to virtually any amplifier. Net Each \$18.00
- Shure Model A68P Phono Preamp — Converts aux input to magnetic or ceramic phono input. Built-in scratch filter. Takes power from mixer. Use with M68 Series. Net Each \$18.00
- Shure Model A68S Stacking Kit — Stacks two mixers for 8 mike and one aux input. With brackets, cable. Fits M68 Series, M67, M62. Net Each \$3.00
- Shure Model A68SC Interconnecting Cable — For connecting mixers as above, but without stacking brackets. Use with M68 Series. Net Each \$0.75
- Shure Model A68L Locking Panel — Fastens over controls to prevent tampering. Supplied with padlock. Fits M68 Series, M62. Net Each \$7.20
- Shure Model A68R Rack Panel Kit — Standard 19" x 3 1/2" audio equipment rack panel for use with M68 Series, M67, M62. Gray hammertone finish. Net Each \$8.40
- Shure Model A67H Handle/Tilt Stand — Serves as a carrying handle or provides a locking tilt of 20° for greater controls visibility. Fits Models M67, M68, M63 or M62V. Net Each \$13.20

Talk-A-Phone Intercoms

"CHIEF" TALK-A-PHONE . . . ONE MODEL THAT MEETS EVERY REQUIREMENT

Sets a high standard for versatility and flexibility to meet every intercom need of office, factory, institution or home. Convenient push-button operation for instant, direct, two-way communication. Reduces load on busy switchboards. Exciting, modern cabinetry

combines the look and feel of fine grained leather with the strength and rigidity of steel; resistant to corrosive chemicals and atmospheres; finished in charcoal gray with brushed chrome sides and front panels.

"CHIEF" UNIVERSAL MASTER STATIONS (FIG. A)

The "Chief" with its dynasonic design, can be used in any combination — with all Master Stations — one Master and Staff Station — or a number of Masters combined with Staff Stations. 6, 12, 20, 30, 40 and 50 Station Masters, together with Staff Stations can be intermixed in the same system. Masters can talk with any other Master, as well as with Staffs. Staff Stations can answer all Masters and can originate calls to as many as 2 "private" Masters, depending upon Staff's capacity. Staff stations are not connected to electrical outlet. **Features:** All-transistor system with high gain amplifier; incorporates touch control talk-listen switch. Both Masters and Staffs equipped with busy signal that is provided with over-ride when conversation is urgent. Both Masters and Staffs are provided with an incoming call light; Masters provided with additional chime which may be cut off at user's convenience. All units may be operated both "privately" or "non-privately." Master includes junction box attached by flexible cable and built-in power supply. Reciprocal Power Supply is designed to permit up to 30% of the "Chief" Masters in a system not plugged into electrical outlets. (For best performance, however, each Master should have its own electrical outlet.) Each Master also supplied with provision for activating external relays to turn on sirens, gongs, lights, etc. **Dynasonic Design:** Permits intermixing of units, variation of performance, and additions to systems at any time. Staff Stations can be "private," or "non-private." Any Staff Station can be "non-private" to one or more Masters and "private" to others. **Multi-Magic Selector:** Allows selection of up to 30 stations with 12 pushbuttons. **Uni-Trans:** Unique provision for dictation permits speaking without operating any controls. **Optional LD Long Distance:** Available at slight additional cost built-in at factory, allows up to 40 miles of cable between Master stations. **Power:** 120 VAC. **Size:** 14" w. x 8 3/4" d. x 3 3/8" h., Masters. UL Recognized.

T-A-P Model	Fig.	Description	Wt., Lbs.	Net Each
K-C-4906	A	6 station Master	15	\$112.00
K-C-4912	A	12-station Master	15	125.00
K-C-4920	A	20-station Master	16	149.00
K-C-4930	A	30-station Master	18	173.00
K-C-4940	A	40-station Master	20	196.00
K-C-4950	A	50-station Master	22	220.00

"CHIEF" STAFF STATIONS (FIGS. B, C & D)

For use with any "Chief" Master, Staff Stations may be connected "privately" or "non-privately." Connected "non-privately," persons can answer Master at a distance from the Staff without operation of any controls. Persons at "non-private" Staffs may reply to all Masters in the system (whether connected directly with them or not) and can originate calls to one or two Masters, depending upon its capacity. Connected "privately" no one can "listen-in," but any Master can call. Private Staff can originate calls and reply to one or two Masters, depending on its capacity. Staff Stations do not need electrical outlet. **Features:** Touch control talk-listen switch; incoming call light; busy signal indicator with over-ride feature for urgent communications. Cabinet design matches Masters; fine grained leather look with strength of steel; resists corrosive atmospheres; charcoal gray finish with brushed chrome side and front panels. Metal cased units; finished in charcoal gray. **Size:** 7 1/2" w. x 8 3/4" d. x 2 7/8" h.

"CHIEF" REDI-POWER MASTER STATION (FIG. A)

All the operational features listed above, plus built-in extra power for use when needed. This added power (up to 30 watts), gives additional volume needed when calling a number of stations at one time or calling noisy locations. Return speech from called stations is received at normal volume. Needs no separate power booster which would eliminate return speech. Has self-compensating volume, whether you call 2, 10 or 20 stations simultaneously. Each station receives its predetermined volume with no division of output when you call more stations at one time. One or more Redi-Powers can be combined with regular Master and Staff Stations in same system. 120 VAC only. UL Recognized.

Talk-A-Phone Model K-CRP-5912	—	12-station Redi-Power Master.	Wt., 20 lbs.	Net Each \$185.00
Talk-A-Phone Model K-CRP-5920	—	20-station Redi-Power Master.	Wt., 21 lbs.	Net Each \$207.00
Talk-A-Phone Model K-CRP-5930	—	30-station Redi-Power Master.	Wt., 23 lbs.	Net Each \$230.00

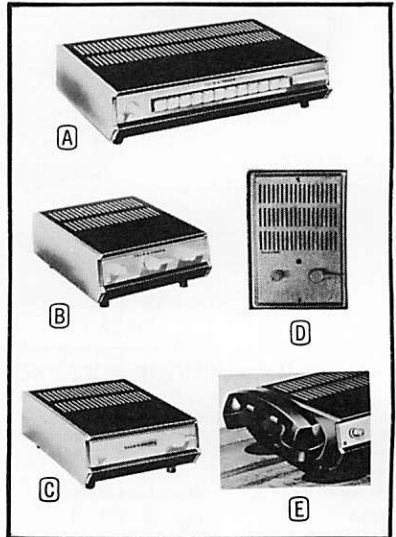
T-A-P Model	Fig.	Description	Wt., Lbs.	Net Each
K-C-41	C	Originates calls to 1 Master	5	\$29.90
K-C-41M #	C	Originates calls to 1 Master	5	24.50
K-C-42	B	Originates calls to 2 Masters	5	37.00
K-C-42M #	B	Originates calls to 2 Masters	5	32.00
K-C-41R †	D	Flush-mt. Staff Station	4	24.50
K-C-42R †	D	Flush-mt. Staff Station	5	32.00
K-SM-L	—	Wall mtg. for K-C-41R, -42R	2	5.25
K-HP-3	—	Wall mtg. metal case Staff †	9	23.20
K-HP-3V	—	Same w./built-in vol. control	—	28.20
K-C-20	—	Weatherproof re-entrant horn †	5	33.00
K-C-20V	—	Same w./built-in vol. control †	—	43.00

*Capacity, 5 watts. †Capacity, 15 watts. #Grained baked enamel finish. †With plaster ring, stainless steel front panel 4 13/16" w. x 7 3/16" h.; requires 4 1/8" w. x 6 1/2" h. x 2" d. wall opening.

OPTIONAL ACCESSORIES

CRADLE PHONE (FIG. 2.)

Available installed on all models Masters or Staffs except metal



cased and built-in units. Weight, 3 lbs. Add "H" to model number when ordering. **Add to Net \$38.00**

WALL MOUNTED CRADLE PHONE

Use as many as needed in combination with a remote speaker, as Model K-HP-3, -3V; K-C-20, -20V.

Talk-A-Phone Model K-S-111

Net Each \$46.00

LD LONG DISTANCE FEATURE

Available on all Masters; extends range up to miles of cable between Masters. Add suffix "LD" to model number when ordering.

Add to Net \$13.95

WALL SWITCHES

Talk-A-Phone Model K-S-101 — Provides for origination of call to one Master through Models K-C-20, -20V or K-HP-3, -3V in "Chief" systems. Wt., 1 lb. **Net Each \$10.30**

Talk-A-Phone Model K-S-102 — Provides for origination of call selectively to two Masters through Models K-C-20, -20V; K-HP-3, -3V in "Chief" systems. Wt., 1 lb. **Net Each \$16.60**

INTERCOM WALL BRACKETS

Wall mounting brackets for K-C-41, K-C-41M, K-C-42 and K-C-42M Staff Stations. Weight, 1 oz. per pair.

Talk-A-Phone Model K-W1 Wall Bracket

Net per Pair 60¢

RIGHT-OF-WAY RELAY

For use with Redi-Power Masters to call any group of stations with a single button. Connects to one Master; others in system also utilize the facility.

Talk-A-Phone Model K-RW-10 — Right-of-Way Relay. Capacity up to 10 stations. Weight, 7 lbs. **Net Each \$49.00**

Talk-A-Phone Model K-RW-20 — Right-of-Way Relay. Capacity up to 20 stations. Weight, 14 lbs. **Net Each \$91.00**

POWER BOOSTER

Provides ample power for paging, with 50-watt output. Use to connect group of paging speakers that cannot reply or originate calls. When used with Model K-RW-10 or K-RW-20 Right-of-Way Relay, these units can then originate calls in regular manner. 120 VAC. Size, 12" x 7 3/8" x 8 1/4" h. Wt., 24 lbs. **Net Each \$98.00**

CABLE REQUIREMENTS

To interconnect Masters, measure from the first Master to second Master only; second Master to third Master only, etc., until the last unit in the system is reached; total. For 20-station Masters, use two lengths of No. 6226 cable; for 30-station Masters, use three lengths; etc. To connect single-call Staff stations and re-entrant horn, measure from Staff to the one Master to which the Staff is to originate calls. For units originating calls to 2 Masters, measure a separate length of cable from Staff to each Master.

Talk-A-Phone No. 6206 Cable — Connects Staff stations to Masters. **Net per Foot 11¢**

Talk-A-Phone No. 6214 Cable — For interconnecting Model K-C-4906 Masters. **Net per Foot 23¢**

Talk-A-Phone No. 6226 Cable — For interconnecting any Master other than Model K-C-4906. **Net per Foot 44¢**

Talk-A-Phone No. 6902 Cable — For connecting re-entrant horn or wall mounting Staffs without origination of call. **Net per Foot 23¢**

Talk-A-Phone Intercoms

TWELVE-STATION SELECTIVE WIRELESS SYSTEM



T-LCM-8912



T-LCM-8906



T-LCS-901,2,3,4,5,6

MASTER STATION

Here is an outstanding development in the Intercommunications field — a Wireless 12-Station Selective System! Incorporating the exclusive Noise-Free "Sonic-Gate" circuit, this system offers instant two-way intercommunication to as many as 12 separate locations. **No Wiring:** Installs without cables merely by plugging into nearest electrical outlet. **Fully Flexible:** Each Master Station has six or twelve channel selector; permits six two-way conversations simultaneously if 12 Master Stations are in use. A system may consist of as few as two Stations and be added onto as more are needed. All units in system must operate from same electric service transformer. **Conferences:** By calling all Master Stations and having them tuned to the same channel, conferences may be held. **"Uni-Trans" Feature:** Provides 1-way transmission where desired; for dictating, or monitoring. **Paging:** Any Master can page Staff stations that are on the same channel. **Cabinets:** Both Masters and Staffs are custom designed to combine the look and feel of fine grained leather with the strength and rigidity of steel. Beautiful finish is charcoal gray with brushed chrome side panels. Resists abuse even from corrosive industrial liquids and atmospheres. **Power Required:** 120 VAC/DC. UL Recognized.

Model T-LCM-8912 Twelve Station Master — Complete with tubes and instructions. Size, 14" w. x 8 3/4" d. x 3 1/8" h.

Net Each \$125.00

Model T-LCM-8906 Six-Station Master — Furnished complete with tubes and instructions. Ready to use. Size, 14" w. x 8 3/4" l. x 3 1/8" h.

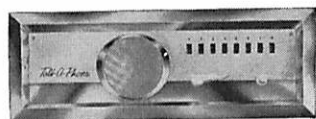
Net Each \$112.00

WIRELESS STAFF STATIONS

These Wireless Staff Stations are designed to make the 12-Station System completely flexible. By using two Staff Stations tuned to the same channel, a regular wireless intercom installation is obtained. And naturally, more than two Stations on the same channel can be used. Hundreds of uses can be found for such a system. A Master can be added at any time, expanding the system to include its obvious advantages. Wireless Staff Stations can receive and reply on a single channel only. This channel must be specified when ordering as indicated below. They can be called by and reply to any Master in the system, but Staffs cannot originate calls. Like the Master Stations, they require no wiring. Place them where they are desired, plug into an electrical outlet and they are ready for operation. Staff Stations match Master in cabinetry; charcoal gray with brushed chrome side panels. Furnished complete with tubes and instructions. Universally operate on 120 VAC/DC. UL Recognized. Size: 10 1/2" w. x 8 3/4" d. x 3 1/8" h.

T-A-P Model	Description	Net Each
T-LSC-901	Staff Station for Channel 1 only	\$64.50
T-LSC-902	Staff Station for Channel 2 only	64.50
T-LCS-903	Staff Station for Channel 3 only	64.50
T-LCS-904	Staff Station for Channel 4 only	64.50
T-LCS-905	Staff Station for Channel 5 only	64.50
T-LCS-906	Staff Station for Channel 6 only	64.50

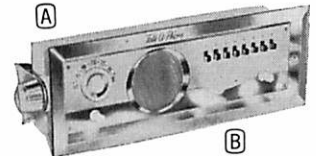
HOME INTERCOM-RADIO SYSTEM — TRANSISTORIZED



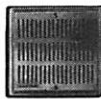
A



C



B



D

HOUSING ASSEMBLY (FIG. B)

For surface mounting of 8- or 16-station Masters or Staffs on wall or stand or shelf. Adjustable brackets permit any angle of mounting. May be easily removed for flush wall mounting of station. Gray and chrome finish.

Model HI-SM Housing Assembly Net Each \$12.90

STAFF STATION (FIG. A)

Calls any other station in system for either conversing or monitoring. Switch for tuning in radio from Central Master. Flush mounting, or use with HI-SM housing for wall or cabinet mounting. Size: Front panel, 15 1/4" x 5 3/4". Plaster ring, 14 1/8" x 4 3/8" x 3 1/8".

Model HI-8 Staff Station — Eight station capacity. With plaster ring. Instructions. Net Each \$35.00

Model HI-16 Staff Station — Same as HI-8 except has 16 station capacity. Net Each \$64.40

Model HI-4 Staff Station (Not Illus.) — Similar 4-station capacity staff station. Panel, 4 13/16" w. x 7 3/16" h.; mounts in 4 1/2" w. x 6 1/2" h. x 2" d. wall opening with L-PR plaster ring. Requires type 6214 cable for connection. Net Each \$21.00

Model K-SM-L Mounting Accessory — Optional for surface mounting HI-4 on wall. Net Each \$5.25

OUTDOOR SUB-STATIONS (FIGS. C & D)

Model HI-1 Sub-Station (Fig. C) — With pushbutton to connect regular doorbell or chime; and, illuminated name plate. May be answered by any Master or Staff; no controls of its own. Weather resistant speaker; flush mounting panel 3 3/8" x 5 5/8"; requires 2" x 2" x 2" wall opening. Net Each \$18.20

Model K-LR-2R Alternate Sub-Station (Fig. D) — For flush mounting. Stainless steel front panel 4 13/16" sq. Has no pushbutton or name plate. Plaster ring supplied. Requires 4 1/8" sq. x 2" d. wall hole. Net Each \$17.50

Model K-SM Mounting Accessory — Optional unit for surface mtg. of K-LR-2R on wall. Net Each \$4.65

JUNCTION BOX AND POWER SUPPLY

Model HI-JB8 Junction Box — For connecting Masters and Staffs up to a total of eight stations. Net Each \$5.50

Model HI-JB16 Junction Box — Same as above, but for connecting up to 16 stations. Net Each \$9.70

Model HI-PS Power Supply — Eliminates battery. Plugs into 120 VAC line; provides DC power to run system. Net Each \$18.20

CONNECTING CABLES

Individually vinyl-plastic covered conductors with overall plastic jacket; for outdoor or indoor use.

No. 6226 Cable — For 8- or 16-Station Master-Staff connections. 13-pair; O.D. 5/8". Net Per Foot 44¢

No. 6214 Cable — For HI-4 Staff Stations; 7-pair; O.D. 1/2". Net Per Foot 23¢

No. 6202 Cable — For Outdoor Sub-Stations, battery or power supply. 1-pair. Net Per Foot 4 1/2¢

Brings safety and convenience to the home; plus, radio that plays anywhere in the house. Permits up to 16 stations placed wherever you want them. All transistor design for dependable performance, low electricity consumption. Optional, built-in radio is advanced design, superheterodyne type for sensitivity, selectivity. Finished in polished gold and satin silver tones. Operates on 9-volt battery or 120 VAC power supply. All Masters and Staffs feature exclusive Dynasonic selector for private or non-private conversations as desired. All masters and staffs have volume controls and are switchable for reception of radio.

CENTRAL MASTER STATION (FIGS. A AND B)

Versatile unit can call any station for conversing or monitoring, as desired. Unit contains the amplifier for the whole system, plus built-in radio (optional). Only one Central Master is required for a system, but Additional Masters may be used where separate radio facilities are desired in addition to the Central Master radio. Both Central and Additional Masters can be recessed in wall for flush mounting; or, for cabinet or shelf mounting utilize Housing Assembly HI-SM (as Fig. B). Size: Front panel, 15 1/4" x 5 3/4". Plaster ring, 14 1/8" x 4 3/8" x 3 1/8".

Model HI-9 Central Master (Fig. A) — Flush wall mounting; 8 station capacity. Without radio. Plaster ring and instructions provided. Less battery. Net Each \$61.50

Model HI-17 Central Master Station — Same as HI-9, but with 16 station capacity. Net Each \$91.50

Model HI-9R Central Master With Radio — Same as HI-9, but with built-in radio. Net Each \$95.50

Model HI-29R Additional Master — With built-in radio; not replacement for Central Master. Complete, less battery. Net Each \$95.50

Talk-A-Phone INTERCOMS

DELUXE INTERCOM SYSTEMS

Instant, direct two-way conversations are provided at a flick of a finger. Modern, custom designed cabinetry combines the look and

Quality systems for office, industry, and home. Installs easily. Operates continuously for pennies a day.

feel of fine grained leather; rigid and strong as steel; charcoal gray and brushed chrome finish resists abuse. Masters have translucent illuminating indicator when "on". Size: Master, 10 1/2" w. x 8 3/4" d. x 3 1/2" h.; substations, 7 1/2" w. x 8 3/4" d. x 2 1/2" h.

TRANSISTORIZED MASTER SELECTIVE SYSTEMS (FIGS. A, B, C & D)

Consists of one Master and one to ten Sub-Stations, arranged as in Fig. C. Master can talk and listen to any or all Sub-Stations. Sub-Stations do not communicate with each other. Only the Master plugs into electrical outlet. Start with only one Master and one or two Sub-Stations and add more when necessary. Sub-Stations can be connected "privately" or "non-privately" and still originate calls to Master. Once a conversation has been initiated with "non-private" system, Sub-Stations need operate no controls and can reply from a distance. For "private" operation, Master cannot "listen in" on Sub-Stations. However, they can reply when called and can originate calls to the Master. Operates universally on 110-120 VAC/DC. UL Recognized. Models **K-AC-5406**, **-5411** have added feature of 10 times the volume output; for use in large or noisy locations; 120 VAC only. **Only one Master may be used in these systems.** Use No. 5303 or 6303 cable listed elsewhere.



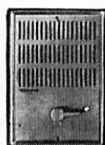
A



B



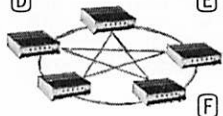
C



D



E



F



G



H

Model	Fig.	Description	Lbs.	Net
K-ML-5	A	Master that handles up to 5 Sub-Stations	7	\$49.95
K-ML-10	A	Master that handles up to 10 Sub-Stations	7	61.50
K-AC-5406	A	High volume output Master for up to 5 Sub-Stations	7	61.50
K-AC-5411	A	High volume output Master for up to 10 Sub-Stations	7	73.30
K-LR-3	B	Sub-Station for use with any Master	4 1/2	21.95
K-LR-3M	B	Grained baked enamel finish version of K-LR-3	4 1/2	17.50
K-LR-3R†	D	Flush-mtg. Sub-Station for above Masters	4	17.50
K-SM-L	—	Optional surface mount for K-LR-3R on wall	2	5.25
K-HP-3††	—	Hi-power Staff Station (wall mt.), gray metal case	9	23.20
K-C-20●	—	9" weatherproof re-entrant horn, gray color	5	33.00
K-S-100	—	Call origination wall switch for K-C-20 or K-HP-3	1	4.95
K-W1	—	Optional pair of wall brackets for K-LR-3, K-LR-3M	1 oz.	.60
"H"***	—	Cradle phone optional on all units except K-LR-3R, K-HP-3 & K-C-20. Add suffix "H" to model number.	3	38.00
5303	—	3-cond. indoor, Subs-to-Master cable	1#	.04**
6303	—	3-cond. shielded indoor-outdoor cable	2#	.06 1/2**

TRANSISTORIZED SUPER SELECTIVE SYSTEMS (FIGS. A & F)

A system of all Master Stations that interconnect as in Fig. F. Any station can call any other station, permitting several completely private conversations at the same time. Versatile, low cost system; stations can be located up to 1000 ft. apart. Each station has variable volume controlling incoming voice. Start with two or three Masters and add more later, as many as required. Operates universally on 110-120 VAC/DC. UL Recognized. Models **K-AC-505** and **K-AC-510** have added feature of 10 times the volume output; 120 VAC only; cannot be intermixed with any other Master; ideal for noisy locations.

K-LS-5	A	Master for use in up to 5-Master system	7	\$49.95
K-LS-10	A	Master for use in up to 10-Master system	7	61.50
K-AC-505	A	High volume Master for 5 Masters	7	61.50
K-AC-510	A	High volume Master for 10 Masters	7	73.30
"H"***	—	Cradle phone optional for any Master	3	38.00
5506	—	6-cond. cable for K-LS-5 and K-AC-505 systems	3#	.11*
9911	—	11-cond. cable for K-LS-10 and K-AC-510 systems	5#	.21*

TRANSISTORIZED COMBINATION SYSTEMS (FIGS. A, E, G & H)

A more flexible multiple-Master system with Sub-Stations that can answer, but cannot originate calls. Masters talk to Masters or Sub-Station selectively. All calls can be answered by personnel as far as 25 to 40 ft. away from unit. Master stations are optionally "private" or "non-private" at will. Only the Masters plug into the power source. Begin your system with two stations (one of which must be a Master) and add other units as required. For 110-120 VAC/DC. UL Recognized. **K-AC-605**, **K-AC-610** have added feature of 10 times the volume output; 120 VAC only; cannot be intermixed with other Masters.

K-CL-5	A	Master that handles up to 5 other stations	7	\$59.95
K-CL-10	A	Master that handles up to 10 other stations	7	72.00
K-AC-605	A	High volume Master for 5-station use	7	72.00
K-AC-610	A	High volume Master for 10-station use	7	83.30
K-S-111■	—	Wall-mounted cradle phone for K-HP-3 or K-C-20	—	46.00
K-LR-2	G	Sub-Station for use with any Master	4 1/2	21.95
K-LR-2M	G	Baked enamel finish version of K-LR-2	4 1/2	17.50
K-LR-2R†	E	Flush-mtg. Sub-Station for above Masters	4	17.50
K-SM	—	Optional wall surface mount for K-LR-2R	1	4.65
K-HP-3††	—	Hi-power staff station (wall mt.), gray metal case	9	23.20
K-C-20●	—	9" weatherproof re-entrant horn, gray color	5	33.00
K-W1	—	Optional pair of wall brackets for K-LR-2, K-LR-2M	1 oz.	.60
6210	—	5-pair cable for 5-station Masters	5#	.20*
6226	—	13-pair cable for 10-station Masters	12#	.44*
6902	—	2-conductor cable for Sub-Station to Master use	1#	.02 3/4**

*Per foot. †With plaster ring; requires 4 1/2" w. x 6 1/2" h. x 2" d. wall opening; stainless steel front panel requires 4 1/2" w. x 7 1/2" h. ††Stainless steel front panel 4 1/2" sq.; requires 4 1/2" sq. x 2" d. wall opening. #Wt. per 100'. †††For built-in volume control, add suffix V (K-HP-3V); Net \$28.20. ●For built-in volume control, add suffix V (K-C-20V); Net \$43.00. ***For separate, wall-mounted cradle phone, order K-S-111; Net \$46.00. ■Used in combination with K-HP-3 or K-C-20.

TRANSISTORIZED TWO-STATION SYSTEM (FIGS. B & I)

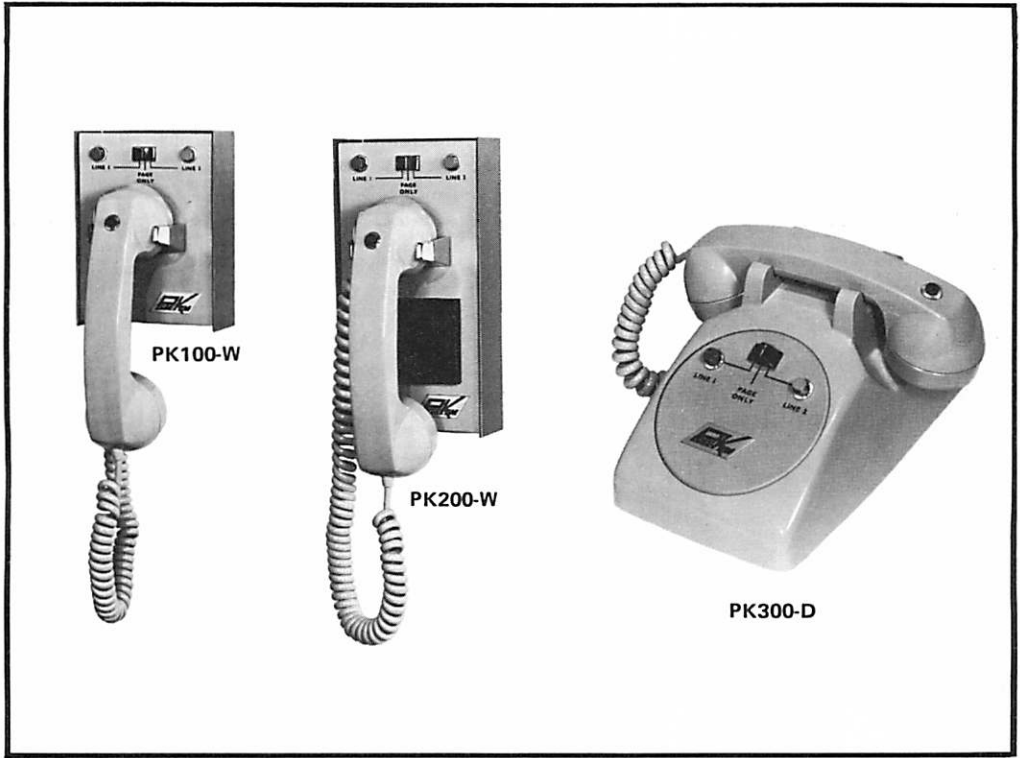
Complete transistorized two-station system Master station, Sub-Station and 50 ft. interconnecting cable; additional cable is available for distances up to 2000 ft. Easy to install and operate. Sub-Station features built-in "private" or "non-private" selectivity; when "private", Master may not "listen in" though Sub-Station can answer or originate calls. Master is equipped with translucent indicator to show when system is "on". Amplifier is rugged, high-gain unit built to withstand continuous use and requiring a minimum of maintenance. Volume is fully adjustable. Cabinet finish is identical with multiple-system units, above. Operates universally on 110-120 VAC/DC. UL Recognized.

Talk-A-Phone Model K-LC-2 System — Complete with 50 ft. of cable. Weight, 11 1/4 lbs. Net Each \$51.50
Talk-A-Phone Model H Cradle Phone — Wt., 3 lbs. Net Each \$38.00
Talk-A-Phone Model K-W1 Wall Brackets — Net per Pair 60c
Talk-A-Phone No. 5303 Cable — 3-conductor cable. Net per Foot 4c
Talk-A-Phone No. 6303 Cable — 3-conductor; indoor-outdoor. Net per Foot 6 1/2c

CABLE REQUIREMENTS

For Master Selective Systems: Measure from each Sub-Station to Master and order total.
For Super Selective Systems: Measure from first Master to second Master, only; second to third Master, only, etc., and total. Cable between first and last Master not necessary.
For Combination Systems: Measure for Masters as in Super Selective System; then measure each Sub-Station to nearest Master.

Soundolier INTERCOMS



PAGEKOM® IS AN ENTIRELY NEW SYSTEM BY SOUNDOLIER!

Designed to meet the paging and intercom demands of both office and industrial use. Its modern design is compatible with any interior decor, yet ruggedly built to last for many years. PageKom is as simple to operate as your telephone. Light indicator tells you at a glance which line is in use . . . you select your line with the simple flick of a switch . . . your control for paging is right on the phone handle, giving you the freedom to page from any phone station.

FEATURES:

- **QUIET DEPENDABILITY** . . . PageKom eliminates "squawk box" sound. Telephone control keeps your conversation private.
- **MODERN DESIGN** . . . Basic beige and dark brown color complementary to most conventional color schemes. Custom color available on special order.
- **NO FEEDBACK** . . . Annoying speaker feedback has been completely eliminated.
- **EASY ADD ON** . . . The PageKom system operates up to 30 phone stations from the basic control unit. If you need to increase the number of phone stations, it can be done easily and economically without having to change to an entirely different system.
- **VOLUME**

CONTROL BUILT IN . . . All phone models with built-in speakers have a simply adjusted volume control which you can regulate to suit individual conditions.

- **BACKGROUND MUSIC** . . . Your existing or planned background music system can be intergrated with PageKom.

OPERATES ANYWHERE INTERCOM/PAGING IS DESIRED

- Office Buildings • Supermarkets • Lumber Yards • Warehouses • Department Stores • Hotels/Motels • Manufacturing Plants/Auto Agencies • Freight Loading Centers.

THREE MODELS TO CHOOSE FROM:

PK-100W (Less Speaker)	Net Each \$44.63
PK-200W (With Speaker)	Net Each \$55.13
PK-300-D (With Speaker)	Net Each \$63.38

ACCESSORIES (NOT SHOWN)

PKC24-30 Power Supply Control Unit	Net Each \$96.00
PK10-J Junction Box	Net Each \$2.93
PK10-T Terminal Box (With 10 Conductor Cable)	Net Each \$8.63

Can be used with any Audio Amplifier.

- Advanced, Conservative Solid State Design
- Printed Circuit Boards for All Input Circuits, Intermediate Amplifier and Controls
- Designed for Continuous Operation at Full Output from -20° C to +65° C
- Simultaneous Mixing of Up to Three Input Signals

Four versatile, popularly priced PA amplifiers offering rugged, solid state design; automatically wave-soldered printed circuit boards for all input circuits, intermediate amplifier and controls; and safe, continuous-duty operation at full output from -20° C to +65° C (-4° F to +149° F). Up to three input signals can be simultaneously mixed; e.g., two mikes and a tuner, tape recorder or phono. An optional panel-mounting preamplifier (see PMA-2 accessory, below) provides two additional high or low-impedance mike inputs for a total of up to four mikes. High input sensitivity, low noise and hum, and wide frequency response for maximum clarity and intelligibility. Heat sinks are mounted on nylon bushings, not thermally connected to chassis.

- High or Low-Impedance Mike Inputs (No Transformer Needed)
- Optional Panel-Mounting Mike Preamplifier Available for Two Additional Mike Inputs
- High Input Sensitivity; Low Noise and Hum
- Separate Master Volume, Bass, Treble Controls
- Constant-Voltage Output Taps; Mike Precedence Provision

Built-in remote control circuit permits adjustment of volume from distances up to 2000 ft. "Memory Markers" aid in returning controls to previously determined levels. Constant-voltage output taps facilitate addition of matching transformers for multiple speaker systems. Other features include: High-impedance mike inputs with adapters to work with MC1F or standard phone plugs; bridging connection for feeding unbalanced signal to tape recorder; provision for microphone precedence; separate Master Volume, Bass and Treble controls; two quick-disconnect speaker sockets, plus screw terminals; provision for 12-volt battery operation (Models CHS35 and CHS20 only); compact, attractive styling.



CHS100, CHS50, CHS35

CHS100 100-WATT AMPLIFIER

Special design features include all-silicon solid state circuit, oversize military-type heat sinks, and push-to-reset circuit breaker. **Power Output:** 100 watts. **Frequency Response:** ±2 dB, 40-20,000 Hz. **Hum and Noise:** Mike, 65 dB, and aux, 70 dB below rated output. **Sensitivity:** Low-impedance mike, 0.3 mV; high-impedance mike, 4.0 mV; aux, 0.3 V; bridging, 1.0 V. **Inputs:** Two mike (100,000 or 200 ohms unbalanced); aux (two inputs on fader), 300,000 ohms; high-impedance bridging (1.0 V). **Output Impedance:** 2, 8 and 16 ohms; 25 VCT balanced (6 ohms); 70 V balanced (49 ohms); tape/booster, 10,000 ohms (5.0 V); high-impedance bridging (0.5 V). **Controls:** Mike 1; Mike 2; Fader (for Aux 1 and 2); Master Volume; Bass (+10 dB to -10 dB at 50 Hz); Treble (+10 dB to -10 dB at 10 kHz); Power switch. **Semiconductors:** 10 transistors, 2 diodes. **Power Required:** 190 W, 105-125 VAC, 50/60 Hz. **Size:** 15¼" w. x 10½" d. x 5½" h. Shipping Weight, 23 lbs.

Bogen Model CHS100 Amplifier—Net Price..... \$172.75

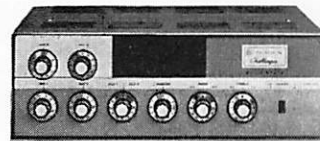


CHS50

CHS50 50-WATT AMPLIFIER

Lower-powered version of CHS100, above. Includes all-silicon solid state design and built-in circuit breaker. **Power Output:** 50 watts. **Frequency Response:** ±2 dB, 40-20,000 Hz. **Hum and Noise:** Mike, 67 dB, and aux, 70 dB below rated output. **Sensitivity:** Low-impedance mike, 0.5 mV; high-impedance mike, 3.0 mV; aux, 0.2 V; bridging, 1.0 V. **Inputs:** Two mike (100,000 or 200 ohms unbalanced); aux (two inputs on fader), 300,000 ohms; high-impedance bridging (1.0 V). **Output Impedance:** 4, 8 and 16 ohms; 25 VCT balanced (12 ohms); 70 V balanced (100 ohms); tape/booster, 10,000 ohms (5.0 V); high-impedance bridging (0.5 V). **Controls:** Mike 1; Mike 2; Fader (for Aux 1 and 2); Master Volume; Bass (+10 dB to -10 dB at 50 Hz); Treble (+11 dB to -12 dB at 10 kHz); Power switch. **Semiconductors:** 10 transistors, 2 diodes. **Power Required:** 105 W, 105-125 VAC, 50/60 Hz. **Size:** 15¼" w. x 10½" d. x 5½" h. Shipping Weight, 21 lbs.

Bogen Model CHS50 Amplifier—Net Price..... \$139.35

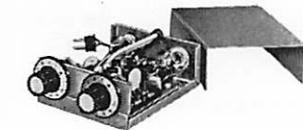


CHS35
Shown with PMA-2

CHS35 35-WATT AMPLIFIER

Can be operated from 12-volt battery as well as 105-125 VAC. **Power Output:** 35 watts. **Frequency Response:** ±2 dB, 60-15,000 Hz. **Hum and Noise:** Mike, 64 dB, and aux, 67 dB below rated output. **Sensitivity:** Low-impedance mike, 0.6 mV; high-impedance mike, 4.0 mV; aux, 0.5 V; bridging, 1.0 V. **Inputs:** Two mike (100,000 or 200 ohms unbalanced); aux (two inputs on fader), 300,000 ohms; high-impedance bridging (0.6 V). **Output Impedance:** 4, 8 and 16 ohms; 25 V (16 ohms); 70 V (143 ohms); tape/booster, 10,000 ohms (5.0 V); high-impedance bridging (0.5 V). **Controls:** Mike 1; Mike 2; Fader (for Aux 1 and 2); Master Volume; Bass (+8 dB to -23 dB at 50 Hz); Treble (+8 dB to -15 dB at 10 kHz); Power switch. **Semiconductors:** 7 silicon, 2 germanium, 3 diodes. **Power Required:** 75 W, 105-125 VAC, 50/60 Hz (3 amps at 12-15 VDC). **Size:** 15¼" w. x 10½" d. x 5½" h. Shipping Weight, 17 lbs.

Bogen Model CHS35 Amplifier—Net Price..... \$116.70



PMA-2

CHS20 20-WATT AMPLIFIER

Similar to CHS35 above, except one microphone input. **Power Output:** 20 watts. **Frequency Response:** ±2 dB, 50-15,000 Hz. **Hum and Noise:** Mike, 66 dB, and aux, 70 dB below rated output. **Sensitivity:** Low-impedance mike, 0.6 mV; high-impedance mike, 4.0 mV; aux, 0.5 V; bridging, 1.0 V. **Inputs:** One mike (100,000 or 200 ohms unbalanced); aux (two inputs on fader), 300,000 ohms; high-impedance bridging (1.0 V). **Output Impedance:** 4, 8 and 16 ohms; 25 V (31 ohms); 70 V (250 ohms); tape/booster, 10,000 ohms (5.0 V); high-impedance bridging (0.5 V). **Controls:** Mike 1; Fader (for Aux 1 and 2); Master Volume; Bass (+8 dB to -19 dB at 50 Hz); Treble (+12 dB to -15 dB at 10 kHz); Power switch. **Semiconductors:** 6 silicon, 2 germanium, 3 diodes. **Power Required:** 46 W, 105-125 VAC, 50/60 Hz (2 amps at 12-15 VDC). **Size:** 15¼" w. x 10½" d. x 5½" h. Shipping Weight, 15 lbs.

Bogen Model CHS20 Amplifier—Net Price..... \$101.50

ACCESSORIES

Bogen Model PMA-2 Microphone Preamplifier—Mounts on amplifier panel to provide two additional high or low-impedance mike inputs (no transformers required for low impedance). Knobs come through front of amplifier (see illustration). **Size:** 3½" w. x 4¾" d. x 1½" h. Shipping Weight, 2 lbs. Net Price..... \$37.45

Bogen Model RPK-27 Rack Panel Mounting Kit—Includes all hardware. Gray metallustre finish. **Size:** 19" w. x 7" h. Shipping Weight, 9 lbs. Net Price..... \$22.45
Zone 2: 23.25

We also stock these other accessories to increase the operating flexibility of "CHS" Series PA amplifiers: LK-10 tamper-proof locking cover; manual phono tops, LPC-4 4-speed AC motor; LVP-1 plug-in remote controller/precedence control; RVC-2 remote controller; WMT-1 plug-in 500/600 ohm, input/output transformer; CC128 carrying case with built-in speakers.

TRANSISTORIZED MOBILE AMPLIFIERS

MU1250 UNIVERSAL 50-WATT MOBILE PA AMPLIFIER



MU1250

Transistorized amplifier operates on either 12 volts DC or 117 volts AC, at a temperature range of -20° C to $+65^{\circ}$ C. Inputs provided for two microphones (high or low impedance), one magnetic phono or tape playback head and two auxiliary inputs. Separate bass, treble, and master-volume controls. Includes AC and DC power cables and back cover. Plug-in transformer not required. **Power Output:** 50 watts at 10%, continuous. Peak power, 70 watts. **Frequency Response:** ± 2 dB, 30-15,000 Hz. **Gain:** Microphone, 125 dB; aux, 95 dB. **Hum and Noise:** Microphone, -65 dB; aux, -70 dB below rated output. **Inputs:** Two microphone (high or low impedance); one mag. phono or tape head; two auxiliary. **Output Impedance:** 4, 8 and 16 ohms; balanced 25-volt line; 70-volt (122 ohms), balanced. **Transistors and Silicon Rectifiers:** (14) 2-2N3053, 7-2N2712, 2-2N1557, 3-MR322. **Power Consumption:** 117 VAC, 12 VDC; 116 watts, 6.7 amps; (quiescent) 16 watts, .3 amp. **Size:** $15\frac{3}{4}$ " w. x 10 " d. x $6\frac{3}{4}$ " h. Shipping Weight, 23 lbs.

Bogen Model MU1250 Amplifier—Net Price.....\$181.35

BT35A TRANSISTORIZED MOBILE 40-WATT PA AMPLIFIER



BT35A

Ideal for police, fire, Civil Defense and navigation applications. Radio receiver easily connected to auxiliary input. Chassis sealed securely in cabinet with splashproof gasket. Built-in RF and line filters; polarity protection. Mounts with adjustable fixed lock bracket. Operates over temperature range of -20° C to $+65^{\circ}$ C. **Power Output:** 40 watts at less than 10% distortion, continuous. **Peak Power:** 55 watts. **Frequency Response:** ± 3 dB, 150-15,000 Hz. **Gain:** Microphone, 110 dB; aux, 90 dB. **Hum and Noise:** Microphone, -90 dB; aux, -95 dB below rated output. **Sensitivity:** Microphone, 1 mV; aux, 0.4 V. **Inputs:** One low impedance microphone; one high level aux for tuner/tape/phono; one high level aux for tone signal. **Output Impedance:** 4, 8 and 16 ohms. **Controls:** Microphone; Aux Volume; 4-Position Selector/Power Switch. **Transistors:** 2-2N2431, 1-2N555, 2-2N1557; 1 silicon diode. **Power Consumption:** 3.6 amps at full power, .42 amp quiescent, 12-15 VDC. **Size:** 8" w. x $6\frac{1}{4}$ " d. x 3" h. Shipping Weight, 8 lbs.

Bogen Model BT35A Amplifier—Net Price.....\$92.70

BT20A TRANSISTORIZED MOBILE 20-WATT PA AMPLIFIER



BT20A

Economical design for general, mobile public address applications. **Power Output:** 20 watts at less than 10%, continuous. **Gain:** 110 dB, mike; 90 dB, aux. **Hum and Noise:** -90 dB at rated output, mike; -95 dB, aux. **Sensitivity:** 1 mV, mike; 0.4 volt, aux. **Inputs:** One low impedance microphone; one aux (tuner, tape or phono). **Output Impedance:** 4, 8 and 16 ohms. **Controls:** Microphone; Aux/Power. **Transistors:** 2-2N2926, 1-40234, 2-DTG-110. **Power Consumption:** 2.8 amps at full power; 0.26 amp quiescent, 6-15 VDC (6 watts output on 6 VDC). **Size:** $4\frac{1}{2}$ " w. x 4" d. x $6\frac{1}{2}$ " h. Shipping Weight, 4 lbs.

Bogen Model BT20A Amplifier—Net Price.....\$67.95

BACKGROUND MUSIC EQUIPMENT

RM300 AM/FM RECEIVER AND TP160 MONOPHONIC TUNER

High fidelity, professional quality, AM/FM receiver for the finest background music systems. Features ceramic and mechanical filters, interchannel muting, tuning meter, flywheel tuning, FET front end, IC circuitry and line cord FM antenna. Built-in telephone input permits paging override from Bogen-phones 6—TQ-6A, 12—TQ-12A, 7—TSL-8 or 15—TSL-16 (with power supply and paging adapter). For mike precedence, momentary SPST switch is required on mike or separate. **Power Output:** 30 watts rms at less than 1% distortion. **Frequency Response:** ± 2 dB, 30-15,000 Hz, FM. **Sensitivity:** 1.5 μ V for 30 dB quieting, FM. **Hum and Noise:** -80 dB. **Inputs:** Mike (XLR-311C or Bogen CON-1 connector), hi-Z; use TM200 transformer for low-Z; Magnetic phono; Aux, for either 8-track or cassette deck. **Outputs:** 4, 8 and 16 ohms; 25 V and 70 V line; tape/booster amplifier output. **Controls:** Power; Volume; Mike Volume (and precedence); Mike Selector; Program Selector; Bass; Treble; Tuning; Speaker Selector. **Power Required:** 0.65 amp, 120 VAC, 50/60 Hz. **Size:** $16\frac{1}{2}$ " w. x $14\frac{1}{4}$ " d. x $3\frac{3}{4}$ " h. with brushed aluminum front panel and black wrinkle enclosure. Mounts on rack in $3\frac{1}{2}$ " x 19 " space using RPK-32 brackets (see accessory page). Shpg. Wt., 20 lbs.

Bogen Model RM300 AM/FM Monophonic Receiver—
Net Price.....\$239.95

Bogen Model TP160 AM/FM Monophonic Tuner—Tuner portion of above receiver has same specifications for reception, filtering and sensitivity. Use with any good quality amplifier for superior music. **Size:** $14\frac{1}{2}$ " w. x $11\frac{3}{4}$ " d. x $3\frac{3}{4}$ " h. with brushed aluminum front panel, black wrinkle case. Use RPK-31 bracket (see accessory page) for rack mounting in $3\frac{1}{2}$ " x 19 " space. Shpg. Wt., 10 lbs.

Net Price.....\$165.00

8P-M TAPE CARTRIDGE 8-TRACK PLAYBACK DECK

Handy, add-on deck for RM300 or any PA amplifier with aux input. Has "Y" adapter permitting playing 8-track stereo, 4-channel cartridges into monophonic systems. Features hysteresis-synchronous motor, automatic channel advance, channel indicator, manual channel selection. Micro-balance track adjustment improves signal-to-noise and response; eliminates channel interference. Comes with walnut enclosure for shelf or table mounting, audio leads and "Y" adapter. For 120 VAC, 60 Hz operation. **Size:** $9\frac{1}{4}$ " w. x $8\frac{1}{4}$ " d. x $4\frac{1}{2}$ " h. Shpg. Wt., 10 lbs.

Bogen Model 8P-M Tape Cartridge Playback Deck—
Net Price.....\$79.95

622N-72A



RM300



TP160



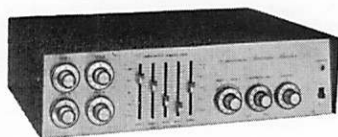
8P-M

BOGEN SERIES "CT" SOLID STATE PA AMPLIFIERS, SOUND COLUMNS

ACOUSTA-MASTER CT, SERIES PA AMPLIFIERS

WITH BUILT-IN ANTI-FEEDBACK EQUALIZER AND ELECTRONIC COMPRESSOR

- Five equalizer filters with slide controls provide unique anti-feedback and tone-control circuit.
- Built-in electronic compressor, adjustable by front panel control, assures constant output for a wide variation in input.
- Volume of two MIC and one AUX channels can be controlled from remote point by means of LVP-1 and RVC-2 accessories.
- MIC precedence on two MIC and one AUX channels with LVP-1.
- Special circuitry protects the amplifiers at both inputs and outputs against accidental misuse, overload or short circuit. Automatically resets without need for replacing fuses or re-setting circuit breakers.
- Rack panel kit available for rack mounting.
- Plug-in transformer provides balanced microphone inputs at 50, 200 and 500 ohms in CT series amplifiers.
- All solid state amplifier; silicon transistors and diodes used exclusively.
- 500/600 ohm telephone line can be fed either to input or from output by use of accessory WMT-1 transformer.
- Line cord terminated in three-prong plug provides automatic grounding of amplifier.
- Three-conductor broadcast type connectors provided for input of each MIC channel.
- Two phone-type quick-disconnect jacks provided for speaker outputs.
- Two similar amplifiers can be bridged together to increase number of inputs and parallel outputs.
- High-level tape outputs provided both before and after equalizer controls.



Powerful, all silicon-transistor amplifier boasts unique built-in equalizer filter circuitry and electronic compressor. Five acoustic equalizer filters with front panel slide controls provide highly effective anti-feedback and tone-control circuit; permits boosting or attenuating any of five selected frequencies to "tune out" acoustic feedback. Adjustable built-in electronic compressor assures uniform output regardless of input level variations such as may result from erratic microphone technique. Wide variety of built-in and accessory inputs affords extraordinary versatility including inputs for 4 high impedance mikes, each convertible to low impedance, with plug-in transformer. Plug-in transformer provides balanced microphone inputs at 50, 200, and 500 ohms. Solid-state circuitry employs all silicon transistors and diodes. Self-restoring cutout in output circuit protects power transistors against damage from accidental shorting or disconnecting of speaker lines. Unit can be bridged with similar amplifier to increase number of inputs and parallel outputs. **Power Response:** -2 dB, 60-12,000 Hz at 5% distortion. **Frequency Response:** ±2 dB from 50-15,000 Hz. **Sensitivity:** High-impedance mike, 3 mV; low-impedance mike, 0.3 mV; bridging input, 30 mV; auxiliary, 0.3 V. **Output Levels:** Bridging, 30 mV; tape, 0.68 V. **Hum and Noise:** Mike, 60 dB below rated output for both low and high impedance; auxiliary, 70 dB below rated output; fundamental, 80 dB below rated output. **Inputs:** 4 high-impedance microphone inputs, each convertible to low-impedance microphone; 2 auxiliary inputs with fader control; bridging input;

500/600 ohms telephone line with optional WMT-1 accessory; 3 inputs for remote volume control. Three-conductor broadcast type connectors are provided for input of each microphone channel. **Outputs:** 4, 8, 16 ohms speaker taps; 25 volts CT and 70 volts balanced lines. Tape, booster and bridging outputs; 500/600 ohms telephone line output with WMT-1 optional accessory. High-level tape outputs provided both before and after equalizer controls. **Controls and Indicators:** 4 mike volume controls, aux 1/aux 2 fader, master volume control, 5 equalizer filter slide controls, (= 10 dB at 80 Hz, 300 Hz, 1 kHz, 3 kHz, 10 kHz), compression limiter (5 msec attack time; 2 sec decay time; max. compression 30 dB), power-on/off switch and power-on indicator lamp. Line fusing has resettable circuit breaker. Line cord has three-prong plug to provide automatic grounding of amplifier. **Power Required:** 120 V, 50/60 Hz; regulation, 2 dB. **Size:** 16 3/4" w. x 13 3/4" d. x 4 1/4" h. Durable, metal case.

Bogen Model	Power Output at 2% Distortion	Shpg. Wt., Lbs.	Net Price
CT-30	30 watts	19	\$183.60
CT-60	60 watts	22	214.20
CT-100	100 watts	26	260.10

Accessories Available: Carrying case, phono top, plug-in transformers for low impedance and 500/600 ohm telephone line inputs, rack panel brackets, control-guard locking plate, remote volume control, mic precedence.

SOUND COLUMNS

These carefully engineered units provide the practical, economical answer to difficult sound reinforcement installations. By precisely restricting sound projection to a 25° vertical pattern (120° horizontal), they greatly reduce dispersion into undesirable areas. This minimizes reflections which produce feedback "howl", simplifies microphone placement, and prevents "blasting". Excellent for churches, auditoriums, night clubs, and other locations presenting difficult acoustic problems. Offer rugged plywood construction in choice of oiled walnut or painted utility finish.

Bogen Model SCW80 Oiled Walnut—Power rating, 80 watts continuous. Response, 50-15,000 Hz. Speakers, six 8", 11 ohms. Impedance, 16 ohms. Effective throw, 200 ft. Terminals, two-screw polarized terminal strip. Size, 52" h. x 7 1/4" d. x 11 1/2" w. Finish, oiled walnut. Shpg. Wt., 48 lbs. Net Each..... **\$149.30**

Bogen Model SCU80—Same, but painted utility finish. Net Each..... **134.30**

Bogen Model SCW35—Same as SCW80 except: Power, 35 W. Freq. Resp.: 70-14,000 Hz. Speakers, six 6", 11 ohms. Effective throw, 130'. Size, 9 1/2" w. x 6" d. x 42" h. Shipping Weight, 31 lbs. Net Each..... **\$89.30**

Bogen Model SCU35—Same as SCW35, but painted utility finish. Net Each..... **81.80**

Bogen Model SCU20—Power rating, 20 watts continuous. Response, 120-10,000 Hz. Speakers, four 5". Impedance, 8 ohms. Effective throw, 50 feet. Utility gray, baked vinyl paint finish. Size, 7 1/2" w. x 5" d. x 20" h. Shipping Weight, 12 lbs. Net Each..... **\$53.85**



SCW80

BOGEN FLEX-PAK[®] TUBE-TYPE PUBLIC ADDRESS AMPLIFIERS

"MX" SERIES DELUXE PA AMPLIFIERS

FEATURES:

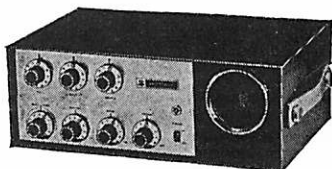
- Master Gain Control
- Built-in Remote Gain Control Circuit: Allows changes in gain for distances up to 2000 ft.
- Constant Voltage Output Taps
- Variable Level Markers: Permit resetting controls to predetermined levels
- Variable, Low Frequency Notch Filter
- Special Filters in Five Channels: Improve speech clarity
- Equalized Phono Input for All Cartridges
- Separate Bass and Treble Controls
- Plug-in Sockets for Low Impedance Transformers
- Total of Six Channels: Can be mixed simultaneously
- Broadcast Type (Cannon XL Series) Microphone Connectors
- Push-pull Switches on Each of Five Inputs
- Sturdy Leather Carrying Handles
- Handsome, Compact Design: Finished in silver, gray and black
- Inputs Include: 4 Mike (Convertible to low impedance); 1 Mike (High impedance or magnetic tape); 2 Aux (High impedance, high level/fader); 1 Telephone Line (500 ohms, balanced); 1 Bridging Input/Output
- Many Versatile Accessories Available: See Accessory Page for full listing



MX60A or MX30A
Shown with MMS-1



M120



M60A, M330A
Shown with MSK-1

MX60A DELUXE 60-WATT PA AMPLIFIER

With master gain control, built-in remote gain control circuit, five microphone channels (one converts to phono), auxiliary exclusive variable level markers and other features listed above. **Power Output:** 60 watts rms at 2% distortion, 21-30,000 Hz, -1 1/2 dB. **Frequency Response:** ±1 1/2 dB, 10-38,000 Hz. **Hum:** Mike, -70 dB below rated output. **Tone Controls:** Treble, +13 dB to +15 dB at 10 kHz; bass, +15 dB to -10 dB at 50 Hz. **Output Impedances:** 4, 8, 16 and 82 ohms; 25-volt and 70-volt balanced lines. **Tubes:** (8) 3-12AX7A, 2-7247, 2-8417 plus five silicon rectifiers. **Power Consumption:** 180 watts. **Size:** 16 1/2" w. x 12" d. x 4 3/4" h. Shpg. Wt., 35 lbs.

Bogen Model MX60A Deluxe Amplifier—Net Price..... \$263.05

Bogen Model LVP-1—Accessory for master volume remote control; precedence over aux by 1 mike or adjustable volume compressor. Shpg. Wt., 1/4 lb. Net Price. \$6.75
Zone 2: 6-80

MX30A DELUXE 30-WATT PA AMPLIFIER

Features master gain control, built-in remote gain control circuit, five microphone channels (one converts to phono), auxiliary exclusive variable level markers and other features as listed above. **Power Output:** 30 watts rms at 2% distortion, 21-30,000 Hz, -1 1/2 dB. **Frequency Response:** ±2 dB, 10-40,000 Hz. **Hum:** Mike, -70 dB below rated output. **Tone Controls:** Treble, +13 dB to -15 dB at 10 kHz; bass, +15 dB to -10 dB at 60 Hz. **Output Impedances:** 4, 8, 16 and 163 ohms; 25-volt and 70-volt balanced lines. **Tubes:** (8) 3-12AX7A, 2-7868, 3-7247 plus five silicon rectifiers. **Power Consumption:** 125 watts. **Size:** 16 1/2" w. x 12" d. x 4 3/4" h. Shipping Weight, 34 lbs.

Bogen Model MX30A Deluxe Amplifier—Net Price..... \$220.50

M120 120-WATT PA AMPLIFIER

Power Output: 120 watts rms at 3% distortion, 50-20,000 Hz, -3 dB. **Frequency Response:** ±1 dB, 20-20,000 Hz. **Hum:** Mike, -65 dB; mag., -65 dB; aux, 80 dB; all below rated output. **Inputs:** 3 mike (convertible to low imped., two convertible to mag.); 1 aux; 1 600-ohm line, 2 mag./tape. **Output Impedances:** 8 and 16 ohms; 25 V (5 ohms) balanced; 70 V (44 ohms) balanced; 25 V, CT (1.25 ohms). **Tone Control:** Treble, -14.5 to +12 dB at 10 kHz; bass, -9.5 dB to +15 dB at 50 Hz. **Tubes:** (7) 4-8417, 1-7247, 2-6EU7; 3 silicon rectifiers. **Power Consumption:** 320 watts. **Size:** 16 1/2" w. x 12" d. x 4 3/4" h. Shpg. Wt., 36 lbs.

Bogen Model M120 Amplifier—Net Price..... \$255.15

M60A 60-WATT PA AMPLIFIER

General purpose 60-watt PA amplifier similar to Model M330A. Seven inputs plus separate volume controls for the four input channels. Bass and treble controls provided for adjusting tonal balance; master volume for overall gain. **Power Output:** 60 watts rms at 3% distortion, 50-20,000 Hz, -3 dB. **Frequency Response:** ±2 dB, 20-20,000 Hz. **Hum and Noise:** Microphone, -65 dB; aux, -80 dB. **Inputs:** 3 mike (convertible to low imped. or 2 to mag.), 1 aux, 1 600-ohm bal. line, 2 mag./tape. **Output Impedances:** 4, 8 and 16 ohms; 25-volt (16 ohms) balanced; 70-volt (82 ohms) balanced from quick disconnect sockets. **Tone Controls:** Treble, -15 1/2 dB to +12 dB at 10 kHz; bass, -9 1/2 dB to +15 dB at 50 Hz. **Tubes:** (5) 2-7247, 2-6EU7, 2 silicon rectifiers, 1 diode. **Power Consumption:** 160 watts. **Size:** 14 7/8" w. x 9 7/8" d. x 5 3/4" h. Shpg. Wt., 29 lbs.

Bogen Model M60A Amplifier—Net Price..... \$189.00

M330A 30-WATT PA AMPLIFIER

Three microphone channels, with two convertible to magnetic cartridge; plus auxiliary inputs. Built-in remote gain control circuit. Sockets provided for low impedance T500/200/50 transformers. Other features include separate master gain, bass, treble controls, plus memory markers for resetting controls. Uses 70 V and 25 V output taps. **Power Output:** 30 watts rms at 2% distortion, 50-20,000 Hz, -3 dB. **Frequency Response:** ±2 dB, 20-20,000 Hz. **Hum and Noise:** Microphone, -65 dB; aux, -80 dB below rated output. **Inputs:** Identical to Model M60A 60-watt PA amplifier, see above. **Output Impedances:** 4, 8 and 16 ohms; balanced 25-volt (16 ohms); 70-volt (163 ohms). **Tone Controls:** Treble, +10.5 dB to -14.5 dB at 10 kHz; bass, -13.5 dB to -9 dB at 50 Hz. **Tubes:** (5) 2-7868, 1-7247, 2-6EU7; 2 silicon rectifiers, 1 silicon diode. **Power Consumption:** 120 watts, 105-125 VAC, 50/60 Hz. **Size:** 14 7/8" w. x 9 7/8" d. x 5 3/4" h. Shipping Weight, 23 lbs.

Bogen Model M330A Amplifier—Net Price..... \$148.05

MONITORING ACCESSORIES

Bogen Model MMS-1 Monitor Meter and Speaker—Allows operator to check sound levels both by eye and ear. For use with Models MX60A and MX30A. Shpg. Wt., 2 lbs. Net Price..... **\$29.90**

Bogen Model MSK-1 Monitor Speaker and Panel—For Models MX60A, MX30A, M120, M60A and M330A. Shpg. Wt., 1 lb. Net Price..... **\$8.95**

A FULL LINE OF ACCESSORIES IS AVAILABLE FOR ALL BOGEN AMPLIFIERS, INCLUDING REMOTE CONTROL UNITS, CARRYING CASES, MICROPHONE TRANSFORMERS AND PHONO TOPS.

BOGEN CHALLENGER "CHB" SERIES PUBLIC ADDRESS TUBE AMPLIFIERS

- MODERATELY PRICED PA AMPLIFIERS COMPARE FAVORABLY WITH MORE EXPENSIVE UNITS—THE FIRST CHOICE OF VALUE-CONSCIOUS BUYERS
- TIME-TESTED CIRCUITRY PERMITS CONTINUOUS HEAVY DUTY OPERATION
- BUILT-IN PROTECTION AGAINST CIRCUIT DAMAGE FROM ACCIDENTAL SHORTING OR DISCONNECTING OF LOUDSPEAKER LINES
- SINGLE-FUNCTION CONTROLS FOR EASE OF OPERATION—NO "DOUBLE DUTY" DEVICES
- BUILT-IN REMOTE CONTROL CIRCUIT, SOUND LEVEL "MEMORY MARKERS" TAPE OUTPUT AND MANY MATCHING ACCESSORIES FOR VIRTUALLY ANY APPLICATION

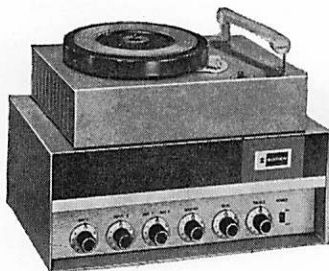
Systems-tested circuitry for continuous, heavy duty operation; protection against circuit damage caused by accidental shorting or disconnecting of speaker lines; master volume control; separate bass and treble controls; no "double duty" control devices; "Memory Markers" for resetting controls to previously determined levels. Reserve power for volume peaks with wide frequency response. High input sensitivity; low noise and hum. Fixed grid bias in push-pull output stage assures low distortion at maximum

output. Constant-voltage output taps simplify addition of matching transformers for multiple speaker systems. Two speaker plug-in sockets, plus screw terminals. Models CHB35A, CHB50 and CHB100 also offer simultaneous mixing of three input signals, two microphones and tuner or phono; accept magnetic phono and tape recorder; built-in remote vol. control. All models have provision for 500/600 ohm phone line input for wired background music and require 105-125 VAC, 50-60 Hz.

CHB100 100-WATT AMPLIFIER

Power Output: 100 watts. **Hum and Noise:** Microphone, 70 dB; aux, 80 dB below rated output. **Sensitivity:** Microphone, 5 mV; aux, 0.3 V; magnetic phono, 15 mV. **Inputs:** Two high impedance microphones; one magnetic phono; two aux (high impedance, high level). **Output Impedance:** 4, 8 and 16 ohms; 25 V line bal. (6 ohm); 70-volt line (50 ohm). **Tone Controls:** Treble, +12 dB to -15 dB at 10 kHz; bass, +14 dB to -9 dB at 50 Hz. **Tubes:** (7) 1-6EU7, 1-12AX7, 4-7868, 1-6C4; 1 silicon rectifier. **Power Consumption:** 300 watts. **Size:** 15 $\frac{3}{4}$ " w. x 10" d. x 6 $\frac{3}{4}$ " h. Shipping Weight, 25 lbs.

Bogen Model CHB100 Amplifier—Net Price..... \$152.25



CHB100 Shown with Phono Top

CHB50 50-WATT AMPLIFIER

Power Output: 50 watts. **Hum and Noise:** Microphone, 70 dB; aux, 80 dB below rated output. **Sensitivity:** Microphone, 5 mV; aux, 0.3 V; magnetic phono, 15 mV. **Inputs:** Two high impedance microphones; one magnetic phono; two aux (high impedance, high level). **Output Impedance:** 4, 8 and 16 ohms; 25-volt line (12 ohm); 70-volt line (100 ohm). **Tone Controls:** Treble, +10 dB to -15 dB at 10 kHz; bass, +11 dB to -10 dB at 50 Hz. **Tubes:** (5) 1-6EU7, 1-12AX7, 2-6L6GC, 1-6C4; 1 silicon rectifier. **Power Consumption:** 150 watts. **Size:** 15 $\frac{3}{4}$ " w. x 10" d. x 6 $\frac{3}{4}$ " h. Shipping Weight, 22 lbs.

Bogen Model CHB50 Amplifier—Net Price..... \$116.85



CHB50, CHB35A

CHB35A 35-WATT AMPLIFIER

Power Output: 35 watts. **Hum and Noise:** Microphone, 65 dB; aux, 80 dB below rated output. **Sensitivity:** Microphone, 4 mV; aux, 0.2 V; magnetic phono, 12 mV. **Inputs:** Two high impedance microphones; one magnetic phono; two aux (high impedance, high level). **Output Impedance:** 4, 8 and 16 ohms; 25-volt line (18 ohm); 70-volt line (143 ohm). **Tone Controls:** Treble, +10 dB to -16 dB at 10 kHz; bass, +14 dB to -10 dB at 50 Hz. **Tubes:** (5) 1-6EU7, 2-7868, 1-12AX7, 1-6C4; 2 silicon rectifiers; 1 silicon diode. **Power Consumption:** 125 watts. **Size:** 15 $\frac{3}{4}$ " w. x 10" d. x 6 $\frac{3}{4}$ " h. Shipping Weight, 20 lbs.

Bogen Model CHB35A Amplifier—Net Price..... \$99.90

CHB20A 20-WATT AMPLIFIER

Power Output: 20 watts. **Hum and Noise:** Microphone, 65 dB; aux, 80 dB below rated output. **Sensitivity:** Microphone, 4 mV; aux, 0.2 V; magnetic phono, 12 mV. **Inputs:** Two high impedance microphones; one magnetic phono; two aux (high impedance, high level). **Output Impedance:** 4, 8 and 16 ohms; 25 volt balanced line (31 ohm); 70 volt line (250 ohm). **Tone Controls:** Treble, +10 dB to -16 dB at 10 kHz; bass, +14 dB to -10 dB at 50 Hz. **Tubes:** (3) 1-6EU7, 2-6GW8; 2 silicon rectifiers; 1 silicon diode. **Power Consumption:** 90 watts. **Size:** 15 $\frac{3}{4}$ " w. x 10" d. x 6 $\frac{3}{4}$ " h. Shipping Weight, 17 lbs.

Bogen Model CHB20A Amplifier—Net Price..... \$81.45

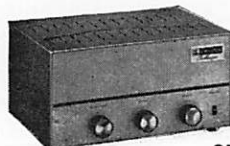


CHB20A

CHB10A 10-WATT AMPLIFIER

Ideal for wired background music. One speaker socket and screw terminals. **Power Output:** 10 watts. **Hum and Noise:** Microphone, 60 dB; phono, 75 dB below rated output. **Sensitivity:** Microphone, 6 mV; phono, 0.2 V. **Inputs:** One high impedance mike, one phono (high impedance, high level); provision for 500/600 ohm telephone line input for wired background music. **Output Impedance:** 4, 8, 16 ohms; 25 V (62 ohms); 70 V (500 ohms). **Tone Control:** Treble, -24 dB at 10 kHz. **Tubes:** (2) 1-12AX7/ECC83; 1-7868; rectifier. **Power Consumption:** 50 watts. **Size:** 11 $\frac{1}{4}$ " w. x 8 $\frac{1}{4}$ " d. x 5 $\frac{1}{4}$ " h. Shipping Weight, 12 lbs.

Bogen Model CHB10A Amplifier—With cage. Net Price..... \$50.80



CHB10A

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BOGEN BOOSTER AMPLIFIERS AND WALL-MOUNTING AMPLIFIER

MO SERIES TUBE-TYPE BOOSTER AMPLIFIERS

Maximum power from a small package. Built-in provision permits paralleling any number of power amplifiers to multiply power output. Bogen MXXM-A and RTP-1 are excellent preamplifiers to use with these boosters. **High Impedance Input:** 0.5 megohm with sensitivity 7 volts. **Low Impedance Input** (with TL600 line transformer): MO200A and MO100A, 500/600 ohms. With TL600 transformer, both models have low impedance sensitivity of better than 0.5 volt. **Hum:** 80 dB below rated output. **Power Required:** 115 volts AC. **Size:** MO200A, 16" w. x 11 1/2" d. x 6" h.; MO100A, 8" w. x 13" d. x 6 1/4" h.

Bogen Model	Power Output	Freq. Response	Output Impedance, Ohms:	Tubes, Rects., Diode	Power Wt., Cons. Lbs.	Net Price
MO200A	200 W*; full power, ± 1 dB, 21-50,000 Hz†	± 1 dB, 8-50,000 Hz	8, 3 (25 VCT), 25 (70 VCT), 66 (115 V)‡	10, 3	500 W 65	\$300.00
MO100A	100 W*; full power, ± 1 dB, 21-50,000 Hz†	± 1 dB, 8-50,000 Hz	16, 6,25 (25 VCT), 49 (70 VCT), 132 (115 V)‡	5, 3	250 W 33	165.00

*At less than 2% distortion. †At 5% distortion. ‡Balanced output impedance. §For industrial applications.



MO200A

MT125 ALL SILICON TRANSISTOR 125-WATT BOOSTER AMPLIFIER

Power Output: 125 watts at less than 5% distortion. **Full Power:** ± 2 db, 38-20KHZ at 5% distortion. Variations in performance characteristics normally will not exceed 1 db. **Hum & Noise:** -80 dB below rated output. **Sensitivity:** High impedance .3V; low impedance, .25V with TL600 transformer. **Inputs:** High impedance 30,000 ohms, low impedance 500/600 ohms with TL600 transformer, bridging 10,000 ohms with TL10K transformer. **Output Impedance:** Balanced or unbalanced, 1.25, 5, 8, 16, & 39 ohms; 25 V (CT), 25 V, 44.7 V, 44.8 V, & 70 V. **Semi-Conductors:** 8 silicon transistors, 5 diodes. **Power Required:** 325 watts, @ 120 VAC 60 Hz, or 48-56 VDC @ 2.7A. **Size:** 8" w x 13" d x 6 1/4" h - Shipping wt., 25 lbs. **Bogen Model MT125 Booster Amplifier—Net Price** **\$270.00**



MT 125

MBT60 ALL SILICON TRANSISTOR 60-WATT BOOSTER AMPLIFIER

Power Output: 60 watts rms at less than 3% distortion. **Frequency Response:** 12-20,000 Hz, ± 1 dB. **Full Power:** ± 2 dB, 40-10,000 Hz at 5% distortion. **Gain:** High impedance 10 dB and DC stabilizing circuits use zener diodes. Anti-thump circuit for noiseless off-on switching. **Power Output:** 250 W rms, 40-5,000 Hz at less than 3% THD (35-20,000 Hz at less than 5% THD); 350 W rms, 50-12,000 Hz at less than 5% THD; 700 W peak. **Frequency Response:** ± 1 dB, 20-30,000 Hz. **Regulation:** Better than 2 dB, no load to full load. **Noise Level:** -83 dB at 250 W; -85 dB at 350 W. **Inputs:** Two hi-Z RCA phono jacks; lo-Z 3-screw grounded barrier strip. **Imp. Impedances:** 70 K (1.4 V at 250 W; 1.3 V at 350 W); 10 K with TL10K bridge transformer; 500/600 ohms with TL-600 line transformer (.3 V at 250 W, .35 V at 350 W). **Outputs:** 8 ohms, 25 V and 70 V; 250 W, 120 VAC sine wave at 35-5,000 Hz from suitable input source; 600 W, 120 VAC, 3-wire aux outlet. **Output Impedances (Balanced or Unbalanced):** At 250 W—625 ohm (25 VCT), 25 ohms (25 V), 8 ohms (44.7 V), 5 ohms (70 VCT), 20 ohms (70 V), 57 ohms (120 V). At 350 W—14.3 ohms (70 V), 8 ohms (53 V). **Controls:** On-Off Switch and Indicator; Output Level Meter; Speech Filter Switch; Input Level Control. **Power Required:** 105-125 VAC, 50/60 Hz, 565 W (250 W output) or 700 W (350 W output); 20-30 VDC, 22-32 amp; 24 VDC, 25 amp (250 W output). **Size:** 17 1/2" w. x 11 1/4" d. x 9 1/4" h. Side brackets supplied for mounting on 8 3/4" x 19" panel. Shpg. Wt., 75 lbs. **Bogen Model MBT60 Booster Amplifier—Net Price** **\$129.75**



MT100

NTB250 ALL SILICON TRANSISTOR 250-350 WATT BOOSTER AMPLIFIER

Feedback paralleling receptacles permit parallel connection of two or more amplifiers for increased power. Automatic protection against shorts and overloads in output stage; automatic AC and DC stabilizing circuits use zener diodes. Anti-thump circuit for noiseless off-on switching. **Power Output:** 250 W rms, 40-5,000 Hz at less than 3% THD (35-20,000 Hz at less than 5% THD); 350 W rms, 50-12,000 Hz at less than 5% THD; 700 W peak. **Frequency Response:** ± 1 dB, 20-30,000 Hz. **Regulation:** Better than 2 dB, no load to full load. **Noise Level:** -83 dB at 250 W; -85 dB at 350 W. **Inputs:** Two hi-Z RCA phono jacks; lo-Z 3-screw grounded barrier strip. **Imp. Impedances:** 70 K (1.4 V at 250 W; 1.3 V at 350 W); 10 K with TL10K bridge transformer; 500/600 ohms with TL-600 line transformer (.3 V at 250 W, .35 V at 350 W). **Outputs:** 8 ohms, 25 V and 70 V; 250 W, 120 VAC sine wave at 35-5,000 Hz from suitable input source; 600 W, 120 VAC, 3-wire aux outlet. **Output Impedances (Balanced or Unbalanced):** At 250 W—625 ohm (25 VCT), 25 ohms (25 V), 8 ohms (44.7 V), 5 ohms (70 VCT), 20 ohms (70 V), 57 ohms (120 V). At 350 W—14.3 ohms (70 V), 8 ohms (53 V). **Controls:** On-Off Switch and Indicator; Output Level Meter; Speech Filter Switch; Input Level Control. **Power Required:** 105-125 VAC, 50/60 Hz, 565 W (250 W output) or 700 W (350 W output); 20-30 VDC, 22-32 amp; 24 VDC, 25 amp (250 W output). **Size:** 17 1/2" w. x 11 1/4" d. x 9 1/4" h. Side brackets supplied for mounting on 8 3/4" x 19" panel. Shpg. Wt., 75 lbs. **Bogen Model NTB250 Booster Amplifier—Net Price** **\$562.50**



NTB250

RPK-18 RACK PANEL MOUNTING KIT

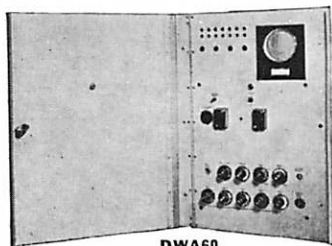
For mounting MBT60, MT100, MO100A, MO200A amplifiers. Mounts 2 amplifiers MBT60, MT100 or MO100A, or 1 MO200A. Includes all hardware. When ordering, specify Model No. of Bogen equipment to be mounted. **Bogen Model RPK-18 Rack Panel Mounting Kit—Net Price** **\$22.45**

DWA60 WALL-MOUNTING 60-WATT AMPLIFIER

All silicon transistor PA amplifier ideal for schools, ballrooms, churches, auditoriums. Mounts flush into wall, remaining hidden and tamper-proof behind its own locked door. Simultaneously accommodates five mikes and two aux signals (on fader control) for high-impedance tape recorder, ceramic phono cartridge or tuner. All inputs may be mixed or faded; volume of each input may be controlled individually or by a master control. Optional remote volume control, microphone precedence, limiting available. **Power Output:** 60 watts rms with less than 3% distortion, 110 watts peak. **Frequency Response:** ± 1 dB, 20-20,000 Hz. **Gain:** Mike, 125 dB; aux, 85 dB. **Hum and Noise:** Mike, 60 dB, and aux, 72 dB below rated output. **Power Consumption:** 115 watts, 105-125 VAC, 50/60 Hz. **Size:** Front panel, 15 1/4" w. x 21 1/4" h.; back box, 14" w. x 3" d. x 20 1/4" h. Shpg. Wt., 25 lbs. **Bogen Model DWA60 Amplifier—Net Price** **\$297.00**

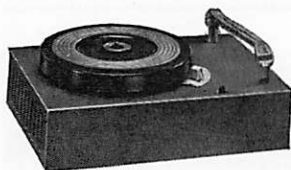
Bogen Model RBDW-F Back Box—For DWA60. Shpg. Wt., 9 lbs. Net. **28.50**

Bogen Model RBDW-S Surface Box—For DWA60. Shpg. Wt., 15 lbs. Net. **52.50**



DWA60 with MMS-1

BOGEN PUBLIC ADDRESS AMPLIFIER ACCESSORIES



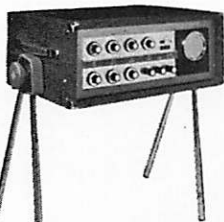
LPC-4



CC125 Case with CHB35A Amplifier, Phono Top, Microphone



RPK-14 with CHB35A



XPC-1 with MX60A, on LE-1



LK-Series



SR-2

MANUAL PHONO TOP

For Bogen PA amplifiers. Supplied with all necessary hardware, tone arm and turn-over cartridge.
Bogen Model LPC-4—Four speed. AC.
 Net Each.....\$33.75

MONITORING ACCESSORIES

Bogen Model MMS-1 Monitor Meter and Speaker—Allows operator to check sound levels both by eye and ear. For use with DWA60, MX30A, MX60A.
 Net Each.....\$29.90

Bogen Model MSK-1 Monitor Speaker and Panel—For Models MX60A, MX30A, M120, M60A and M330A.
 Net Each.....\$8.95

CARRYING CASES

Bogen Model CC125—Carrying case with two built-in 12" ceramic magnet speakers and space for amplifier and microphone. For use with portable systems with amplifiers up to 60 watts output. When opened, each half of case acts as a baffle. With 25-ft. cables and plugs. Size, 17 1/4" w. x 12" d. x 23 1/4" h. Weight, 24 lbs.
 Net Each.....\$74.95

Bogen Model XPC-1—Case only; for any Bogen amp using 19" x 7" rack panel kit. Size, 21" w. x 12" d. x 9 1/4" h. Weight, 6 lbs. Net Each.....\$53.95

Bogen Model LE-1—Leg assembly for use with XPC-1; lifts equipment off floor for ease of operation. Net Each...\$16.45

PLUG-IN TRANSFORMERS

Microphone and line transformers designed for use with Bogen amplifiers, as indicated.

MICROPHONE INPUT TRANSFORMERS For M60A, M120, M330A, MX30A, MX60A, MXM-A, RTP-1 and CT Series, except as noted.

Bogen Model	Ohms	Net Price	
TM200	200	\$13.30	
TM500	500	13.30	
T5250*	50-600	13.30	
TM50	50	13.30	

LINE TRANSFORMERS

WMT-1	500/600†	\$11.85	\$11.95
TL600§	500/600	13.85	13.90

BRIDGING TRANSFORMER

TL10K§	10,000	\$18.75
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†Input for any amplifier with aux input; output, for any amplifier with 25 V output.
 §For MT100, MBT60, MO100A, MO200A, MXM-A and NTB250. *For DWA60 balanced microphone lines.

LWM WALL-MOUNTING KIT

For M60A, M120, M330A, MX60A and MX30A amplifiers; MXM-A preamp. Keeps your equipment ready when you need it, yet safely, neatly out of the way when not in use. Kit is complete with hardware, template and complete instructions. Net Each.....\$12.75

PEAK LIMITER

Bogen Model PVP-1—For automatic limiting of DWA60 output to any predetermined level; requires one LVP-1 controller. Net Each.....\$8.25

PMC-1 PLUG-IN MAGNETIC CARTRIDGE MODULE
 For Bogen DWA60. Net Each....\$8.95

CON-1 MICROPHONE CONNECTOR

For Bogen CT and Flex-Pak® series, DWA60, MXM-A, CTM, RTP-1, RM300, (MO1-F connector for C, CHB, CHS series, BT20A, BT35A, MTA10, MU1250, MX6A-T uses standard phone plug). Net Each.....\$1.65

624N-72C

RACK PANEL MOUNTING KITS

Includes all hardware. When ordering, specify Model No. of amplifier or pre-amplifier to be mounted. Gray metallure finish. Size, 19" w. x 7 1/2" h. except RPK-20, and RPK-28, 3 1/2" h. Brackets RPK-31 and RPK-32 are 3 1/2" h., RPK-33 is 4 1/4" h.

Bogen Model	For Amplifier	Net Price
RPK-14	CHB35A, CHB50, CHB100, MU-1250	\$22.45
RPK-16	MX30A, MX60A, MXM-A, M120	22.45
RPK-18*	MT100, MO100A, MO200A, MBT60	22.45
RPK-21	M60A, M330A	22.45
RPK-23	MTA10	20.95
RPK-27	CHS20, CHS35, CHS50, CHS100	22.45
RPK-28	MXM-A-T	20.95
RPK-31	TP160	7.45
RPK-32	RM300	5.95
RPK-33	CT Series	10.45

*Mounts two units (one MO200A).

MICROPHONE PRECEDENCE

LVP-1 used with SPST switch provides aux (e.g., music) channel muting for microphone precedence in CHS Series, CT Series, MX30A, MX60A, MXM-A. Switch not supplied (usually incorporated in mic. assembly).

Bogen Model LVP-1—Net Each...\$6.75

CONTROL-GUARD LOCKING PLATE

Protects advanced settings from tampering.

Bogen Model LK-5—For CHB20A, CHB-35A, CHB50, CHB100, MU1250.
 Net Each.....\$8.65

Bogen Model LK-6—For MX30A, MX-60A, MXM-A, M120. Net Each...\$11.10
 Zone 2: 11.35

Bogen Model LK-8—For M60A, M330A.
 Net Each.....\$8.95

Bogen Model LK-10—For CHS20, CHS35, CHS50, CHS100. Net Each....\$11.90

Bogen Model LK-12—FOR CT-30, 60, 100, CTM (RUN B) \$13.45

STANDBY CONTROLLERS

Bogen Model KR-6—Used in MO200A, MO100A with remote switch to control plate power during "silent" periods.
 Net Each.....\$44.95

Bogen Model LVP-1—For use in MBT60, MT100, NTB250 with RVC-2 remote control. Net Each.....\$ 6.75
 Zone 2: 6.80

Bogen Model RVC-2—Net Ea... 11.25

REMOTE VOLUME CONTROLS

Permit mixing, fading and frequent changes in gain of individual channels; up to 2000 feet away.

Bogen Model SR-2—Two-channel for CHB35A, CHB50, CHB100, M60A, M330A, MX30A, MX60A, MXM-A, M120. Size, 6" w. x 1 1/4" d. x 3 1/2" h. Shpg. Wt., 2 lbs. Net Each.....\$13.45

Bogen Model SR-4—Four-channel for M60A, MX60A, MX30A, MXM-A, M330A, M120. Net Each....\$22.45

Bogen Model LVP-1 with RVC-2—For use in microphone channels of CHS Series, CT Series, DWA60 (use one per mike channel). Also for use in aux channel of CHS Series, CT Series, MX30A, MX60A, MXM-A and DWA60.

Bogen Model LVP-1—Net Ea... \$ 6.75
 Zone 2: 6.80

Bogen Model RVC-2—Net Ea... 11.25

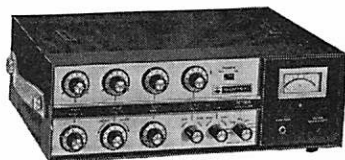
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BOGEN PUBLIC ADDRESS PREAMPLIFIERS AND 10-WATT AMPLIFIER

MXM-A MIXER-PREAMPLIFIER

Self-powered professional unit accommodates 7 mixed input signals simultaneously. One mike input converts to an equalized mag, phono cartridge or tape playback head. Two aux are connected to a fader control. Accepts signals from a remote preamplifier or a zero level line. Three units in parallel will provide 21 inputs (up to 15 mikes). Output level monitored by headset or VU meter. Speech filters for all mike inputs. Separate bass and treble controls. Sockets for plug-in low impedance transformers and remote control. **Power Output:** 20 V into high impedance load at 1%; 4 V into 600 ohms at 1%; 0.1 V into 1 meg. **Frequency Responses:** ± 1 dB, 18-38,000 Hz. **Output Impedance:** High impedance (less than 3,000 ohms); 500/600 ohms with TL600 transformer. **Sensitivity:** High Imped., 2 mV; low Imped., 0.1 mV; mag., 1 mV; bridging, 0.5 V; aux, 0.1 V. **Hum:** Mike, 60 dB below rated output. **Tone Controls:** Treble, $+12$ dB to -12 dB at 10 kHz; bass, $+14$ dB to -8 dB at 50 Hz. **Tubes:** 6 plus 3 silicon rectifiers. **Power Consumption:** 47 watts, 117 VAC, 50/60 Hz. **Size:** 16 $\frac{1}{2}$ " w. x 12" d. x 4 $\frac{3}{4}$ " h. **Shipping Weight,** 23 lbs.

Bogen Model MXM-A Mixer-Preamplifier—Net Price..... \$212.65

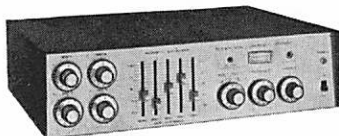


MXM-A

CTM ALL-SILICON TRANSISTOR MIXER-PREAMPLIFIERS

Broadcast quality mixer-preamplifier offers five equalizer filters with front panel slide controls to provide unique anti-feedback and tone-control circuit. Adjustable, built-in electronic compressor assures constant output regardless of input level variations. Each of the four CTM mike channels is convertible to low impedance using plug-in transformers. Remote volume and microphone precedence on two mike and one auxiliary input channel. Provides 600/600 ohm telephone line input output with accessory WMT-1 transformer. High level tape outputs are provided both before and after equalizer controls. Unit may be bridged with similar preamp to increase inputs and parallel outputs. Controls and indicators include 4 mike volume controls, aux 1/aux 2 fader, master volume control, 5 equalizer filter slide controls, limiter control, level meter, meter sensitivity control, power on/off switch and power-on indicator lamp. Three-conductor connectors are provided for input of each microphone channel. Filter control action offers ± 10 dB variation at the following frequencies: 80, 300, 1000, 3000 and 10,000 Hz. **Inputs:** 600 ohms balanced CT; 600 ohms unbalanced; 150 ohms balanced; 150 ohms unbalanced; tape output; bridging output; front panel monitor headphone jack. **Outputs:** 4 high impedance mike inputs (each convertible to low impedance); 2 auxiliary inputs with fader; bridging input; 3 inputs for remote volume control; 500/600 ohm telephone line with WMT-1 optional accessory. **Power Output:** 6 volts into high impedance; 6 volts into 500/600 ohms. **Frequency Response:** ± 1 dB, 20-20,000 Hz. **Sensitivity:** High impedance mike, 3 mV; low impedance mike, 0.3 mV (600 ohm); aux, 0.5 V; bridging, 15 mV. **Hum and Noise:** Mike, 60 dB; auxiliary, 70 dB; fundamental, 80 dB below full rated output. **Output Imped.:** Hi Imped. less than 10K ohms; 600-ohm output 70 ohms; bridging output hi Imped. **Power Required:** 120 VAC or external 24 VDC source. **Size:** 16 $\frac{1}{2}$ " w. x 12 $\frac{1}{4}$ " d. x 4" h. **Shipping Weight,** 17 lbs.

Bogen Model CTM Mixer-Preamplifier—Net Price..... \$191.25



CTM

RTP-1 ALL SILICON TRANSISTOR PREAMPLIFIER

Will drive any number of booster amplifiers or packaged amplifiers over a 500/600 ohms line even several miles away. Two units in parallel provide 6 mixed inputs. Headphone monitor; output level meter reads VU and dB. Extremely low battery drain. Built-in battery tester and output transformer. **Power Output:** At 0 dB, 1.8 V into 500 ohms (1%); $+12$ dB, 7 V into 500 ohms (2.5%); no high impedance output. **Frequency Response:** ± 1 dB, 20-20,000 Hz. **Output Impedance:** Split output, 125/150 ohms and 125/150 ohms or 500/600 ohms balanced. **Input Impedance:** Mike, high or low with transformer; aux, 0.1 meg. **Sensitivity:** Low Imped. Mike (500 ohm), 0.3 mV; high Imp. md. mks, 5 mV; aux, 0.5 V. **Hum and Noise:** 73 dB; aux, 55 dB; bridging, 60 dB. **Bass Cut:** -6 dB at 50 Hz. **Hum:** Mike, -65 dB; aux, -70 dB. **Transistors:** 9; 3 silicon diodes. **Power Consumption:** 5 W, 117 VAC, 50/60 Hz; 0.3 A, 12 VDC, internal batteries or external DC supply. **Temperature Range:** -20° C to $+70^{\circ}$ C. **Size:** 9" w. x 9 $\frac{1}{4}$ " d. x 3 $\frac{1}{2}$ " h. **Shpg. Wt.,** 7 lbs.

Bogen Model RTP-1 Preamplifier—Net Price..... \$148.50

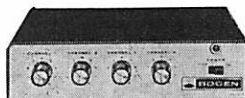


RTP-1

MX6A-T ALL SILICON SOLID STATE MIXER-PREAMP

Self-powered unit excellent for use with electronic musical instruments. Has inputs for four high or low-impedance mikes with individual volume controls; two channels accept tuner or crystal cartridge signals. Ample output to drive any packaged amplifier through aux input—will drive power amplifiers with sensitivity of 5 volts or higher. Up to three MX6A-T's may be paralleled to provide 12 inputs. **Frequency Response:** ± 2 dB, 50-20,000 Hz. **Hum and Noise:** 68 dB below 5 volts. **Inputs:** Four 150,000-ohm mike (200 ohms nom.); two 250,000-ohm aux. **Output Impedance:** 2200 ohms. **Transistors:** 6 silicon plus 2 silicon diodes. **Power Consumption:** 1.2 watts, 117 VAC, 50/60 Hz. **Size:** 9 $\frac{1}{4}$ " w. x 6" d. x 2 $\frac{3}{8}$ " h. **Shpg. Wt.,** 6 lbs.

Bogen Model MX6A-T Mixer-Preamplifier—Net Price..... \$56.25



MX6A-T

MTA10 10-WATT SOLID STATE AMPLIFIER

Power Output: 10 watts rms (20 watts peak) at less than 3% distortion. **Frequency Response:** 50-20,000 Hz, ± 2 dB. **Power Response:** ± 2 dB, 50-16,000 Hz at 10 watts with less than 5% distortion. **Gain:** Microphone, 105 dB; aux, 95 dB. **Hum and Noise:** Microphone, -60 dB; aux, -80 dB below rated output. **Sensitivity:** Microphone, 0.4 mV; aux, 0.2 V. **Tone Control:** Treble, -23 dB at 10 kHz. **Inputs:** 1 microphone (low impedance); 1 aux (high impedance, high level); 1 for optional WMT-1 (500/600 ohms) transformer; 1 bridging. **Output Impedances:** 4 and 8 ohms; 16 ohms balanced; 25 V CT (62 ohms) balanced; 70 V (500 ohms) balanced. **Printed Circuit Boards:** 2 plug-in. **Semiconductors:** 3 silicon; 2 germanium; 2 silicon diode rectifiers. **Power Required:** 30 watts, 120 VAC, 50/60 Hz. **Size:** 10 $\frac{1}{2}$ " w. x 6 $\frac{1}{2}$ " d. x 5" h. **Shipping Weight,** 11 lbs.

Bogen Model MTA10 Amplifier—Net Price..... \$67.45



MTA10

BOGEN SERIES "C" SOLID STATE PUBLIC ADDRESS AMPLIFIERS

NEW CHALLENGER SERIES "C" PA AMPLIFIERS

Economy-priced, solid state control amplifiers offer the combined advantages of modern circuitry plus unusual economy. Reliable and versatile, they offer the logical choice of maximum value in solid state amplifiers. Advanced transistor design permits operation continuously at temperature extremes and increases stability and useful life.



C100, C60 and C35 Solid State Amplifiers



C20 Amplifier

INPUTS

- Provides simultaneous mixing of 3 input signals; 2 mikes and a tuner (C20 has 1 mike input), tape recorder or phono
- Mike inputs are high impedance; equipped with filters to protect against RF interference
- Can be wired for mike precedence

OUTPUTS

- Include tape, booster amplifier, 25-volt, 70-volt, and 500/600-ohm zero level line with external WMT-1 transformer
- Two loudspeaker plug-in sockets are provided, plus screw terminals; handle 4, 8 or 16 ohms (C20 has only 1 socket)

MODEL C35 35-WATT AMPLIFIER

True economy in a 35-watt control amplifier, yet versatile in performance. Uses all-silicon circuitry employing 10 transistors and 6 diodes. **Power Output:** 35 watts continuous. **Hum and Noise:** -60 dB, mike; -70 dB, aux at rated output. **Sensitivity:** For full output, 3 mV for mike; 0.5 mV, aux. **Inputs:** 2 mike, hi-Z; 2 aux, hi-Z, high level. Provision for WMT-1 transformer for 500/600 ohms telephone line. **Outputs:** Balanced 4, 8 and 16 ohms, 25-volt line (18 ohms) and 70-volt line (142 ohms). Two speaker sockets provided; plus, screw terminals; tape/booster jack; and, provision for WMT-1. **Controls:** On-Off Switch; Bass (± 11 dB); Treble (± 11 dB); Mike 1 Gain; Mike 2 Gain; Aux Gain; Master Gain. **Power Required:** 60 watts, 105-125 VAC, 50/60 Hz. **Size:** 14 $\frac{1}{4}$ " w. x 12 $\frac{3}{4}$ " d. x 3 $\frac{3}{4}$ " h. Shipping Weight, 14 lbs.

Bogen Model C35 Amplifier—Net Each..... \$99.45

MODEL C20 20-WATT AMPLIFIER

Solid state reliability, simple operating convenience and economy in a moderate-powered amplifier. All-silicon circuitry employs 7 transistors and 6 diodes. **Power Output:** 20 watts continuous. **Hum and Noise:** -68 dB, mike; -70 dB, aux at rated output. **Sensitivity:** For full output, 4 mV for mike; 0.35 V, aux. **Inputs:** 1 mike, hi-Z; 2 aux, hi-Z, high level. Provision for WMT-1 transformer for 500/600 ohms telephone line. **Outputs:** Balanced 4, 8 and 16 ohms, 25-volt line (31 ohms) and 70-volt line (250 ohms). One speaker socket plus screw terminals provided; tape/booster jack; and provision for WMT-1. **Controls:** On-Off Switch; Treble (-14 dB); Mike Gain; Aux Gain. **Power Required:** 54 watts, 105-125 VAC, 50/60 Hz. **Size:** 11 $\frac{1}{4}$ " w. x 11" d. x 3 $\frac{3}{4}$ " h. Shipping Weight, 11 lbs.

Bogen Model C20 Amplifier—Net Each..... \$79.50

ACCESSORIES FOR SERIES "C" AMPLIFIERS

Bogen Model WMT-1 Transformer—Plug-in transformer fits sockets provided on all Series "C" amplifiers above. Provides 500/600 ohms impedance for telephone line input (background music) or output. Shpg. Wt., 1 lb. Net Each..... \$11.85

Bogen Model LPC-4 Phono Top—Manual, 4-speed phono top with tone arm and turnover monophonic cartridge. Fits directly on top

of C100, C60 or C35 amplifiers. All necessary hardware supplied. Shipping Weight, 7 lbs. Net Each..... \$33.75

Bogen Model CC125 Carrying Case With Speakers—Carrying case holds amplifier (not to be used with amplifiers rated above 60 watts); and, also contains two 12" ceramic magnet speakers in each half of the split case, acting as baffles. With cables and plugs. Shipping Weight, 24 lbs. Net Each..... \$74.95

FEATURES

- All-silicon, solid state design provides continuous operation at full output, -20° C to +50° C (-4° F to +122° F)
- Use of advanced complementary transistors assures highest reliability of power transistors
- Full protection against circuit damage is provided against possible accidental shorting or disconnecting of loudspeaker lines
- Printed circuit board (input circuits, intermediate amplifier and controls) is automatically wave-soldered to eliminate human error
- Separate master volume, bass and treble controls (except Model C20); plus Memory Markers to aid in returning controls to previously determined levels
- High input sensitivity, low noise and hum, and wide frequency response for maximum clarity and intelligibility
- Full array of accessories provide for completely flexible operation
- Compact, attractive styling

MODEL C100 100-WATT AMPLIFIER

All-silicon circuitry combines 14 transistors and 6 diodes for superior performance and long-lived reliability. **Power Output:** 100 watts continuous. **Hum and Noise:** -60 dB, mike; -70 dB, aux at rated output. **Sensitivity:** For full output, 3 mV for mike; 0.5 V, aux. **Inputs:** 2 mike, hi-Z; 2 aux, hi-Z, high level. Provision for WMT-1 transformer for 500/600 ohms telephone line. **Outputs:** Balanced 4, 8 and 16 ohms, 25-volt line (6 ohms) and 70-volt line (50 ohms). Two speaker sockets provided; plus, screw terminals; tape/booster jack; and, provision for WMT-1. **Controls:** On-Off Switch, Bass (± 11 dB); Treble (± 11 dB); Mike 1 Gain; Mike 2 Gain; Aux Gain; Master Gain. **Power Required:** 180 watts, 105-125 VAC, 50/60 Hz. **Size:** 14 $\frac{1}{4}$ " w. x 13 $\frac{3}{4}$ " d. x 3 $\frac{3}{4}$ " h. Shipping Weight, 18 lbs.

Bogen Model C100 Amplifier—Net Each..... \$148.50

MODEL C60 60-WATT AMPLIFIER

Reliable performer in medium power range uses 12 transistors and 6 diodes for rugged economy. **Power Output:** 60 watts continuous. **Hum and Noise:** -60 dB, mike; -70 dB, aux at rated output. **Sensitivity:** For full output, 3 mV for mike; 0.5 V, aux. **Inputs:** 2 mike, hi-Z; 2 aux, hi-Z, high level. Provision for WMT-1 transformer permitting 500/600 ohms telephone line. **Outputs:** Balanced 4, 8 and 16 ohms, 25-volt line (10 ohms), 70-volt line (83 ohms). Two speaker sockets provided; plus, screw terminals; tape/booster jack; and, provision for WMT-1. **Controls:** On-Off Switch; Bass (± 11 dB); Treble (± 11 dB); Mike 1 Gain; Mike 2 Gain; Aux Gain; Master Gain. **Power Required:** 100 watts, 105-125 VAC, 50/60 Hz. **Size:** 14 $\frac{1}{4}$ " w. x 13 $\frac{3}{4}$ " d. x 3 $\frac{3}{4}$ " h. Shipping Weight, 16 lbs.

Bogen Model C60 Amplifier—Net Each..... \$118.50

BOGEN INTERCOMMUNICATION SYSTEMS

NEW SERIES "IE" TRANSISTORIZED INTERCOMS IE-7 MASTER STATION

For systems of up to 7 stations. Two-tone Cycloac* cabinet. Use of TBR-1 relay and separate amplifier permits high-volume paging and reception of hands-free reply from remote. **Controls:** Volume; Push-to-Talk with Dictate Lock; 6 Push-Push Selector Switches (permit "All-Call") with station ID strips. **Power Required:** 3½ wats, 120 VAC, 50/60 Hz; or 12 V battery with PFC-1 cable. **Peak Output:** 1 watt. **Impedance:** 16 ohms. **Size:** 6¾" w. x 7¾" d. x 4¾" h.; desk or wall mount. Shpg. Wt., 4 lbs.

Bogen Model IE-7—Net Each..... \$41.20
Bogen Model IE-13—Same as IE-7, but with 12 selector switches for 13-station systems. Net Each..... \$50.35
Bogen Model JB-E Junction Box—One required for each IE-7; two for each IE-13 master station. Shpg. Wt., 2 lbs. Net Each..... \$5.95
Bogen Model TBR-1 Relay Module—For use in "IE" and "IM" series. Shpg. Wt., 2 lbs. Net Each..... \$29.95

RIE-1 REMOTE STATION

Similar to IE masters in size, appearance. Switches for talking or listening to master, private or non-private functioning. Shpg. Wt., 2 lbs.
Bogen Model RIE-1—Net Each..... \$13.25

IE-4S INTERCOM SYSTEM

IE-4 master plus RIE-1 remote. Calls to master indicated visually, with unique magnetic annunciator, as well as by beep-tone. Master-remote connection by 2C cable. IE-4 has same power requirements, output, size and color as IE-7, has annunciators and station selectors for addition of two more RIE-1 remotes for individual or "All-Call" operation. Shpg. Wt. (master and one remote), 5 lbs.
Bogen Model IE-4S—1 master, 1 remote. Net..... \$49.75

NEW SERIES "IM" SOLID STATE INTERCOMS

IM-9 MASTER STATION

For systems of up to nine stations has gray Cycloac cabinet. Masters can optionally reply hands-free when called; 100% trunkage. Model TBR-1 relay can be used with selector button #8 as with IE masters. No-solder junction box connection by heavy-duty plug on 6-ft. master cable. **Controls:** Volume; 8 Selector Switch Pushbuttons with station ID strips; Talk-Listen Button with dictate lock; Standby Button; Privacy, Busy, and Standby Indicators. **Power Required:** 10 wats, 120 VAC, 50/60 Hz. **Peak Output:** Standard—1 watt each to stations 1-5; 6 wats each to stations 6-8; other combinations of 1 and 6 watt outputs are possible. **Impedance:** 45 ohms (balanced line). **Size:** 7¾" w. x 9¼" d. x 5" h. Shpg. Wt., 7 lbs.

Bogen Model IM-9—Net Each..... \$116.95
Bogen Model IM-17—Same as IM-9 but for up to 17 stations. Output, 6 wats peak to 6 stations; 1 watt, other stations; TBR-1 relay can be used on 2 selectors. Shpg. Wt., 8 lbs. Net Each..... \$149.95
Bogen Model JB-X Junction Box—One required for each IM-9, two for each IM-17. Shpg. Wt., 2 lbs. Net Each..... \$9.75
 *Reg. Borg-Warner T.M.

SERIES "IM" REMOTES AND ACCESSORIES

Bogen Model	Description	Shpg. Wt., Lbs.	Net Each
RIM-1	Can call pre-selected master; privacy switch*	3	\$20.25
RIM-3	Can call any of 3 masters; privacy switch; 6-ft. cable*	3	29.95
STB-45	Outdoor-indoor remote; weather- and vibration-proof	4	23.40
WX-6	Wall-mounted remote; walnut-finished wood cabinet; 5" PM speaker	2	10.23
CS-1	Lets TBS-45 or WX-6 call pre-selected master	1	8.95

*6¾" w. x 7¾" d. x 4¾" h. 171¾" dia. x 6¾" d.

CABLE FOR "IE" AND "IM" SERIES INTERCOMS

Bogen No.	Description	Shpg. Wt., Lbs./100'	Net/100'
1SH	1-conductor, shielded, for IE only	1½	\$ 4.90
2C	2-conductor, unshielded, for IE only	1½	2.90
3SC	3-conductor, unshielded, for IE only	2	4.00
7SC	7-conductor, unshielded, for IE only	3	8.25
12SC	12-conductor, unshielded, for IE only	6	13.50
16SC	16-conductor, unshielded, for IE only	8	19.50
20SC	20-conductor, unshielded, for IE only	9	22.50
BB-8450	1 pair, twisted, shielded, for IE and IM	2	5.25
1401S	1 pair, twisted, unshielded, for IE and IM	2	4.45
1411S	11 pair, twisted, unshielded, for IM only	10	37.50

EXECUTIVE SERIES "9" INTERCOMS

For systems with up to 9 master and remote stations in any combination. Features fully transistorized central amplifier, pushbutton convenience, simplified installation, selective call-common talk, "hands free" answering.

OMW-9 MASTER STATION

Calls up to 8 master or remote stations. Eight selector pushbuttons, talk-listen lever, in-use light, volume control, 8-ohm speaker. Attractively styled brushed aluminum control panel in walnut wood cabinet. Size, 12¾" w. x 5" d. x 5½" h. Shpg. Wt., 5 lbs.

Bogen Model OMW-9—Net Each..... \$82.45
Bogen Model OMF-9—Similar to OMW-9, but in metal box for flush mounting. Size, 12" w. x 3½" d. x 4¾" h. Shpg. Wt., 5 lbs. Net Each, \$74.20
Bogen Model OA-1 Amplifier—Fully transistorized, 105-120 VAC, 50/60 Hz. Power Consumption: 8 wats. Imped: 8 ohm. Control: Volume/Power On-Off. Size: 8¾" w. x 2¾" d. x 4¾" h. Shpg. Wt., 4 lbs. Mounts in any location. One required per system. Net Each..... \$57.70

EXECUTIVE SERIES "9" INTERCOM REMOTE STATIONS

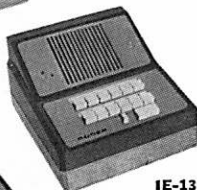
Model	Description (All speakers 8-ohm imped.)	Size, Inches	Shpg. Lbs.	Net Each
STB-8	Remote station with weatherproof speaker for indoor and outdoor use	7½" dia. x 6½" d.	4	\$21.90
WB6/L115-A	Walnut wood, surface mtg., baffle remote station, 6" cone speaker	7½" w. x 9 h. x 5 d. (3 d. base)	3	8.40
HCR-1	Remote station w/stainless steel panel for indoor and outdoor, flush or surface mounting	6¾" w. x 4¾" h.	1	10.30
RBR-F	Flush mtg. back box for HCR-1	5½" w. x 2¾" d.	1	3.00
RBR-S	Surface mtg. back box for HCR-1	x 3¾" h. x 2¾" d.	1	8.25

*RBR-S is 6¾" w. x 2" d. x 4¾" h.

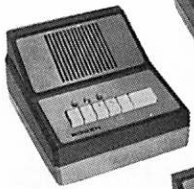
644N-71A



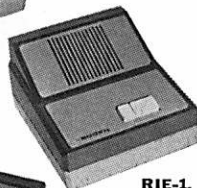
IE-7



IE-13



IE-4



RIE-1, RIM-1



IM-17



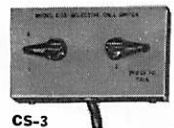
RIM-3



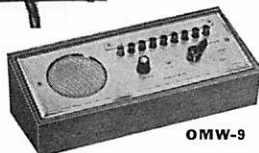
STB-45



WX-6



CS-3



OMW-9



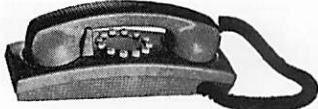
OMF-9



OA-1

BOGEN INTERCOMMUNICATION SYSTEMS

SERIES TQ BOGEN-PHONES



TQ-12A

To make a call on any Bogen-Phone system, simply lift the receiver and press the button (or buttons for conference call) of the station desired. Buzzer sounds at that station and when receiver is lifted, you are in communication. Can be desk or wall mounted. Slim, attractive gray plastic handsets; 9 1/2" x 3 1/4" x 3 3/4". One power supply (PRS-1A or PRS-5) required for each system; one unshielded conductor for each phone plus 3 additional conductors required for wiring any system. With 4 ft. snarproof cord and junction box.

TWO-STATION SYSTEM

Private line system between two parties. Each handset has a pushbutton that activates buzzer on other handset. Supplied with 4' snarproof cord. Shipping Weight, 7 lbs.
Bogen Model TQ-1A—Net per Pair... \$46.10

SEVEN-STATION SYSTEM

Inexpensive seven party system with six pushbuttons on each handset. Shipping Weight, 4 lbs.
Bogen Model TQ-6A—Net Each... \$29.85

THIRTEEN-STATION SYSTEM

Each handset has 12 pushbuttons for selective ringing. Serves up to 13 stations. Shipping Weight, 4 lbs.
Bogen Model TQ-12A—Net Each... \$33.40

MULTI-MIX POWER ADAPTER

Permits combining TQ-12A or TQ-6A phones with up to five remote speakers (trumpets) and a PA amplifier to provide: Phone communication between TQ phones; communication between any TQ phone and any remote loudspeaker; and, simultaneous paging from any TQ phone to all remote speakers. Provides power for phones plus a relay for adding remote speaker; provision for adding up to four plug-in relays (one for each remote speaker).

Bogen Model PRS-5 Multi-Mix Adapter—Size, 11" x 7" x 6". Shipping Weight, 10 lbs. Net Each \$134.95
Bogen Model RV-1 Relay—Extra, plug-in relay for PRS-5. Shipping Weight, 1 lb. Net Each... \$12.75

POWER SUPPLY

Serves all systems using TQ handsets. One required for each system. May be plugged into any standard electrical outlet and connected to any of the junction boxes in the system. Negligible power drain when system is inactive. Shipping Weight, 3 lbs.
Bogen Model PRS-1A—Net Each... \$25.00

TRA PHONE-PAGE ADAPTER

Provides paging from TQ phones; attaches between phone system and any PA system. Needs no separate power supply. With volume control for separate levels of paging and music; automatic stop on music during announcements. Operates from TQ station button. Shipping Weight, 2 lbs.
Bogen Model TRA—Net Each... \$31.65

SERIES TSL BOGEN-PHONES

Internal telephone system with extreme flexibility and reliability. Handsome, low cost system combines in many ways to suit your specific needs. Needs no central exchange—no dialing, no relays, no expensive central switching. Provides instant communication; conversations start as soon as called party lifts up his handset. To call a station, caller simply lifts the handset and pushes the button for the station desired; if called station is not busy, its buzzer will sound; if busy, you can cut into his conversation for urgent communication. Full 100% trunkage assures efficiency; permits up to 8 simultaneous conversations with TSL-16 phones. Conference calls are an added convenience; all parties can join on a single line for conference discussions. For each system, one PRS-16 power supply is required plus cable with at least 3 conductors more than the number of phones to be used. For systems that may be expected to expand, extra lines may be pre-installed, but not connected. Phones mount on wall, side of desk or any other convenient location, in any position. Size, 9 1/2" lg. x 3 1/4" w. x 3 3/4" h. Finished in rich gray with contrasting, square push-buttons.

Bogen Model TSL-8 Eight-Station Master—With seven station selector buttons and one ring button. Shpg. Wt., 4 lbs. Net Each... \$41.90

Bogen Model TSL-16 Sixteen-Station Master—Fifteen station selectors; one ring button. Shpg. Wt., 4 lbs. Net Each... \$49.60

Bogen Model TRC Phone-Page Accessory—Permits paging, being wired between phone and PA system as if it were another phone. Use with any PA system, with or without music system. Powered from PRS-16. Volume control adjusts separate levels for paging and music; music stops during announcements. Shipping Weight, 3 lbs. Net Each... \$31.65

Bogen Model PRS-16A Power Supply—May be mounted in any position and on any convenient surface located at point equidistant from end stations in system. Size, 6" x 2" x 3 1/2". Shipping Weight, 5 lbs. Net Each... \$41.55



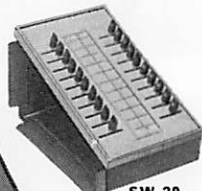
TSL-16

SERIES STA PAGING AND INTERCOM SYSTEM

Series STA is an expandable, high-powered, modern sound system designed for inter-communication and program material between a central control station and up to 60 remote stations. Twenty-switch master station, STA-20, is furnished with separate PRS-STA 35-watt power supply. STA-20L uses same supply and is equipped with an electronic chime and annunciator lights. Chimes sound at control center to indicate incoming call; annunciator light illuminates calling station on front panel. Both control stations expand to accommodate 40 or 60 stations by utilizing 20-station add-on modules; add-on module SW-20 for Model STA-20, add-on module SW-20L for Model STA-20L. In addition to voice communication, system can distribute background music or other special program material from a record player, radio tuner, or magnetic tape deck. Also has provision for accepting external low-impedance, 200 to 500 ohms, microphone. Control station is capable of transmitting emergency and all-call announcements to all remote stations simultaneously. Remotes may be wired for private or non-private operation. Solid state semiconductors: 10 silicon transistors, 7 diodes. Five pushbutton function switches select Microphone, Radio/Phone, Inter-calls, All Call, and Talk/Listen modes. Three separate volume controls for incoming calls, outgoing calls and auxiliary program material. Twenty individual station selector switches are three-position type for Off, Program and Intercom positions. Power-on lamp illuminates when control station is operative. Handsome, durable case is beige with brown trim. **Size and Weight:** Master, 14" w. x 10 1/2" d. x 5 1/2" h.; wt., 15 lbs. Power supply, 7 1/2" w. x 5 1/2" d. x 3 1/2" h.; wt., 8 lbs. Add-on module, 6 3/4" w. x 10 1/2" d. x 5 1/2" h.; wt., 7 lbs.



STA-20 Master Station



SW-20 Add-on Unit



R1S-1 Remote Station

Bogen Model	Description	Net Each
STA-20/PRSTA	20-Station Paging & Intercom Master	\$346.50
STA-20L/PRSTA	20-Station Paging & Intercom Master with chime and light annunciators	472.50
SW-20	20-Station Add-On Unit	110.25
SW-20L	20-Station Add-On Unit with light annunciators	196.90
ST-1	Single Circuit Time Option	78.75
R1S-1	Desk Mtg. Remote for STA	26.80
JBX	Junction Box (2 required for every 20 stations)	9.75
CS-1	Call-In Switch Surface Mtg.	8.95
FCS-1	Call-In Switch Flush Mtg.	5.95
CA-10	Annunciator Call-In Switch Flush Mtg.	6.75
CA-11	Privacy Annunciator Call-In Switch Flush Mtg.	8.25
PF	Privacy Switch Surface Mtg.	4.15
FPF	Privacy Switch Flush Mtg.	4.20

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BOGEN INTERCOMMUNICATION SYSTEMS

BOGEN TRANSISTORIZED INTERCOM SYSTEM FOR THE HOME

Planning a new home? Modernizing the present one? If so, why not create a feeling of security and well-being for every family member by installing a Bogen intercom system. Know where the children are and what they're doing . . . inside the house, in the garage, on the terrace. And you needn't stop what you're doing.

Once baby's in bed, you can listen in and know he's comfortable and undisturbed. Someone ill upstairs? Anyone anywhere in the house can talk with him and he doesn't even have to get out of bed. And you can talk with anybody in the workshop or den or garage without interrupting his or your activities. A Bogen intercom system is as easy to use as 1-2-3 . . . even the kids can operate it!

You won't have to leave the basement, playroom or kitchen to answer the doorbell. A Bogen system makes it possible to answer it from every room in the home without opening the door to strangers. For that extra touch of gracious living, you can have music or news "piped" throughout your home. A voice call, however, will override the music.

Discover for yourself how convenient and pleasant a Bogen intercom system can be. Your home . . . tied together by your voice . . . at a surprisingly modest price. Choose the components that suits you best!

HOME COMMUNO-PHONE SYSTEM



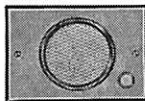
HCM-9 Control Station



HCA-1 Amplifier with Music Input Jack



HCR-1 Outdoor Remote



HCR-2 Outdoor Remote with Doorbell Button

HOME COMMUNO-PHONE SYSTEM

A deluxe nine-station system featuring selective calling. Control stations and remotes may be used in any combination up to a total of nine. Slim, graceful design and brushed stainless steel finish make the control stations ideal for bedroom, living room, dining room, kitchen or den. Outdoor remotes are finished in stainless steel. System offers high output, excellent intelligibility, low power consumption and years of trouble-free service. Any control station can select and call any other control station or remote; control stations enjoy complete privacy when desired, and can answer the doorbell. Remotes can receive calls from control stations and reply. Use of a nursery station permits "baby-sitting" with any other room with a control station. Engineered for easy installation, with cable entry from top or bottom, solderless terminals, and mounting back boxes.

Bogen Model HCM-9 Control Station—Has built-in 8-ohm speaker, write-in tabs for each selector switch, tilt-out chassis to simplify cable connections, and screw terminals. Controls, 8 selector switches; volume; monitor switch; 5-position function switch (talk, listen, standby/off, non-private, music). Size, 11 $\frac{1}{4}$ " w. x 4 $\frac{1}{2}$ " h. Shipping Weight, 3 lbs. Net Each \$40.90

Bogen Model RBM-F Flush Mounting Box—For HCM-9. Size, 10 $\frac{3}{4}$ " w. x 3 $\frac{1}{4}$ " d. x 3 $\frac{3}{4}$ " h. Shipping Weight, 2 lbs. Net Each \$5.65 (Zone 2: \$5.80)

Bogen Model RBM-S Surface Mounting Box—For HCM-9. Size, 11 $\frac{1}{4}$ " w. x 2 $\frac{3}{8}$ " d. x 4 $\frac{1}{2}$ " h. Shipping Weight, 2 lbs. Net Each \$14.20

Bogen Model HCA-1 Transistorized Amplifier—May be mounted below HCM-9, or in any convenient location. Brushed stainless steel panel has phone jack for music input. Controls, volume (screwdriver type); power on/off. Designed for continuous operation. Impedance, 8 ohms. Power required, 8 watts, 105-125 VAC, 50/60 Hz. Size, 11 $\frac{1}{4}$ " w. x 4 $\frac{1}{2}$ " h. Shpg. Wt., 3 lbs. Net Ea. \$36.25

Bogen Model RBA-F Flush Mounting Box—For HCA-1. Size, 10 $\frac{3}{4}$ " w. x 3 $\frac{1}{4}$ " d. x 3 $\frac{3}{4}$ " h. Shipping Weight, 3 lbs. Net Each \$12.85 (Zone 2: \$13.10)

Bogen Model HCR-1 Remote—Has built-in 8-ohm speaker. Size, 6 $\frac{3}{8}$ " w. x 4 $\frac{1}{2}$ " h. Brushed stainless steel. Shpg. Wt., 1 lb. Net Each \$10.30

Bogen Model HCR-2 Remote—Same as HCR-1, but has momentary pushbutton switch for connection to doorbell circuit. Net Each \$11.65

Bogen Model RBR-F Flush Mounting Box—For HCR-1 or HCR-2. Size, 5 $\frac{1}{4}$ " w. x 2 $\frac{3}{8}$ " d. x 3 $\frac{3}{4}$ " h. Shipping Weight, 1 lb. Net Each \$3.00

Bogen Model RBR-S Surface Mounting Box—For HCR-1 or HCR-2. Size, 6 $\frac{3}{8}$ " w. x 2" d. x 4 $\frac{1}{2}$ " h. Shipping Weight, 1 lb. Net Each \$8.25

CABLE FOR WIRING HOME COMMUNO-PHONE SYSTEM

Run an unshielded cable in which the number of twisted pairs is four or more than the combined total of control stations and remotes in the system; if music distribution is not planned, reduce above figure from four to three. Between amplifier and closest control station, run a 3-pair unshielded twisted cable. Between each remote and the most convenient control station, run one unshielded twisted pair.

Bogen Type 14015 Cable—Single pair, twisted, unshielded; 100 ft. Shipping Weight, 2 lbs. Net Each \$4.45

Bogen Type 14115 Cable—Eleven pair, each individually twisted, unshielded; 100 ft. Shipping Weight, 10 lbs. Net Each \$37.50

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LUXO MICROPHONE ARMS AND ACCESSORIES



IDEAL FOR PUBLIC, COMMERCIAL AND HOBBY COMMUNICATION SYSTEMS

Luxo mike arms put your mike exactly where you want it for comfortable, efficient operation. Engineered for maximum flexibility; spring-balanced action permits mike to be raised, lowered or turned with ease to any position — then stays put. Full 360° arc. Available in long (2 $\frac{1}{8}$ ") or short (1 $\frac{1}{16}$ ") necks to suit various mikes. Several bracket types permit permanent or movable installations. Careful balancing using proper

mike attachment assures satisfaction. Mike arms should be selected according to the weight of the mike to be used — see listings below. All arms are guaranteed against defects for one year; replacement of defective parts made free of charge. Specify Color: Dove gray, desert tan, black, or oyster white.

MIKE ARMS COMPLETE WITH BRACKETS

Specify color (see above) and bracket (per suffix as indicated in model number) when ordering.

Luxo Model LM-1-A, -B or -C — For mikes weighing up to 1 lb. Two extension arms for 45" length. Suffix indicates bracket supplied, per accessory list. Net Each \$19.95

Luxo Model LM-1-Ax, -Bx or -Cx — Same, but bright chrome arms and brackets. Net Each \$41.75

Luxo Model LM-2-A, -B or -C — For mikes weighing up to 1 lb. Two extension arms for 30" length. Suffix indicates bracket supplied, per accessory list. Net Each \$19.95

Luxo Model LM-3-A, -B or -C — For mikes weighing up to 1 lb. Three extension arms for 60" length. Suffix indicates bracket supplied, per accessory list. Oyster white or dove gray, specify. Net Each \$26.10

BRACKETS, BASE AND STAND



Luxo Model A, B or C Bracket Net Each \$2.25

Luxo Model Ax, Bx or Cx Bracket — Same as A, B or C brackets, but bright chrome. Net Each \$4.75

Luxo Model D Bracket Net Each \$3.50

Luxo Model E Base Net Each \$7.20

Luxo Model Ex Base — Chrome. Net Each \$15.50

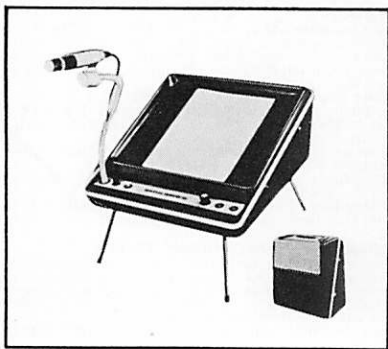
Luxo Model T Tilt-Proof Stand Net Each \$33.25


SOUND COLUMN LECTERN

- Covers audiences up to 3000
- Realistic, natural sound, excellent penetration
- Deluxe appearance: walnut Formica finish
- Battery operated — use indoors or out.

Specifications

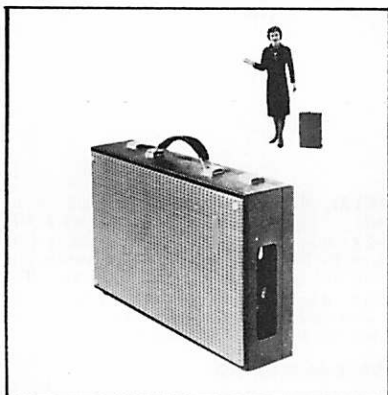
Amplifier: 25 watt EIA rating (40 watt peak), push-pull all transistor design, 50-15,000 cps. **Microphone:** Professional dynamic cardioid, supplied with goose-neck and lavalier cord. **Speakers:** 6 full fidelity 5" speakers in integrated sound column. **Inputs:** For microphone, and for auxiliary equipment. **Outputs:** For auxiliary speaker and tape recorder. **Power Source:** Works on 10 flashlight batteries, that give 200 years of operation (more than a year with normal use.) Long-life alkaline batteries recommended. AC Adapter available. **Lectern Dimensions:** 15 inches deep, 21 inches wide at base. **Reading Table Dimensions:** 13 inches deep, 20 inches wide. **Construction:** All wood, walnut Formica furniture finish, hidden wheels for easy movement. **Height:** Adjustable 36 inches to 46 inches. **Weight:** 65 lbs. with batteries. **Price:** Model S-500 complete — \$398.95 less batteries. **Accessories:** Set of 10 alkaline batteries, AC Adapter, Reading Lamp, Auxiliary Sound Column Speaker, Audience Participation Kit.


ROVING ROSTRUM

- Completely portable — weighs 22 lbs.
- For audiences up to 1000
- It becomes its own lectern
- High volume sound from flashlight-battery power.

Specifications

Amplifier: 25 watt EIA rating (40 watt peak), push-pull all-transistor design. **Microphone:** Professional dynamic cardioid with 10-ft. cable, frequency response 50-15,000 cps, supplied with adjustable goose-neck stand, lavalier cord to wear around neck. **Speakers:** Two high efficiency full fidelity 6" x 9" units with 10-oz. ceramic magnets. Each can handle full amplifier power. One built into reading table, one in cover with 40-ft. cable. Special anti-feedback speaker housing allows high volume without howls. **Inputs:** For microphone and auxiliary equipment. **Outputs:** For auxiliary speaker, tape recorder. **Dimensions:** 8 7/8" high, 16 3/4" wide, 17 1/4" deep. **Construction:** Molded scuff-proof black Royalite; retractable legs for height adjustment. **Weight:** 22 lbs. with batteries. **Price:** Model S-122 with professional microphone — \$239.95 less batteries. Model S-112 same except microphone is low impedance omnidirectional dynamic — \$198.95 less batteries. **Accessories:** Set of 10 alkaline batteries; AC Adapter; Reading Lamp; Audience Participation Kit.


DIPLOMAT

- Complete P.A. system in an attache case
- Take it anywhere — weighs 16 1/2 lbs.
- Flashlight battery operated
- For audiences up to 500.

Specifications

Amplifier: 25 watt EIA rating (40 watt peak), push-pull all-transistor design. (Available separately as Model S-702). Amplifier can be readily removed from the case where remote amplification is desired. **Microphone:** Low impedance omnidirectional dynamic with 10-ft. cable, lavalier cord to wear around neck, desk stand. May be located hundreds of feet from speaker unit. **Speaker:** 6" x 9" high efficiency full fidelity speaker in anti-feedback housing built into case. 40 feet of cable supplied for operation away from amplifier. Additional cable and/or extension speaker may be added. **Inputs:** For microphone and auxiliary equipment. **Outputs:** For auxiliary speaker, tape recorder. **Power Source:** Works on 10 flashlight batteries, that give 200 hours of operation (more than a year with normal use). Long-life alkaline batteries recommended. AC Adapter available. **Dimensions:** 12" high, 19" wide, 4 1/4" deep. **Weight:** 16 1/2 lbs. with batteries. **Price:** Model S-210 complete — \$159.95 less batteries. Model S-702 Portable Amplifier only, net each — \$79.95.

Accessories: Set of 10 alkaline batteries; AC Adapter; Audience Participation Kit; Sound Column Auxiliary Speaker.


ANNOUNCER

- Compact, lightweight, complete
- Covers audience up to 150
- Perfect for tours, classrooms, stores and offices.

Specifications

Amplifier: Solid state, 20 watt peak, simple one-knob control, automatic gain control. **Microphone:** Sensitive dynamic cardioid microphone with 15 ft. cord. **Speaker:** 9" oval, ceramic magnet, in anti-feedback housing. **Inputs:** For microphone and external music source. **Power Source:** Works on 117V. A.C. or on 8-9V. transistor radio batteries. Built-in trickle charge circuit for battery life renewal when plugged into A.C. U.L. listed. **Dimensions:** 12" x 19" x 4". **Weight:** 8 lbs. **Price:** Model S-220 complete — \$98.95 net.



AMPLI-VOX

SOLID STATE PUBLIC ADDRESS SOUND SYSTEMS



PAGING SYSTEM

• Individually adjust music volume and paging volume • Supplied complete with paging mike and 2 speakers • 35 watts of power, plenty for large areas • Perfect for restaurants, motels, stores, plants, offices, clubrooms.

Specifications

Amplifier: 35 watt EIA rating (50 watt peak), all-transistor, push-pull design. **Frequency Response:** 50-15,000 cps. **Controls:** Microphone volume, music volume, music tone. **Microphone Input:** Low impedance, up to 50 K ohms, 105 db gain. **Accessory Input:** High Impedance, 1 megohm (0.3 V. for full output), 3-position selector switch for magnetic phono, ceramic phono (both RIAA equalized), tuner or tape recorder. **Outputs:** 8 and 16 ohms; 25 V.C.T. and 70.7 V. line; 600 ohms telephone line (all outputs bridging). **Power Source:** 55 watts, 105-125 V. AC, 50/60 cps. **Size:** 8 $\frac{3}{4}$ " wide x 3 $\frac{3}{4}$ " high x 8 $\frac{3}{4}$ " deep. **Microphone:** Desk stand paging mike with push-to-talk switch, 6 ft. cable. **Speakers:** 2 background music 6" x 9" speakers with ceramic magnets in walnut vinyl bass reflex enclosures. System accommodates up to 8 speakers without detracting from sound level at any location. **Shipping Weight:** Complete system 20 lbs., amplifier only 8 $\frac{3}{4}$ lbs., speaker only, 9 lbs. **Price:** Model S-410 Background Music & Paging System complete, net each — \$198.95. Model S-402 Background Music & Paging Amplifier only, net each — \$99.95.



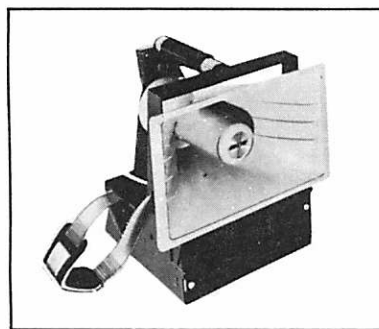
SOUND CRUISER

• Clear, powerful mobile soundcasting • Ideal for cars, trucks, busses, boats • 45-second installation • Plugs into cigarette lighter socket • Ruggedly built to take plenty of punishment.

Specifications

Amplifier: 32 watt EIA rating (50 watt peak), all-transistor, push-pull design. **Response:** 50-15,000 cps, for maximum voice penetration and intelligibility, with less than 5% distortion at full output. **Controls:** Master volume, auxiliary volume, auxiliary stand-by switch, and tone. **Microphone Input:** Any dynamic or ceramic microphone, 105 db gain. **Auxiliary Input:** High impedance, for radios, tuners, recorders, etc. 500 K ohms, full power at 0.3 V. **Outputs:** Two, 8 to 16 ohm speakers or recorders. **Signal-to-Noise Ratio:** 80 db. **Power Source:** 12 VDC — idle power 40 ma. Plugs into auto cigarette lighter socket; automatically polarizes to system. Terminals provided for permanent installation. (AC and flashlight battery power packs available.) **Size:** 8 $\frac{3}{4}$ " wide x 3 $\frac{3}{4}$ " high x 8 $\frac{3}{4}$ " deep. **Mounting:** Handle supplied for easy carrying, ready mounting under dash. **Speakers:** Two weather-proof Implex horn speakers that swivel and lock in any direction, can handle full amplifier output, mounted on car-top carrier ready to clamp to car. **Microphone:** Noise-cancelling hand-held microphone, supplied with 5' coil cord, push-to-talk switch, mounting clip. **Shipping Weight:** Complete system, 20 lbs. amplifier only, 8 lbs., speaker assembly only 17 lbs. **Price:** Model S-310, Sound Cruiser Complete system, net each (including F.E.T.) — \$219.95. Model S-302 Mobile Amplifier only, net each (including F.E.T.) — \$99.95.

Accessories: AC Adapter, Portable Power Pack (battery adapter), set of ten batteries.



HALF-MILE HAILER

• 25 watt solid-state megaphone • Extremely intelligible, even at half a mile • Easy to handle — weighs 15 lbs., never blocks your vision, never gets in your way.

Specifications

Amplifier: All-transistor push-pull design, 25 watts (E.I.A. music power rating), 40 watts peak. **Frequency response:** 30-15,000 Hz. **Controls:** On-Off; Volume. **2 Inputs:** 105 db gain input for ceramic or dynamic microphone and auxiliary input for phono, tuner, tape recorder, etc. (requires 0.3 V. for full output). **2 Outputs:** 2 phone jack outputs for 4, 8, or 16 ohm speakers or recorder. **Power Source:** Ten flashlight batteries, size "D"; 40 ma. idle current; 200 hours of operation. (AC Adapter available.) **Speaker:** Weatherproof Implex horn, capable of handling full amplifier output. **Microphone:** Noise-cancelling hand-held microphone, supplied with 8' coil cord, push-to-talk switch. **Construction:** Gripper handle, shoulder strap included. **Weight:** 15 lbs. with batteries. **Price:** Complete system Perma-Power Model S-610 (less batteries.) Net each \$139.95.

Accessories: Set of ten alkaline batteries; AC Adapter; Car top carrier speaker system.



VOICE TRUMPET

• Convenient 6 watt hailer • Excellent intelligibility at distances to $\frac{1}{4}$ mile • Lightweight, rugged, and reliable • Trigger switch for easy one-hand operation.

Specifications

Amplifier: All-transistor, 6 watts rated output, 10 watts peak. **Frequency Response:** 500-5,000 Hz. **Controls:** Trigger switch for on-off; volume. **Microphone:** Dynamic type built-in. **Power Source:** 6 "C" cells that give approximately 4 hours continuous, 8 hours intermittent operation. **Power Consumption** less than 12 watts (at rated power) less than 0.5 watts (at no signal). **Rated Power Voltage** 9V. D.C. **Size:** 8" Mouth Diameter, 13 $\frac{3}{4}$ " length. **Weight:** 4 $\frac{1}{2}$ lbs. with batteries. **Price:** Model S-620 complete \$69.95 less batteries.

Electro-Voice



Public Address Products



MUSICASTER™

MUSICASTER IA: Outdoor speaker. High fidelity performance in a compact, weatherproof system. 12" Radax dual-cone, wide-range driver in rugged, compression-molded housing. Bass reflex design. Acoustifoam™ between speaker and grille repels water without affecting sound dispersion. Olive finish. Response: 80-10,000 Hz. Impedance: 8 ohms. Dispersion: 120°. 60 watts peak. Sound pressure level: 111 dB†. 21½" h., 21½" w., 8½" d. \$80.25

MUSICASTER IIA: Musicaster IA with addition of vhf tweeter for extended high-frequency response and more uniform dispersion above 5000 Hz. Response: 80-16,000 Hz. \$101.10

† Measured at 4' on axis with full rated power.

Power Megaphones



New Electro-Voice Power Megaphones are extremely rugged, waterproof, weather-proof, and salt spray proof for the most severe uses: safety services, construction, sports, tour guides, marine, home uses, all emergency applications, etc.

All units include low-distortion, all-transistor amplifiers for high intelligibility and long term, trouble free operation. Two styles are available: pistol-grip trigger with built-in microphone for instant readiness in any situation; and separate microphone with coil-cord for semi-permanent installation or for resting heavier models. Pistol grip models are well balanced for ease of holding. Except for PM4G, all models have volume controls easily reached by thumb. Most models, except 6G and 4G, have noise-cancelling microphone which reduces unwanted background sound and feedback for higher operating volume. All models have convenient carrying strap.

16 and 20 watt models incorporate an alarm tone signal, push-button operated, useful for attracting attention, as a distress signal, or boat fog horn. These models carry a bright International Yellow — recognized emergency color. When nickel-cadmium batteries are used in 16 and 20 watt models, they can be recharged without removing them from the megaphone using the C1215 plug-in recharger listed below, for semi-permanent life.

	PM20EAC	PM16EAC	PM16GAC	PM6E	PM6G	PM4G
TYPE:	Ext. Mic	Ext. Mic	Pistol grip	Ext. Mic	Pistol grip	Pistol grip
Output-peak:	20 watts	16 watts	16 watts	6 watts	6 watts	4 watts
Range:	1 mile	¾ mile	¾ mile	2000 ft.	2000 ft.	1200 ft.
Batteries*:	10 C size	8 C size	8 C size	6 C size	6 C size	4 D size
Color:	Int. Yellow & Cream	Int. Yellow	Int. Yellow	Red & Cream	Red & Cream	Red & Cream
Size:	11¼" dia. 18" l.	8¾" dia. 13-5/8" l.	8¾" dia. 14½" l.	7½" dia. 13" l.	7-5/8" dia. 12¼" l.	8¾" dia. 12-1/16" l.
Net Weight: (less batt.)	6 lb. 10 oz.	4 lbs.	4 lbs.	3 lb. 5 oz.	3 lb. 5 oz.	2 lb. 14 oz.
Price:	\$104.10	\$84.60	\$75.00	\$57.90	\$50.70	\$36.60

*Not furnished.



C1215: Battery Charger. For 16 and 20 watt megaphones. Plugs into AC outlet and receptacle on unit. Switch for 12 or 15 volt, 150 ma charging current. Size: 2½" h., 2-7/8" w., 4-5/8" d. \$30.00

Accessory Line Transformers

For use in Constant-Voltage PA Systems

TR Series—70.7 V., 4 wattage taps. Secondary impedances 4, 8, 16 ohms.

TM Series—Dual 25 and 70.7 V., 4 wattage taps. Secondary impedances 8 and 16 ohms.

Watts	Model	Price	Model	Price
5	TR5	5.10	TM5	7.20
15	TR15	5.55	TM15	7.65
30	TR30	5.85	TM30	11.70
50	TR50	10.65		
60			TM60	13.80



TH Transformer Housing: Weatherproof, eliminates soldering. Wattage indicator dial. Size: 4" h., x 5" w., x 3½" d. \$6.75

TR30-7: 30-watt, 70.7-V line transformer for PA30A and -R. Fits under base. Taps: 30, 15, 8, 4, 2 watts. Secondary impedance: 8 ohms. \$10.65

TR30-2: As above except 25-V. \$10.65

Warranty

Electro-Voice public address products (except Sentry IV and power megaphones) are guaranteed for the life of the product against malfunction due to defects in workmanship and materials. If malfunction from this cause occurs, the product will be repaired or replaced (at our option) without charge for materials or labor, if delivered to Electro-Voice or its service agency. Unit will be returned prepaid. The Sentry IV is guaranteed as above for a period of two years from date of purchase. Power megaphones are guaranteed as above for one year from date of purchase and there will be no charge for parts during the first year, no charge for labor during the first 90 days. Warranty does not cover finishes or malfunction due to abuse or operation at other than specified ratings. Repair by other than Electro-Voice or its authorized service agencies will void this guarantee.

Electro-Voice



Professional Sound Reinforcement

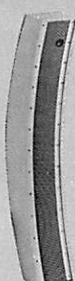
Loudspeaker Systems

Line Radiator™ Speakers

NEW



LR4B



LR4A



LR7



LR4SA



LR2SA

LR4B: An even further engineering advance allowing the famous E-V curved Line Radiator to be improved in control of dispersion with reduced size and easier mounting ability. In the LR4B, the curved Radiator is actually built in a straight configuration by mounting 5" x 7" cone speakers in a "multi-plane" front surface, each speaker at a different, carefully engineered angle. New ST350A sectoral tweeter provides smooth, extended high-frequency response. Integral electrical filter reduces effective length of the radiator with increasingly higher frequencies providing same control of dispersion at all frequencies. Directional control greatly reduces feedback and unwanted reverberation. Response: 90 to 15,000 Hz. Dispersion: 60° vertical, 120° horizontal. 90 watts program. Impedance: 8 ohms. Sound Pressure Level: 113½ dB†. 48" h., 7½" w., 9¼" d., 40 lbs. Completely weatherproof wood enclosure with utility black finish. \$150.00

LR4A: Curved design^a to overcome unwanted high frequency dispersion at ends, eliminates echo and feedback. Uses nine 3" x 5" and three 3½" cone speakers. Dispersion: 160° horizontal, 60° vertical. Response: 200 to 10,000 Hz. 25 watts program. Impedance: 8 ohms. Sound Pressure Level: 112 dB†. 48" h., 7" w., 13" d. Mesa tan wood enclosure. 26 lbs. \$147.90

LR7: Curved Line Radiator. Uses nine 5" x 7" speakers and two T35 vhf drivers for frequency range of 200 to 17,000 Hz. Coverage: horizontal 160°, vertical 60°. 50 watts. Impedance, 8 ohms. Sound Pressure Level: 117 dB†. Nonresonant, curved^b wood enclosure finished in Mesa Tan. 60" h., 11" w., 14" d. 59 lbs. \$208.80

LR4SA: Straight Line Radiator. Weatherproofed for outdoor or indoor installation. Extruded aluminum case is finished in Faun metallic. Electrical filters remove end speakers from circuit as frequencies increase, eliminating high frequency lobes. Response: 200 to 10,000 Hz. Impedance: 8 ohms. 40 watts program. Dispersion: 30° vertical, 160° horizontal. Sound Pressure Level: 116 dB†. 48-3/8" l., 6-5/8" w., 4-7/8" d. 25 lbs. \$115.50

LR4SAT: With externally switchable 25/70.7 Volt line transformer—4 taps. \$126.00

LR2SA: Short LR4SA. Greater vertical dispersion (45°). Response: 200 to 10,000 Hz. Impedance: 8 ohms. 20 watts program. 24½" l., 6-5/8" w., 4-7/8" d. 15 lbs. \$67.50

LR2SAT: With externally switchable 25/70.7 Volt line transformer—4 taps. \$81.00

SENTRY IA: Wall or ceiling mounted system designed specifically for monitor use in recording and broadcast studios. Extremely wide, very flat response. Walnut finished cabinet. Frequency response: 30 to 20,000 Hz. 8 ohms impedance. Power handling capacity: 20 watts. Permits precise monitoring and use as reference standard. Size: 21½" h., 37" w., 16-3/8" d. 82 lbs. \$195.00

SENTRY IIA: Floor model, similar to Sentry IA above. For free standing floor position. Size: 32" x 20" x 13" d. 63 lbs. \$195.00

^aU.S. Patent No. 3,125,181 ^bU.S. Patent No. 2,856,467 †At 4" on axis with full rated power.



High Power-Capacity Speaker System for Studio & Broadcast Monitoring and Heavy-Duty Sound

SENTRY IV: Extraordinary new professional sound reinforcement and monitor loudspeaker. Already preferred in leading studios. Three-way, all horn-loaded system offers absolute minimum distortion over wide frequency range, unequalled efficiency and uniformity, high power handling capacity, uniform and wide dispersion. Midrange and tweeter horns represent first significant new sectoral design in 25 years. Vertical dispersion 60°, and horizontal dispersion 120°-over virtually entire range eliminate "hot" or "dead" spots. Folded horn woofer with two entirely new 12" cone drivers provides almost linear response down to 50 Hz. Crossover frequencies: 400 and 3500 Hz. High-frequency components may be operated with separate amplifier. Heavy, well braced wood enclosure, utility black. 4-position high-frequency rolloff switch allows higher power handling capacity in excess of 125 watts RMS with attenuated highs. Response: 50 to 18,000 Hz. 50 watts RMS at full range. Sound Pressure Level: 117 dB†. Impedance: 8 ohms. 50¼" h., 27¼" w., 20-5/8" d. 148 lbs. \$495.00

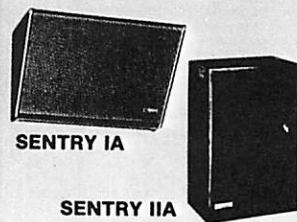
LFSA: Low-frequency sub assembly only from Sentry IV. \$277.50

HFSA: High-frequency sub assembly only from Sentry IV. Includes midrange and tweeter sectoral horns. \$277.50

SRK: Sentry IV road kit—4 heavy duty furniture casters and hardware. \$26.70

SPK: Sentry IV protection kit—trunk corners, furniture glides, and 2 special trunk handles. \$11.25

STR: Sentry IV tweeter protector—an electronic sensing device which protects tweeter from potentially damaging input levels. \$19.80



SENTRY IA

SENTRY IIA

Electro-Voice

Sound Reinforcement



Horns and Drivers

CDP® Horns



848A



FC100



AC100

Exclusive E-V Compound Horns^b permit widest range at lowest distortion, plus complete directional control of both highs and lows. Best wide-angle coverage with exclusive dual diffraction horns means better sound through entire coverage area. Natural voice and music reproduction results in higher intelligibility without annoying peaks.

848A: Combines FC100 Horn and 1828C Driver for finest wide-angle sound, low distortion, and highest quality of any projector. Frequency response: 150 to 10,000 Hz. Impedance: 8 ohms. Dispersion: 90° x 120°. Power handling capacity: 30 watts. Sound Pressure Level: 120 dB†. 20½" h., 10½" w., 20" d. \$60.75

FC100: Provides two diffraction horns for uniform wide-angle coverage. Flexible coverage control by individual adjustment of each horn. Use any E-V convertible driver. Low frequency horn cutoff: 100 Hz, taper: 100 Hz. Air column length: 58", sound distribution 90° x 120°, high frequency sound distribution: 90° x 120°. Crossover: 1000 Hz. 20½" h., 10½" w., 20" d. (less driver). \$37.80

AC100: Concentrating version of CDP®. Uses round horns for most concentrated coverage. Use with any E-V convertible driver. Low frequency horn cutoff: 100 Hz, taper: 100 Hz. Air column length: 56", sound distribution, 80°. High frequency sound distribution: 30°. Crossover: 1,000 Hz. 21" dia., 21" d. (less driver). \$67.50

Reentrant Horns



FR150



AR150



HC400



AR400

FR150: Medium-angle, low-cost rectangular horn provides good coverage. Fiberglass horn has Mesa Tan color molded in. Adjustable mounting angle. Can be stacked for multiple speaker applications; ideal for car-top installation. Low frequency cutoff: 150 Hz, taper 150 Hz. Air column length, 45". Sound distribution, 70° x 100°. 20½" x 10½" x 21" d. (less driver). \$37.80

AR150: Round concentrating horn for maximum penetration. E-V ring reflector plus new exponential design contributes to wide range. High intelligibility and remarkably natural voice and music quality. High efficiency design. Low frequency horn cutoff: 150 Hz, taper 150 Hz. Air column length, 41". Sound distribution, 85°. 21" dia. x 17" d. (less driver). \$31.50

HC400: Wide-angle round reentrant horn. As used in 844A. Use with any E-V driver. High articulation. Rugged diecast body. Weatherproof. Nominal dispersion 90°. Low frequency cutoff 250 Hz. Taper 250 Hz. Air column length 16". Mesa tan baked enamel finish. 10" dia., 5¼" d. \$11.70

AR400: Rugged reentrant horn designed as siren horn but versatile for high-level public address. Excellent response and dispersion from small horn. Spun aluminum and zinc die-cast. Thermal black (can be painted over). Low-frequency cutoff: 400 Hz. Dispersion: 110°. 8½" dia., 6-1/8" d. (less driver). \$19.50
AR500: Similar to AR400, with low-frequency cutoff at 500 Hz. 7-3/8" dia., 3-5/8" d. (less driver). \$17.40

^b U.S. Patent No. 2,856,467



M253

Multicell

M253: Multicellular horn (less driver) weatherproof for outdoor and indoor use. Dispersion uniform at all frequencies (60° vertical, 120° horizontal). Two rows of five steel cells. Accepts any E-V driver. Low frequency cutoff, 300 Hz. Mounting hardware supplied. Driver-throat built in. 17½" h., 30½" w., 36½" d. 26 lbs. \$202.50

Versatile Convertible Drivers



	1828R*	1828C	1828T	1829	1829T	1823*
Program Power Capacity—Watts	30	30	30	60	60	110
Frequency Response—Hz	150-10,000	150-10,000	150-10,000	140-11,000	140-11,000	140-8,000
Sound Pressure Level with FC100 with AR150	127 dB	120 dB 127 dB	120 dB 127 dB	127 dB 133 dB	127 dB 133 dB	133 dB
Voice Coil Impedance—ohms	8	8	8	16	16	8
Transformer Impedance—ohms	—	—	167,333,667 1337	—	83,167 333,667	—
Transformer Power Taps—watts	—	—	30, 15, 8, 4	—	60, 30, 15, 8	—
Dimensions (overall)	4" dia. 2¾" d.	4" dia. 3¾" d.	5" h. 4" w. 5¼" d.	6" dia. 4-1/16" d.	6" dia. 6-3/8" d.	4¼" dia. 3-7/16" d.
Price	\$23.40	\$23.40	\$34.50	\$41.70	\$51.00	\$40.50

*Reentrant style only † Measured at 4' on axis with full rated power.

E-V P.A. DRIVERS offer smooth, peak-free response with maximum efficiency for greatest possible long term economy. Reentrant driver model 1828R will produce maximum intelligibility with E-V AR150, FR150, and HC400. Convertible Drivers may be used with Reentrant Horns but are especially effective with the exclusive Electro-Voice Compound Diffraction Projectors (CDP®), FC100, and AC100. Model 1823 is a heavy-duty driver designed for siren applications with AR400 or AR500, but can be used with any E-V reentrant horn; Faston terminals. For use in constant voltage systems, order 1828T or 1829T. All drivers have 1-3/8"-18 threads for attaching horn.

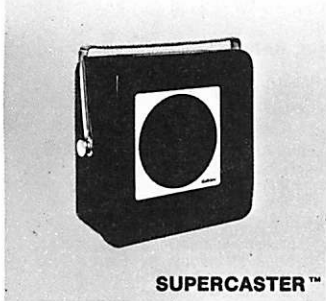
E-V Diaphragm replacement kits are available for all Electro-Voice public address drivers.



ELIMINATOR™ 1

ELIMINATOR 1: A three-way, full-range loudspeaker system for extremely high audio level, high quality sound reinforcement, playback, and music instrument amplification. SRO/15, 15" loudspeaker in folded horn cabinet. 8HD midrange Diffraction Horn and driver. Two special vhf drivers and horns, level controls for vhf and midrange drivers. Rugged enclosure finished in black vinyl with metal corners. Response: 55 to 15,000 Hz. 100 watts RMS. Dispersion: 100°. Sound Pressure Level: 122 dB†. Impedance: 8–16 ohms. 37½" h., 22½" w., 23-1/8" d. 118 lbs. \$490.00

ELIMINATOR 2: For even higher midrange power-handling capacity and sound pressure output. Ideal for Acid Rock groups, etc. Same cabinet as Eliminator 1. Heavier midrange driver, without vhf speakers. Response: 55–10,000 Hz. 100 watts RMS. Sound Pressure Level: 124 dB†. 112 lbs. \$385.00



SUPERCASTER™

SUPERCASTER: For instrument amplification or p.a. outdoors or in. Heavy duty 12" speaker. Same case as Muscaster, with black and chrome finish. Heavy chrome handle and positioning knobs for carrying or mounting on heavy-duty stand. Response: 80–8,000 Hz. 80 watts RMS. Sound Pressure Level: 115 dB†. Impedance: 8 ohms. 21½" h., 21½" w., 8½" d. 30 lbs. \$127.50

ElectroVoice



Public Address Loudspeakers

**Music Instrument/P.A. Speakers
Paging Projectors**

Paging Speakers



**30-watt
PA30AT**

**30-watt
PA30RT**

**30-watt
844A**

**25 watt
847A**

**12-watt
PA12 & TR12**

PA30AT-7: 30-watt projector with integral 70.7 V line transformer. Externally switchable line power taps at 30, 15, 8, 4 and 2 watts. Rugged rectangular Implex horn. Universal swivel bracket permits angling or rotating without demounting. Smooth response for voice or music: 250 to 14,000 Hz. Dispersion: 120° x 90°. EIA sensitivity rating: 60 dB. Sound pressure level: 127 dB†. 11" h., 6½" w., 8½" d. \$34.50

PA30AT-2: Same as above with 25-volt transformer. \$34.50

PA30A: Same as PA30AT but no line transformer. Impedance: 8 ohms. \$25.50

PA30A-45: 45-ohm voice coil for intercom systems. \$27.00

PA30RT-7: 30-watt reentrant projector with round spun-aluminum bell. Integral 70.7-V transformer, switchable power taps at 30, 15, 8, 4 and 2 watts. Resistant to chemical atmospheres and weather extremes. Response: 250–14,000 Hz. Impedance: 8 ohms. Dispersion: 105°. EIA sensitivity rating: 60 dB. Sound pressure level: 127 dB†. 11" h., 9¾" d., 10" dia. \$34.80

PA30RT-2: Same as above with 25 volt transformer. \$34.80

PA30R: Same as PA30RT but no line transformer. Impedance: 8 ohms. 10" high. \$27.00

PA30R-45: Has 45-ohm voice coil. \$27.00

844A: Medium-angle round projector. Smooth response with better lows to provide natural paging without feedback. Handles 30 watts program. Rugged die-cast horn, field replaceable voice coil. Frequency response: 250–13,000 Hz. Impedance: 8 ohms. Dispersion: 90°. EIA sensitivity rating: 54 dB. Sound pressure level: 123 dB†. 9-7/8" dia., 7-7/8" d. \$28.80

847A: CDP® wide angle speaker provides high articulation over uniform 120° x 90° area. Uses TWO diffraction horns. Power handling capacity: 25 watts. Smooth, peak-free response: 250–10,000 Hz. Sound pressure level: 114 dB†. Impedance: 8 ohms. Fiberglass Mesa Tan horn. 11¾" l., 7¾" w., 10¼" d. \$42.30

PA12: High performance, inexpensive 12-watt RMS paging speaker. Outstanding efficiency allows reduced amplifier power. Excellent response and dispersion due to computer-calculated horn flare. High impact-strength Implex horn, rugged Kapton voice coil, and phenolic diaphragm fully moisture and fungus proof. Molded-in Mesa tan color. Outstanding intelligibility and articulation with superior music reproduction. Single wing-nut adjustment base may be removed for installation. Response: 325–14,000 Hz. Dispersion: 130°. Sound pressure level: 119 dB†. 7½" dia., 7-1/8" d. \$17.40

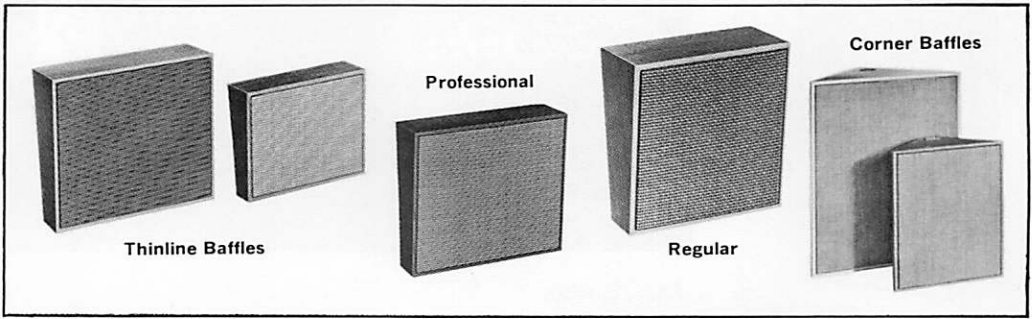
PA12-45: NEW Same as PA12 with 45-ohm voice coil for intercom installations. \$18.06

TR12-7: 70.7-volt line transformer for PA12. Mounts on bracket at rear of horn. Vacuum-varnished for full protection from weather, moisture, and fungus. Clear formed-acetate cover will not discolor, snaps on and off. Solderless push-clips for tap selection. Wide response, low loss. Power taps at 12, 6, 3, 1.5, and 0.75 watts. Secondary impedance: 8 ohms. \$4.80

TR12-2: Same as above except 25 volts. \$4.80

PA12F: Flush-mounting version of PA12. Handles 12 watts RMS. Fits between ceiling joists or wall studs for built-in installation. Mounts to front or rear of surface. Cast aluminum housing, Mesa tan finish. Response: 500–14,000 Hz. Dispersion: 120°. Sound pressure level: 119 dB†. Overall dimensions: 6" dia. 3-9/16" d. \$21.00

† Measured at 4' on axis with full rated power.



THINLINE WALL BAFFLES

Attractive, wider, but a third thinner wall baffles with heavy-duty PA-quality speaker installed and wired; screw terminals. Top, sides and bottom covered in heavy, wood-grained vinyl; specify blond or walnut. Cane grille. Front angled 10°. Impedance, 8 ohms.

WITH 8" DUAL-CONE SPEAKER

Rated 10 watts; 4.8 oz. ceramic magnet. Size, 12¼" w. x 4¾" d. x 9¾" h. Shpg. Wt.: 4¼ lbs.; with transformer, 5 lbs.

Argos No. WB-408CS — With speaker. Net Each \$11.85

Argos No. WB-408CSL — Same, with L-pad. Net Each \$14.25

Argos No. WB-408CST — With 70.7-volt transformer. Net Each \$15.95

Argos No. WB-408CSLT — With 70.7-volt transformer and L-pad. Net Each \$16.95

WITH 12" JENSEN SPEAKER

Rated 15 watts; 10-oz. ceramic magnet. Size, 16¼" w. x 6¼" d. x 14" h. Shpg. Wt.: 5½ lbs., less speaker; 9¼ lbs., with speaker; 10 lbs., with speaker and transformer.

Argos No. WB-212CS — With speaker. Net Each \$16.75

Argos No. WB-212CSL — Same, but with L-pad. Net Each \$18.95

Argos No. WB-212CST — With 70.7-volt transformer. Net Each \$19.95

Argos No. WB-212CSLT — Speaker, L-pad and 70.7-volt transformer included. Net Each \$21.95

Argos No. WB-212C — Baffle only; for speaker 4¾" d. Net Each \$7.25

LOW-LEVEL WITH 8" SPEAKER

Rated 6 watts; 1 oz. magnet. Size, 12¼" w. x 4¾" d. x 9¾" h. Shpg. Wt.: 4 lbs., with transformer, 4½ lbs.

Argos No. WB-108CS — With speaker only. Net Each \$9.35

Argos No. WB-108CSV — Same, with volume control. Net Each \$11.75

Argos No. WB-108CST — With 70.7-volt transformer. Net Each \$12.75

Argos No. WB-108CSVT — With speaker, volume control and 70.7-volt transformer. Net Each \$14.40

Argos No. WB-208C — Baffle only; for speaker 3" d. Net Each \$4.90

SLANTING CORNER STYLE WITH 8" JENSEN SPEAKER

Argos No. SCB-208S — Rated 15 watts; 6 oz. ceramic magnet. Size, 12¼" w. x 6¾" d. x 18" h. Shpg. Wt., 5½ lbs. Net Each \$15.95

PRESTIGE BAFFLES WITH 8" JENSEN SPEAKER

Furniture-finished wood cabinet in choice of antique birch or dusk walnut; cane grille. Speaker rated 15 watts; 6 oz. magnet. Impedance, 8 ohms. Size, 11" w. x 5¾" d. x 9¾" h. Front angled 10°.

Shpg. Wt.: 5½ lbs.; with transformer, 6 lbs.

Argos No. PB-508CS — With speaker only. Net Each \$13.95

Argos No. PB-508CSL — Same, but with L-pad. Net Each \$16.45

Argos No. PB-508CST — With 70.7-volt transformer. Net Each \$17.25

Argos No. PB-508CSLT — With speaker, L-pad and 70.7-volt transformer. Net Each \$19.25

WEATHERMASTER OUTDOOR SPEAKER SYSTEM

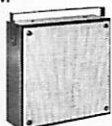
Weather resistant. Has 6" speaker, 5.4 oz. magnet, 10-watt power, 8-ohms impedance. Baffle is waterproof Resincore™; walnut wood-grain vinyl. Size, 9¼" x 4" x 12". Shpg. Wt., 4¾ lbs.

Argos No. WWB-600CS Net Each \$12.95

HALLMARK TWO-FACED SPEAKER SYSTEM

For bi-directional sound such as corridor paging; as effective as two single-faced speakers. Mounts easily on ceiling or wall. Dual-cone 8" speaker has 4.8 oz. magnet; rated 10 watts; 8 ohms impedance. Specify antique birch or dusk walnut finish; cane grille. Size, 10¾" sq. x 3½" d. Shpg. Wt., 5½ lbs.

Argos No. TCB-8S Net Each \$16.75



PROFESSIONAL, DELUXE AND REGULAR BAFFLES

Professional wall baffle (PWB) has wider shape for better appearance, more volume. Wood-grain vinyl, blond or walnut (specify). Deluxe wall baffles (DWB) are natural hardwoods. Dusk walnut or antique birch finish (specify). Regular wall baffles (WB) are the standard of the industry for quality reproduction and appearance. Wood-grain vinyl, walnut or blond (specify). All baffles have Speedy Mounting Clips. Two-way baffle (TWB) is like two back-to-back Thinline; mounts one speaker for two way projection. In walnut wood-grain vinyl. Weathermaster baffle (WWB) is constructed of 100% waterproof Resincore™ wood material. In walnut wood-grain vinyl. Cane grille.

PROFESSIONAL WALL BAFFLE

Argos No.	Spkr.	Size, Inches W. x D. x H.	Cubic In.	Shpg. Lbs.	Net Each
PWB-8C	8	16¼ x 6¼ x 14	1000	6	\$7.25

DELUXE WALL BAFFLES

DWB-8A	8	9¾ x 6½ x 10½	400	6*	\$6.75
DWB-12A	12	13¾ x 9½ x 14	1180	11*	9.75

REGULAR WALL BAFFLES

WB-4/5D	4-5	6½ x 4 x 6¾	100	2½*	\$3.75
WB-6D	6	8½ x 5 x 8¾	210	4½*	4.50
WB-6/9D	6 x 9	10 x 6½ x 10¾	400	6*	4.95
WB-8D	8	10 x 6½ x 10¾	400	6*	4.90
WB-10D	10	12½ x 7½ x 12½	800	9*	6.95
WB-12D	12	13¾ x 9½ x 14¼	1180	12*	7.25

SPECIAL PURPOSE WALL BAFFLES

TWB-8C	8	12¼ x 8 x 10		6¼	8.75
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*Shipping weight of two in a carton.

CORNER BAFFLES

Easily hung on Speedy Mounting Clips. Front panel held by two clips and concealed screw. Screw-type exterior speaker terminals. Bass reflex design, acoustic padding for superior sound. Specify walnut or blond wood-grain vinyl.

SLANTING CORNER BAFFLES

Argos No. SCB-8D — For 8" speaker; volume, 680 cubic inches. Size, 17¾" w. x 9" d. x 15" h. Shpg. Wt., 6 lbs. Net Each \$10.95

Argos No. SCB-12D — For 12" speaker; volume, 1240 cubic inches. Size, 20¾" w. x 10½" d. x 20" h. Shpg. Wt., 10 lbs.

Net Each \$13.95

REGULAR CORNER BAFFLES

Argos No. CB-8D — For 8" speaker; volume, 525 cubic inches. Size, 12¼" w. x 6½" d. x 14" h. Shpg. Wt., 4½ lbs.

Net Each \$8.95

Argos No. CB-12D — For 12" speaker; volume, 1520 cubic inches. Size, 17¾" w. x 9" d. x 20" h. Shpg. Wt., 11 lbs.

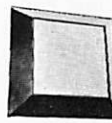
Net Each \$14.75

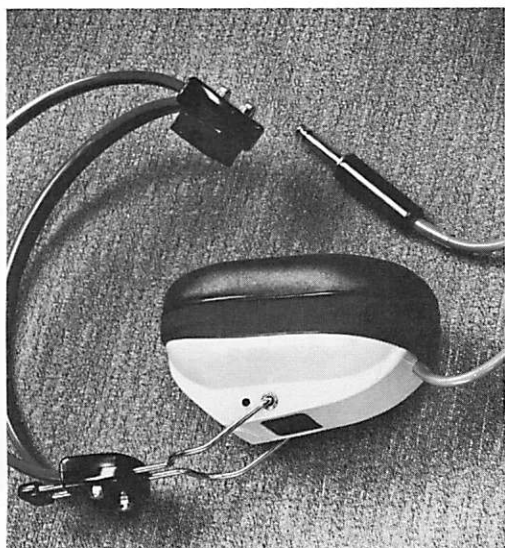
TROBADOR SPEAKER SYSTEM

WITH ATTRACTIVE ART FRAME

For horizontal or diamond mounting. Dual-cone 8" speaker, rated 15 watts, is ideal for voice or music. Choice of dusk walnut or antique birch finish; Belgium linen grille. Impedance, 8 ohms. Size, 13¼" sq. x 3½" d. Shpg. Wt., 5½ lbs.

Argos No. TSW-8S Net Each \$15.25





SINGLE EAR HEADPHONES

For monitoring or recording sessions. 20-15,000 Hz. Response.
MRN Net Each \$16.00

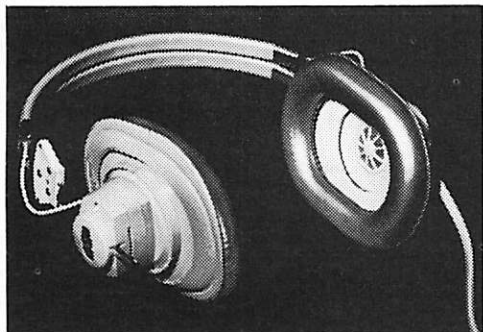
Features:

Foam Cushioned • Adjustable Headband and Vinyl Covered, Padded Ear Cushion • 20 Feet of Super Flexible Cable • 2000 Ohm Impedance • Standard Phone Plug • Smooth Extended Bass Response • Rugged Construction for Dependable Performance Under All Conditions • Especially Suitable for General Lab and Studio Work.



DOUBLE EAR HEADPHONES

For TV Radio Broadcasting. Mono/Stereo Switch. 20-15,000 Hz. Response. Metal Stereo Phone Plug.
MRN-SM Net Each \$27.00



AKG K-60

AKG's stereo dynamic headphone Model K-60 has revolutionized headphone listening. It has become an outstanding example in headphone design which offers full fidelity listening experiences, yet provides complete comfort over extended periods. Music can be reproduced at concert hall level with silky deep bass, smooth mid range response and brilliant highs without distortion; a truly remarkable objective sound reproduction.

Technical Data:

Frequency range: 20-20,000 Hz. Normal Power requirement: 1 mW for 112 dB SPL. Impedance: 600 ohms each system. Distortion: Under 1% at 125 dB SPL. Weight: 11 oz. Net Each \$49.00



AKG K-180

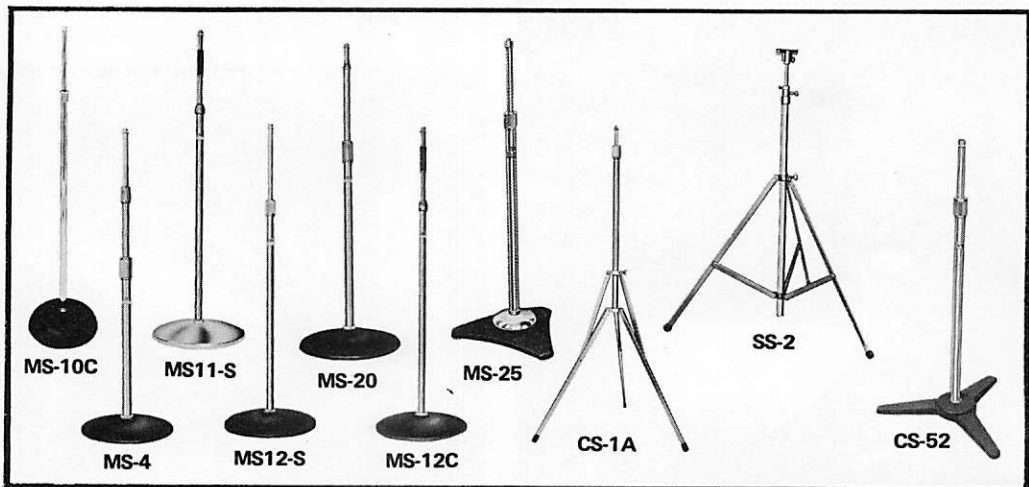
For the ultimate experience in headphone listening; surpasses any type of headphone presently available. Features "subjectively controllable sound" which is based on the fact that the auditory volume between headphone driver and eardrum greatly influences the headphone response characteristics. The auditory volume can be varied on the K-180 by turning adjusting knobs, thus adapting the headphone response to individual physiological acoustic taste.

Technical Data:

Frequency range: 16-20,000 Hz. Normal Power requirement: 1 mW for 112 dB SPL. Impedance: 600 ohms each system. Distortion: Less than 1% at 125 dB SPL. Weight: 21 oz. Net Each \$69.00



ATLAS MICROPHONE STANDS



MS-10C
Popular Floor Stand with grip-action clutch for budget-conscious users. Charcoal wrinkle base. Height: 35"-63". Base: 10" dia., charcoal. Weight: 10 lbs. Net Each \$8.91

MS-4
Special Height Stand. Three section tube assembly with two grip-action clutches adjust from standard to extra low heights for seated performers or children. Height: 25"-65". Base: 10" dia., charcoal. Weight: 10 lbs. Net Each \$13.80

MS-11C
General Purpose Stand. Grip-action clutch. Low-profile chrome base with added weight for extra stability. Height: 34"-62". Base: 10" dia., chrome. Weight: 13 lbs. Net Each \$11.58

MS-14G
Identical to MS-11C except in deluxe all gold finish for special decor requirements. Net Each \$15.38

MS-11S
Automatic Clutch Stand. Effortless, instantaneous changes in height by grasping of decorative control sleeve and raising or lowering the microphone. Removing hand automatically locks stand height. Low Silhouette chrome base. Height: 39"-62". Base: 10" dia., chrome. Weight: 13 lbs. Net Each \$21.00

MS-12C
General Purpose Stand. Same profile and stability as MS-11C with base in charcoal wrinkle finish. Height: 34"-62". Base: 10" dia., charcoal. Weight: 12 lbs. Net Each \$9.50

MS-12S
Automatic Clutch Stand. Identical to MS-11S with low silhouette base in charcoal wrinkle finish. Height: 39"-62". Base: 10" dia., charcoal. Weight: 12 lbs. Net Each \$19.20

MS-20
Heavy Duty Professional Stand. Grip-action clutch. Extra height, oversize 1 1/8" dia. tube assembly with 5/8"-27 thread top adaptor. Low contour base. Height: 37"-66". Base: 12" dia., charcoal. Weight: 15 lbs. Net Each \$15.00

MS-25
Stage and Studio Floor Stand. Has integral air suspension system to counterbalance microphone weight. Extra heavy triangular base with concave sides. Extra height, oversize 1 1/8" dia. tube assembly with 5/8"-27 thread top adaptor. Height: 38"-67". Base: 17" dia., charcoal with chrome cover. Weight: 22 lbs. Net Each \$24.00

CS-1A
Collapsible Tripod Stand. For clustering microphones or supporting small speakers. Reverse-collapsible for compact storage. Infinitely adjustable from 10" dia. standing to 42" flat base circle. Cadmium finished base. Height: 32"-74". Size: 23" collapsed. Weight: 5 lbs. Net Each \$18.50

CS-42
Folding Base Stand. For portable use. Grip-action clutch. Three legs collapsible for convenient storage. Charcoal finish legs. Base dia. 16". Height: 34"-62". Weight: 9 lbs. Net Each \$11.78

CS-52
Heavy Duty Stand. Demountable legs for easy storage. Grip-action clutch. Charcoal finish legs. Base dia. 15". Height: 34"-62". Weight: 9 lbs. Net Each \$10.62

CS-32
All Chrome Lightweight Floor Stand. Stores within amplifier or speaker carrying case. Grip-action clutch. Skid-proofed demountable tubular legs. Leg base spread dia. 21". Height: 36"-64". Weight: 5 lbs. Net Each \$11.01

CS-33
Identical to CS-32 with three section tube assembly, two grip-action clutches, for extra height-adjustment flexibility. Height: 26"-64". Weight: 4 lbs. Net Each \$12.98

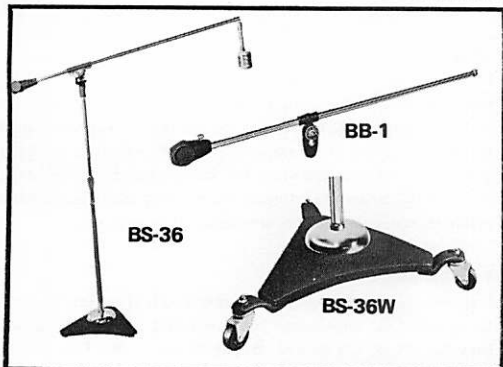
SS-2
Heavy-Duty Speaker Stand. For stable tripod base-support of heavy speakers indoors or outdoors, even under adverse wind conditions. Equipped with easy-off top adaptor to facilitate attachment or removal of speaker. Height extension from 5 to 10 feet. Base spread 48" dia. Weight 29 lbs. Net Each \$37.44

SS-4
All Purpose Stand. For medium size and weight speakers. Equipped with easy-off top adaptor. Chrome tube adjustable height 38"-74". Charcoal finish, cast iron base requires minimum floor space. Weight 20 lbs. Net Each \$19.59

BS-36 BOOM STAND
Professional Boom Stand. Grip-action clutch with integral air suspension system to counterbalance boom weight. 5/8"-27" threaded gyromatic swivel joint at microphone end permits directional positioning of microphone. Boom length 62". Adjustable vertical height from 48" to 72". All tube sections chrome plated. 17" dia. triangular base with concave sides, charcoal wrinkle with chrome cover. Furnished with cable hangers for guiding mike cable. Shipping weight 36 lbs. Net Each \$59.85

BS-36W
Mobile Model. Same as BS-36 with rubber casters for mobility. Shipping weight 40 lbs. Net Each \$67.80

BB-1 BABY BOOM
Baby Boom Attachment. Attaches to any adjustable Microphone Stand. Locks in any position. Boom Arm 31" long. Chrome tube 5/8"-27 threaded. Counterweight in charcoal wrinkle. Shipping weight 3 1/2 lbs. Net Each \$6.92

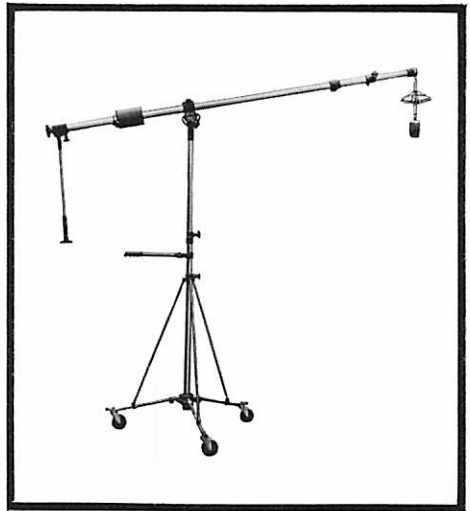




ATLAS MICROPHONE STANDS

BS-37 BOOM STAND

Studio Porto Boom. Designed for the most exacting audio, video or recording studio and motion picture applications. Completely mobile. Completely portable for "on location" use. Fully collapsible for transportation. Dual control "aiming" for 360° rotation and positioning of microphone at any boom angle. Vibration-free, non-conductive isolation mount for 5/8"-27 threaded microphone attachment. Noise free, balanced, action controls. Piston type air check for upright tube safety. Vertical upright; retracted 5 1/4 ft., extended 9 ft. Horizontal boom; retracted 7 ft., extended 18 ft. All tubular sections aluminum processed in "alumilite" to prevent corrosion. All castings aircraft aluminum. Counterweight cast iron base with 4" swivel casters. Base spread 42" on radius. Weight 73 lbs. **Net Each \$600.00**



DESK STANDS

DS-4
Light Weight Stand. Non-adjustable 4" high chrome tube. 5" dia. polished phenolic beige base. Weight 1/2 lb.
Net Each \$2.04



DS-7
Adjustable Desk Stand. Chrome tube assembly, adjustable height 8" to 13". Grip-action clutch. 6" dia. Charcoal base. Weight 3 lbs.
Net Each \$4.92



DS-14
Contemporary Stand. For professionally styled microphones. Non-adjustable 3" high chrome tube. Charcoal base. Weight 2 lbs.
Net Each \$3.68

DS-5
General Purpose Stand. Non-adjustable 4" high chrome tube. 6" dia. cast iron charcoal base. Weight 2 lbs.
Net Each \$2.99



DS-9
Studio Stand. Non-adjustable, 4" high, satin chrome tapered tube. 8" dia. low-silhouette satin chrome base. Weight 4 lbs.
Net Each \$7.13



TS-8
Adjustable Banquet Stand. Chrome tube assembly, height 14 1/2" to 26". Grip-action clutch. 8" dia. low-silhouette chrome base. Weight 5 1/2 lbs.
Net Each \$9.15

DS-6G
Identical to DS-5 except in deluxe all gold finish for special decor requirements.
Net Each \$4.65



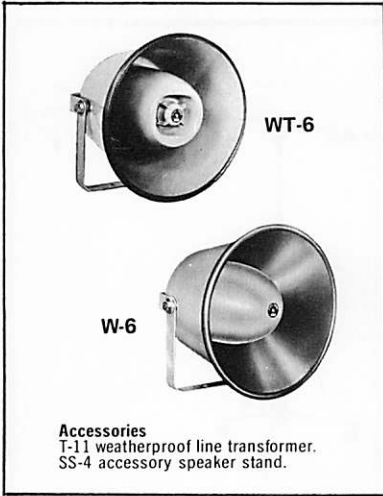
DS-10
Streamline Stand. Microphone cable concealed under center section of chrome strip on base. Charcoal enamel finish, chrome trim. Weight 1 1/2 lbs.
Net Each \$5.39





ATLAS

**HI-FI SPEAKERS —
MICROPHONE ADAPTORS & FITTINGS**



Accessories
T-11 weatherproof line transformer.
SS-4 accessory speaker stand.

ALL WEATHER HI-FI SPEAKERS
WT-6

High fidelity, weatherproof, two-way loudspeaker for application in communication and sound systems where, in addition to voice, wide range music reproduction and high efficiency sound projection is desired. For indoor or outdoor installation in recreation and sports centers, parking areas, at poolside or on patios, in shopping malls, manufacturing plants and distribution centers. Speaker includes individual, high-efficiency horn-loaded woofer, independent coaxial high frequency horn tweeter and a 1000 Hz electronic crossover network. All metal construction. Rugged steel mounting bracket. Beige baked enamel finish.

Model WT-6

Power: 15 Watts. **Impedance:** 8 Ohms. **Frequency Hz.:** 100-15,000. **Dispersion:** 120°. **Dimensions:** 15" dia. — 12" deep. **Shipping Weight:** 16 lbs.

Net Each \$46.80

W-6








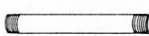





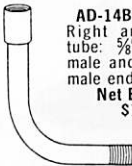




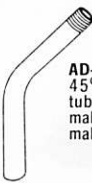
Popularly priced wide-range weatherproof speaker for music reproduction, identical to WT-6 but without high frequency horn tweeter.

Model W-6

Power: 15 Watts. **Impedance:** 8 Ohms. **Frequency Hz.:** 100-8,000. **Dispersion:** 120°. **Dimensions:** 15" dia. — 12" deep. **Shipping Weight:** 14 lbs.

Net Each \$36.39

MIKE ADAPTORS & FITTINGS

 AD-1B 5/8"-27 female to 1/2" pipe thread male. Net Each \$.83	 AD-2B 1/4" pipe female to 5/8"-27 male. Net Each \$.62	 AD-3B 1/4" pipe female to 5/8"-27 female. Net Each \$.68	 AD-4B 3/4" long, 5/8"-27 male running thread. Net Each \$.50	 AD-5B 5/8"-27 female to 5/8"-27 female, coupling. Net Each \$.68
 AD-6B 7/8"-27 female to 7/8"-27 female, coupling. Net Each \$ 1.23	 AD-7B 3" long tube 5/8"-27 male each end. Net Each \$.83	 AD-8B 6" long tube 5/8"-27 male each end. Net Each \$.83	 AD-9B 7/8"-27 female to 5/8"-27 female. Net Each \$.92	 AD-10B 5/8"-24 female to 5/8"-27 female. Net Each \$ 1.32
 AD-11B Flange, 5/8"-27 female. Base diameter 1 3/4". Net Each \$.90	 AD-12B Flange, 5/8"-27 male. Base holds on 1/4" mounting centers. Net Each \$.92	 AD-13B 7/8"-27 male to 5/8"-27 female. Net Each \$.92	 AD-14B Right angle tube: 5/8"-27 male and female end. Net Each \$ 1.40	 AD-15B Cable feed-thru adaptor: 5/8"-27 male and female end. Net Each \$ 1.34
 AD-16 Mounts any paging speaker onto 5/8" or 7/8" diameter stands. Net Each \$ 3.44	 AD-17 Mounts any paging speaker onto 1/2" diameter threaded pipe. Net Each \$ 1.91	 AD-18B Heavy duty triangular flange: 5/8"-27 female. Net Each \$ 1.59	 AD-19B 45° angle tube: 5/8"-27 male and female end. Net Each \$ 1.40	MISC-K Blister packaged service parts kit for all 7/8" clutch assembly stands. Includes clutch, lock rings, inserts. Net Each \$ 2.50

NOTE: Thread sizes specified as 1/8" pipe is I.P.S. (Electrical fitting) measures approx. 3/8" dia. All adaptors chrome finished.
 *Available only in commercial pack.



ATLAS ACCESSORIES

SB-1
Switchboard and Dispatcher Microphone Support. For overhead and desk use. Flexible 12" long goose-neck on spring loaded swivel with cable feed-through. Heavy, extra stability 9" x 6" charcoal base. Weight 13 lbs. **Net Each \$14.68**

SB-2
Identical to SB-1 except with adjustable length boom arm 12 3/4" to 21 1/4". **Net Each \$17.55**

US-2
Flange-Mounting Microphone Support. For learning labs, lecterns, consoles, control racks. 12 3/4" long boom on spring loaded swivel with cable feed through. 180° vertical adjustment, 360° rotation. Weight 1 lb. **Net Each \$8.10**

US-4
Identical to US-2 except with adjustable length boom arm. 12 3/4" to 21 1/4". **Net Each \$10.50**

FS-1
Microphone Foot Switch. For single-ended input microphones. Male connectors 2 1/2" x 3"; gray finish. **Net Each \$11.25**

GN-6
Flexible Gooseneck. Attach to any ATLAS SOUND stand or adaptor. 5/8"-27 male and female threads. Chrome finish. GN-6, 6" long **Net Each \$1.76**
GN-13, 13" **Net Each \$2.37**
GN-19, 19" **Net Each \$3.35**

BC-1
Bracket Clamp. For table, desk, counter top. Non-adjustable 6" high chrome tube. 5/8"-27 thread. Weight 1 lb. **Net Each \$3.41**

CH-1
Cable Hanger. Essential for neat appearance of microphone cable, moving and storage of every complete microphone stand. Fits all tube assembly sizes. Single screw mounting. Chrome finish. **Net Each \$2.43**

SW-1
Gyromatic Swivel. Permits microphone adjustment to any angle. Locks in position with single knob. Chrome finish. **Net Each \$4.47**

LO-2
Lock-On Accessory. Protective locking design push-button release for instantaneous fastening or disconnect of microphone-holder or BB-1 boom attachment from any stand. Chrome finish. **Net Each \$3.15**

VM-1
Shock-Mount Accessory. Greatly reduces external mechanical vibration pick-up of microphones. Fits all 5/8"-27 thread microphones. 4 1/4" high; chrome finish. **Net Each \$6.15**

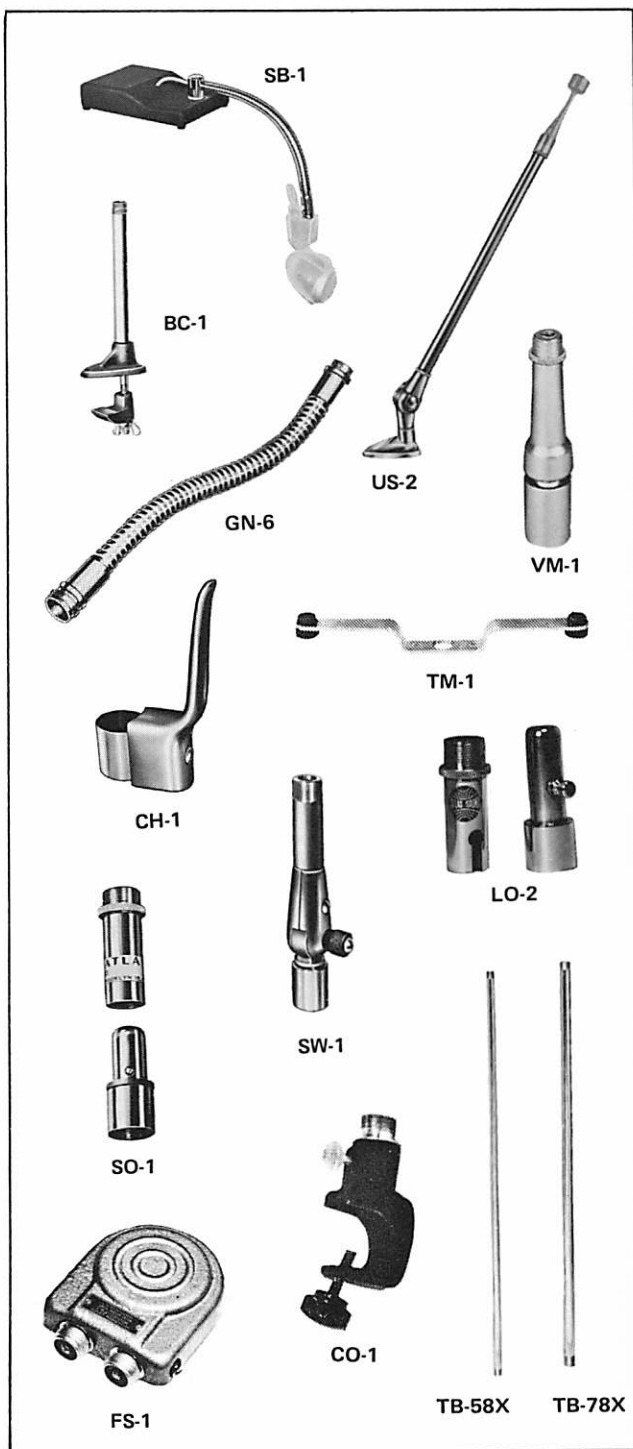
SO-1
Snap-On Accessory. For quick fastening or disconnect of microphone-holder or BB-1 baby boom attachment from any stand. Chrome finish. **Net Each \$2.66**

TM-1
Twin Mount. Designed for horizontal mounting of two or three microphones on any stand or podium-top installation. Fits all 5/8"-27 thread microphones. 8 3/4" wide; chrome finish. **Net Each \$6.00**

CO-1
Connect-On Adaptor. For installation at any height level of a second 5/8"-27 microphone on vertical tube of any floor or desk stand. Charcoal wrinkle finish. **Net Each \$3.51**

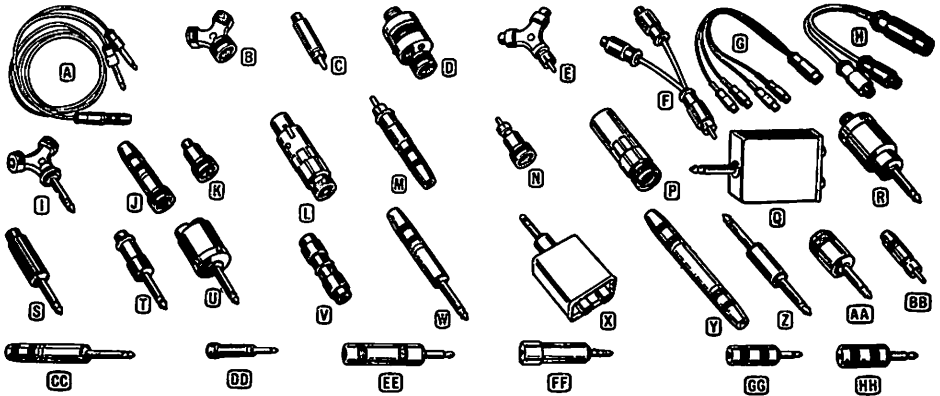
TB-58X
Extension Tube. 31" additional height or length for 5/8" diameter tube. Use with AD-5 Connector. **Net Each \$1.80**

TB-78X
Extension Tube. 31' additional height or length for 7/8" diameter tube. Use with AD-6 Connector. **Net Each \$2.34**



MOST COMPLETE SOURCE FOR THE PROFESSIONAL TRADE!

SWITCHCRAFT® ADAPTERS AND MOLDED COILED CORD CABLE ASSEMBLIES



A complete line of versatile adapters for interconnecting components without mating jacks and/or plugs. For hi-fi, stereo, phonographs, tuners, tape recorders, amplifiers, PA systems, etc. Positive mating design prevents line losses. Nickel-plated finish for long life.

Part No.	Fig.	Description (Connector Terminals)	Net Ea.
05FH81	A	Stereo Headphone Adapter — Two std. 2-conductor phone plugs wired to a 3-cond. phone jack; shielded 4' cable	\$3.18
25Y	B	Y Adapter — Two parallel male mike connectors to one female mike connector	1.47
328A	C	Audio Equalizer — Converts ceramic phono cartridge to magnetic input; phono jack input to phono plug output	2.04
329	D	High Impedance Volume Control Adapter — Female mike connector to male mike connector	4.17
330F	E	Y Adapter — Two parallel phono jacks to a phono plug; shielded	1.32
330F1	F	Flexible Y Adapter — Two parallel phono jacks to a phono plug; shielded 4" cable	1.50
330F2	—	Flexible Y Adapter — Same, but jack and plug to plug arrangement	1.50
330F3	—	Flexible Y Adapter — Same as 330F1, but two phono plugs to one phono plug	1.50
330G	G	Stereo Cable Adapter — European 5-pin plug to four phono jacks; shielded, color-coded 12" stereo cables†	4.05
330H	H	Flexible Y Adapter — European 3-pin plug to two phono jacks; shielded, color-coded 5" cable†	2.40
330M	I	Y Adapter — Two parallel male mike connectors to a 2-conductor phone plug	1.50
330PJ	—	Y Adapter — Same, but two phono jacks to a 2-conductor phone plug; shielded	1.50
332A	J	Phone jack input to female mike connector output adapter*	1.29
334A	K	Phone jack input to female mike connector output adapter; shielded*	1.08
334B	—	Same, but phono jack input to male mike connector output; shielded	.99
335A	L	Switchcraft 2501MP (Amphenol 75PCIM) 2-conductor input to Cannon XL-3-11 output; unsoldered internal wire, one end	2.10
336A	M	Shielded 2-conductor phone jack input to phono plug output	1.29
336B	—	Same, but 2-conductor phone jack input to phono jack output	1.29
338A	—	Phono plug input to male mike connector output; shielded	.84
338B	N	Phono plug input to female mike connector output; shielded*	.96
339A	P	Switchcraft 2501F (Amphenol 75MCIF) output connector to Cannon XL-3-12 input connector	2.10
340	Q	Two parallel 2-conductor phone jack inputs to 2-conductor phone plug output; shielded	2.55
341	R	Silent Plug Adapter — 2-cond. phone jack to 2-cond. phone plug; circuit-closing device stops amplifier squeal	2.49
343	S	Phone Jack to phone plug; built-in limiting resistor for Webcor recorders	1.35
345A	T	Phone plug output to phono jack input adapter	.96
346	U	Tip jack input to 2-conductor phone plug output	1.65
349A	V	Phono Plug Coupler — Mates with phono plug at each end; shielded	.81
352	W	Stereo to Mono Adapter — 3-conductor phone jack to 2-conductor phone plug; shielded	1.50
353	X	Stereo Headphone Adapter — Permits two stereo headphones on single 3-circuit jack; shielded tan metal case	3.00
361	Y	Coupler — 2-conductor phone jack at each end; shielded	1.65
362	Y	Coupler — Same, but 3-conductor phone jack at each end; shielded	1.95
363	Z	Coupler — 2-conductor phone plug at each end; shielded	1.50
364A	AA	Adapter — 2-conductor "Tini-Jax" $\frac{3}{64}$ " dia. sleeve to 2-conductor $\frac{1}{4}$ " O.D. phone plug; shielded	1.14
365	BB	Adapter — 2-conductor "Tini-Jax" input to phono jack output; shielded	1.14
369	CC	2-conductor Revere/Wollensak phone jack to standard 2-conductor phone plug; shielded	1.50
370	DD	Phono jack to 2-conductor "Tini-Plug" ($\frac{3}{64}$ " finger); shielded	.90
374	EE	Phone jack input to 2-conductor "Tini-Plug" ($\frac{3}{64}$ " dia. finger) output; shielded, nickel plated brass handles	1.29
375	FF	Phone jack input to 2-conductor "Micro-Plug" (.097" dia. finger) output; shielded, nickel plated brass handles	1.17
376	GG	"Tini-Jax" input to 2-conductor "Micro-Plug" (.097" dia. finger) output; shielded, nickel plated brass handles	1.17
377	HH	"Micro-Jax" input to 2-conductor "Tini-Plug" ($\frac{3}{64}$ " dia. finger) output; shielded, nickel plated brass handles	1.17

*May be used as male or female mike connector with coupling ring supplied. †For Grundig, Norelco, Sony or Korting tape recorders.

MOLDED COILED CORD SHIELDED CABLE ASSEMBLIES

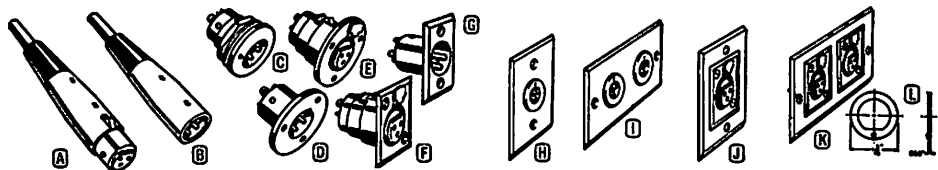
Black neoprene jacketed, single-conductor, shielded cable with molded-on phone plugs and/or mike connectors.

No.	End #1	End #2	Lgth.*	Net Ea.
05LH84	A	D	4'	\$1.89
05LP05	A	A	12'	3.90
05LP15	A	B	12'	3.90
05LP87	A	C	12'	3.90
05LT05	A	A	20'	5.37
05LT15	A	B	20'	5.37
05LT87	A	C	20'	5.37
15LH84	B	D	4'	1.89
87LH84	C	D	4'	1.95



*Extended.

SWITCHCRAFT® AUDIO CONNECTORS



Automatic grounding between mating connector shells upon engagement. "Captive Design" eliminates possible loss of insert screw. "Wedge Action" Insert Assembly insures firm, reliable positioning.

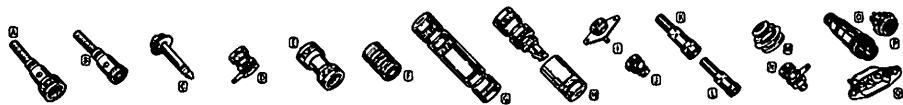
"Ground Terminal" connected to shell for grounding. Offer 4- and 5-contact versatility. Interchangeable and mates with Cannon XLR-3, XLR-4 or Amphenol 91-850.

No. of Contacts: Choice of three or four; H () M type has dual 3- or 4-contact. Socket Contacts: Phosphor bronze, silver-plated, chromate dipped. Pin Contacts: Brass, silver-plated, chromate dipped. Body or Shell: Diecast zinc alloy. Finish: Satin nickel except as noted. Insert Dielectric: High-impact resistant thermosetting plastic. Latchlock: Molded high strength plastic. Dual Pressure Plates: Provide a secure cable lock and strain relief for all standard size cable. Cable Strain Relief: Neoprene, keyed to shell.

3 Contacts*	4 Contacts*	Fig.	Description	Insert	Size, Inches Length x Diameter
A3F	A4F	A	Cord plug, takes 1/2" cable	Skt.	3/32 x 3/4
A3M	A4M	B	Cord plug, removable insert	Pin	29/32 x 3/4
B3M	B4M	C	Receptacle, 3/2" pin	Pin	13/16 x 1/64
C3F	C4F	E	Receptacle, 3-.136" mtg. holes	Skt.	1 1/16 x 1 1/16
C3M	C4M	D	Receptacle, 3-.136" mtg. holes	Pin	1 1/16 x 1 1/16
D3F	D4F	F	Receptacle, rectangular flange	Skt.	1 1/16 w. x 1 1/16 d. x 1 1/16 h.
D3M	D4M	G	Receptacle, narrow flange	Pin	1/8 w. x 1 1/16 d. x 1 1/16 h.
G3M	G4M	H	Single-gang wall plate	Pin	Incl. one B3M†, wall plate, 2 3/4 w. x 4 1/2 h.
G3MS	G4MS	H	Single-gang wall plate	Pin	Incl. one B3M†, wall plate, 2 3/4 w. x 4 1/2 h.
H3M	H4M	I	Two-gang wall plate	Pin	Incl. two B3M†, wall plate, 2 3/4 w. x 4 1/2 h.
H3MS	H4MS	I	Two-gang wall plate	Pin	Incl. two B3M†, wall plate, 2 3/4 w. x 4 1/2 h.
J3F	J4F	J	Single-gang wall plate	Skt.	w./D3F or D4F, wall plate, 2 3/4 w. x 4 1/2 h.
J3FS	J4FS	J	Single-gang wall plate	Skt.	w./D3F or D4F, wall plate, 2 3/4 w. x 4 1/2 h.
K3F	K4F	K	Two-gang wall plate	Skt.	w./2-D3F or D4F, wall plate, 2 3/4 w. x 4 1/2 h.
K3FS	K4FS	K	Two-gang wall plate	Skt.	w./2-D3F or D4F, wall plate, 2 3/4 w. x 4 1/2 h.
S-3519	L	L	Mounting adapter, use with B(3 or 4)M to prevent turning	Skt.	

*F in part number indicates female connector; M, male. †O B4M.

Part No.	1-24	25-49	50-99	100-249	250-499	500-999
A3F	\$1.47	\$1.35	\$1.23	\$0.98	\$0.93	\$0.882
A3M	1.25	1.16	1.05	.84	.798	.756
A4F	1.83	1.68	1.53	1.22	1.16	1.10
A4M	1.35	1.24	1.13	.90	.855	.81
B3M	1.80	1.65	1.50	1.20	1.14	1.08
B4M	1.89	1.73	1.58	1.26	1.20	1.13
C3F	1.92	1.76	1.60	1.28	1.22	1.15
C3M	.96	.88	.80	.64	.608	.576
C4F	2.01	1.84	1.68	1.34	1.27	1.21
C4M	1.05	.963	.875	.70	.665	.63
D3F	1.98	1.82	1.65	1.32	1.25	1.19
D3M	1.20	1.10	1.00	.80	.76	.72
D4F	2.07	1.90	1.73	1.38	1.31	1.24
D4M	1.29	1.18	1.08	.86	.817	.771
G3M	2.85	2.61	2.38	1.90	1.81	1.71
G4M	3.12	2.86	2.60	2.08	1.98	1.87
G3MS	3.00	2.75	2.50	2.00	1.90	1.80
G4MS	3.30	3.03	2.75	2.20	2.09	1.98
H3M	3.90	3.58	3.25	2.60	2.47	2.34
H4M	4.38	4.02	3.65	2.92	2.77	2.63
H3MS	4.20	3.85	3.50	2.80	2.66	2.52
H4MS	4.70	4.35	3.95	3.16	3.00	2.84
J3F	2.82	2.59	2.35	1.88	1.79	1.69
J3FS	3.24	2.97	2.70	2.16	2.05	1.94
J4F	2.97	2.72	2.48	1.98	1.88	1.78
J4FS	3.42	3.14	2.85	2.28	2.17	2.05
K3F	4.14	3.80	3.45	2.76	2.62	2.48
K3FS	4.62	4.24	3.85	3.08	2.93	2.77
K4F	4.44	4.07	3.70	2.96	2.81	2.66
K4FS	4.98	4.57	4.15	3.32	3.15	2.99
S-3519	.27	.248	.225	.18	.171	.162



MICROPHONE CONNECTORS

Standard microphone connectors with 3/64"-27 threads. Designed for use with single conductor microphone cable with 3/64" max. O.D. 2501F Female Connector (Fig. A) — With removable coupling ring for fast change of female to male type. Spring assembled into body. Cable braid and spring clamped by hollow set screw. 2501M Male Connector (Fig. B). 44 Phone Plug Adapter (Fig. C) — Adapts 2501F to fit standard 2-conductor phone jack. 2501MP Panel Receptacle (Fig. D) — Male type, mounts in .385" hole. 2501MPC Panel Receptacle (Fig. D) — Same as 2501MP except closed circuit type. 2501FT Double Female Connector (Fig. E) — One female connector at each end. 2501MT Double Male Connector (Fig. F) — One male connector at each end. 2501FL Screw Terminal Female Connector (Fig. G) — Two piece handle with built-in cable clamp. No soldering needed for connecting cables with stripped ends. 2501FS Screw Terminal Connector (Fig. H) — Same as 2501FL except. No cable clamp; short handle. 2501MBL Insulated Male Panel Receptacle (Fig. I). 2501MPF Male Panel Receptacle (Fig. J) — Press-fit mounting.

Part No.	Fig.	Connector Type	1-24	25-49	50-99	100-249	250-499	500-999
2501F	A	Female	\$0.45	\$0.413	\$0.375	\$0.30	\$0.285	\$0.27
2501M	B	Male	.36	.33	.30	.24	.228	.216
44	C	Adapter	.36	.33	.30	.24	.228	.216
2501MBL	I		.39	.358	.325	.26	.247	.234
2501MP	D	Panel	.33	.303	.275	.22	.209	.198
2501MPC	D	Recept.	.42	.385	.35	.28	.266	.252
2501MPF	J		.33	.303	.275	.22	.209	.198
2501FT	E	2-Female	.90	.825	.75	.60	.57	.54
2501MT	F	2-Male	.90	.825	.75	.60	.57	.54
2501FL	G	Screw	1.65	1.51	1.38	1.10	1.05	.99
2501FS	H	Term.	1.20	1.10	1.00	.80	.76	.72

"MINI-CON" MINIATURE CONNECTORS

Miniature microphone connectors for use with single conductor shielded cable up to 3/16" O.D. Only 1/2 the size of standard micro-

phone connectors. Nickel-plated brass bodies. Ideal for miniaturized audio equipment, lapel microphones, musical instruments, etc. 5501F Female Cord Connector (Fig. K) — With removable coupling ring for quick converting to male type. Cable-braid spring clamped to body by hollow point set screw. 5501M Male Cord Connector (Fig. L). 5501MF Male Panel Connector (Fig. M) — Mounts by lock-nut front side of panel, in 3/8" dia. hole. 5501MP Male Panel Connector (Fig. N) — Mounts back side of panel in 3/8" dia. hole. 5501MPC Male Panel Connector — Same as 5501MP except shorting type.

Part No.	Fig.	Connector Type	1-24	25-49	50-100	100-249	250-499	500-999
5501F	K	Female	\$0.45	\$0.413	\$0.375	\$0.30	\$0.285	\$0.27
5501M	L	Male	.36	.33	.30	.24	.228	.216
5501MF	M	Male	.33	.303	.275	.22	.209	.198
5501MP	N	panel	.33	.303	.275	.22	.209	.198
5501MPC	N		.54	.495	.45	.36	.342	.324

"SLIM-LINE" CONNECTORS

Small 4-contact connectors for audio and communication equipment. High-impact, thermo-plastic barrel insert assembly. No. 2504M plug has coupling ring, polarized D-shaped barrel assembly and large cable clamp. No. 2504FP receptacle only 3/64" dia., 3/4" depth behind panel. Bright nickel-plated.

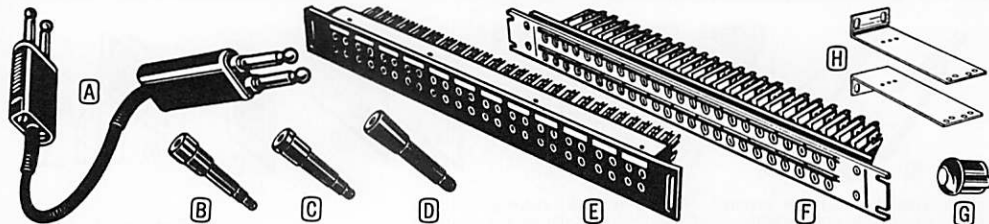
Part No.	Fig.	Connector Type	1-24	25-49	50-100	100-249	250-499	500-999
2504M	O	Male	\$1.50	\$1.38	\$1.25	\$1.00	\$0.95	\$0.90
2504FP	P	Female	1.50	1.38	1.25	1.00	.95	.90

AC RECEPTACLES

Highly dependable 3-pin receptacles for use in all electrical/electronic equipment. "Chassis hugging" recessed type mounting. Brass contact pins are silver plated, chromate dipped. No. AC3, ungrounded; No. AC3G, grounded, includes self-aligning feature. Pins #1 and #2 mode, #3 is stationary. Receptacles mate with Belden No. 17258 Cord. Rated 115 V, 7 amps.

Part No.	Fig.	Pin	3-pin	Recept.	\$0.48	\$0.44	\$0.40	\$0.32	\$0.304	\$0.288
AC3	Q	3-pin			.45	.413	.375	.30	.285	.27
AC3G	Q	Recept.								

SWITCHCRAFT® PATCH CORDS, DUMMY PLUGS, JACK COVERS AND PANELS



PATCH CORD SETS

All patch cords are constructed of bronze tinsel conductors, insulated and shielded, with a heavy black nylon braid overall.

Series 170 — Two-conductor patch cords have No. 413 "Twin-Plug" (PJ-241) at each end with shields grounded both ends.

Series 17P — Same as 170, except shield grounded one plug only.

Series 180 — Two-conductor patch cords have No. 482 "Littel-Plug" (Military Plug PJ-051) at each end with shields grounded both ends.

Series 190 — Single conductor patch cords have No. 420 "Littel-Plug" (Military Plug PJ-047B) at each end with shield grounded both ends.

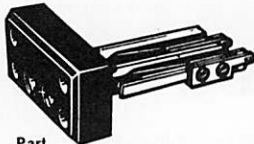
Part No.	Length	1-24	25-49	50-99	100-249
170QA17	6 in.	\$ 7.26	\$6.66	\$6.05	\$4.84
170B17	1 ft.	7.44	6.82	6.20	4.96
170D17	2 ft.	7.59	6.96	6.33	5.06
170F17	3 ft.	7.77	7.12	6.48	5.18
170H17	4 ft.	8.04	7.37	6.70	5.36
170K17	6 ft.	8.58	7.87	7.15	5.72
170N17	10 ft.	9.09	8.33	7.58	6.06
17PA17	6 in.	7.26	6.66	6.05	4.84
17PB17	1 ft.	7.44	6.82	6.20	4.96
17PD17	2 ft.	7.59	6.96	6.33	5.06
17PF17	3 ft.	7.80	7.15	6.50	5.20
17PH17	4 ft.	8.04	7.37	6.70	5.36
17PK17	6 ft.	8.58	7.87	7.15	5.72
17PN17	10 ft.	9.09	8.33	7.58	6.06
180QA18	6 in.	7.59	6.96	6.33	5.06
180B18	1 ft.	7.92	7.26	6.60	5.28
180D18	2 ft.	8.25	7.56	6.88	5.50
180F18	3 ft.	8.58	7.87	7.15	5.72
180H18	4 ft.	8.91	8.17	7.43	5.94
180K18	6 ft.	9.57	8.77	7.98	6.38
180N18	10 ft.	10.89	9.98	9.08	7.26
190QA19	6 in.	3.96	3.63	3.30	2.64
190B19	1 ft.	4.14	3.80	3.45	2.76
190D19	2 ft.	4.47	4.10	3.73	2.98
190F19	3 ft.	4.80	4.40	4.00	3.20
190H19	4 ft.	5.13	4.70	4.28	3.42
190K19	6 ft.	6.00	5.50	5.00	4.00
190N19	10 ft.	6.93	6.35	5.78	4.62

"DUMMY-PLUG"

Molded plastic dummy plugs prevent accidental insertion of phone plugs. Used as phone plugs but can not couple incoming signals.

Series 491, three-conductor, 207" dia. finger; mates with MT-342B jack. **Series 492**, three-conductor, 250" dia. finger; mates with three-conductor phone jacks with standard 1/4" sleeve. **Series 493**, same as Series 492 except two-conductor.

Part No.	Fig.	Handle	1-24	25-49	50-99	100-249	250-499	500-999
491-01	B	Red	\$0.33	\$0.303	\$0.275	\$0.22	\$0.209	\$0.198
491-02	B	Black	.33	.303	.275	.22	.209	.198
491-03	B	White	.33	.303	.275	.22	.209	.198
492-01	C	Red	.33	.303	.275	.22	.209	.198
492-02	C	Black	.33	.303	.275	.22	.209	.198
492-03	C	White	.33	.303	.275	.22	.209	.198
493-01	D	Red	.33	.303	.275	.22	.209	.198
493-02	D	Black	.33	.303	.275	.22	.209	.198
493-03	D	White	.33	.303	.275	.22	.209	.198



"DUAL-JAX BLOCK"

For mounting MT-Jax and T-Jax on 3/8" centers. Molded black phenolic blocks are 2 3/4" w. x 1 1/2" d. x 1 1/4" h. Rack panel mounted singly or in multiples using four 8-32 flat head screws.

Part No.	Description	1-24	25-49	50-99	100-249
2300	Block only	\$0.96	\$0.88	\$0.80	\$0.64
2331	2 MT-331	2.52	2.31	2.10	1.68
2332A	2 MT-332A	2.76	2.53	2.30	1.84
2332B	2 MT-332B	2.76	2.53	2.30	1.84
2333	2 MT-333	3.09	2.83	2.58	2.06

JACK PANELS — FIGS. E (Phenolic) AND F (Aluminum)
Rugged, heavy-duty jack panels for switching, distribution and control of audio signals in broadcasting stations, theaters, PA systems, etc. **Series 1200**, black phenolic panels reinforced with steel for the utmost rigidity. Mounting brackets slotted to fit all standard 19" relay racks. Panel includes plastic covered designation strips. **Series 2800**, clear anodized aluminum panel. Extremely rugged, yet lightweight. Includes new narrow designation strip for each row. Prefix "X" to part number indicates offset ground lugs on jacks.

SINGLE ROW JACK PANELS — 19" W.

Part No.	No. of Jacks	Type of	Size, In. D. x H.	Net Each, Lots of			
				1-24	25-49	50-99	100-249
1200	24	○	1 1/4" x 1 3/4"	\$ 9.15	\$ 8.39	\$ 7.63	\$ 6.10
1232A†	24	T-332A	1 1/4" x 1 3/4"	25.20	23.10	21.00	16.80
1332A†	24	MT-332A	1 1/4" x 1 3/4"	28.35	25.99	23.63	18.90
1400	26	○	5/8" x 1 3/4"	9.15	8.39	7.63	6.10
1432A†	26	T-332A	5/8" x 1 3/4"	27.15	24.89	22.63	18.10
1532A†	26	MT-332A	5/8" x 1 3/4"	30.90	28.33	25.75	20.60

DOUBLE ROW JACK PANELS — 19" W.

Part No.	No. of Jacks	Type of	Size, In. D. x H.	Net Each, Lots of			
				1-24	25-49	50-99	100-249
2400	48	○	1 1/4" x 2 1/4"	\$ 9.45	\$ 8.66	\$ 7.88	\$ 6.30
2432A†	48	T-332A	1 1/4" x 2 1/4"	44.10	40.43	36.75	29.40
2532A†	48	MT-332A	1 1/4" x 2 1/4"	52.35	47.99	43.63	34.90
2600	52	○	5/8" x 1 3/4"	11.40	10.45	9.50	7.60
2632A†	52	T-332A	5/8" x 1 3/4"	49.80	45.65	41.50	33.20
2732A†	52	MT-332A	5/8" x 1 3/4"	57.90	53.08	48.25	38.60
2800†	48	○	5/8" x 1 3/4"	25.20	23.10	21.00	16.80
X2832A†	48	T-332A	5/8" x 1 3/4"	59.85	54.86	49.88	39.90
X2932A†	48	MT-332A	5/8" x 1 3/4"	68.10	62.43	56.75	45.40

*Supplied less jacks. †Aluminum panels, Fig. F; all others phenolic panels, Fig. E. ‡Available with offset ground terminals; prices on request.

JACK PANEL ACCESSORIES

Switchcraft Part No. P-1801 Hole Plug — To plug unused holes in jack panels. Molded nylon. Fits all Switchcraft jack panels, Series 1200, 1400, 2400, 2600 and 2800.

Part Number	1-24	25-49	50-99	100-249	250-499	500-999
P-1801	\$0.18	\$0.165	\$0.15	\$0.12	\$0.114	\$0.108

Switchcraft Part No. K-107 Bracket Kit — Holds jack panel, stand-off brackets and eight 6-32 self-tapping screws. Depth in front of mounting rack, 7".

K-107	\$2.70	\$2.48	\$2.25	\$1.80	\$1.71	\$1.62
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REPLACEMENT PATCH CORDS

Designed for use with Switchcraft plugs 413, 420, 482 or their equivalents. When used with No. 420, clip off unnecessary lead.

Part Number	Both Ends Shielded	One End Shielded	Length	Net Each, Lots of			
				1-24	25-49	50-99	100-249
890A89	89PA89	6 in.	\$1.50	\$1.38	\$1.25	\$1.00	
890B89	89PB89	1 ft.	1.83	1.68	1.53	1.22	
890D89	89PD89	2 ft.	1.98	1.82	1.65	1.32	
890F89	89PF89	3 ft.	2.22	2.04	1.85	1.48	
890H89	89PH89	4 ft.	2.31	2.12	1.93	1.54	
890K89	89PK89	6 ft.	2.97	2.72	2.48	1.98	
890N89	89PN89	10 ft.	4.29	3.93	3.58	2.86	

JACK COVERS

Handy, rugged spring-load phone jack covers. Automatically covers jack openings when phone plug is removed. Protects against dust and moisture.

Series 500 — Used with standard 3/8"-32 threaded bushing type phone jacks.

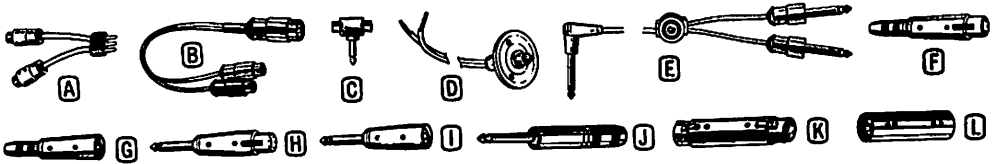
Type 620 — Used with certain type tip jacks with 1/4" mounting; height of tip jack head 3/8" to 1/2". Also used as covers for "Tini-Jax".



Part No.	Color	Net Each, Lots of			
		1-24	25-49	50-99	100-249
510	Olive drab	\$0.75	\$0.688	\$0.625	\$0.50
511	Bright nickel	.75	.688	.625	.50
515	Black	.75	.688	.625	.50
520	Navy gray	.75	.688	.625	.50
620	Navy gray	.66	.605	.55	.44

SWITCHCRAFT® ADAPTERS, CABLE ASSEMBLIES, HI-FI SWITCHES AND MIXERS

CONNECTOR ADAPTERS



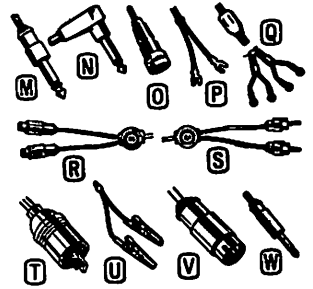
Part No.	Fig.	Description	Net Each
330B	A	Special Stereo Adapter — Adapts Lear Jet No. HSA-900 tape recorder to RCA or other stereo units with 3-contact inline socket assembly	\$1.41
330C	B	Stereo Cable Adapter — European 5-pin rt.-angle plug to 2 molded, color-coded phono extension jacks; shielded 8" cable	2.25
378	C	Adapter — 2-cond. "Tini-plug" input to two 2-cond. "Tini-jax" outputs; shld. nickel-plated steel housing	1.41
379	D	Speaker Enclosure Phono Jax — Molded, flanged phono jacks to stripped, tinned leads; three #6 x 1/2" screws; 24" gray parallel cable	.81
381	E	Adapter Cable — 2-cond. shielded cable from 3-cond. rt.-angle phone plug to "Y"; two 1-cond., 112" cables from "Y" to two 2-cond. phone plugs; 11' long	4.11
383	F	Adapter Connector — 3-cont. A3F female mike input to 2-cond. extension phone jack output	2.76
384	G	Adapter Connector — 3-pin A3M male mike input to 2-cond. extension phone jack output	2.46
386	H	Adapter Connector — 3-contact A3F female mike input to std. 2-cond. phone plug output; shielded	2.70
387	I	Adapter Connector — 3-pin A3M male mike input to std. 2-cond. phone plug output; shielded	2.40
388	J	Adapter — .206" dia. plug to standard 1/2" phone extension jack	1.56
389	K	Adapter Connector — 3-cont. A3F female mike input to A3F female mike output; shielded	2.85
390	L	Adapter Connector — 3-pin A3M male mike input to A3M male mike output; shielded	2.40

HI-FI MOLDED CABLE ASSEMBLIES

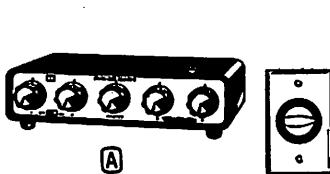
Quality, molded cable assemblies feature built-in cable clamps to support cable and eliminate strain. All connectors mechanically "locked" and soldered. Shielded chrome-gray cable with matching easy-grip plastic handles. Special connectors include: Fig. O, female mike connector; Fig. T, 2-pin European type plug; and, Fig. V, 3-pin right-angle European plug.

Part No.	Terminal Figs.	Lgth., Ft.	Net Each	Part No.	Terminal Figs.	Lgth., Ft.	Net Each
05AR05	M M	15	\$2.88	32ZK86°	T U	6	\$1.32
05AR15	M N	15	2.88	32ZN86°	T U	10	1.50
05AR87	M O	15	2.88	33FK25	V S	6	2.43
05CT85	M P	20	1.71	33FN25	V S	10	2.79
05CU85	M P	25	2.25	40DF05	W M	3	1.71
05NJ88	M O	5	2.70	40DN05	W M	10	2.19
05NN88	M O	10	3.36	40DN25	W R	10	2.07
25CT85	R P	20	1.59	40DF82	W S	3	1.26
25FF82	R S	3	2.16	40DN82	W S	10	2.10
25FK82	R S	6	2.49				
25FN82	R S	10	2.97				

*Plug not molded to cable.

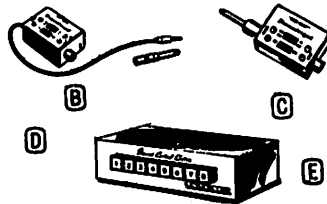


HI-FI SWITCHES AND MIXERS



MICROPHONE MIXER

A Part No. 307TR Studio MixMaster — Four-channel, solid state, stereo/mono mixer-amplifier powered by two "D" size batteries. Will mix up to four monophonic or two stereo input sources and amplify the signals to a 2-volt (line) level. Accepts inputs from any program source or combination such as: Mikes, tape recorders, tuners, stereo or mono phono, preamplifiers and musical instruments. Two, low-level inputs equalized for magnetic phono. Input levels controlled individually with separate gain controls; or, simultaneously with master gain. Other controls include phono equalization switches, on-off switch and stereo/mono switch. Frequency response, flat 20-20,000 Hz with 1% max. distortion (0.5% typ.) at 1.5 V output. Signal-to-Noise Ratio, 60 dB ref. 1 mV input. Four standard 2-cond. phone jack low-level inputs; 2 std. 2-cond. phono jack high-level aux. outputs. Size, 3 1/2" x 12" x 7 1/4". Less batteries. Net Each \$87.00



Part No. 308TR Studio MixMaster — Same, but for 3 W, 117 VAC, 60 Hz operation. Output up to 4 V rms. Net Each \$96.00

"MIX-AMP" AMPLIFIERS

B Part No. 503 Miniature Transistorized Amplifier — Specially designed for use with miniature tape recorders. Plugs into most foreign-built and other miniature tape recorders without adapters. High signal-to-noise ratio; up to 25 dB gain at "LO" impedance. No hum or noise. Frequency response, 20-20,000 Hz. On-off switch; "LO-HI" impedance switch. Input, 2-cond. phone jack to 12" cable with 2-cond. "tini-plug". With No. 364A adapter to convert "tini-plug" to standard 2-cond. phone plug. Comes with single 1.5 V penlite cell and instructions. Net Each \$9.90

C Part No. 504 Miniature Transistorized Amplifier — Same as No. 503, except has 2-conductor phone jack to a 2-cond., long-shoulder phone plug. Net Each \$8.70

HI-FI STEREO SWITCHES AND CONTROLS

D Part No. 657 Stereo Speaker Selector Switch — 7-position stereo speaker selector switch mounted on wall plate. Selects any one, two or three pairs of stereo speakers or any combination of three. Ivory and black dial; brushed brass wall plate. Screw terminals: Size, 4 1/2" x 2 3/4" x 1 3/8". Net Each \$6.03

Part No. 657S — Same, but has brushed stainless steel wall plate. Net Each \$6.03

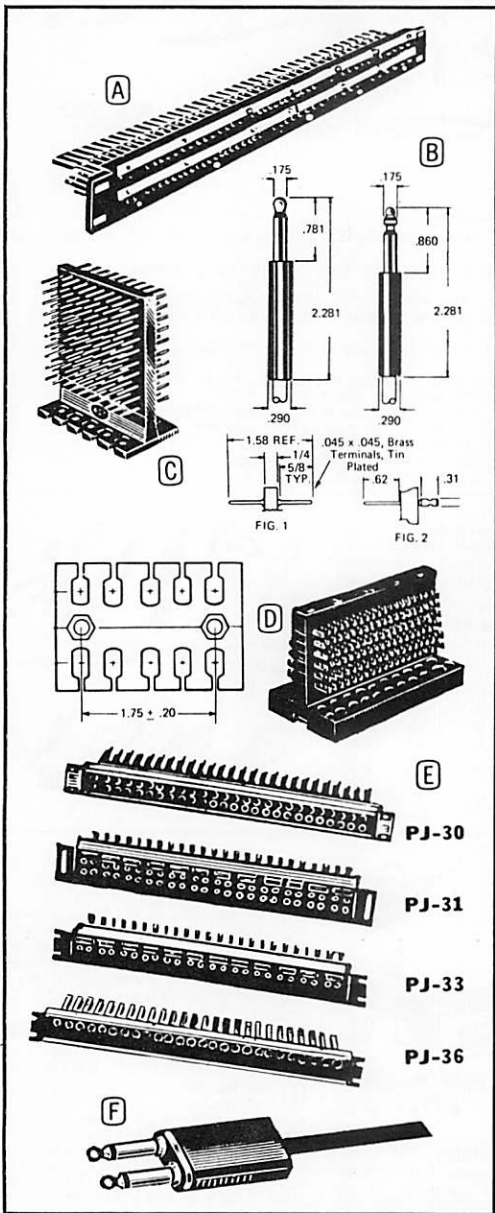
E Part No. 641 Sound Control Center — Controls up to 8 complete stereo speaker systems or 8 pairs of mono speakers with simple pushbutton operation. Permits selecting only one speaker system to operate at a time. Outputs: 8 pairs of standard 2-cond. phone jacks. Inputs: 1 pair std. phone jacks. Simple plug-in convenience on rear panel for amplifier and speakers. Power handling capacity, 100 watts max. into a 4-ohm load. Frequency response, DC to 30 kHz with negligible switching loss. No external power required for operation. Size, 2 1/4" x 6 3/8" x 7". Net Each \$49.50

Part No. 642 Sound Control Center — Same, but allows any number of speaker systems (up to 8) to play simultaneously. Net Each \$49.50

Part No. 643 Escutcheon Plate for Sound Control Centers — For flush mounting Nos. 641 or 642. Template and 4 mounting screws supplied. Size, 7 1/8" x 2 1/8". Net Each \$3.51



JACKS, JACK PANELS, PATCH CORDS AND TERMINAL BLOCKS



BANTAM JACK PANELS (FIG. A)

Compact patch fields for modern communications equipment. Double row panel holds 96 jacks (48 pairs), twice the number of standard size panel. Extruded black anodized aluminum panel, 1 1/4" x 19". Panels with 104 jacks, panel inserts, and special components are available; write for information.

ADC Type	Description	Net Each, Lots of		
		1-9	10-24	25-99
PJ-731	Panel, less jacks	\$ 19.20	\$16.00	\$12.80
PJ-739	Panel with PJ-839 jacks	116.40	97.00	77.60

BANTAM PATCH CORDS (FIG. B)

Shielded cables with plastic jackets, molded-on plugs, brass plug components and integral strain reliefs. Double-plug patch cords are also available, with 2 or 3 conductors.

ADC Type	Conductors	Length	Net Each, Lots of		
			1-24	25-49	50-99
PJ-701	2	6"	\$3.60	\$3.00	\$2.40
PJ-702	2	12"	3.66	3.05	2.44
PJ-704	2	24"	3.78	3.15	2.52
PJ-706	2	36"	3.90	3.25	2.60
PJ-708	2	48"	4.02	3.35	2.68
PJ-711	3	6"	4.32	3.60	2.88
PJ-712	3	12"	4.38	3.65	2.92
PJ-714	3	24"	4.50	3.75	3.00
PJ-716	3	36"	4.62	3.85	3.08
PJ-718	3	48"	4.74	3.95	3.16

"WRAPID" TERMINAL BLOCKS (FIG. C)

For high-density terminations, up to 120 connections in 2 1/4" x 3 3/4" space. Wrapped or wrapped and soldered connections. Terminals are electro-tin plated brass; block and fanning strip are black glass-filled nylon. Size, 1 1/4" w. x 2 1/2" l. at base.

ADC Type	Term. Style	No. of Term.	Ht.	Net Each, Lots of		
				1-24	25-49	50-99
PJ-604	Solder (Fig. 1)	40	1.75"	\$3.27	\$2.72	\$2.18
PJ-606		60	2.25"	4.00	3.33	2.66
PJ-608		80	2.75"	4.80	4.00	3.20
PJ-610		100	3.25"	5.50	4.58	3.65
PJ-612	120	3.75"	6.60	5.50	4.40	
PJ-646	Solder or Solderless (Fig. 2)	60	2.25"	5.40	4.50	3.60
PJ-648		80	2.75"	6.35	5.30	4.10
PJ-650		100	3.25"	6.85	5.75	4.60
PJ-652		120	3.75"	7.80	6.50	5.70

MOLDED TERMINAL BLOCKS WITH 20-PIN ROWS (FIG. D)

Molded black thermoplastic with electro-tin plated brass solder terminals in graduated lengths. Base, 3" wide x 1.602" long.

ADC Type	No. of Term.	Rows	Height	Net Each, Lots of		
				1-9	10-24	25-99
PJ-103	60	3	2.693"	\$ 5.85	\$ 4.88	\$ 3.90
PJ-110	80	5	2.937"	7.05	5.88	4.70
PJ-105	100	5	3.281"	8.25	6.88	5.50
PJ-106	120	6	3.625"	9.45	7.88	6.30
PJ-108	160	8	4.312"	11.85	9.88	7.90
PJ-112	240	12	5.593"	16.65	13.88	11.10

JACK PANELS (FIG. E)

Steel-reinforced molded phenolic panels fit 19" rack. For use in TV, radio, recording studios and communication centers. Accepts standard double plug; 5/8" spacing between rows. Type PJ-37 commonly used for "Line", "Equip", "Mon" jack sets. Available less jacks, or with PJ-339 or PJ-318 jacks.

ADC Type	Panel Style	With Jacks	No. of Jacks	Net Each, Lots of		
				1-9	10-24	25-99
PJ-30	Double	None	52	\$12.90	\$10.75	\$ 8.60
PJ-390	Double	PJ-339	52	64.80	54.00	43.20
PJ-31	Double*	None	48	8.45	7.88	6.30
PJ-341	Double*	PJ-318	48	42.75	35.63	28.50
PJ-391	Double*	PJ-339	48	57.30	47.75	38.20
PJ-33	Single	None	24	8.52	7.10	5.68
PJ-343	Single	PJ-318	24	25.14	20.95	16.76
PJ-333	Single	PJ-339	24	32.05	27.00	21.60
PJ-36	Single	None	26	8.70	7.25	5.80
PJ-396	Single	PJ-339	26	35.10	29.25	23.40
PJ-37	Triplet†	None	78	19.35	16.13	12.90

Panel Height: *2 1/8"; †2 5/8"; All others, 1 1/4".

PATCH CORDS (FIG. F)

Nylon braid jacket, tinsel conductors, molded plug body, thermoplastic insulation and brass components.

TWO-CONDUCTOR SHIELDED

ADC Type	Length	With Plugs	Net Each, Lots of		
			1-24	25-49	50-99
PJ-11	1 ft.	PJ-1	\$6.60	\$5.50	\$4.40
PJ-12	2 ft.	PJ-1	6.75	5.63	4.50
PJ-13	3 ft.	PJ-1	6.90	5.75	4.60
PJ-14	4 ft.	PJ-1	7.13	5.94	4.75
PJ-52	2 ft.	PJ-055B	4.20	3.50	2.80
PJ-54	4 ft.	PJ-055B	4.86	4.05	3.24
PJ-56	6 ft.	PJ-055B	5.79	4.83	3.86
PJ-472	2 ft.*	PJ-047R	5.25	4.38	3.50
PJ-474	4 ft.*	PJ-047R	5.76	4.80	3.84
PJ-476	6 ft.*	PJ-047R	6.33	5.27	4.22

THREE-CONDUCTOR SHIELDED

ADC Type	Length	With Plugs	Net Each, Lots of		
			1-24	25-49	50-99
PJ-72†	2 ft.	PJ-2	\$ 6.42	\$ 5.35	\$ 4.28
PJ-74†	4 ft.	PJ-2	7.14	5.95	4.76
PJ-76†	6 ft.	PJ-2	7.98	6.65	5.32
PJ-81	1 ft.	PJ-051R	5.49	4.57	3.66
PJ-82	2 ft.	PJ-051R	5.82	4.85	3.88
PJ-83	3 ft.	PJ-051R	6.15	5.12	4.10
PJ-84	4 ft.	PJ-051R	6.48	5.40	4.32
PJ-172	2 ft.	PJ-7	20.40	17.00	13.60
PJ-174	4 ft.	PJ-7	21.60	18.00	14.40
PJ-176	6 ft.	PJ-7	22.50	18.75	15.00

*Unshielded. †Cone-shaped tip prevents momentary shorts between tip and ring contacts.

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JACKS, PLUGS, VIDEO PANELS AND PATCH CORDS

BANTAM JACKS (FIG. G)

For miniature Bantam Jack Panels (on preceding page). Meet Mil-Specs for long frame telephone jacks.

ADC Type	Conductors	Contact Schematic	Stack Ht.	Net Each, Lots of	
				1-99	100-499
PJ-803	2	Fig. 1	1 1/2"	\$0.90	\$0.60
PJ-805	3	Fig. 2	4 3/8"	1.30	.85
PJ-818	2	Fig. 3	1 3/8"	.78	.52
PJ-823	2	Fig. 4	2 7/8"	.66	.44
PJ-824	3	Fig. 5	4 3/8"	1.32	.88
PJ-836	2	Fig. 6	3 5/8"	1.23	.82
PJ-838	3	Fig. 7	3 5/8"	.75	.50
PJ-839	3	Fig. 8	1 7/2"	1.05	.70

BANTAM LITES (NOT ILLUS.)

High brilliance, half-size line lamps mount in Bantam Jack Panels. Draws 60 mA at 24 V (6 or 12V types available).

ADC Type	Description	Net Each, Lots of		
		1-24	25-49	50-99
PJ-850	Lamp socket	\$0.84	\$0.70	\$0.56
PJ-862	Bantam lamp	.66	.55	.44
PJ-729*	Lamp cap	.15	.125	.10

*Add suffix A for amber, G for green, R for red or W for white.

BANTAM 2+1 JACK PANELS (FIG. H)

Offers maximum patching density with 48 three-conductor 2+1 jacks in 19" panel. Solder or wrap terminals.

ADC Type	Jack Type	Net Each, Lots of		
		1-9	10-24	25-99
PJ-721	PJ-821	\$210.00	\$175.00	\$140.00
PJ-721W	PJ-821W	230.40	192.00	153.60

PLUGS (FIG. I)

ADC Type	WE-Equiv.	Description	Color	Net Each, Lots of		
				1-24	25-49	50-99
PJ-051R	WE-310	3-conductor	Red	\$1.32	\$1.10	\$0.88
PJ-051B	WE-310	3-conductor	Black	1.32	1.10	.88
PJ-055R	None	2-conductor	Red	.78	.65	.52
PJ-055B	None	2-conductor	Black	.78	.65	.52
PJ-327	WE-327	Twin, 2-cond.	Black	2.55	2.13	1.70
PJ-7	WE-425	Twin, 3-cond.	Black	5.40	4.50	3.60
PJ-1	WE-241	Twin, 2-cond.	Black	2.55	2.13	1.70

TELEPHONE JACKS (FIG. J)

Standard size jacks for patch panels.

ADC Type	WE-Equiv.	Contacts	Frame Style	Stack Ht.	Net Ea., Lots	
					1-99	100-499
PJ-123	223-A	Fig. 4	A	7/8"	\$0.60	\$0.40
PJ-203	203-A	Fig. 1	A	9/16"	.78	.52
PJ-240	240-C	Fig. 2	C	3/4"	1.23	.82
PJ-241	241-A	Fig. 9	A	3/4"	1.02	.68
PJ-280	280-C	Fig. 10	A	23/32"	1.80	1.20
PJ-318	218-A	Fig. 3	A	1/2"	.66	.44
PJ-336	236-C	Fig. 11	C	19/32"	1.14	.76
PJ-338	438-C	Fig. 12	C	13/16"	1.23	.82
PJ-339	239-A	Fig. 8	A	9/16"	.92	.62

TWIN TELEPHONE JACKS (NOT ILLUS.)

ADC Type	WE-Equiv.	Accepts Plug Type	Net Each, Lots of		
			1-24	25-99	100-499
PJ-410	410-A	PJ-047, -1, -327	\$2.40	\$2.00	\$1.60
PJ-482	482-A	PJ-051 or PJ-7	2.70	2.25	1.80
PJ-482W	482-A	PJ-051 or PJ-7	2.80	2.34	1.87

"WRAPID" JACKS (NOT ILLUS.)

Wrapped solderless terminals.

ADC Type	Contact Schematic	Frame Drawing	Net Each, Lots of	
			1-99	100-499
PJ-238W	Fig. 13	A	\$0.72	\$0.48
PJ-339W	Fig. 8	A	1.05	.70

COAX PANELS (FIG. K)

For high frequency signal switching (LF, MF, VHF and UHF).

ADC Type	Rows	Coax Jack Type	Net Each, Lots of	
			1-4	5-9
CM-1022	Single	CJ-1000	\$130.00	\$104.00
CM-1122	Single	CJ-1100	130.00	104.00
CM-1027	Double	CJ-1000	255.00	202.00
CM-1127	Double	CJ-1100	255.00	202.00

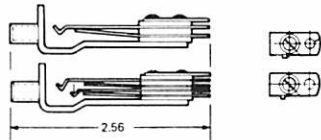
COAXIAL SINGLE JACKS (FIG. L)

ADC Type	Pin Dia.	Description	Net Each, Lots of	
			1-24	25-99
CJ-1000	.090"	For RG-59 cable*	\$4.50	\$3.60
CJ-1100	.078"	For RG-59 cable*	4.50	3.60
CJ-1011	.090"	BNC conn. on back	5.00	4.00
CJ-1111	.078"	BNC conn. on back	5.00	4.00

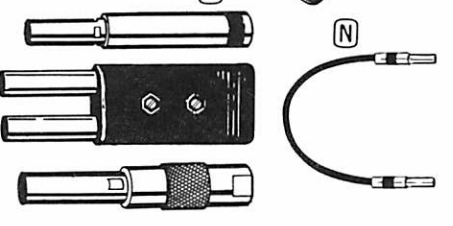
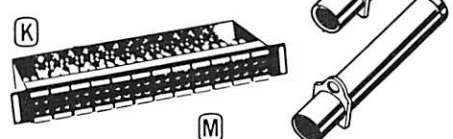
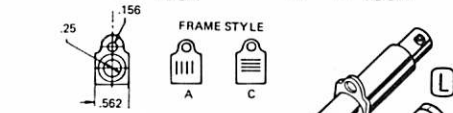
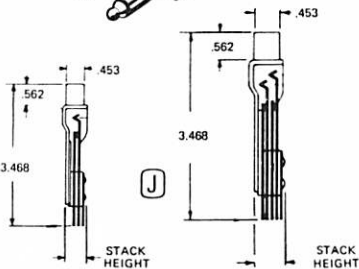
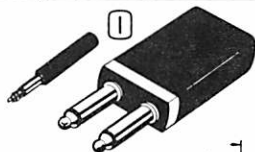
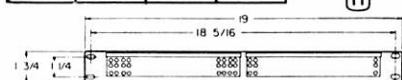
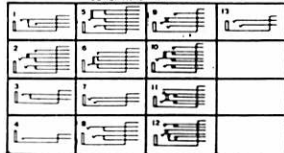
*Use WT-412 crimping tool.

COAXIAL PLUGS (FIG. M)

ADC Type	Description	Net Ea., Lots	
		1-24	25-99
CP-1040	Terminating plug, 30 pF/75 ohms. Equiv. WE-340C, RCA CC1140	\$4.50	\$3.60
CP-1042	Looping plug, Spectely 50 or 75 ohm. Equiv. WE-372A, RCA CP1142	6.00	4.80
CP-1043	Looping plug with monitor pins. Equiv. RCA CP-1143	7.50	6.00



SCHEMATIC DIAGRAM



PATCH CORDS (FIG. N)

ADC Type	Length	Plug Type	Net Each, Lots of	
			1-24	25-99
CC-1072	12"	CP-1041	\$6.00	\$4.80
CC-1074	24"	CP-1041	6.25	5.00
CC-1076	36"	CP-1041	6.50	5.20
CC-1172	12"	CP-1141	6.00	4.80
CC-1174	24"	CP-1141	6.25	5.00
CC-1176	36"	CP-1141	6.50	5.20



E. F. Johnson CB TWO-WAY RADIOS



MESSENGER 323

Finest 23 channel operation — no extras to buy. Crystal filter for interference free operation. Double conversion superheterodyne receiver. Precision, fingertip frequency selection on all 23 channels means more convenience and greater operating ease. The precision crystal filter in the receiver of the Messenger 323 virtually eliminates adjacent channel interference — a "must" when operating in areas of high CB activity. The double conversion superheterodyne receiver provides the maximum in selectivity and sensitivity. Provision for Tone Alert. Use as base station with optional AC power supply or as a portable unit with accessory Power Pack. With microphone and crystal for all CB channels.

Net Each \$249.95

AC Power supply for adapting Messenger 323 to base station use from 110-120 VAC, 50-60 Hz.

Net Each \$32.95

External speaker. Increases intelligibility under difficult conditions such as noisy traffic.

Net Each \$13.00

Power Pack converts Messenger 323 into a deluxe 23-channel portable unit.

Net Each \$79.95

Battery charger for above.

Net Each \$17.50

Tone-Alert™ V selective calling. Keeps radio quiet until called. (Specify code tone 1-10 when ordering).

Net Each \$69.00



MESSENGER 223

Top performance at modest cost. 10 tubes, 8 diodes, 6 transistors. Reserve gain audio per-amplifier for superior microphone sensitivity. Same rugged circuitry as famous Messenger "1" and "Two" with even greater "Talk Power" capability. At least 15dB more audio gain than the "1" and "Two", the "223" punches out a clear, penetrating signal. Built to deliver the reliable day-in, day-out performance. Messenger 223 combines tubes with a solid-state frequency synthesizer to give unmatched performance at reasonable price.

Net Each \$199.95



MESSENGER 125

Most compact, full power, two-way radio available. Push-button control, simple to use. Outstanding 5 channel performance. An entirely new class of CB equipment specifically designed to solve the problems of installation space in late model cars . . . to harmonize with contemporary automotive interior styling . . . and to greatly simplify mobile operation. Features far ahead of its time, such as push-button station selection, slide-lever squelch and volume, and the famous Johnson solid-state "Talk Power" circuitry — the Messenger 125 now offers high performance two-way communications capability for anyone — at a price that makes it almost a necessity.

Net Each \$99.95

External speaker for increased intelligibility under difficult conditions such as noisy traffic.

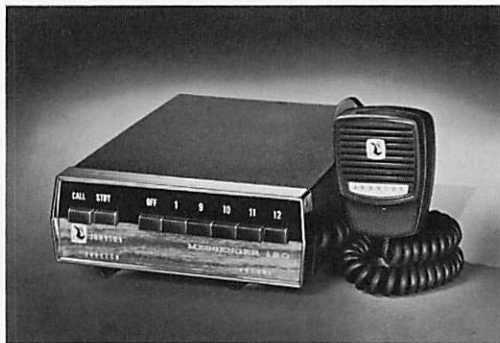
Net Each \$13.00

Porta-Pack for Messenger 125. Carrying case, complete with built-in rechargeable batteries and collapsible whip antenna. Lets you take the 5-watt Messenger 125 with you anywhere!

Net Each \$59.95

Battery charger for above.

Net Each \$17.50



MESSENGER 120

Includes selective calling capability, compatible with Johnson Tone-Alert V. Mobile use — 12 volt negative ground DC input; all solid state; single conversion receiver; five channels crystal controlled requiring two crystals per channel (pushbutton selected); series gate noise limiting; squelch; modulation compression; external speaker jack; exceptionally clear audio; call, standby, channel indicator and power on indicator lights; S0-239 antenna connector.

Net Each \$149.95

AC power supply for adapting Messenger 120 to base station use from 110-120 VAC, 50-60 Hz. Complete with mobile mounting bracket, microphone, crystals for Channel 11, and instruction manual. Equipped with Tone-Alert™ code tone 5. (Other code tones, 1-10, available on special order. All units in a system must be equipped with the same code tone.)

Net Each \$32.95

Crystals for additional channels:

Receive Net Each \$2.50

Transmit (Specify Channel 1-23 when ordering.)

Net Each \$2.50

External speaker. Net Each \$13.00



E. F. Johnson

CB TWO-WAY RADIOS AND MONITOR



DUO-SCAN MONITOR RECEIVER

Hear all the exciting activity in both low and high band VHF two-way radio (30-50, 150-174 MHz) with Johnson Duo-Scan™ monitor receiver. Automatic scanning of any combination of up to eight high or low band channels, or manual, one at a time channel selection. When scanning, the receiver automatically stops and locks

on to any channel with activity, then resumes scanning when the activity ceases. Built in 110-120 VAC and 12 VDC power supplies. Supplied with a mobile mounting bracket and AC and DC power cable.

Net Each \$169.95

TRANSCIVER TESTER

Checks transceiver performance 10 ways. Measures RF power output, SWR, field strength, crystal activity and more. Built-in dummy load and field strength antenna, plus built-in signal generators.

Net Each \$49.95



TRANSCIVER TESTER

ANTENNA MATE

Combination CB Antenna matcher and SWR indicator. Insert in transmission line between transceiver and antenna. Direct reading of SWR; pi-network matching section — SO-239 connectors.

Net Each \$29.95



ANTENNA MATE

ACCESSORY SPEAKER

The same speaker used in Johnson professional two-way systems. 10 watt rating.

Net Each \$13.00



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RE 15

RE 10

RE 11

RE 16

NEW Model RE10 \$166.00 shown on Model 421 desk stand \$20.00. Model RE15 \$283.00 shown with Model 307 suspension mount \$37.00. NEW Model RE11 \$177.50, shown with Model 311 snap-out stand adapter \$7.00. NEW Model RE16 \$294.50, shown on Model 421 desk stand \$20.00. List prices shown. Normal trade discounts apply.

Freedom of choice!

E.V. Professional sound has entered a new era. It started with the Electro-Voice Model RE15. And now there are four E-V dynamic cardioid microphones that share its distinctive advantages — with some unique benefits of their own.

Unaffected by Distance... Angle

Basic to all of these microphones is Exclusive Electro-Voice Continuously Variable-D* construction. Now it offers something you've never heard before with any microphone: no matter what you do, microphone response never varies!

Whether performers almost swallow the microphone, wander far off-mike... or even move around to the back... you'll still get the same smooth response. Only the level changes.

Once you set equalization it remains constant. You have full assurance that tonal balance won't change between the dress rehearsal and the final performance, no matter what the talent does.

Improved Cardioid Pattern

Only acoustics and noise can limit you. Yet even here these new E-V microphones gain an advantage from the super-cardioid pattern that provides better sound control than ordinary cardioids. With maximum rejection 150° off axis, it is easier to eliminate unwanted sound while maintaining normal stand or boom microphone positions. There's also an integral bass-tilt circuit to cut rumble below 100 Hz. when needed.

Now Select from Four Models

In addition to the original RE15, we've added the RE16. The same fine microphone with an external "pop" filter to solve the problems of ultra-close miking.

The new RE10 is the economy version of the RE15. The same concept and quality, but for slightly less rigid requirements. And the RE11 is the lower cost twin to the RE16.

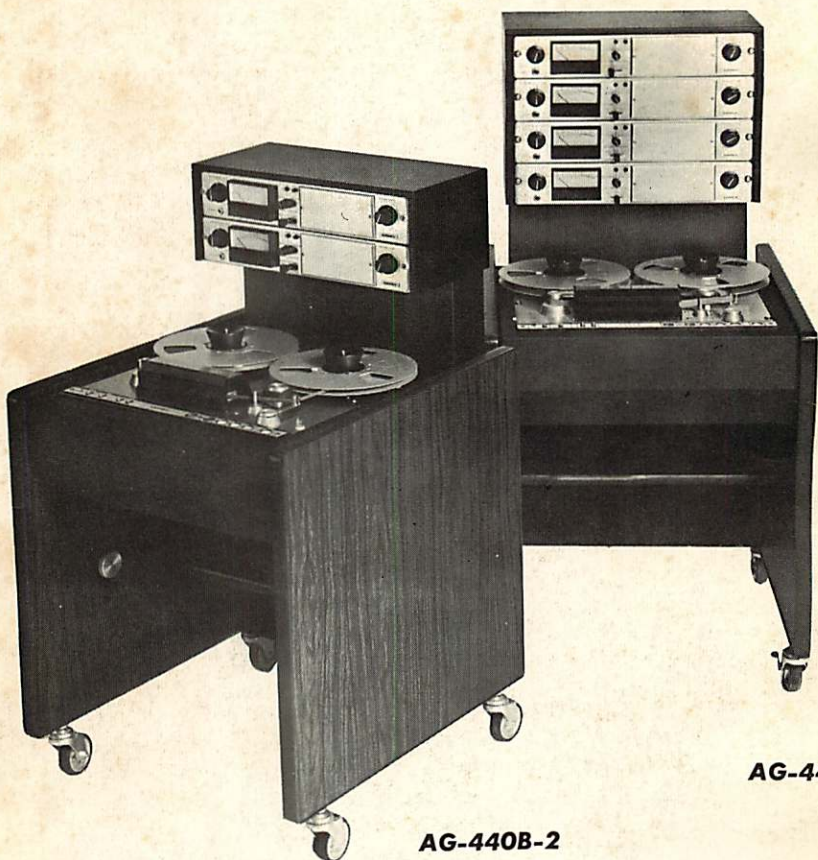
These four great cardioid microphones give you new freedom to head off sound problems before they start.

*U.S. Patent No. 3,115,207. Trade mark registered.

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AMPEX

Professional Tape Equipment



AG-440B-4

AG-440B-2

Ampex Series AG-440B recorder/reproducers feature rugged, reliable design coupled with great versatility. The three-motor, two-speed transport will handle both $\frac{1}{4}$ " (one- and two-channel) and $\frac{1}{2}$ " (three- and four-channel) tape. Standard speeds are $15\frac{1}{2}$ ips and $7\frac{1}{2}/3\frac{3}{4}$ ips. Conversion from one format to another takes only minutes; simply remove three screws and replace the head assembly. Dowel registration pins assure quick alignment. Record/play electronics are housed in slim stacking

modules for easy conversion. Power is supplied from the transport chassis. All transport controls are solenoid operated, with remote control available. All units are equipped with built-in SEL-SYNC® systems for track reversing and sound-with-sound. (Also available is the AG-440-8 eight-track master recorder/reproducer, which employs a different transport for 1" tape.) The AG-440B Series can fill any need from monophonic broadcast to the most complex and demanding studio operation.

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