

Spotmaster[®]

**Tape Cartridge Machines
Audio Consoles
Studio Accessories**

BROADCAST ELECTRONICS INC.
— A FILMWAYS COMPANY —



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Warranty

Broadcast Electronics tape cartridge machines are guaranteed to be free from defects in workmanship and material for a period of two years. During the second year those items subject to normal wear, such as tape heads and pinch rollers, will not be covered under this guarantee. All other Broadcast Electronics' products are guaranteed for a period of one year. All warranties are void. A) If equipment has been altered or repaired by others without Broadcast Electronics' specific prior authorization, or B) If equipment is operated under environmental conditions or circumstances other than those specifically described in Broadcast Electronics' literature or instruction manuals. Liability extends only to value of equipment.

ADDITIONAL INFORMATION

Additional information and product literature are available from your SPOTMASTER Distributor or Broadcast Electronics, Inc.



**VIDEO
MONITORS**

Broadcast Electronics, Inc. Modtec Division
manufactures monochrome video monitors.



BROADCAST ELECTRONICS INC. — A FILMWAYS COMPANY —
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Series 5000

- NEW, RUGGED MULTI-DECKS FROM SPOTMASTER
- COMPLETELY MODULAR CONSTRUCTION WITH HINGED FRONT PANEL, SLIDE OUT DECKS AND PLUG-IN ELECTRONICS

The SERIES 5000 Multi-Deck Cartridge Machines, with their innovations in electronics, mechanical design and packaging, are built for reliability and ease of maintenance when subjected to the abuse and rigors of continuous daily use. One half inch thick slide out machined decks, massive air damped solenoids and a direct drive hysteresis synchronous motor provide rugged, reliable and quiet tape handling. Plug-in electronics (separate for each deck), ribbon cabling, and conservatively rated components give today's broadcaster the ultimate in cartridge machine quality and reliability.

All SERIES 5000 decks may operate simultaneously supplying independent audio to separate console inputs. If a single output is desired, all 3 or 5 decks may be joined together through a SPOTMASTER® audio mixer or switcher. The mixer allows overlap of audio from one deck to the next. The switcher allows output from only one deck at a time, and automatically switches the output from the last started deck. Thus, if the operator has started the wrong deck, he can immediately start another deck without having to worry about the output from the first deck which will automatically re-cue.

A standard feature of SERIES 5000 machines is an audio muting circuit that independently turns off the audio from any idle deck. This feature keeps unnecessary noise to a minimum.

Secondary and tertiary cue tones, complete with front panel indicators and dry contact closures, are available as an op-

SPECIFICATIONS

Equalization: NAB Standard, (CCIR Standard) adjustable to compensate for head wear.

Frequency Response: 50 Hz to 15 kHz ± 2 dB

Distortion: 1% or less at 0 VU (400 Hz).

Noise: -60 dB or better at 400 Hz, 3% THD unweighted.

Wow and Flutter: 15% peak weighted.

Crosstalk: Better than 50 dB at 1 kHz.

Output: +21 dBm peak output, adjustable (independent for each deck).

Output Impedance: 600 ohms balanced, alternate strapping for 150 ohms at 18 dBm.

Speed Accuracy: .10% or better at 7.5 ips.

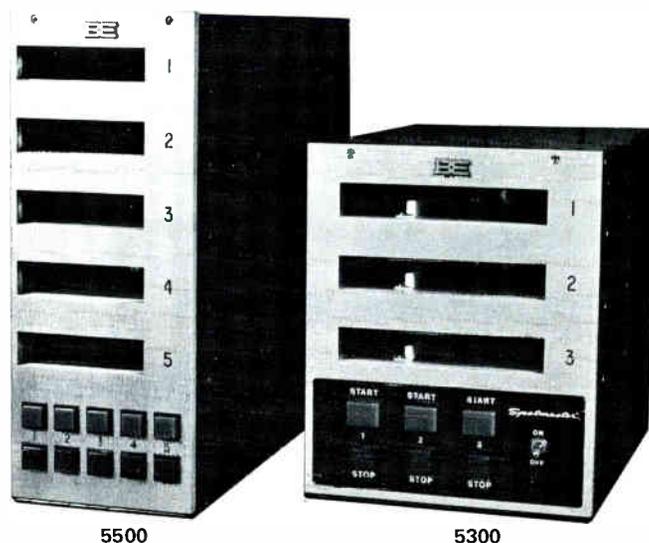
Motor: Direct drive hysteresis synchronous.

Cue Trip: Stop Cue (1 kHz)

Cue Trip I (150 Hz): Optional. Normally open or normally closed isolated contacts.

Cue Trip II (8 kHz): Optional. Normally open or normally closed isolated contacts.

MULTI-DECK CARTRIDGE MACHINES



MONO OR STEREO

tion. These optional cue tones can be used to sequence the decks, start other equipment, and alert the operator prior to the end of a cartridge.

An optional recording amplifier (mono or stereo) is available for the three deck reproducer to allow recording on the third deck independent of the other two decks; thus, the single machine can operate as three separate machines — a record/playback deck and two playback decks.

The SERIES 5000 machines are designed for either table top mounting or single and multiple rack mounting. Two of the three deck machines can be mounted side-by-side in a standard 19" rack, or three of the five deck machines can be mounted side-by-side in the same space.

Cueing Accuracy: 0.1 second.

Tape Capacity: Size A or B NAB standard cartridge.

Power Requirement: 120 watts, 117 V/60 Hz. Other voltages and frequencies available on special order.

Max. Ambient Operating Temperature: 50°C (122°F)

Remote Control: All front panel controls and indicators. Individual audio output.

External Connections: Mating plugs furnished.

Mounting: Table top or optional rack mounting.

Dimensions: 5300 SERIES (3-deck) 10-5/8" high, 8-5/8" wide, 13-3/8" deep.
5500 SERIES (5-deck) 14-3/4" high, 5-3/4" wide, 17" deep.

Weight: 5300 SERIES 37 lbs.

5500 SERIES 44 lbs.

Series 4000

THE RUGGED ONES

SINGLE DECK
CARTRIDGE MACHINES



Model 4200 space saver for size A and B cartridges, available in mono and stereo playback.



Model 4300 for size A, B and C cartridges, available in mono and stereo playback only or record/playback.

SERIES 4000 - THE ULTIMATE CARTRIDGE MACHINE FROM SPOTMASTER®

The SERIES 4000 is the ultimate cartridge machine from SPOTMASTER – and the ultimate machine for the most discriminating broadcaster. It proves that a no-nonsense cartridge machine can be innovative, reliable and durable without being overly complex or expensive. It's a unique machine with unique features – features like the SPOTMASTER PHASE-LOK III head bracket that provides accurate phase response with its exclusive and simple independent azimuth adjustment. SERIES 4000 machines have 15 years of SPOTMASTER experience and design leadership in a new style of packaging that is preferred by many of today's broadcasters.

SPECIFICATIONS

Record/Playback Equalization: NAB Standard (∞ , 50 usec).

Tape Velocity: 7.5 ips (19.05 cm/s).

Timing Accuracy (7.5 ips): 0.1%.

Frequency Response: ± 1 dB 50 Hz to 15 kHz exclusive of head contour effect.

Noise: 62 dB mono, 60 dB stereo. Below 400 Hz at 3% THD level, 3M156 tape, 20 Hz to 20 kHz.

Cross Talk (Magnetic head limited):

Cue channel to program channel:

150 Hz: -50 dB max.

1000 Hz: -55 dB max.

8000 Hz: -50 dB max.

Stereo: Less than 50 dB, 50 Hz to 15 kHz.

Input Impedance:

Recorder Input

Low level/high level input amplifier.

Mic: 150 ohm balanced floating.

Line: 50k ohms balanced floating.

The SERIES 4000 features an automatic release deck, a direct drive motor and a large air-damped solenoid to assure trouble-free operation. Power consumption is low, only 45 watts, so the machine remains cool hour-after-hour. High quality components and conservative design are combined to provide high reliability and minimize down time. These ruggedly built machines also feature a massive machine deck and heavy cast frame for added durability and performance. An integral tape fault/splice detector is available as an option for record/playback models. This allows the operator to quickly locate and position the splice without removing the cartridge from the machine.

Input Levels:

High level inputs: -24 to $+20$ dBm (50mV to 7.7V).

Microphone inputs: -70 to -24 dBm.

Output Impedance (Balanced): Less than 1/8 load of 150/600 ohms.

Output Level (From 160 nW/M Recording): $+8$ dBm.

Peak Output Level: $+20$ dBm before clipping.

Bias Oscillator Frequency: 100 KHz.

Fast-Forward Tape Velocity: 22.5 ips (57 cm/s).

Ambient Operating Temperature (Machine Only): 0° to 55° C (32° to 130° F).

Tape Start/Stop Time: 0.1 s max.

Tape Pull Force: 1.5 lbs. (6.67N) min.

Power Requirements: 105-125/210-230V, 50 or 60 Hz, 45-50W max.

Dimensions: Model 4200: 5-1/4" H, 8-1/2" W, 12-1/8" D

Model 4300: 5-1/4" H, 17" W, 12-1/8" D
(Height without feet)

Remote Control: Complete duplication of front panel controls and indicators.

Series 3000

THE RUGGED ONES

SINGLE DECK CARTRIDGE MACHINES

- **AUTOMATIC RELEASE DECK WITH LARGE AIR DAMPED SOLENOID**
- **LOW POWER CONSUMPTION – COOLEST RUNNING UNIT IN THE INDUSTRY**
- **PHASE-LOK III HEAD BRACKET ELIMINATES STEREO PHASING PROBLEMS**
- **EXCEEDS PRESENT AND PROPOSED NAB SPECIFICATIONS**
- **FULL RANGE OF MODELS AND OPTIONS**

SPOTMASTER[®] maintains its leadership in the tape cartridge machine field with the SERIES 3000 – the first SPOTMASTER to incorporate an automatic release deck. SERIES 3000 machines are heavy duty units built to assure long, trouble-free life. Mechanically, these machines use rugged components with a large air damped solenoid and a machined deck surface. Electrically, all components are chosen for proven dependability with gold plated card edge connector contacts, internally shielded audio circuitry, and extensive use of integrated circuits. SERIES 3000 cartridge machines exceed both present and proposed NAB specifications.

Total power consumption is so low – less than 50 watts – that these machines are the coolest running units in the industry. There is no excessive heat build-up to damage tape. An efficient hysteresis synchronous motor provides direct tape drive and optional fast forward.

Standard features include balanced transformer output, FET output switching for paralleling machines, rear panel connector for full remote control, and – on stereo models – the unique PHASE-LOK III head bracket with independent azimuth adjustment to assure extremely tight control of stereo phasing. Options include secondary and tertiary cue tones, fast forward, microphone input on record models and alternate tape speeds. Accessories include a tape fault/splice detector – see page 9.

SPECIFICATIONS

Record/Playback Equalization: NAB Standard (∞ , 50 usec).

Tape Velocity: 7.5 ips (19.05 cm/s).

Timing Accuracy (7.5 ips): 0.1%;

Frequency Response: ± 1 dB 50 Hz to 15 kHz exclusive of head contour effect.

Noise: 62 dB mono, 60 dB stereo. Below 400 Hz at 3% THD level, 3M156 tape, 20 Hz to 20 kHz.

Cross Talk (Magnetic head limited):

Cue channel to program channel:

150 Hz: –50 dB max.

1000 Hz: –55 dB max.

8000 Hz: –50 dB max.

Stereo: Less than 50 dB, 50 Hz to 15 kHz.

Input Impedance:

Recorder Input

Low level/high level input amplifier.

Mic: 150 ohm balanced floating.

Line: 50k ohms balanced floating.



Model 3100 for A size cartridges, available in mono or stereo playback. Three Model 3100's mount side-by-side in 19 inch rack adapter.



Model 3200 for A and B size cartridges, available in mono or stereo playback only, record/playback, or delay programmer. Mono record/playback shown. Two Model 3200's mount side-by-side in 19 inch rack adapter.



Model 3200 stereo record/playback with optional fast forward, secondary cue tone (150 Hz) and tertiary cue tone (8 KHz).



Model 3300 for A, B and C size cartridges, available in mono or stereo playback only or record/playback. A Model 3300 may be mounted side-by-side with a Model 3100 in a 19 inch rack adapter.

Input Levels:

High level inputs: –24 to +20 dBm (50 mV to 7.7V).

Microphone inputs: –70 to –24 dBm.

Output Impedance (Balanced): Less than 1/8 load of 150/600 ohms.

Output Level (From 160 nW/M Recording): +8 dBm.

Peak Output Level: +20 dBm before clipping.

Bias Oscillator Frequency: 100 KHz.

Fast-Forward Tape Velocity: 22.5 ips (57 cm/s).

Ambient Operating Temperature (Machine Only): 0° to 55°C (32° to 130°F).

Tape Start/Stop Time: 0.1 s max.

Tape Pull Force: 1.5 lbs. (6.67N) min.

Power Requirements: 105-125/210-230V, 50 or 60 Hz, 45-50W max.

Dimensions: Model 3100: 5-1/4" H, 5-7/8" W, 15-1/2" D

Model 3200: 5-1/4" H, 8-3/4" W, 15-1/2" D

Model 3300: 5-1/4" H, 11-3/4" W, 15-1/2" D
(Height without feet)

Remote Control: Complete duplication of front panel controls and indicators.

Series 2000

- **PLUG-IN MODULES FOR RECORD AND AUDITION FUNCTIONS PERMIT FIELD CONVERSION OF PLAYBACK UNITS**

SERIES 2000 cart machines have low power consumption and run cool to protect your tapes. Their noise figure exceeds 57 dB. Start/stop times are fast — under 80 milliseconds. Standard features include balanced transformer output, 150 Hz cue, 1000 Hz cue, and provision for remote control and telephone interface.

Separate front panel plug-in modules are used to implement record and audition functions. These add flexibility and

SERIES 1000

- **SIMPLE, BASIC CART MACHINES AT VERY LOW PRICES**
- **FULL +16 DBM PEAK OUTPUT WITH EXCELLENT FREQUENCY RESPONSE**

In today's battle against inflation, SPOTMASTER® introduces a basic, spartan audio tape cartridge machine — the SERIES 1000. The SERIES 1000 combines a rock-bottom price with the quality and reliability of the SERIES 2000.

The SERIES 1000 includes: low noise electronics; fast starting and stopping tape transport; full +16 dBm peak output; excellent frequency response with high frequency adjustment; automatic cueing with 1 KHz tone; rugged construction for durability and long life; cool and quiet operation; easy accessibility for periodic maintenance; table top or rack mounting; adjustable head mounting; self-cancelling record preset; stable, low flutter, hysteresis synchronous tape drive; minimum component circuitry; and line or microphone input capability to the recorder.

The SERIES 1000 delay model provides facilities for simultaneous recording and playback to temporarily store programming material. Primary users are stations with telephone

SPECIFICATIONS — SERIES 1000 AND 2000

- Noise:** 60 dB below 3% THD level
- Frequency Response:** ± 1.5 dB, 50 Hz to 15 kHz exclusive of head contour effect.
- Distortion:** 2% or less at +16 dBm output
- Tape Speed:** 7.5 ips accurate 0.2% or better
Optional 3.75 ips accurate 0.4% or better
- Wow and Flutter:** .15% Peak, weighted
- Output (SERIES 2000):** Peak output +16 dBm, continuously adjustable, 600 ohms, transformer balanced
- Output (SERIES 1000):** Peak output +16 dBm, continuously adjustable. Output load 150 ohms or higher unbalanced, 600 ohm balanced in delay models
- Start and Stop Time:** 80 milliseconds
- Equalization:** NAB standard
- Drive:** Hysteresis synchronous, indirect
- Power:** 117 VAC/60 Hz standard
220 VAC/50 Hz optional
117 VAC/50 Hz optional
- Cue Tones (SERIES 2000):** 1 KHz stop standard, 150 Hz standard
- Cue Tones (SERIES 1000):** 1 KHz stop standard (not included in delay models)

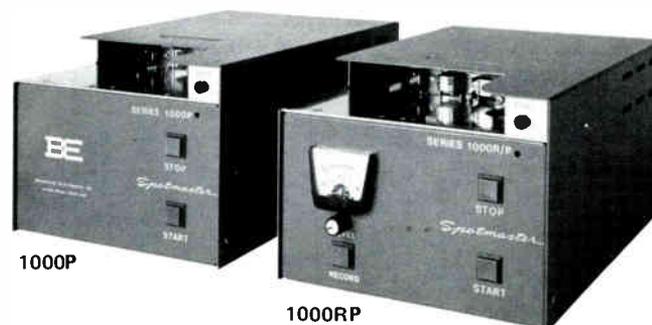
SINGLE DECK CARTRIDGE MACHINES



2000PA

2000RP

permit instant field conversion of Series 2000 playback machines. Table top units accept A, B and C size cartridges, and the dual rack mount configuration accepts size A and B cartridges. Available in mono and stereo playback and record/playback, and mono playback/audition.



1000P

1000RP

call-in programs where the delay permits editing of extraneous material. Since the delay length is determined by the cartridge used, the delay time may be easily changed. This permits delaying whole programs for up to 60 minutes.

MODELS AVAILABLE: Mono Playback Only, Model 1000P; Mono Record/Playback, Model 1000RP; Mono Delay, Model 1000DL.

Remote Control (SERIES 2000 Only): Stop and start lamps, stop and start TELCO telephone answering accessory, and 150 Hz cue tone logic ground.

Delay (SERIES 1000 Only): 3 seconds to 60 minutes depending on cartridge length and tape speed. Uses standard NAB cartridges. 6 second length cartridges available for telephone delay purposes.

Dimensions: 5-5/8" high x 8-1/2" wide x 12" deep

OPTIONS — SERIES 2000

- Cue Tones:** 8 KHz auxiliary in lieu of standard 150 Hz
- Record Module:** Plug-in for simple field installation; includes VU meter, microphone input provision, and 150 Hz tone generator
- Audition Module:** Plug-in module with 1 watt amplifier and speaker; output jack for external speaker with 10 watt amplifier
- Rack Adapter:** Mounts two SERIES 2000 units side by side in 19" rack
- Telephone Answering:** Prewired for TELCO telephone answering interface.

OPTIONS — SERIES 1000

- Rack Adapter:** Mounts two SERIES 1000 units side by side in 19" rack

Three/70 Series

SINGLE DECK
CARTRIDGE MACHINES

- COMPACT PLAYBACK MACHINE FOR SIZE A CARTS
- HIGH PERFORMANCE WITH EXCELLENT ELECTRICAL SPECIFICATIONS
- PLUG-IN MODULAR ELECTRONICS AND PLUG-IN DECK
- LOW POWER, COOL OPERATION



SPECIFICATIONS

Frequency Response: 50-15 kHz, ± 2.5 dB.
Equalization: NAB or IEC standards.
Distortion: Less than 1.75% @ 0 VU (400 Hz).
Noise: 58 dB below 3% THD level (400 Hz).
Output: Adj. to +8 dBm.
Max. Output: +18 dBm (before clipping).

Wow and Flutter: 0.15% or less @ 7.5 ips.

Cue Circuitry: Stop Cue (1 KHz) (150 Hz, 8 KHz optional).

Cueing Accuracy: 0.1 second.

Speed Accuracy: $\pm 0.15\%$ @ 7.5 ips.

$\pm 0.4\%$ @ 3.75 ips.

Power Requirements: 117 V/60 Hz; less than 30 Watts. 220 V/240 V, 50 Hz; less than 35 Watts.

Remote Control: Use BE-102.

MECHANICAL

Size: 5.625" wide, 5.75" high, 12.5" long.

Weight: 12 lbs.

Rear Panel Configuration:

Remote Control/Telco: Octal, 8 pin

Line Out: Jack, 3 connector phone

Output Level Potentiometer

Contact closures derived from Cue Trip I and II Tone Sensors.

OPTIONAL ACCESSORIES

600 ohm balanced transformer output

Telco Telephone Answering Accessory

Rack Adaptor

BE 102 Remote Control

220V/240V, 50 Hz power conversion

3.75 ips speed option

Cue Trip I (150 Hz) and Cue Trip II (8 KHz) Tone Sensors

Ten/70 Series



1070P – Mono playback - compact and light.

1070PS – Stereo playback.



1070RP – Record/playback.

1070RP/DL – Record/playback/delay three-in-one machine ideal for talk shows. Electronic output mute remote controllable.



1070RPS – Stereo record/playback with Phase-Lok II head bracket to eliminate FM phasing problems.

1070SDL – Stereo delay programmer.

SPECIFICATIONS

Equalization: NAB or IEC Standards.

Frequency Response: 50 - 15 kHz, ± 2.5 dB.

Distortion: 1% or less @ 0 VU (400 Hz).

Noise: 58 dB below 3% THD level (400 Hz).

Wow and Flutter: 0.15% or less @ 7.5 ips.

Cross Talk: Cue/Program -55 dB or better. Stereo - 50 dB or better.

Output: -10 dBm/0 dBm/+8 dBm switchable. Adjustable 10 dB. Peak output +18 dBm.

Output Impedance: 600 ohms balanced. Alternate strapping for 150 ohms.

Speed: 7.5 ips accurate 0.2% or better. Fast Forward** to 22.5 ips (Other speeds optional).

Motor: Direct drive hysteresis synchronous.

Cue Trip: Stop Cue (1 KHz)

Cue Trip I (150 Hz) Optional.

Cue Trip II (8 KHz) Optional.

Cueing Accuracy: 0.1 Second.

Capacity: Size A or B NAB standard cartridge.

***Input:** Line -15 dBm to 0 dBm to +15 dBm switchable @ 10,000 ohms bridging balanced. Mic 0.1 mv @ 150 ohms balanced (Optional, RP and RP/DL only).

Power Requirement: 117 V/60 Hz, 50 Watts. 220-240 V/50 Hz (Optional).

Controls: Start *Record Preset

Stop *Line Level

On-Off *Mike Level

*VU Meter ** Advance

Cartridge Release

Optional: Cue I (150 Hz) Generator*/Sensor

Cue II (8 KHz) Generator*/Sensor

Auto Cue Automatic Advance**

Size: 8-3/8" H, 8-1/2" W, 12" D.

Shipping Weight: 15 lbs.

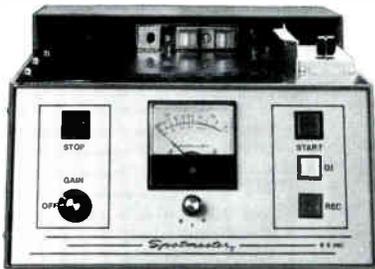
*Applies to RP Models Only. **Not available on delay models.

500 D Series

SINGLE DECK CARTRIDGE MACHINES



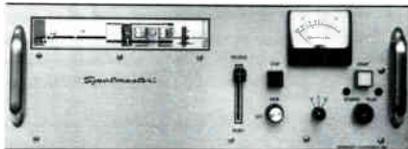
- TRADITIONAL FAVORITE THAT MEETS OR EXCEEDS NAB SPECIFICATIONS
- COMPLETE RANGE OF MODELS AT MODERATE PRICES
- 500 D FEATURES AUTOMATIC RECORD CANCEL, BUILT IN MIKE PRE-AMP AND FULL AUXILIARY CUE TONE OPTIONS



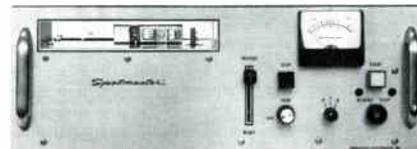
500 D/DL Record/Playback/Delay. Records, stores and plays back any program material for pre-determined length on standard cartridges. Also normal record/playback functions.



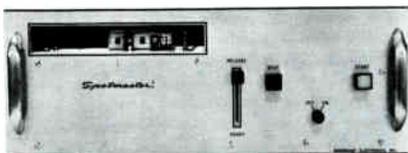
500 DS Stereo Record/Playback. Optional mike pre-amp.



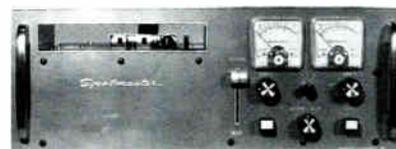
500 DR. Rack Mount 500 D in 7" panel height. Chassis rolls out for access. Optional mike pre-amp.



500 DR/DL Record/Playback/Delay. Rack mount version of 500 D/DL. Optional mike pre-amp.



505 DR and 505 DRS. Rack mount mono and stereo playback units. All rack mount units accept A, B or C size cartridges.



500 DRS Stereo Record/Playback. Full stereo record and playback in a 7" rack unit.

SPECIFICATIONS

Equalization: NAB Standard.

Frequency Response: ± 2 dB 50 - 12 kHz @ 7.5 ips ± 3 dB
40 - 15 kHz @ 7.5 ips.

Distortion: 2% or less @ 0 VU recording level.

Noise: 55 dB below 3% THD (400 Hz), peak weighted.

Wow & Flutter: 0.2% or less @ 7.5 ips.

Tape Speed: 7.5 ips..

***Input (Line):** 0.1 Volt (Bridging)

***Input (Microphone, 150 ohms):** 0.25 mv (-64 dBm)

Output: +4 dBm @ 600 ohms. Peak output +14 dBm. (Transformer output.)

Cue-Tones: Primary - 1,000 Hz (Stop). Cue-Trip No. 1 - 150 Hz (Optional). Cue-Trip No. 2 - 8,000 Hz (Optional).

Cueing Accuracy: 0.1 Second.

Starting Time: 0.1 Second.

Power Requirement: 105 - 125 VAC, 60 Hz, 50 watts (115/220 VAC, 50 Hz optional extra).

Playing Time: 1 second to 31 minutes @ 7.5 ips.

Motor: Hysteresis Synchronous

Controls: *Gain, *Automatic Record Pre-set, *VU Meter Selector, Start Switch, Stop Switch, Output Level, On-Off

Size: 10-1/4" W, 12-3/4" L, 6-5/8" H (Desk top). 7" panel height (Rack mount)

Weight: 18 lbs. (Model 500) 15 lbs. (Model 505)

Finish: Silver Gray and satin aluminum panel.

* Applies to Model 500 combination Record/Play units only.

Models 605C 610CR

FIVE SPOT®
TEN SPOT®

MULTI-DECK
CARTRIDGE MACHINES

SPOTMASTER® TEN-SPOT and FIVE-SPOT multiple cartridge units are capable of manual operation or may be incorporated into programmed automation systems making use of one, two or three NAB standard cueing tones.

A flywheel loaded common capstan supplies tape motive force, the flywheel in turn being driven by a heavy duty hysteresis synchronous motor. Individual power supplies are provided for each solenoid thereby making each deck independent of the other and, in the TEN-SPOT, each module of five decks is completely separate and independent of the other five deck module both mechanically and electronically. Each reproduce channel is separately equipped with cueing amplifier/s and a program amplifier with the output level adjustable to +4 dBm by means of locking type controls. The amplifier power supply is transistorized and zener regulated.

SPECIFICATIONS

Equalization: NAB standard.

Frequency Response: ±2 dB, 50 Hz - 12 kHz
±4 dB, 50 Hz - 15 kHz

Distortion: 2% or less @ normal recording level.

Noise -45 dB, ref. 3% THD.

Wow and Flutter: .2% or less (RMS).

Tape Speed: 7.5 ips (3.75 ips available).

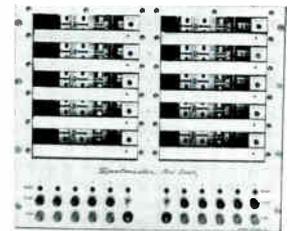
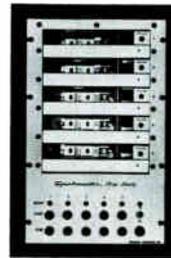
Output Level: Adjustable to +4 dBm @ 600 ohms, peak output +12 dBm.

Output Load Impedance: 600 ohms (emitter-follower). *600/150 ohms (transformer output).

Cueing Accuracy: .1 second.

Cueing Tones: Primary - 1,000 Hz (Stop/Re-Cue). *Cue Trip No. 1: 150 Hz (end of message). *Cue Trip No. 2: 8,000 Hz (auxiliary).

Playing Time: 3 sec. to 16 mins. per deck @ 7.5 ips using NAB type A & B cartridges.



Facilities are provided on the rear panel for remote control and for inter-connections between channels so as to permit automatic sequencing from channel to channel. All amplifiers are plug-in modular units. Enclosed plug-in relays are used throughout.

Capacity: FIVE-SPOT - 5 type A or B cartridges. TEN-SPOT - 10 type A or B cartridges.

Circuitry: All silicon solid state.

Power Supply: Transistor, filtered, zener regulated.

Power Requirements: 108-125 VAC, 60 Hz.
75 watts - FIVE-SPOT
150 watts - TEN-SPOT
Optional 220 VAC, 50 Hz (step down transformer supplied).

Dimensions: FIVE-SPOT - 9-13/16" W x 15" D x 15-3/4" H.
TEN-SPOT - 19" W x 15" D x 15-3/4" H.

Mounting: FIVE-SPOT - Walnut Formica Cabinet (Model 605C).
FIVE-SPOT - in 19" rack panel with cartridge storage cubicle (Model 605CR).
TEN-SPOT - 19" rack (Model 610CR).

Weight: FIVE-SPOT - 44 lbs.
TEN-SPOT - 89 lbs.

*Optional

Model 610CX Automatic Audio System

The SPOTMASTER 610CX is provided with 6 Playback and 2 Record/Playback channels. The two record/playback channels may be utilized for recording purposes while the other playback channels are in use. The 610CX may be operated as one, 8 channel system, or as two, 4 channel systems. A front-panel "Split-Combined" function switch is provided for the selection of this mode of operation.

The Automatic Audio System is equipped with an integral sequential switcher that may be programmed to automatically playback any of two to eight cartridges.

SPECIFICATIONS

Frequency Response: ±3 dB, 50 Hz - 12 kHz
±5 dB, 50 Hz - 15 kHz

Output Level: -4 dBm, ±3 dB.

Cueing Tones: 1 KHz, 150 Hz.

Tape Speed: 7.5 ips.

Drive: Each 4 channel unit is driven by a common capstan thru a belt and pulley.

Power: 108-125 VAC, 60 Hz, 200 watts.

Distortion: 2% or less.

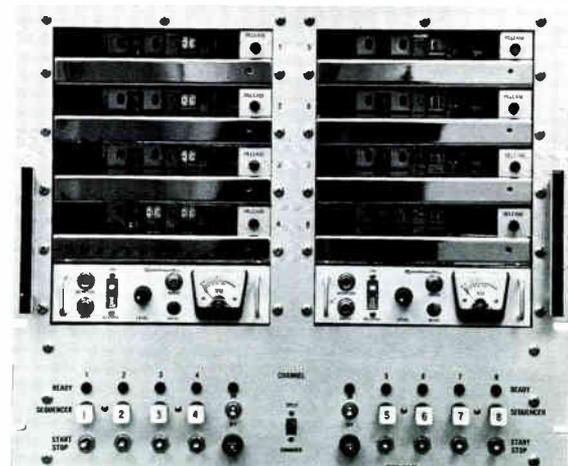
Wow and Flutter: 0.2% RMS.

Inputs: (2) microphone, 250 mv sens. low impedance.
(2) Line, 0.1 v sens., 2.5 k nom. impedance.

Cartridges: NAB types A, B.

Mounting: Standard 19" rack, 15-3/4" high.

Weight: 95 pounds.



Mini Series 303/305

- MINI-SPACE, MAXI-PERFORMANCE
- LOGIC SWITCHING
- FORCED AIR VENTILATION
- MONO OR STEREO

SPECIFICATIONS

ELECTRICAL:

Frequency Response: ± 2 dB 50 Hz to 15,000 Hz, ± 4 dB 30 Hz to 18,000 Hz

Distortion: 1.5% or less @ 0 VU, Ref: 400 Hz

Noise Unweighted -55 dB or better, Ref: NAB Standards Section 2.35

Cross Talk: Cue/Pgm: -55 dB or better @ 1 kHz, Ref: NAB Standard 2:40

Equalization: NAB or IEC standards

Output Level: $+18$ dBm peak, continuously adjustable

Output Impedance: 600 ohm balanced transformer out, alternate strapping for 150 ohm

Cue Tones: Primary: 1000 Hz (Stop/Re-cue), Secondary: 150 Hz (End of Message-Optional), Tertiary: 8000 Hz (Auxiliary-Optional)

Cue Output: N/O contact closure available on rear panel for 150 Hz and 8 KHz tones.

Cueing Accuracy: 0.1 seconds

Cue Sensitivity: Exceeds NAB Standards by 10 dB

Speed: 7.5 ips (Standard), 3.75 ips (Optional)

Speed Accuracy: $\pm 0.4\%$ or better

Wow & Flutter: 0.2% or better @ 7.5 ips, 0.25% or better @ 3.75 ips (Optional)

Capacity NAB Standard Cartridge: Size "A"

Power Requirements: 105 - 125 VAC, 60 Hz @ 75 watts (305), 60 watts (303), 220 - 250 VAC, 50 Hz @ 75 watts (305), 60 watts (303) (Other Line Standards on Special Request).

MULTI-DECK CARTRIDGE MACHINES



Controls: Front Panel illuminated pushbuttons for Start (green), and Stop (red). Rear Panel each channel, Output: 3 circuit std. phone jack, Level Trim: Potentiometer

Remote and Accessory Control Connections: Remote: Amphenol Blue Ribbon (50) pin connector providing remote control and indication of all front panel pushbutton control functions. Accessory: Amphenol Blue Ribbon (24 pin) connector providing normally open relay contacts from optional 150 Hz and 8000 Hz auxiliary tone sensors.

MECHANICAL:

Overall Dimensions: Model 305 - 14.39" H x 5.44" W x 17.75" D, Model 303 - 10.45" H x 5.44" W x 17.75" D

Weight: Model 305 - 42 lbs; Model 303 - 30 lbs.

Rack Panel Adapter: RA35 (for 3 - Model 305): 15 $\frac{1}{2}$ " H x 19" W x 18" D, RA33 (for 3 model 303) 12 $\frac{1}{4}$ " H x 19" W x 18" D

Model A77 Mark III B from Spotmaster/Revox

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 $\frac{1}{2}$ " 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.

Phase-Lok III Head Bracket

The PHASE-LOK III head bracket provides independent azimuth adjustment for quick, accurate azimuth setting without disturbing height and zenith. Rugged construction and locking provision ensure continued optimum performance. Precision tape guidance provides accurate and permanent tape to head alignment. Installed as standard equipment on 3000, 4000 and 5000 SERIES units.

CARTRIDGE MACHINE ACCESSORIES



Remote Controls

Almost all BE tape cartridge machines may be operated by remote control. Typical SPOTMASTER® remote control panels are:

BE-106 with illuminated start/stop switches and electronic sequence indicator for models 605C and 610CR.

303D remote control for Mini Series duplicates front panel start/stop functions. Suitable for mounting in console desk cut-out. 5" wide, 1-7/8" high, 2-7/8" deep.

RC1070 duplicates all Ten/70 front panel functions. Suitable for desk cut-out or blank rack panel. 5 1/2" wide, 2 1/4" high, 4" deep. Supplied with 15' cable and 24 pin connector.

BE-102 controls up to 3 single deck units such as the 500D Series. Desk top panel with 15' cable supplied.



Series 3000 remote control offers complete duplication of front panel controls and indicators

Fault/Splice Detector Models BEFSD-100/200

Spotmaster Fault/Splice Detectors function as tape quality inspectors or as splice detectors. All electronic detection is used, with variable sensitivity, to sense only major tape defects or all surface characteristics which affect recording. As a fault detector, tape is stopped whenever drop-outs, wrinkles or surface blemishes occur to allow a quick check of tape quality. As a splice detector, the BEFSD saves manual search for splices and prevents recording over splices.

Conveniently, the defect or splice is positioned directly opposite the capstan opening in the cartridge to permit easy inspection. This also allows storing of cartridges after splice positioning, since the splice is readily visible and permits running the cartridge briefly before recording without run-the splice out-of-sight in the tape pack.

The model BEFSD 100 is a completely self-contained detector with tape drive system. The model BEFSD 200 is used in conjunction with SPOTMASTER SERIES 3000 record/playback tape cartridge machines. Cables and controls are provided so that the BEFSD 200 may be connected to two SERIES 3000 machines.

SPECIFICATIONS

MODEL BEFSD 100:

Tape Speed: 22 1/2 IPS

Power Requirements: 117 VAC, 60 Hz; 117 VAC, 50 Hz; 220 VAC, 50 Hz

Dimensions: 5-5/8" high x 8-1/2" wide x 12" deep

Weight: 14 lbs.

Mounting: Desk top or in SERIES 1000/2000 rack adaptor

Cartridge Capacity: NAB A, B, or C when operated on table top; NAB A or B when rack mounted



MODEL BEFSD 200:

Tape Speed: 22 1/2 IPS

Power Requirements: Supplied by cartridge machine

Dimensions: 3" high x 9-1/2" wide x 6-1/2" deep

Weight: 3.5 lbs.

Mounting: Desk top or optional rack mount

Cartridge Capacity: Same as cartridge machine used



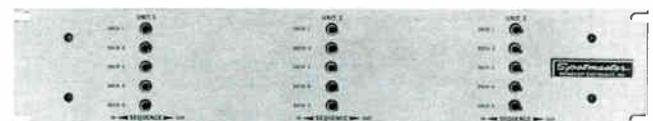
Sequencers/Switchers

Sequencers and switchers are used with individual cart machines, or with multi-deck machines that do not have internal sequencer or switcher functions. Examples are:

ESD-15 Sequencer pre-programs playback sequence of 1 to 15 decks. May be used with Mini Series 303/305. Rack mount in 3 1/2".

SW-5B Audio Switcher used with Five-Spot and Ten-Spot. Provides single balanced output and automatically mutes non-active channels.

SW-5D Audio Switcher used with 5000 Series Multi-decks. Provides single balanced output and automatically mutes non-active channels.



Spotmaster[®]

THE VERSATILE ONES

All Consoles Feature:

- INTERNAL POWER SUPPLY
- ½ WATT CUE AMPLIFIER AND INTERNAL CUE SPEAKER
- HEADPHONE AMPLIFIER, FRONT PANEL HEADPHONE JACK FOR LOW OR HIGH IMPEDANCE PHONES
- NOISE SPECIFICATION 65 dB (UNWEIGHTED) BELOW +8 dBm OUTPUT
- INPUT AND OUTPUT CONNECTIONS MADE INTERNALLY TO SCREW TERMINALS
- ALL INPUT AND OUTPUT TERMINALS LABELED IN CONSOLE
- ALL STEREO MODELS – OUTPUT AMPLIFIERS EQUIPPED WITH LEFT AND RIGHT CHANNEL BALANCE TRIMMERS
- DUAL CHANNEL OPERATION IN 100/200 and 3006/4006 SERIES
- DC CONTROLLED, LOW NOISE FET, AUDIO SWITCHING IN 100/200 SERIES

AUDIO CONSOLES COMPARISON CHART

MODEL	4 BEV-50	4BEM-50	4BES-50	5BEM-75	5BEM-100	5BES-100	5BEM-200	5BES-200	8BEM-100	8BES-100	8BEM-200	8BES-200	BEML-3006-10	BESL-3006-10	BEML-4006-10	BESL-4006-10	BE12A BE13A		
MONO/STEREO	MONO		STEREO	MONO		STEREO	MONO	STEREO	MONO	STEREO	MONO	STEREO	MONO	STEREO	MONO	STEREO	MONO		
NUMBER MIXERS	4 MIXERS			5 MIXERS				8 MIXERS				10 MIXERS				4 MIXER ADD-ON			
FADERS	SEALEO			SEALEO (STEP)**	STEREO SEALEO (STEP)**	STEP LADDER	STEREO STEP LADDER	SEALEO (STEP)**	STEREO SEALEO (STEP)**	STEP LADDER	STEREO STEP LADDER	LINEAR CONDUCTIVE PLASTIC	STEREO LINEAR CONDUCTIVE PLASTIC	LINEAR CONDUCTIVE PLASTIC	STEREO LINEAR CONDUCTIVE PLASTIC	ROTARY SEALEO (100 SERIES) OR STEP LADDER (200 SERIES)			
NUMBER INPUTS	10 INPUTS	8 INPUTS		5 INPUTS	10 INPUTS				16 INPUTS				22 INPUTS		24 INPUTS		12 INPUTS WITH 10 REMOTE LINES		
TYPE INPUTS	7 MIC/LINE SWITCHABLE, 3 LINE	MIC/LINE STRAPPABLE	MIC/LINE		MICROPHONE OR LINE; SWITCH SELECTABLE												MAX 18 SWITCHABLE MIC OR LINE & 6 REMOTE LINES		LINE
	MONO		MONO OR STEREO	MONO	MONO OR STEREO	MONO	MONO OR STEREO	MONO	MONO OR STEREO	MONO	MONO OR STEREO	MONO	MONO OR STEREO	MONO	MONO OR STEREO	MONO	MONO OR STEREO	MONO	
LINE INPUTS	BALANCED BRIDGING (18K)	10K BAL -20 TO 0 dBm			BALANCED BRIDGING (18K), 20 dBm NOMINAL, +10 dBm MAXIMUM								BALANCED BRIDGING (88K) -20 dB NOMINAL, +20 dB MAXIMUM				0 dBm +8dB MAX BALANCED XFMR COUPLED		
MIC INPUT	150 OHMS BALANCED	150 OHM -65 TO -45 dBm			150 OHMS, BALANCED, 65 dBm NOMINAL, -38 dBm MAXIMUM; 92 dB MAXIMUM GAIN								150 OHM BALANCED, -70 dBm NOMINAL -30 dBm MAX; 130 DB MAX GAIN				150 OHMS, BALANCED, -65 dBm NOMINAL, -33 dBm MAXIMUM, 92 dB MAXIMUM GAIN		
OUTPUTS	PGM XFMR +8 dBm (+18 max)	PA UNBAL 0.45V max	PGM 600 OHM XFMR +8 dBm (15 max)		PGM-AUD	PGM (AUD* MONO)*	PGM AUD	PGM AUD, MONO	PGM AUO	PGM (AUD* MONO)*	PGM-AUD	PGM AUD, MONO	MIX I, MIX II	MIX I, MIX II, MONO	MIX I, MIX II	MIX I, MIX II, MONO	AS MAIN CONSOLE		
FREQUENCY RESPONSE	±1.5 dB, 20-30K		±2 dBm, 30 Hz to 20 kHz		±0.5 dBm 20 Hz TO 20 kHz @ +8 dBm OUTPUT													600 OHM XFMR +8 dBm, 20 dBm MAX	
DISTORTION	0.5% @ +8 dBm			0.5% @ +18 dBm															
NOISE	65 dB (UNWEIGHTED) BELOW +8 dBm OUTPUT WITH -50 dBm INPUT												65 dB (UNWEIGHTED) BELOW +8 dBm OUTPUT WITH -60 dBm INPUT						
MONITOR (SPEAKER)	N/A	1.5W		8W	4W (2W/ CHAN)	8W	16W (8W/CHAN)	8W	4W (2W/ CHAN)	8W	16W (8W/CHAN)	8W	16W 8W/CHAN	12W	24W 12W/CHAN	N/A			
CUE	.5W INT SPEAKER		.5W INTERNAL SPEAKER PROVIDED, TERMINALS FOR EXTERNAL SPEAKER																
HEADPHONES	1W FRONT PANEL JACK																		
MUTING RELAY W/CONTACT FOR ON AIR LIGHTS	CUE SPEAKER MUTING ONLY		1	2	1 (2ND OPT)*	3	2	1 (2ND OPT)*	3	2	3	2	3 (4TH OPTION)*						
VU METERS	1 PGM		2 PGM	1 PGM	2 PGM	1 PGM 1 AUD	2 PGM OR AUD	1 PGM 1 AUD	2 PGM	1 PGM 1 AUD	2 PGM OR AUD	1 MIX I 1 MIX II	2 MIX I OR MIX II	1 MIX I 1 MIX II	2 MIX I 2 MIX II				
SPECIAL FEATURES	RACK MOUNT TEST OSC EXTERNAL CONNECTIONS		RACK MOUNT OPTION	RACK MOUNT OR TABLE MOUNT		MODULAR PLUG-IN ELECTRONICS OPTIONAL RIAA TURNTABLE PREAMPLIFIER MODULE						MODULAR PLUG-IN ELECTRONICS OPTIONAL RIAA TURNTABLE PREAMPLIFIER INTERCOM/TALKBACK PROVISION				MODULAR PLUG-IN ELECTRONICS INTERCOM/TALKBACK PROVISION LOW NOISE REED RELAY SWITCHING EXTENSIVE LOGIC CIRCUITRY FOR MUTING RELAYS QUAD CAPABILITY FOR STEREO VERSION NO. CONTACTS PROVIDED ON EACH PGM SWITCH		REMOTE LINES EQUIPPED W/PROVISION TO MIX CUE OR FEED MONITOR SIGNAL TO REMOTE LINE	

*PLUG-IN OPTION
**OPTION

4BEV-50 Versa Console

AUDIO CONSOLES

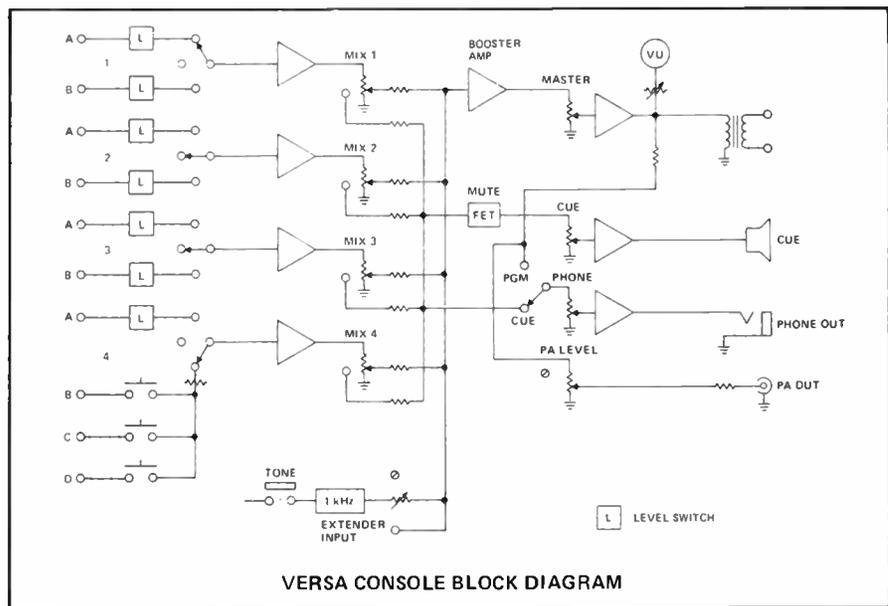
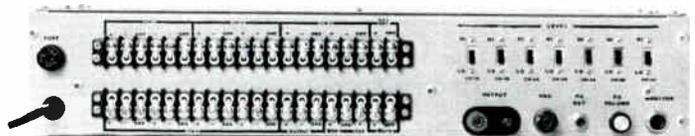
- COMPACT RACK MOUNT SINGLE CHANNEL MIXER
- EXTERNALLY SWITCHABLE INPUT LEVELS
- LINE AND PA OUTPUTS
- IDEAL FOR CATV, CCTV AND REMOTE BROADCASTS
- SMALLEST FULL FEATURE CONSOLE AVAILABLE

The 4BEV-50 Versa Console is an ideal single channel mixer for CATV, CCTV, film studios, commercial sound installations, dubbing facilities and remote broadcasts. This four mixer monophonic console accepts ten inputs – seven externally switchable for microphone or line sources. The Versa Console provides both a balanced 600 ohm line output and a high impedance PA output. A 1 KHz test oscillator supplies tone directly to the mixing bus to facilitate quick and accurate level adjustments.

All inputs are transformer coupled to IC pre-amplifiers. Three of the four mixers accept two inputs each, and each input is externally switchable for microphone or line level sources. The fourth mixer accepts four inputs – one switchable and three direct high level. Mixers are long life sealed pots with cue detents.

Monitoring facilities in the Versa Console include a VU meter switchable for +4 or +8 VU output. A one watt amplifier powers the front panel headset jack which is switchable to the program or cue circuits. A separate FET muted cue amplifier and speaker are included.

The Versa Console is designed for quick and convenient installation. Input connections are made to rear panel screw terminals, and input level selectors are located on the rear panel. Color coded program output binding posts, the PA output and the PA level control are also located on the rear panel.



SPECIFICATIONS

INPUTS

Mixers 1-3: two per mixer, externally switch selectable, high or low level.

Mixer 4: one switch selectable high or low; three high level.

TEST

Internal 1 KHz oscillator, level adjustable.

OUTPUTS

Program: 600 ohms, transformer balanced, +8 dBm nominal, +18 dBm maximum.

Cue: 0.5 watts RMS; internal speaker provided, FET muted.

Headphones: 1.0 watts RMS at 8 ohms. Front panel jack for 8 ohms, 16 ohms, or HiZ headphones.

PA: 10,000 ohms unbalanced, 0.45 V for +8 dBm maximum output.

FREQUENCY RESPONSE

Program and PA Outputs
+1.5 dB, 30 Hz to 20 kHz

POWER REQUIREMENTS

10.5 watts, 117 VAC, 50/60 Hz.

DISTORTION

Program output less than 0.5% at +8 dBm into 600 ohms. No clipping at +18 dBm.

SIGNAL TO NOISE

Program output at least 60 dB below +8 dBm output with -50 dBm input.

SIZE

19" wide x 10" deep x 3.5" high.

MOUNTING

Standard EIA 19" rack.

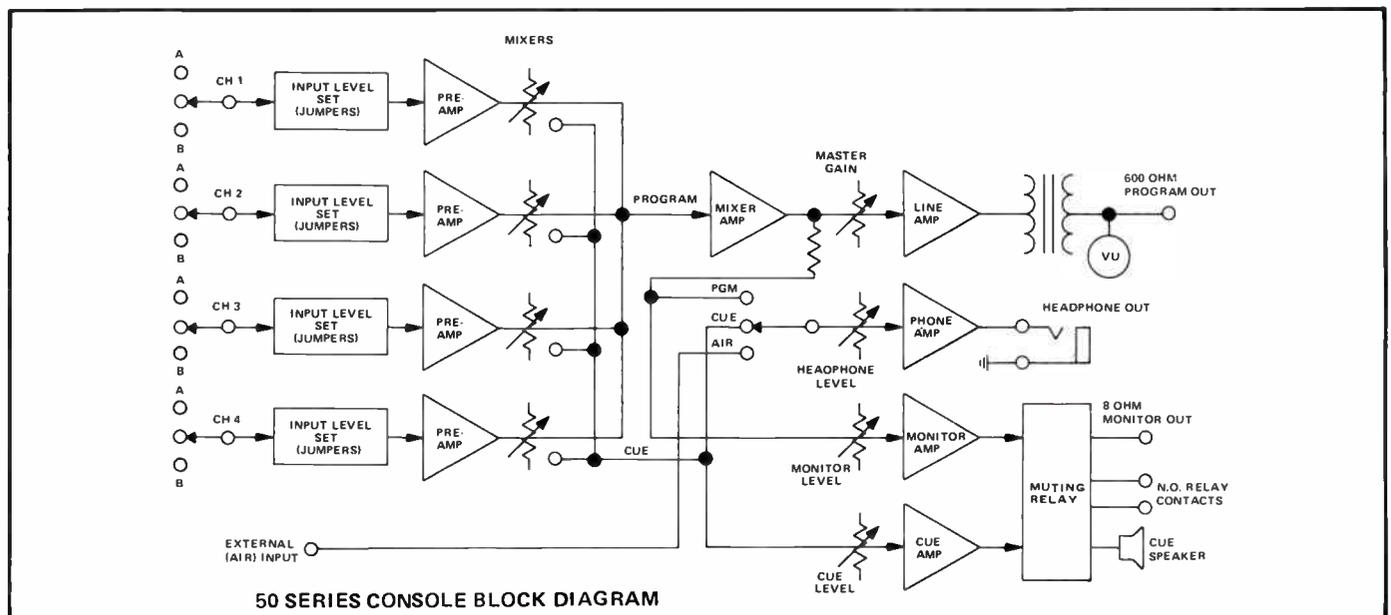
50 Series Mono

AUDIO CONSOLES



The monaural 4BEM-50 is a complete small console ideal for production, on-air, educational, or CATV use. The 4 mixers each accept two switch selectable inputs for a total of eight. Each mixer preamplifier can be wired for either microphone or line level sources. The mixers are long-life, sealed units for quiet, trouble-free operation. Speaker and headphone amplifiers are built-in for monitoring the console output, an

external source ("off-the-air"), or the cue circuit. Each mixer is equipped with a cue position which also feeds a built-in cue speaker. The cue speaker and outputs are controlled by a muting relay supplied as standard. The heavily filtered power supply is mounted in the cabinet. The optional rack version permits mounting the console in a standard 19" rack.



SPECIFICATIONS

INPUTS

Number: 8 inputs to 4 mixers, High or Low level, strappable.
Low Level: 150 ohm balanced; -65 dBm nominal, -42 dBm maximum; maximum gain 50 dB.
High Level: Balanced Bridging (10K ohms each side to ground); -20 dBm nominal, 0 dBm maximum, maximum gain 50 dB.

OUTPUTS

Program: 600 ohms, transformer balanced. +8 dBm nominal, +16 dBm maximum.
Monitor: 2.0 Watts RMS at 8 ohms.
Cue: 0.5 Watts RMS at 4 ohms. Internal cue speaker provided; external connections available.
Headphones: 0.5 Watts RMS at 8 ohms. Front panel jack for 8 ohms, 16 ohms, or HiZ headphones.

FREQUENCY RESPONSE

Program Output: ±1.5 dB, 30 Hz to 20 kHz at 0 dBm.
Monitor Output: ±2 dB, 30 Hz to 20 kHz at 1 Watt into 8 ohms.

DISTORTION

Program Output: Less than 0.5% at +8 dBm into 600 ohms.
Monitor Output: Less than 1% at 2 Watts into 8 ohms.

SIGNAL TO NOISE

Program Output: At least 65 dB below +8 dBm output with -50 dBm input.

MUTING

One muting relay provided to mute monitor output and cue speaker (internal or external). Normally open contacts provided for ON AIR light. Muting relay activated by any input.

CONTACTS

1A at 125 VAC, ½A at 250 VAC, resistive loads.

SIZE

18" wide x 13" deep x 7.5" high.

POWER REQUIREMENTS

30 Watts; 117 VAC 50/60 Hz or 230 VAC 50/60 Hz.

→ 50 Series Stereo

The stereo 4 BES-50 is a complete small console ideal for production, on air, or educational use. The 4 mixers each accept two switch selectable inputs for a total of eight inputs. Each mixer preamplifier can be wired for either microphone or line level sources. The mixers are long-life, sealed units for quiet, trouble-free operation. Speaker and headphone amplifiers are built-in for monitoring the console output, an external source, or the cue circuit. Each stereo mixer comes equipped with a cue position for feeding a built in cue speaker. The cue speaker is controlled by an internal muting relay. The unit may be easily rack mounted with the addition of a rack mount kit.

INPUTS

Number: 8 inputs into 4 mixers, high or low level.

Low Level: 150 ohms, balanced; -65 dBm nominal; -38 dBm maximum available gain = 92 dB.

High Level: Bridging (18K ohms each side to ground); -20 dBm nominal; +10 dBm maximum.

OUTPUTS

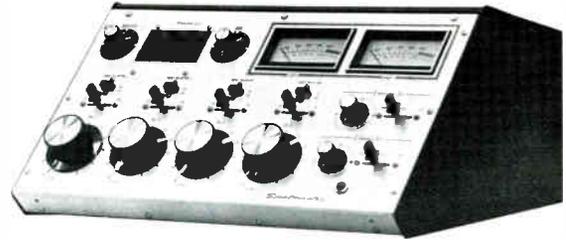
Program: 600 ohms, transformer balanced; +8 dBm nominal, +18 dBm maximum.

Audition: 600 ohms, transformer balanced; +8 dBm nominal, +18 dBm maximum.

Monitor: 8 Watts RMS; will drive 8 or 16 ohms.

Cue: 0.5 Watt RMS; internal speaker and external connections provided.

AUDIO CONSOLES



Headphones: 0.5 Watt RMS; 8 or 16 ohms. Front panel jack and internal connections available.

FREQUENCY RESPONSE

Program & Audition: ± 0.5 dB, 20 Hz to 20 kHz Ref: 1 kHz @ +8 dBm output into 600 ohms.

Monitor: ± 2 dB, 50 Hz to 20 kHz Ref: 1 kHz = 1 Watt output into 8 ohms.

DISTORTION

Program & Audition: 0.5% THD or less, +18 dBm output into 600 ohms.

Monitor: 1% THD or less at rated load and output.

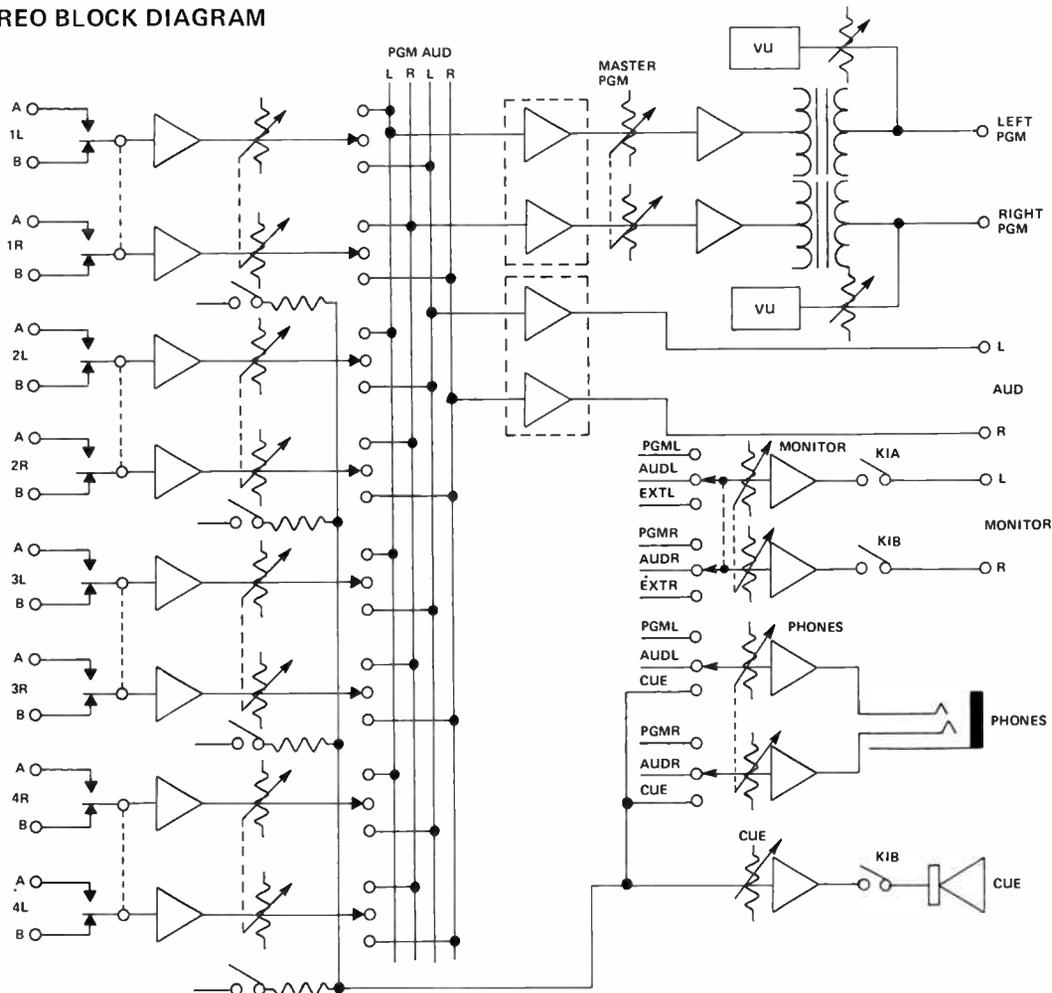
SIGNAL TO NOISE

Program & Audition: Noise (unweighted) 65 dB below +8 dBm output referenced to -50 dBm input.

MUTING

One muting relay provided to mute monitor output and cue speaker.

50 SERIES STEREO BLOCK DIAGRAM



100/200 Series Mono

- 5 AND 8 MIXER MONAURAL, DUAL CHANNEL
- HIGH OR LOW LEVEL INPUTS ON ALL MIXERS



5BEM-200



5BEM-100

The monaural 100 and 200 Series are high quality full dual channel audio consoles. Pushbutton selected inputs are available to high or low level (switchable) plug-in preamps. Mixers are precision ladder attenuators (200 Series) or sealed long-life potentiometers (100 Series). Selection of audition or program channels is by FET's for fast, quiet and distortion-free operation. Both output channels are continually monitored by individual 3½" illuminated VU meters. Both audition and program channels have transformer balanced outputs rated at over +18 dBm peak, and are on interchangeable plug-in PC cards.

These consoles have full built-in monitoring capabilities. The eight watt monitor amplifier delivers sharp, true sound to three individually muted outputs. Program, audition,

SPECIFICATIONS

INPUTS

Number: 10 inputs into 5 mixers (5BEM) and 16 inputs into 8 mixers (8BEM). All mixers high or low level (internally switchable).

Low Level: 150 ohms, balanced; -65 dBm nominal; -38 dBm maximum; maximum available gain = 92 dB.

High Level: Bridging (18K ohms each side to ground); -20 dBm nominal; +10 dBm maximum.

OUTPUTS

Program: 600 ohm, transformer balanced; +8 dBm nominal, +18 dBm maximum.

Audition: 600 ohm, transformer balanced; +8 dBm nominal, +18 dBm maximum.

Monitor: 8 Watts RMS; will drive 8 or 16 ohms.

Cue: 0.5 Watt RMS; 8 or 16 ohms; internal speaker and external connections provided.

Headphones: 0.5 Watt RMS; 8 or 16 ohms. Front panel jack and internal connections available.

AUDIO CONSOLES



8BEM-200



8BEM-100

and external (Off-Air) sources are front panel selectable. The separate headphone amplifier has both front panel and internal outputs. The cue amplifier (relay muted) drives a built-in or external speaker.

Three muting relays (two 100 Series) are provided for user convenience. Each can be wired to any mixer (channels 1, 2 and 3 are standard). Relay No. 1 mutes the cue speaker, and all relays control a monitor speaker output and a normally-open contact for warning lights, etc.

All internal connections are to screw-type barrier strips (except relay contacts and station ground) through two access openings in console bottom.

FREQUENCY RESPONSE:

Program & Audition: ±0.5 dB, 20 Hz to 20 kHz Ref: 1 kHz @ +8 dBm output into 600 ohms.

Monitor: ±2 dB, 50 Hz to 20 kHz Ref: 1 kHz @ 1 Watt output into 8 ohms.

DISTORTION

Program & Audition: 0.5% THD or less, +18 dBm output into 600 ohms.

Monitor: 1% THD or less at rated load and output.

SIGNAL TO NOISE

Program & Audition: Noise (unweighted) 65 dB below +8 dBm output; referenced to -50 dBm input.

MUTING

100 Series: Two relays standard

200 Series: Three relays standard

Monitor: Monitor outputs through the relays.

Cue: Relay 1 mutes internal and external speakers.

CONTINUED ON NEXT PAGE

100/200 Series Mono

AUDIO CONSOLES

SPECIFICATIONS (Cont.)

Switching: Any relay can be activated through any mixer key, audition and/or program positions. Comes wired with relay one activated by channel 1, etc.

External Contacts (On-Air lights, etc.): 1 A. at 125 VAC; .5 A. at 250 VAC; resistive loads.

POWER REQUIREMENTS

115V or 230V, 50/60 Hz. 50 watts max. (100 Series), 70 watts max. (200 Series).

SIZE:

5BEM-100: 29.5" wide x 13" deep x 7.5" high.

5BEM-200: 29.5" wide x 14" deep x 9.5" high.

8BEM-100: 32.5" wide x 13" deep x 7.5" high.

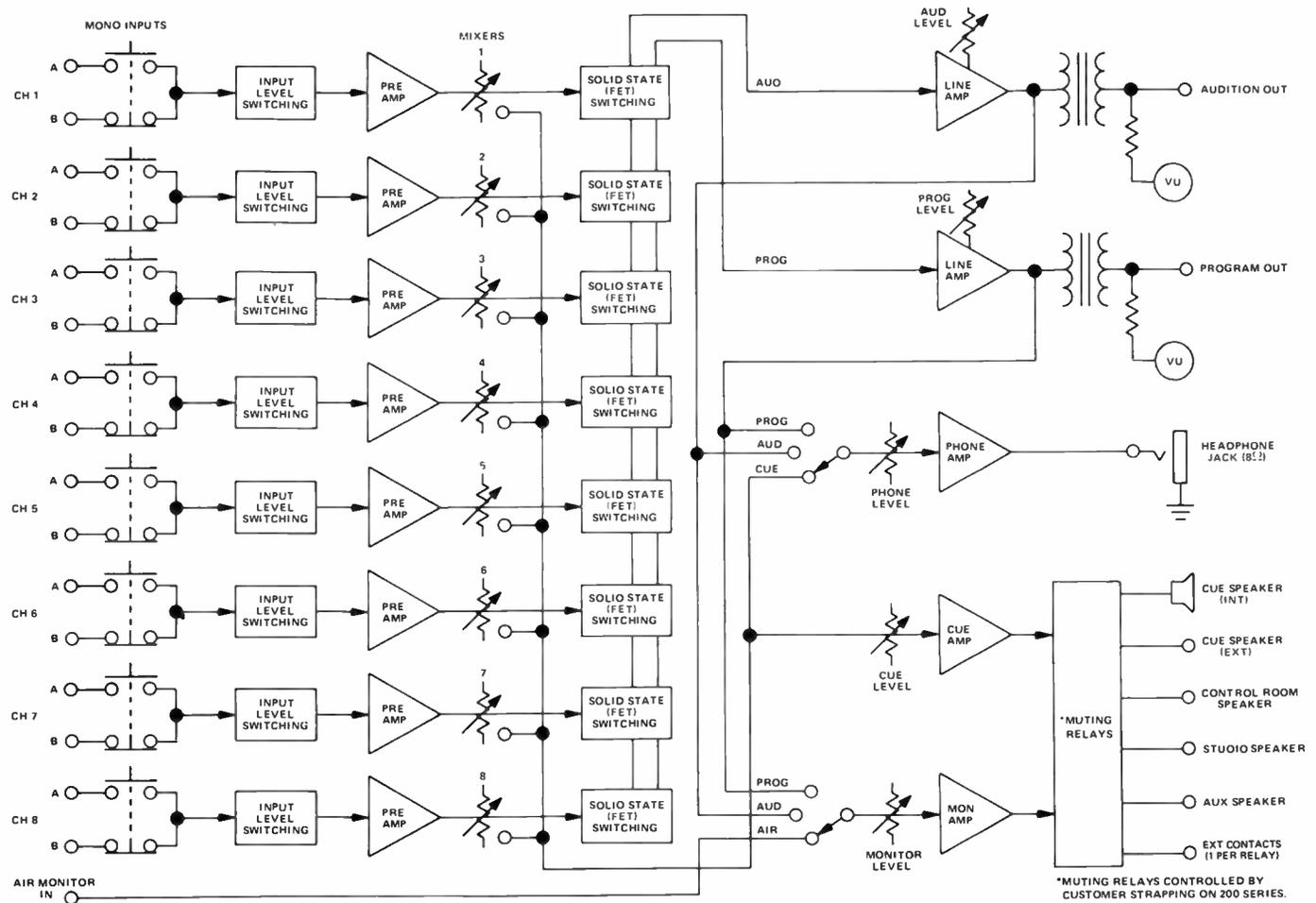
8BEM-200: 32.5" wide x 14" deep x 9.5" high.

OPTIONS

230V, 50/60 Hz operation.

4 mixer extender with remote line provisions.

Step attenuators (100 Series).



100/200 SERIES MONO CONSOLE BLOCK DIAGRAM

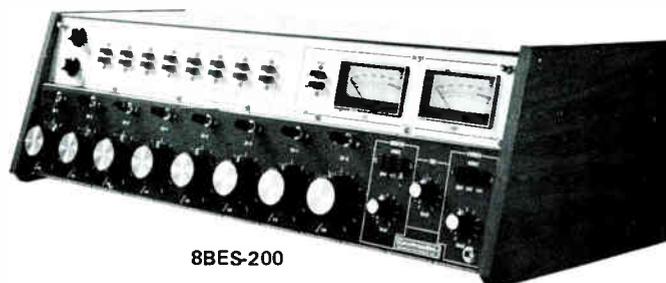
100/200 Series Stereo

AUDIO CONSOLES

- 5 AND 8 MIXER STEREO
- ALL MIXERS ACCEPT MONO OR STEREO, HIGH OR LOW LEVEL



5BES-200



8BES-200



5BES-100



8BES-100

These stereo consoles feature stereo mixers with pushbutton selection of high or low level inputs. Each preamp can also provide in-phase stereo from a mono source (switchable) to eliminate jumpers, impedance mismatch and phase errors. Mixers are long-life, low noise sealed pots (100 Series) or precision step attenuators (200 Series). Switching is accomplished with FET's, for fast, quiet, low maintenance operation. Two 3½" illuminated VU meters continually monitor the program outputs (100 Series). On the 200 Series the meters are switchable to either the program or

audition outputs. Program (and optional audition) plug-in mixer-line driver cards provide a transformer-balanced +18 dBm output.

Built-in amplifiers are provided for stereo monitoring capabilities by speaker or headphones of the program, optional audition, external ('Off-the-Air'), and cue circuits. The cue bus features a composite of both the left and right channels for positive preview of stereo sources.

SPECIFICATIONS

INPUTS

Numbers: 10 inputs into 5 mixers (5BES) and 16 inputs into 8 mixers (8BES); all mixers high or low level (internally switchable).

Low Level: 150 ohms, balanced; maximum available gain = 92 dB; -65 dBm nominal; -38 dBm maximum.

High Level: Bridging (18K ohms each side to ground); -20 dBm nominal; +10 dBm maximum.

OUTPUTS

Program: 600 ohm, transformer balanced; +8 dBm nominal; +18 dBm maximum.

Audition (Optional in 100 Series): 600 ohm, transformer balanced; +8 dBm nominal; +18 dBm maximum.

Mono (Optional in 100 Series): 600 ohm transformer balanced; +8 dBm nominal; +18 dBm maximum; mixing ratio adjustable ±6 dB, left and right program channels.

Monitor: 8 Watts RMS per channel (200 Series), 2 Watts (100 Series), will drive 8 or 16 ohms.

Cue: 0.5 Watt RMS; 8 or 16 ohms; internal speaker and external connections provided.

Headphone: 0.5 Watt RMS per channel; 8 or 16 ohms, or HiZ; front panel jack and internal connections available.

FREQUENCY RESPONSE

Program & Audition: ±0.5 dB, 20 Hz to 20 kHz Ref: 1 kHz @ +8 dBm output into 600 ohms.

Monitor: ±2dB, 50 Hz to 20 kHz Ref: 1 kHz @ 1 Watt output into 8 ohms.

DISTORTION

Program & Audition: 0.5% THD or less, +18 dBm output into 600 ohms.

Monitor: 1% THD or less at rated load and output.

SIGNAL TO NOISE

Program & Audition: Noise (unweighted) 65 dB below +8 dBm output referenced to -50 dBm input.

MUTING

100 Series: One relay standard, second relay optional.

200 Series: Three relays standard.

Monitor: Monitor outputs through each relay.

Cue: Relay 1 mutes internal and external speakers.

Switching: Any relay can be activated through any mixer key, audition and/or program positions; comes wired with relay one activated by channel 1, etc.

CONTINUED ON NEXT PAGE

100/200 Series Stereo

AUDIO CONSOLES

External Contacts (On-Air lights, etc.): 1 A. at 125 VAC; .5 A. at 250 VAC; resistive loads.

POWER REQUIREMENTS

115V or 230V, 50/60 Hz. 85 Watts max. (100 Series), 105 Watts max. (200 Series).

SIZE

5BES-100: 29.5" wide x 13" deep x 7.5" high.

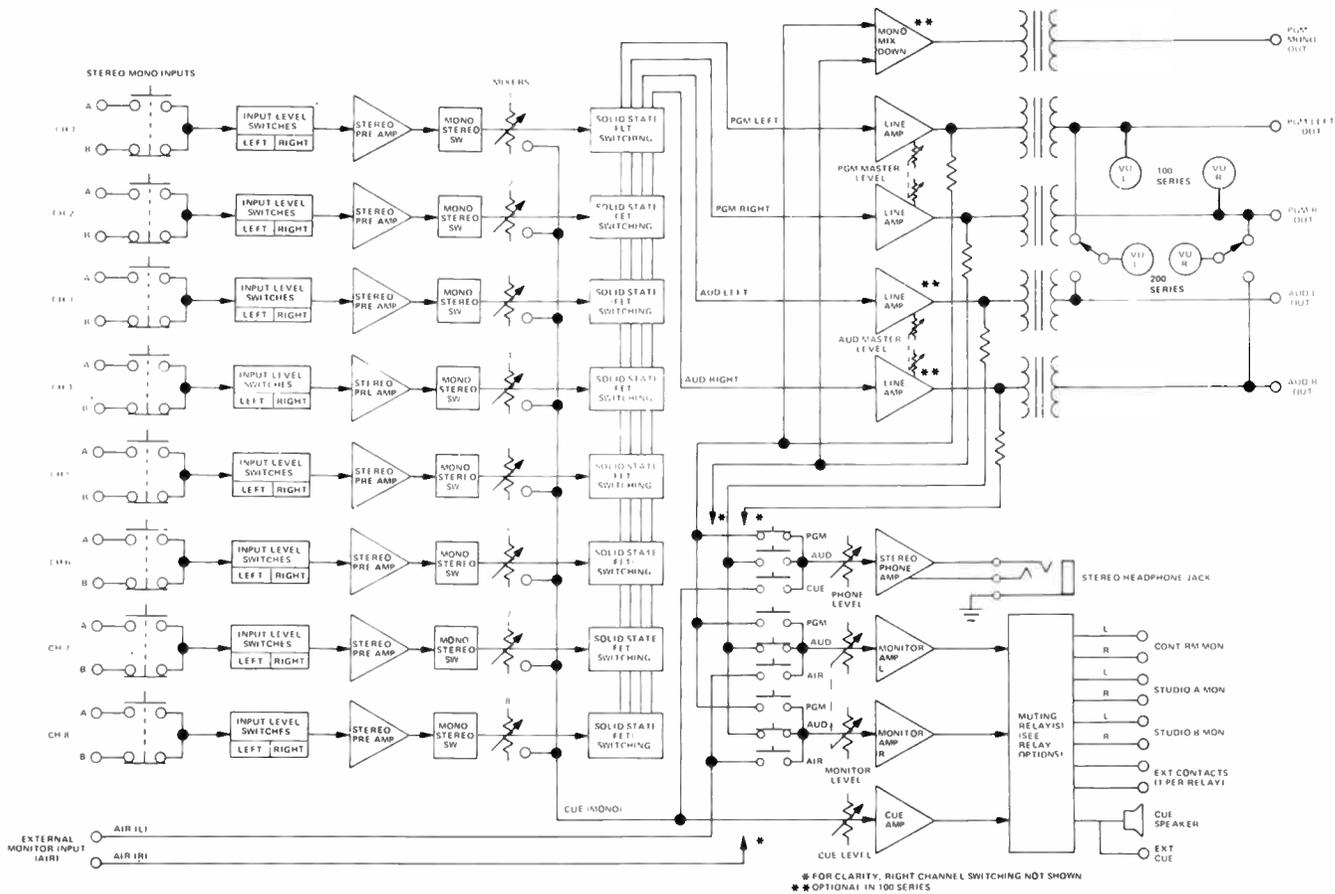
5BES-200: 29.5" wide x 14" deep x 9.5" high.

8BES-100: 32.5" wide x 13" deep x 7.5" high.

8BES-200: 32.5" wide x 14" deep x 9.5" high.

OPTIONS

- 230 VAC, 50/60 Hz operation.
- 4 mixer extender with remote line provisions.
- Mono matrix module (100 Series).
- Second muting relay (100 Series).
- Step attenuators (100 Series).
- Line amplifier module for audition channel (100 Series).



100/200 SERIES STEREO CONSOLE BLOCK DIAGRAM

Series 4006 Slide Type Mono/Stereo Consoles

AUDIO CONSOLES

- COMPLETELY MODULAR CONSTRUCTION – ALL ACTIVE ELECTRONICS ARE UNPLUGGABLE

The NEW SPOTMASTER® 4006 SLIDE-MOD is a truly complete, versatile, totally modular console for the broadcaster.

It accepts up to ten input and two remote modules (a total of 26 inputs) or 12 input modules (a total of 24 inputs). Each input module accommodates two high or low level (switchable) sources. In stereo modules, left and right channels of each input are individually level selectable. All inputs are balanced and specially RFI protected. Each module is completely enclosed and shielded. Each module also contains its own voltage regulator to eliminate crosstalk and externally generated noise. All "live" switching is performed by fast, low-noise reed relays for quiet and distortion-free operation. The mix-buss output of each module is balanced to eliminate the possibility of unwanted noise pick-up, crosstalk, or ground loops.

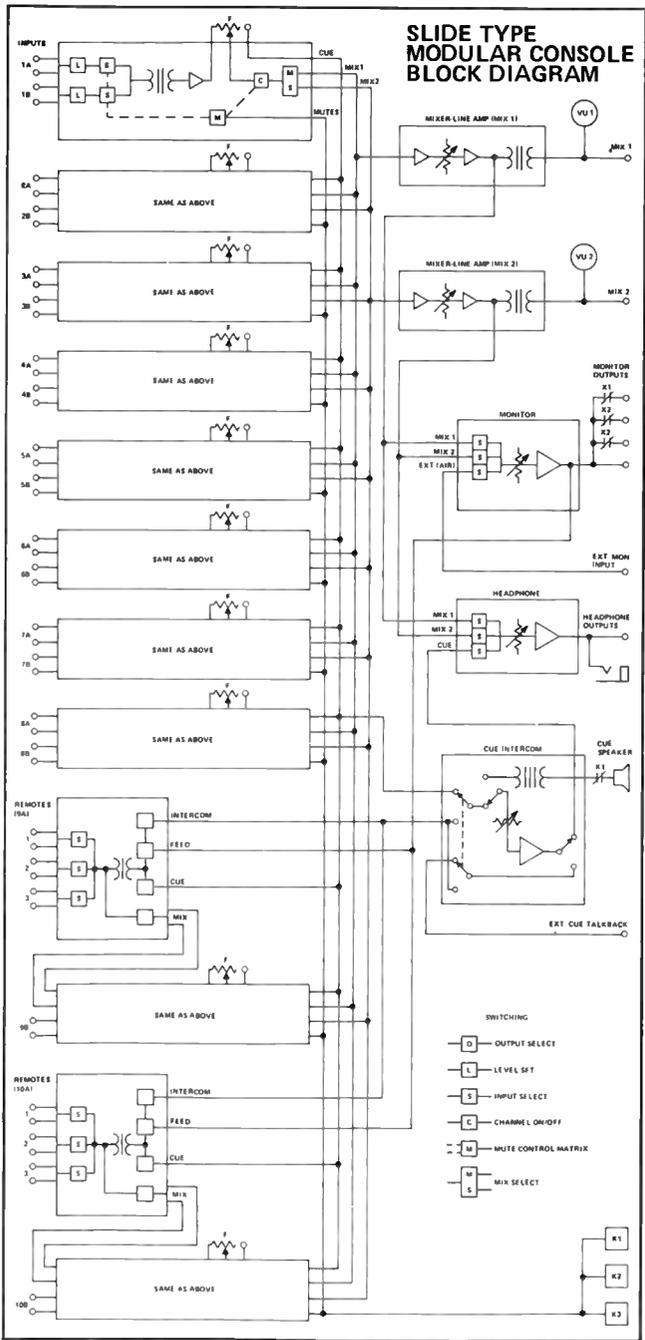
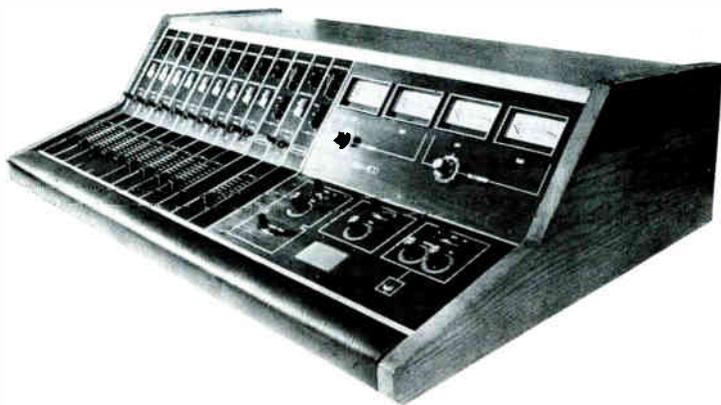
The Slide-Mod consoles have four muting/control relays. A miniature switch matrix and logic in 2 of the 10 input modules allows any relay to be programmed to function when any combination of inputs and mix-busses are activated (16 combinations for each input module!). Monitor outputs and relay contacts are brought out for each relay.

The remote modules accept three high-level inputs each (two stereo and one mono in stereo versions). The remote source selected may either be fed to the "A" input of the adjacent input module for mixing; or the output of the monitor amplifier may be sent down the line for timing and cuing. The line remains balanced and isolated at all times.

The cue function has been taken off the slide fader and brought up to a "Program-Off-Cue" selector switch. This allows cuing without disturbing pre-set levels. It also allows a cue override in the headphones! When any channel is placed in the Cue mode, the program level in the headphones (either mix-busses or external) is dropped in level by 10 dB, and the cue is fed over it. Two headphone level controls allow separate adjustment to suit the operator. A three-function front panel cue speaker is also provided. It can be used as a normal cue speaker, or for Intercom Listen or Intercom Talk. The Intercom function can be used with either of two totally separate external locations (Studio A and Studio B on the Intercom selector switch). Only a small PM speaker and two wires are necessary for full two-way conversation. The Monitor amplifier provides a solid 12W RMS (per channel, stereo) of exceptionally clean audio. All high-level amplifiers are plug-ins and readily accessible for inspection and service.

SLIDE-MOD SPECS:

- INPUTS:** 20 High or Low level, switchable, 6 High level only.
- INPUT LEVELS:** Low – -70 dBm to -30 dBm, 200 ohm nom., balanced; High – -20 dBm to +20 dBm, balanced bridging.
- OUTPUTS:** Mix 1 and Mix 2, (mono Mix 1, mono Mix 2, stereo versions), 150/600 ohm, +8 dBm nominal +20 dBm maximum.
- FREQUENCY RESPONSE:** ±0.5 dB, 20 Hz–20 kHz, +8 dBm output.
- DISTORTION:** 0.5% or less THD at +18 dBm output.
- NOISE, RELATIVE INPUT:** -122 dBm (i.e., 72 dB below a -50 input).
- CUE & HEADPHONE:** 1% or less THD = .5W RMS; ±1.5 dB, 50 Hz–15 kHz.
- MONITOR:** 2% or less THD @ 12W RMS; ±2 dB, 50 Hz–15 kHz.



Series 3006

AUDIO CONSOLES



The 3006 Series Consoles bring economy to the once very expensive slide-type mixer consoles. Ten slide mixers may be switched to either of two output circuits. These assignments are made by pushbuttons, and either or both may be fed simultaneously by each mixer. A lever switch located above each mixer selects the mode of that mixer channel. When placed in the "Pgm" mode, that mixer will feed whichever output assignment the operator had selected.

Two VU meters are provided – in the monaural units one for each separate output, and in the stereo units, one for the left channel and one for the right channel.

Two pushbutton selectable inputs are available for each of the first eight mixers and three for each mixers nine and ten. Each mixer has switch selectable high and low level inputs. The stereo units have a switch for each mixer to provide in-phase left and right output from a mono input.

A monitor selector switch allows the operator to select either output or an external source for monitoring. A headphones selector switch permits selection of either output or the cue buss.

The cue circuit may be switched from the front panel to an intercom function allowing communication between another studio or control room. This may be accomplished by placing a small speaker in the other room. All other switching and circuitry is provided in the console.

All amplifier circuits are on plug-in PC boards and use high quality components.

SPECIFICATIONS

INPUTS

Number: 22 inputs into 10 mixers (2 per mixer and 3 on mixers 9 and 10). All mixers high or low level (internally switchable).

Low Level: 150 ohms, balanced; -65 dBm nominal; -38 dBm maximum; maximum available gain = 92 dB.

High Level: Bridging (18K ohms each side to ground); -20 dBm nominal; +10 dBm maximum.

OUTPUTS

Program: 600 ohms, transformer balanced; +8 dBm nominal, +18 dBm maximum.

Audition: 600 ohms, transformer balanced; +8 dBm nominal, +18 dBm maximum.

Monitor: 8 Watts RMS; will drive 8 or 16 ohms.

Cue: 0.5 Watt RMS; 8 or 16 ohms; internal speaker and external connections provided.

Headphones: 0.5 Watt RMS; 8 or 16 ohms. Front panel jack and internal connections available.

Intercom: Selector switch with cue.

FREQUENCY RESPONSE

Program & Audition: ± 0.5 dB, 20 Hz to 20 kHz Ref: 1 kHz @ +8 dBm output into 600 ohms.

Monitor: ± 2 dB, 50 Hz to 20 kHz Ref: 1 kHz @ 1 Watt output into 8 ohms.

DISTORTION

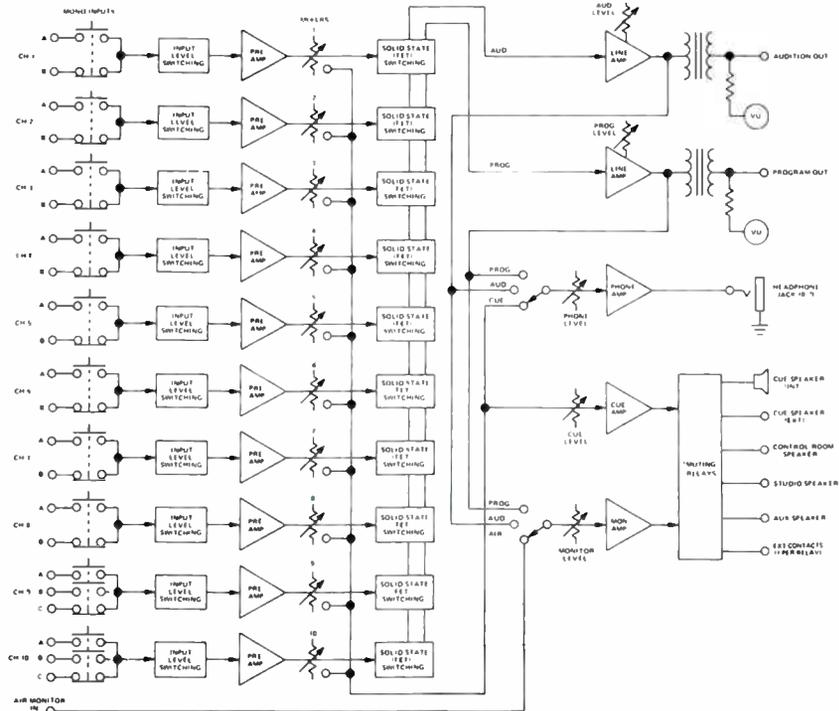
Program & Audition: 0.5% THD or less, +18 dBm output into 600 ohms.

Monitor: 1% THD or less at rated load and output.

SIGNAL TO NOISE

Program & Audition: Noise (unweighted) 65 dB below +8 dBm output; referenced to -50 dBm input.

**3006 SERIES MONO CONSOLE
BLOCK DIAGRAM
(STEREO ALSO AVAILABLE)**



CLE-FM Sound Britener Compressor/Limiter/Expander

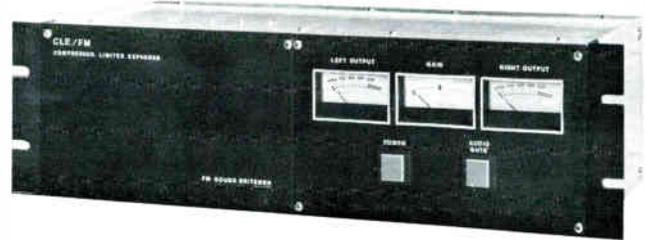
AUDIO PROCESSING AND
DISTRIBUTION AMPLIFIERS

- AUTOMATIC LEVEL CONTROL FOR THE FM AND FM STEREO BROADCASTER
- PROVIDES MAXIMUM TRANSMITTER MODULATION WITH PROTECTION AGAINST OVER MODULATION

The SPOTMASTER[®] FM SOUND BRITENER provides the FM or FM stereo broadcaster with a combination compressor/limiter/expander specifically designed for his needs. The FM SOUND BRITENER provides automatic level control to maximize transmitter modulation, while preventing over modulation.

Two controls are employed to adjust the operating characteristics of the unit. The unique AVERAGE/PEAK RATIO control sets the dynamic range desired from a tight 1 dB to a loose 35 dB. The RETURN RATE determines the speed with which low level signals are expanded. In combination, these two controls permit tailoring the FM SOUND BRITENER operation for the exact sound required for the individual station's programming.

The CLE-FM comes equipped for operation with the DOLBY B FM encoder. It may be used ahead of the DOLBY B encoder to provide compression or used as a peak limiter between the DOLBY B and the transmitter. Alternately, the CLE-FM may be placed in the TEST mode as a straight line amplifier when DOLBY encoding is employed.



SPECIFICATIONS

INPUT: 600 ohms, transformer balanced.

INPUT SENSITIVITY: Maximum: +26 dBm for +20 dBm output.
Minimum: -20 dBm for +20 dBm output. -20 dBm input yields +20 dBm output with 0 compression/expansion.

MAXIMUM OVERALL GAIN: 64 dB (full expansion).

OUTPUT: 600 ohms, transformer balanced, +22 dBm maximum.

MAXIMUM EXPANSION: 20 dB.

MAXIMUM COMPRESSION: 30 dB before clipping.

AVERAGE/PEAK RATIO: adjustable from minimum 35 dB to maximum 1 dB.

FREQUENCY RESPONSE: +0.5 dB, 20 Hz, to 20 KHz.

EQUALIZATION: Test and Limit Only: flat. Normal: 75 microsecond, 25 microsecond, or flat; optional 50 microsecond, 25 microsecond, or flat.

EXPANSION (RETURN) RATE: adjustable from 20 seconds to 5 seconds for 20 dB expansion.

DISTORTION: less than 0.5% total harmonic before clipping.

NOISE: minimum 70 dB below +8 dBm output with -10 dBm input.

CLE-500 Sound Britener Compressor/Limiter/Expander



The Sound Britener combines compressor, limiter and expander functions to provide optimum level for maximum modulation power and coverage without danger of over modulation. Signal processing is smooth and quiet without distortion, pumping, or sucking of background noise. As a compressor/limiter/expander, the Sound Britener includes all characteristics of traditional gated automatic gain control amplifiers and fast acting peak limiters.

Automatic and self-controlling functions within the CLE-500 eliminate the need for several companion units required in

SPECIFICATIONS

Input: 600 ohms, transformer balanced.

Input Sensitivity: Minimum: -40 dBm for +25 dBm output.
Maximum: +30 dBm for +25 dBm output.
-20 dBm yields +25 dBm output with 0 compression/expansion.

Maximum Overall Gain: 65 dB (full expansion).

Output: 600 ohms, transformer balanced, +25 dBm maximum.

Maximum Expansion: 20 dB.

Maximum Compression: 30 dB before clipping.

- AUTOMATIC LEVEL CONTROL FOR THE AM BROADCASTER
- SINGLE UNIT CONTAINS ALL FUNCTIONS – NO NEED FOR ADDITIONAL AUDIO PROCESSORS
- SIMPLIFIED OPERATION – ONLY THREE CONTROLS

some audio enhancement systems. There are just three controls:

- Input level control
- Output level control
- Unique peak-to-average "tightness" control.

A large 3" meter indicates expansion and compression. Compression, timing, and expansion limits are all determined automatically, while a switch provides for test and proofs of performance. In the "test" mode, the unit acts as a fixed gain amplifier.

Average/Peak Ratio: Adjustable from minimum 35 dB to maximum 1 dB.

Limiting Selection: Symmetrical (positive and negative) or asymmetrical (negative only) peak limiting.

Frequency Response: ±0.5 dB, 20 Hz to 20 KHz.

Distortion: Less than 0.5% total harmonic before clipping.

Noise: Minimum 70 dB below normal output with -20 dB input.

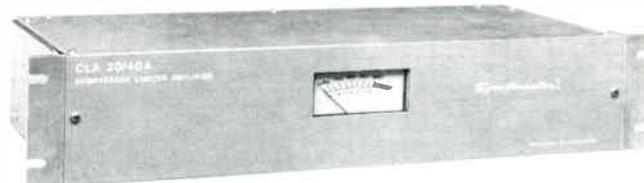
Equalization: Flat.

Power Requirements: 117 VAC, 50/60 Hz, 11 Watts.

Model CLA 20/40A Compressor-Limiter Amplifier

AUDIO PROCESSING AND
DISTRIBUTION AMPLIFIERS

The CLA 20/40A, combining both compression and limiting functions, has applications in both AM and FM installations. This amplifier has switchable control systems for symmetrical or asymmetrical peak limiting; pre-emphasized or flat audio response; and compress/limit, compress only or compress/limit off to provide complete flexibility. Any number of CLA 20/40A's can be strapped together as two for stereo or four for quad. Tracking accuracy is 2 dB or better (over 30 dB level differential range). A minor adjustment permits changing the time constant to 25 microseconds for use with Dolby B.



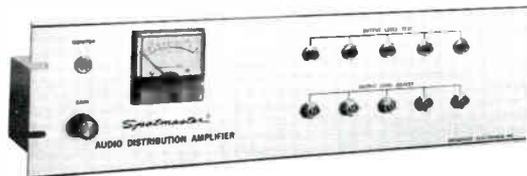
- SWITCHABLE SYMMETRICAL OR ASYMMETRICAL PEAK LIMITING
- SWITCHABLE EQUALIZED OR FLAT RESPONSE – AM/FM
- 40 dB DYNAMIC RANGE

SPECIFICATIONS

Input and Output Impedance: 600 ohms balanced or unbalanced
Input Level: -20 dBm to +20 dBm
Maximum Output Level: +24 dBm RMS
Frequency Response: 20 Hz to 20 KHz flat within 0.5 dB in AM or FM mode
Distortion: 0.5% or less, -20 dBm input with +10 dBm output
Maximum Gain: 40 dB
Noise Level: -65 dB below -20 dBm input with +10 dBm output

Compression Ratio: 30 to 1
Automatic Gain Control Range: Better than 10:1
Metering: Gain reduction, output level +4 VU, +10 VU
AM-FM Operation: Both. Standard 75 microsecond pre-emphasis/de-emphasis used in FM operation or flat
Physical Dimensions: 3½" x 19" rack panel
Power Requirements: 120/240 volts, 50/60 Hz, 10 watts

AD1B Audio Distribution Amplifier



The AD1B distributes audio signals within a studio or to telephone lines. VU meter and aural monitoring of the input signal is provided, as well as separate monitoring and level controls for each output. The five highly isolated output channels are expandable up to 25 by the addition of AD1B-X Extenders, which also contain the same aural monitoring facilities as the AD1B. Both units are available with either optional output transformers or standard unbalanced emitter follower output. Input circuitry may be operated either bridging or matching and balanced or unbalanced.

SPECIFICATIONS

Input Impedance: Matching: 600 ohms, Bridging, 10 K-ohms. AD1B-X: 10 K-ohms, unbalanced.
Output Load Impedance: 600 ohms (Optional 150/600 ohms).
Input Level: Max.: +30 dBm, AD1B-X: +5 dBm. Min.: Matching -26 dBm, Bridging -10 dBm.
Output Level: (Per Channel) +4 dBm (+14 dBm peak).
Gain: Matching: 30 dB, Bridging: 14 dB, AD1B-X: Unity.
Frequency Response: ±1 dB @ 30 - 15 KHz, ±2 dB @ 20 - 20 KHz.
Distortion: Less than 1%.
Noise: 65 dB or better, below rated output.
Channel Separation: 60 dB.
Power Requirements: 115 VAC, 50/60 Hz, 50 watts, AD1B-X: 40 watts.
Dimensions: 19" wide x 5¼" high x 7-1/8" long.

Model BEM-10 Monitor Amplifier

The BEM-10 is a conservatively rated wide band amplifier capable of delivering from 10 to 15 watts RMS. Electronic muting is incorporated to enable the microphone and mute the program channel for paging operation.



SPECIFICATIONS

Power Output: 10 watts rms - 16 ohms unbalanced 25/70.7 volt balanced line. 12.5 watts rms - 8 ohms unbalanced. 15 watts rms - 4 ohms unbalanced.
Frequency Response: ±1 dB, 50-15,000 Hz.
Hum & Noise: Mic: 60 dB below 10 watts output.
 Pgm: 70 dB below 10 watts output.

Program/Line Input: 25 K-ohm unbalanced; or 600 ohms balanced.
Mic Input: 150 ohms balanced (internal transformer). Screw Terminals.
Power Requirements: 115 VAC, 50/60 Hz, 30 watts.

Turntable Pre-Amplifiers Models BETMS-100/200

STUDIO EQUIPMENT



- UNBALANCED OUTPUT - BETMS 100
- BALANCED TRANSFORMER OUTPUT - BETMS 200

SPECIFICATIONS

Output Level: +8 dBm nominal, +16 dBm peak, into 600 ohms. Each output continuously adjustable.

Output Impedance: BETMS-100 150 ohms unbalanced. BETMS-200: 600 ohms balanced, 150 ohms balanced (wiring option).

Input Sensitivity: 5 mV. for +8 dBm output, at 1 kHz.

Input Impedance: 47,000 ohms resistive (50 pf parallel).

Signal to Noise: 65 dB or better for 5 mV. input, +8 dBm output, 1 KHz.

Equivalent Input Noise: 2.8 microvolts (116 dB below output with 600 ohm load).

Channel Separation: 65 dB or better for +8 dBm output, 1 kHz, into 600 ohms, with 5 mV input.

Frequency Response: +1 dB of RIAA equalization curve, 50 - 15,000 Hz.

Distortion: Less than 0.25% THD at 1 kHz, +8 dBm output into 600 ohms.

Equalization: Standard NAB/RIAA Disc Reproduction.

Front Panel Controls: Power on/off, Left Output Level, Right Output Level, Mono/Stereo Mode Switch, Right Channel Phase Reversal Switch.

AC Power: 100 to 135 VAC, 50/60 Hz. 200 to 270 VAC, 50/60 Hz (optional) 6 watts max.

Dimensions: 9 1/2 inches wide (24.1 cm.). 6 1/2 inches deep (16.5 cm.). 3 inches high (7.62 cm.).

Weight: 3.5 lbs. (1.6 Kg.)

Professional Turntables

▶ CUE-MASTER - 3 SPEED

- No slip starting
- Bronze platter shaft bearing
- Motor on-off switch light
- Rugged construction, only 3 rotating parts
- Simple capstan to idler drive

SPECIFICATIONS

Dimensions: 15 1/2" x 15 1/2"

Weight: 16 lbs.

Wow & Flutter: .3 of 1%.

Motor: Hysteresis Sync

Rumble: 36 dB below NAB level at all speeds.



STUDIO-PRO B - 2 SPEED

- Precision engineered for quiet, dependable operation
- Solid cast aluminum chassis and turntable
- Illuminated speed indicators
- Tightest cue potential in the industry
- "Direct Drive" . . . no belts
- Detachable tone arm mounting plate

SPECIFICATIONS

Dimensions: 15 1/2" x 15 1/2"

Weight: 20 lbs.

Wow & Flutter: Less than .2 of 1%

Motor: Hysteresis Sync

Rumble: 38 dB below NAB level @33 and 45 RPM

Bearings: Bronze Oilite throughout

Power Requirements: 110 V ac, 60 Hz (50 Hz available)



Micro-Trak Tone Arms

Micro-Trak tone arms feature low resonance and very small tracking errors. Available in 12 and 16 inch models. Full line of cartridges and styli available, see price list.

No. 303 12"

No. 306 16"



Broadcast and Recording Microphones



COMPLETE LINE
OF MICROPHONES
AVAILABLE



635A



RE50

635A: 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.

RE50: 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. Same electrical characteristics as the 635A.

Cartridge Storage Racks

STUDIO EQUIPMENT

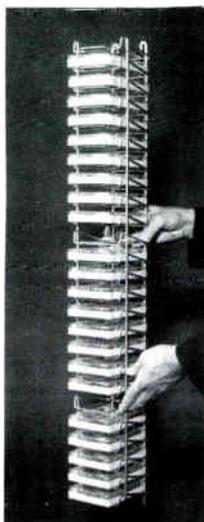
Wire Units



LS-200



LS-100



RS-25 RACK SECTION

LS-200 Lazy Susan – Holds 200 cartridges on rotating stand. Ideal for large storage situations requiring mobility. Equipped with 4 heavy-duty casters and constructed of rugged steel rod finished bright zinc. Each individual RS-25 section is removable 5 1/4" high, 20 1/2" diameter.

LS-100 Lazy Susan – Designed for table top use. Holds 100 cartridges with 4 removable RS-25 sections. Weighted Base. Ball bearing rotating stand. 39" high, 15" diameter.

Modular Units



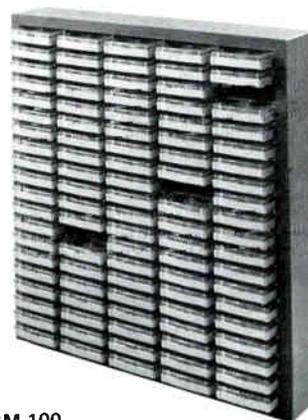
DM-40



DM-20



RM-20



RM-100

Desk Mount Modules – Rotating racks present four-sided storage in attractive Walnut Formica. DM-72 holds 72 cartridges, measures only 22" x 11" x 11". DM-200 provides 200 storage slots. 29 1/2" x 15 3/4" x 15 3/4".

DM-40 Walnut Woodgrain Finished Cabinet – Lazy Susan designed for tabletop operation; holds 40 "A" cartridges. 9-1/2" W x 8" D x 11-7/8" H. Weight 6-1/2 lbs.

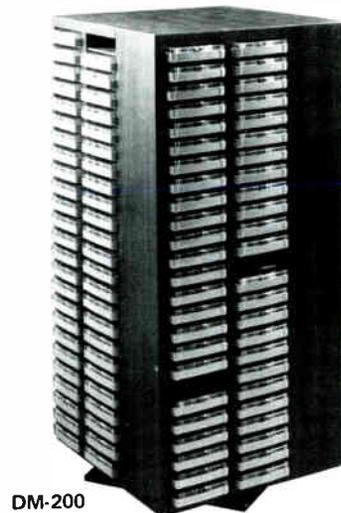
DM-20 Walnut Woodgrain Finished Cabinet – Holds 20 "A" cartridges. Units may be stacked; 9-1/2" W x 4" D x 10-7/8" H. Weight 3-1/4 lbs.

RM-100 Wall Mount Rack – Holds 100 A size cartridges in minimum space. Walnut Formica trim. 2' x 2' x 4-3/8".

RM-20 is designed for standard 19" rack installation. Put vacant rack space to good use. Holds 20 A size cartridges in only 5 1/4" vertical space. Made of aluminum.



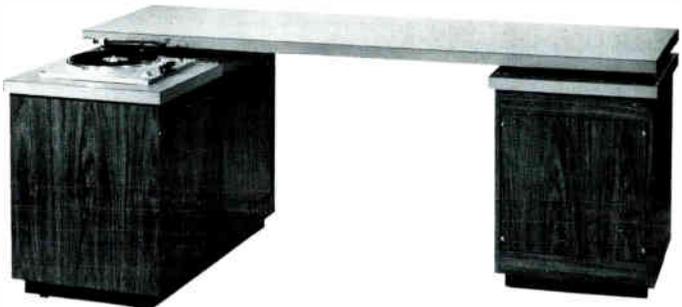
DM-72



DM-200

Control Room Furniture

STUDIO EQUIPMENT



- MODULAR DESIGN FOR COMPLETE FLEXIBILITY.
- SINGLE AND DUAL TURNTABLE CABINETS.
- DESK TOP SECTION MOUNTS ON CABINETS OR METAL LEGS.

A new look is offered in the SPOTMASTER® modular control room furniture. This modular design provides a unique solution to the problem of providing functional workspace in the broadcast studio. 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 installations.

Durable, color keyed, suede formica covered side panels (in a summer pecan wood grain finish) and tops (in French Blue) create an exciting attractiveness. Formica, with its inherent resistance to damage from coffee stains, cigarette burns, and the like insures that your furniture will maintain its initial beauty for many years. (Special colors available at extra cost)

SPECIFICATIONS

DUAL TURNTABLE CABINET

Construction: Panels fabricated from high density particle board 3/4" thick (front and rear closure panels 5/8" thick) with formica press bonded using urea type heat activated adhesive.

Panel Space: Two 17-1/2" 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.

SINGLE TURNTABLE CABINET

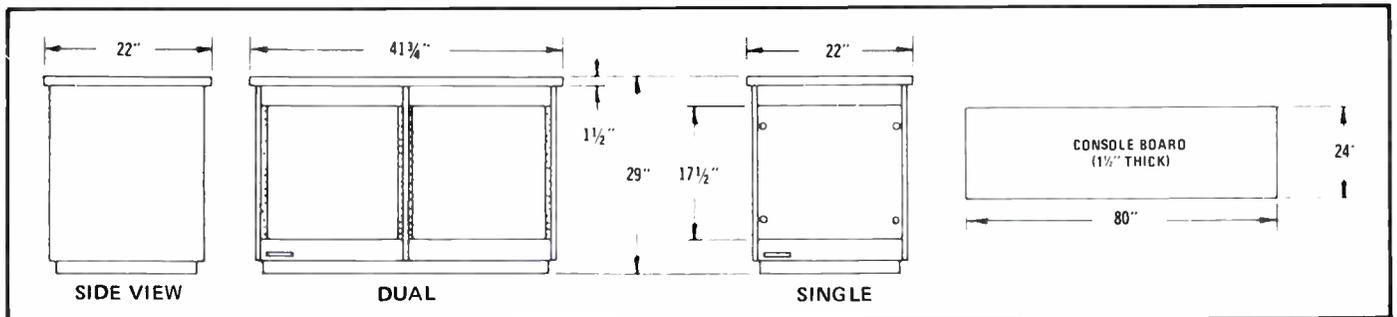
Construction: Panels fabricated from high density particle board 3/4" thick (front and rear closure panels 5/8" thick) with formica press bonded using urea type heat activated adhesive.

Weight: 66 lbs. Includes complete cabinet with wood grained closure panels for front and rear openings.

DESK TOP

Mounting: Mounts on top of single or double bay cabinets with brackets provided or on separate bright metal legs.

Height Mounted: 29 inches.



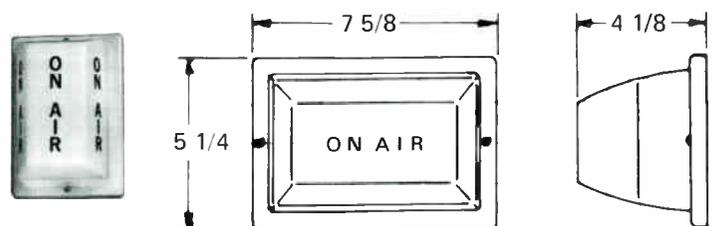
Studio Clock



- LARGE 12" DIAMETER FACE WITH 1-1/2" NUMERALS, RED SWEEP SECOND HAND.
- PRECISION ACCURACY ±1 MINUTE IN ONE YEAR.
- 1 YEAR FACTORY WARRANTY.
- POWERED BY 2 "C" BATTERIES FOR 1 YEAR BATTERY LIFE.
- WHITE OR TAN FACE WITH CHARCOAL NUMERALS IN WOODHUE CASE 2-7/8" DEEP x 14-1/8" DIAMETER.

Warning Light

- OPTIONAL "ON-AIR" OR "AUDITION" SILK-SCREENING
- HORIZONTAL OR VERTICAL FORMATS



The STUDIO WARNING LIGHT is designed to mount to a flush wall or ceiling surface in a vertical or horizontal plane. Supplied complete with 25 watt red bulb and "Attention-Getter" flasher. Rated at 120V, 100watts; UL approved.

BETM-100 Tape Cartridge Winder

The SPOTMASTER® BETM-100 Tape Cartridge Winder is a rugged, dependable and field tested unit which fills a need in every station using cartridge equipment. It handles all reel sizes and runs at 22.5 ips. Worn tape in old cartridges is easily replaced, and new or old cartridges may be wound to any length. Tape timer installed, optional.

BET-50 Tape Timer

Precise tape or speed measuring device with scale calibrated in minutes and seconds at 7.5 and 3.75 ips. Features time reset knob and strobe disc for speed checks. Use with reel-to-reel decks, cart machines and tape winder.

Broadcast Tape Cartridges Audiopak and Fidelipac

SPOTMASTER maintains complete stocks of AUDIOPAK and FIDELIPAC NAB specification tape cartridges. A, B and C size cartridges are available empty, or pre-loaded with lubricated tape in various playtime lengths.

Tape Cartridge Tags

SPOTMASTER Tape Tags are handy self-adhesive labels, easy to apply and remove; room for three typewritten lines. Sheets of eight tags each, available in eight distinctive colors.

Alignment Tapes

Specially pre-recorded cartridges contain 10 KHz alignment tones. NAB Test Tape No. 3 contains program test frequencies consistent with NAB cartridge specifications. Available in mono or stereo.

Tape Erasers

Handy bulk erasers essential for cartridge users to assure clean, noiseless tape. Model 200C handheld, easy to use with 6-foot cord and push-button thumb switch. Model 300C heavy-duty table top unit for cartridges, and equipped with spindle for reels up to 10.5 inches diameter, 1 inch wide. Both available in 117 or 230 VAC.

Supplies

HEAD DEMAGNETIZERS, TAPE SPLICERS AND CLEANING FLUID

Cue Clock

The CUE CLOCK is a digital timer that counts up or down from preset time, set by thumbwheel switches. It shows a light at the end of count, can be remotely operated, has a capacity of 99 minutes, 59 seconds. It can start turntables, tape decks or other units automatically, uses TTL logic, with outputs for interface with automation.

SPECIFICATIONS

Maximum Time: 99 min. 59 sec.

Frequency Standard: 120 VAC/60 Hz Line.

Readouts: Four Digit Readouts for Time. GREEN LED for SET Indication. RED LED for CUE indications.

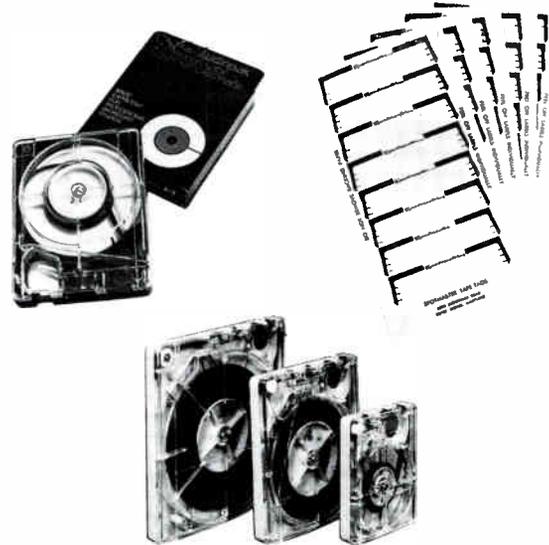
Timer Start Input Levels: Accepts up to four "START" signals independently. These can be from 5v AC/DC to 120v AC/DC with the proper attenuator (2 Attenuator for 120 VAC supplied).

Power Source: 120 Volts, 60 Hz, 10 Watts.

Size: 9½" Deep x 4½" high x 10" Wide.

Weight: 6½ Lbs.

STUDIO AND CARTRIDGE ACCESSORIES



TELCO/80 and TELCO/90 Automatic Telephone Message Systems

TELEPHONE ANSWERING INTERFACE SYSTEMS

- PROVIDES AUTOMATIC RESPONSE AND RECORDS MESSAGE FROM CALLER
- TELCO/80 FOR USE WITH 400, 500 AND 605/610 SERIES CARTRIDGE MACHINES
- TELCO/90 FOR USE WITH 303, 305, 370 AND 1070 SERIES CARTRIDGE MACHINES

The TELCO 80/90 units provide audio and cartridge recorder-reproducer control interfaces with the Western Electric RDM/RDL Recorder Connectors. They give the user the option of fully automatic or manual announcement play and/or message record operation. These capabilities are totally unique in telephone/tape cartridge interface devices.



CONTROLS

Manual/Automatic Select: Selects operational mode. Will allow Recorder Connector to start cartridge machine, seize phone line, and connect audio path in Auto mode, when ringing voltage is sensed.

Manual Play: Connects audio to phone line and starts cartridge deck in play position. Phone line is held by TELCO even if handset is replaced in cradle, until message is over or distant party disconnects (most newer exchanges).

Manual Record: Same as Manual Play, but record cartridge deck is activated. Unless disabled, this deck will be in record mode and will hold line until manually stopped, automatically re-cues, or distant party disconnects.

Auto Play Only: Starts playback deck and seizes line when ringing voltage is sensed. The line is released when the cartridge re-cues. The TELCO will only seize the line if a cartridge is loaded and actually starts.

Auto Play/Record: Will play the pre-recorded announcement as in Play Only mode. When the TELCO detects the 150 Hz (Q1) closure from the playback deck, the audio direction of the recorder connector is reversed (RDL version), the record deck is started in the record mode, and a tone is sounded to the distant party. The TELCO can be wired so that the playback deck re-cue disconnects the phone line and stops the recording, or the distant party disconnect or recording cartridge re-cue can disconnect the line.

If the second deck is a play only deck, and the RDM (bi-directional audio) Recorder Connector is used, two different announcement can be aired in sequence. The second deck re-cue will disconnect the phone line.

Auto Record Only: The ring-up voltage will start the record deck directly, and switch audio to its line input. The function is the same as the second half of the Play/Record mode.

SPECIFICATIONS

Dimensions: 10-1/8" wide x 2-3/4" high x 8-5/8" deep.

Connecting Cable: Provided with 15 feet of cabling and mating connector for W.E. RDM/RDL Connector. Also provided with 15 feet of cabling and connectors for two Spotmaster cartridge units.

Power: Required voltage supplied from associated cartridge machine.

Play Audio Monitor: Allows normal use of cartridge machine without disconnecting the TELCO 80/90.

TELCO III, IV, V and VI Series Answering Systems

- PROVIDES AUTOMATIC RESPONSE TO INCOMING CALLS
- INTERFACES BETWEEN SPOTMASTER® CARTRIDGE MACHINE AND BELL RECORDER COUPLER

All SPOTMASTER record-playback and playback units can be adapted for Automatic telephone response. Install the Telco between the unit and a standard Bell System RDM Recorder Coupler. Allows pre-recorded messages, advertising, audio reports, etc. to automatically respond to incoming calls. The Telco provides the required signal level and switching interface between the cartridge machine and Bell KS19522-L1 (or L2) recorder coupler. Models available for automatic or combined manual/automatic operation.



TC-4 Counter

The TC-4 registers the number of incoming calls to the Spotmaster unit. Counter installs under tape deck lid.

audiopak[®]

BROADCAST CARTRIDGE
A-2 BY CAPITOL



In the broadcast cartridge world, the more efficient the better. That's why each Audiopak A-2 cart is individually tested—100%—to insure accurate azimuth control.

The lessons learned by Capitol Magnetics from their years of experience developing the world's leading

8-track cartridge have been applied to their Audiopak A-2. The result is a more durable, more reliable broadcast cartridge. And because Capitol manufactures the entire product—from tape to packaging—they can assure you of the highest possible quality control.

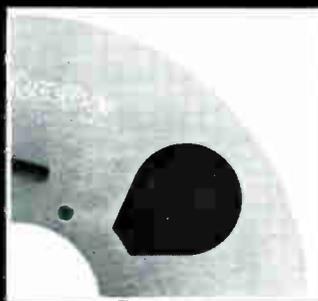


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BY CAPITOL

HIGH OUTPUT/LOW NOISE...
FOR YOUR MOST DEMANDING
RECORDING REQUIREMENTS

- The Compatible Tape—No Equipment Changes Necessary
- Superior Signal-To-Noise Ratio

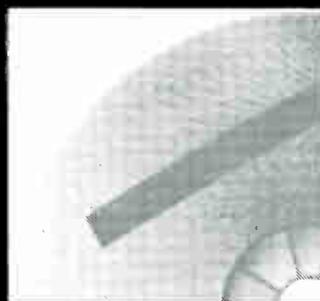


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BY CAPITOL

LOW NOISE—A GOOD
QUALITY TAPE FOR YOUR
EVERYDAY NEEDS

- Heavy-Duty Binder System
- Low Print Through



audiofilm[™]

BY CAPITOL

A STABILIZED TRI-ACETATE BASE
FILM FOR ALL YOUR SOUND
FILM REQUIREMENTS

- Highest Dynamic Range
- Consistent and Reliable



the learning tape[™]

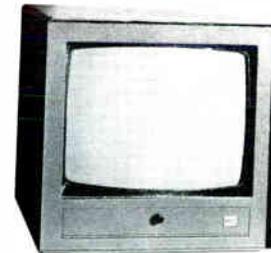
BY CAPITOL

A PROFESSIONAL LOW NOISE
PRODUCT FOR ALL YOUR
CASSETTE REQUIREMENTS

- Moderately Priced
- Highly Reliable



SOLID STATE TELEVISION MONITORS



- TOTAL MODULAR CHASSIS CONSTRUCTION
- 800 LINE RESOLUTION
- CRT SIZES FROM 9 TO 23 INCHES
- AVAILABLE IN CHASSIS, CABINET AND RACK MOUNT MODELS

TECHNICAL DATA

Input Power: 50 watts at 120/240 volts, 60 Hz (525/60 U.S.) or 50 Hz (625/50 CCIR). All performance specifications will be met while the line voltage varies from 105 to 130 or 210 to 260 volts AC. Units easily converted from 120 to 240 volts. A three wire line cord, 6 feet long is provided.

Video Signal: 0.25 volts p-p (minimum for 50 volts at the kinescope). Sync negative at monitor input.

Video Input Impedance: High impedance bridging which can be terminated by an internal 75 ohm load $\pm 5\%$ through a switch located on rear apron.

Video Response: 12 MHz ± 1 MHz. Differential gain below 5% with 50 volts of kinescope drive.

DC Restoration: Switchable 100% or zero, sync tip clamp.

External Sync: 1 to 8 volts. Parallel connectors. Monitors will operate from either composite video and sync signals or separate composite sync.

Linearity: Within 2% of picture height.

Kinescopes: 9", 12", 15", 19", 23". All CRT's provided with integral implosion protection. (800 line center resolution and 650 line corner resolution.)

Environmental: 0° to 50°C (32° to 122°F).

OPTIONS

Kinescopes: 9", 12", 15", 19", 23". Etched anti-glare laminated safety shields. (640 line center resolution and 520 line corner resolution).

Special Phosphors: Long or short decay times, various emission spectra characteristics and intensities, according to EIA specifications, on special order.

Pulse Cross Delay: Displays the sync signals approximately centered in the raster for analysis.

Separate Drive: Separate horizontal and vertical drive in place of external sync.

CONTROLS, CONNECTORS, ADJUSTMENTS

Front Panel:

On-Off Switch	Height	Vertical Linearity
Horizontal Hold	Contrast	Focus
Vertical Hold	Brightness	Underscan Switch
Pulse Cross Selector (Optional)		

Rear Apron:

Video Termination Switch	Paralleled Sync Input
Sync Selector Switch	Connectors
DC Restoration Switch	Horizontal AFC Adjust

Paralleled Video Input

Connectors
Horizontal Linearity Adjust
AC Line Fuse

24 V B+ Adjust

Vertical Frequency Adjust
Vertical Top Linearity Adjust
Horizontal Duty Cycle Adjust

Connectors: All connectors BNC type.

PACKAGING

9" monitors — Single and dual rack mount, single cabinets and chassis only.

12" and 15" monitors — Rack mount, cabinet and chassis only.

19" and 23" monitors — Cabinet only.

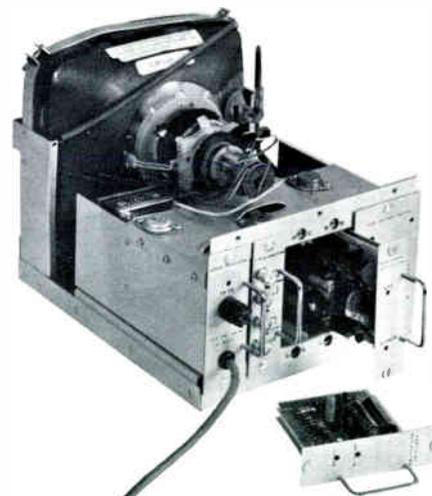
CONSTRUCTION

Racks and cabinets are constructed of heavy gauge steel. Cabinets are finished in deep umber gray and complete with metal back. Chassis is heavy gauge aluminum. All units are shipped with kinescope in place. Front controls are readily accessible in recessed panel with hinged cover (lockable on 23" model). All glass epoxy circuit modules plug in directly from rear of set. High quality components are used throughout.

All units comply with the Department of Health, Education and Welfare X-Radiation safety rules, 42CFR, Part 78, applicable at time of manufacture.

U/L AND CSA SPECIFICATIONS

All MODTEC monitors have been designed to meet or exceed U/L (Underwriters Laboratories) and CSA (Canadian Standards Association) engineering standards and requirements.



**MODTEC'S EXCLUSIVE
TOTALLY MODULAR CHASSIS**

For More Information Call or Write

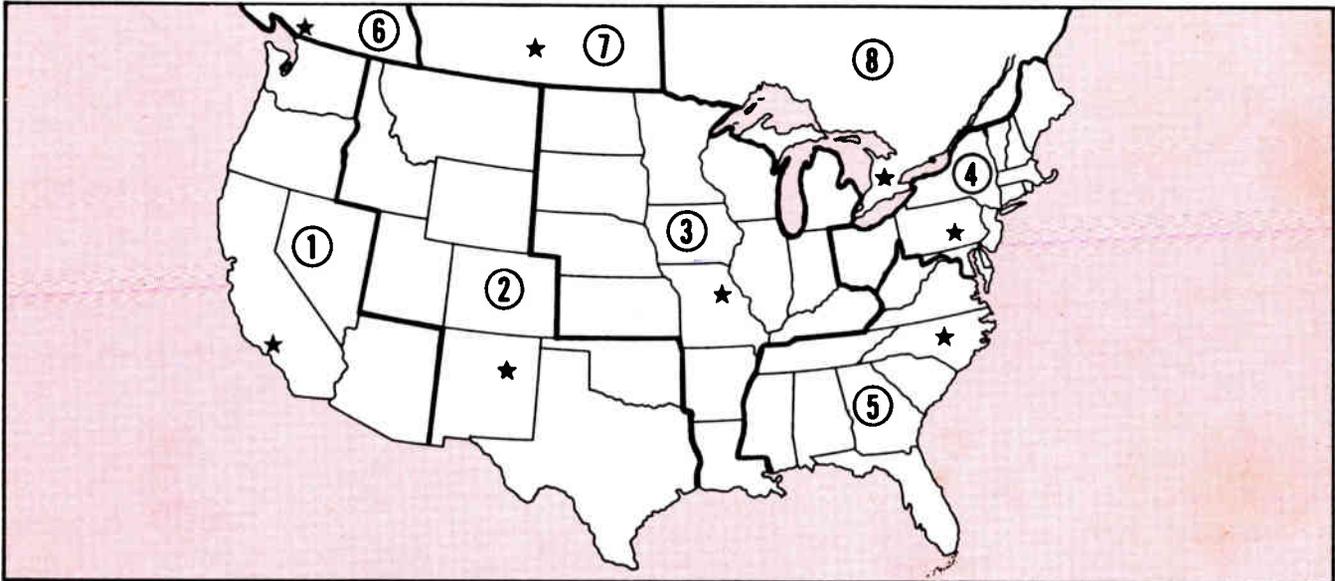


MODTEC DIVISION

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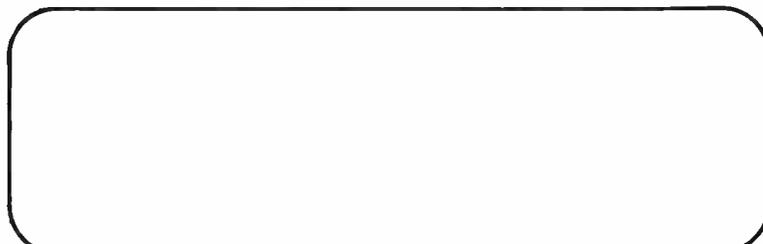
Bill Woods

Provinces Covered:

New Brunswick
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IMPORTANT

PLEASE TELEPHONE OR WRITE FOR RETURN AUTHORIZATION BEFORE RETURNING EQUIPMENT OR PARTS. THIS WILL EXPEDITE SERVICE.



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