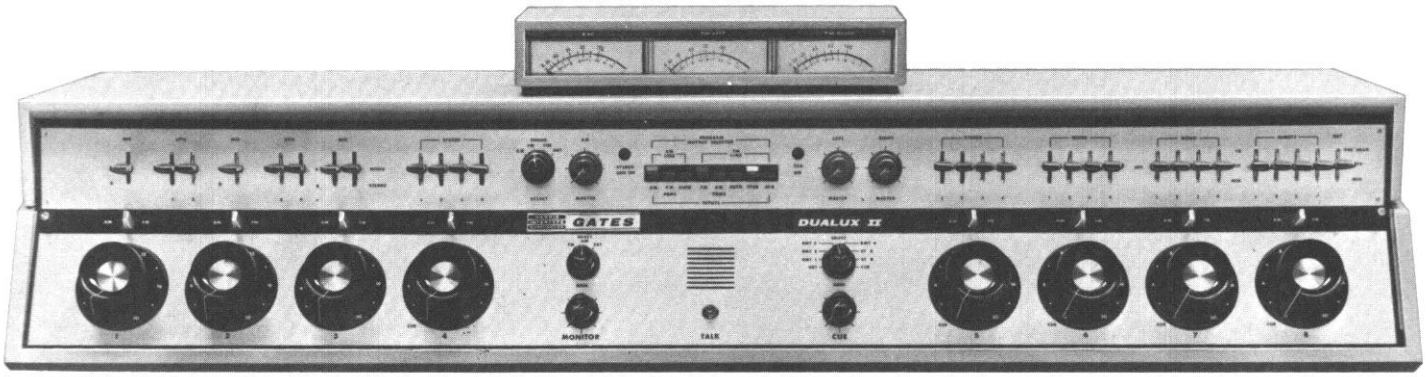
AUDIO CONTROL CONSOLES

HARRIS INTERTYPE CORPORATION

GATES®
A DIVISION OF HARRIS-INTERTYPE

Dual Programming Transistor Console With Stereo



THE DUALUX II

One of the most versatile audio consoles on the market today, Gates Solid Statesman Dualux II is ideal for the broadcaster who wants to control AM, FM, FM Stereo and SCA from one control point during all or part of the broadcasting day.

With the extensive capabilities of the Dualux II, monophonic or stereophonic mixing can be done independently or simultaneously. Simplified control of any mode of broadcasting is achieved through the console's exclusive program output selector. An interlocking system guards against the programming of any unacceptable combinations.

WIDE CHOICE OF INPUTS: Twenty-two audio inputs can be fed to the Dualux II. These include: thirteen monophonic sources, six stereo sources, two automatic programming sources and an SCA channel. Four unwired utility keys allow the addition of sources of your choice.

MICROPHONE CHANNELS (1, 2 and 3): Four single monophonic microphones can be individually switched to channels 1 and 2. Either of two stereo microphone pairs can be mixed on channel 3, and a switch is provided to combine the output during monophonic broadcasting.

MEDIUM LEVEL CHANNELS (4, 5, 6, 7 and 8): Channels 4 and 5 will each mix four stereo sources, while channels 6 and 7 will mix four monophonic sources. These sources can be cartridge tape machines, reel-to-reel units or turntables.

Channel 8 will mix four remote monaural inputs and has a monaural network input. Cueing is provided on all medium level channels.

POSITIVE MIXING CONTROL: Low impedance ladder step type attenuators are used in the minimum loss mixing circuits. Large "feel-of-the-board" VA control knobs are used to make mixing more efficient. An illuminated key selector above each of the mixing knobs switches the mixer output to AM or FM. Center position is off. Color inserts are provided for all mixer knobs to aid in identification.

MONITORING: The Dualux II has two solid state monitoring amplifiers for both stereo and mono monitoring. Monitoring outputs are for control rooms, Studio A, B, and lobby. Cue/intercom connections are provided to Studio A and B.

SOLID STATE MUTING: The Dualux II has Gates new "Micro-muting" which mutes loudspeakers in microseconds. The muting is so fast that a microphone placed directly in front of the monitor cannot possibly cause feedback. This instantaneous solid state muting is exceptionally quiet in operation.

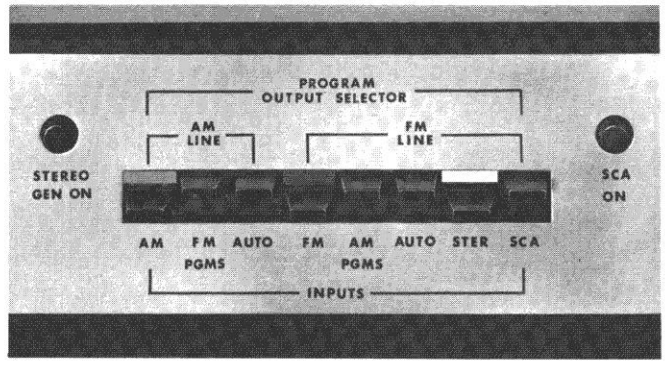
OUTSTANDING AUDIO QUALITY: Audio response is excellent, with distortion at an unusually low level. Consequently, the Dualux II provides audio quality ideally suited to any type of broadcasting—AM, FM or FM Stereo/SCA.

AMPLIFIERS: The silicon transistor Solid-Statesman amplifiers used throughout provide high level, high fidelity output. Preamplifiers will provide a full +23 dBm output, and will handle input levels of —17 dBm without overload or distortion. The program amplifiers are capable of +32 dBm output, and the monitor amplifiers deliver +40 dBm (10 watts). All components are mounted on etched circuit boards for added reliability and excellent crosstalk and noise specifications. Silicon transistors are used to assure optimum console performance over a wide ambient temperature range.

All amplifiers are packaged in modular extruded aluminum housings, and are completely accessible when the top of the console is opened. Amplifiers and power supplies plug in for ease in servicing.

INTERCHANGEABILITY: Electrically, the program amplifiers, monitor amplifiers, and cue amplifier are identical, thus providing three backup program amplifiers as an integral part of the console.

Dual Programming Transistor Console With Stereo–Dualux II



PROGRAM OUTPUT SELECTOR: Functions are logically presented and color-coded to channel keys and VU meter illumination for simplicity. Briefly, control provisions are: two separate transmitter inputs are marked "AM Line" and "FM Line." The AM transmitter may be programmed independently through any mixing channel when corresponding keys are operated to the left. Illuminated channel key, AM VU meter, and tab key #1 of the selector assembly are color-coded green.

Similarly, the FM transmitter may be programmed from the FM buss, when red tab key #4 is selected. In this mode FM may be stereo or mono, depending on the position of tab key #7 of the program output selector. During non-stereo periods an SCA channel may be turned on and programmed from an external source by tab key #8. All keys are cleverly interlocked against any unacceptable combinations.

Either the AM or FM line may be programmed from external automation equipment by the mere flip of a tab key, without tieing up a mixing channel. Dualux II provides a complete and economical means of complying with regulations on separate AM/FM programming. During other hours AM may program FM, or vice-versa, by selecting the appropriate key and operating the console conventionally.

SPECIFICATIONS

MIXING CHANNELS: Total 8. Two microphone—mono. One microphone—stereo. Two turntable/tape—stereo. Two turntable/tape—mono. One remote/network—mono.

AMPLIFIERS AND POWER SUPPLIES PROVIDED: Four preamplifiers, six output modules—program/monitor/cue (all interchangeable as supplied). Two muting modules, four power supply modules, and M-6556B transformer panel.

OPERATING MODE: Tri-channel—mono/stereo simultaneously.

INPUT CIRCUITS: Total 22. Four microphones—mono. Two microphones—stereo pair. Four turntable/tape—stereo pair. Four turntable/tape—mono. Four remote lines, one network, one SCA source—mono. One automation source—stereo pair. One automation source—mono.

OUTPUT CIRCUITS: Three program outputs @ +8 dBm, three record outputs @ −16 dBm, (bridged program line), two monitor speakers unmuted (left and right for lobby), six monitor speakers muted (left and right for Studios A & B & control room), two studio intercom outputs (Studio A, Studio B).

AUXILIARY INPUT/OUTPUT CIRCUITS SWITCHED THROUGH CONSOLE: Inputs: AM automation, FM—left automation (mono), FM—right automation (stereo), programming for SCA—41 kHz. Output: Programming for SCA—41 kHz.

MONITOR OUTPUT: 8 ohms nominal, for use as follows: (A) Single 8 ohm speaker. (B) Two 16 ohm speakers in parallel. (C) Up to six 48 ohm speakers (using the 48/8 ohm transformer supplied) in parallel. (D) Any combination of speakers and/or transformers with a resultant network of 8 ohms or higher.

IMPEDANCES: Microphones: 30/50 or 150/250 ohms balanced. Turntable/tape: 150/250 ohms unbalanced. Network /remote: 500/600 ohms balanced. Record output: 600 ohms balanced.

GAIN: Microphone to line: 102 dB, ±2 dB. Medium level to line: 60 dB, ±2 dB.

RESPONSE: Program and monitor: ±1.0 dB, 20 Hz to 20 kHz.

DISTORTION: Program circuits: 0.5% maximum, 20 Hz to 20 kHz @ +18 dBm. Monitor circuits: 1.0% maximum, 20 Hz to 20 kHz @ +40 dBm (10 watts).

NOISE: Program circuits: 74 dB below +18 dBm with −50 dBm input (−124 dBm equivalent input noise measured 20 Hz to 20 kHz). Monitor circuits: 74 dB below +40 dBm with −50 dBm input (−124 dBm equivalent input noise measured 20 Hz to 20 kHz). Medium level inputs: (Program) 74 dB below +18 dBm.

POWER: 117 volts, 50/60 Hz, 1-phase.

FINISH: Satin anodized aluminum panels, with lettering in black. Cabinet color—two-tone beige-gray.

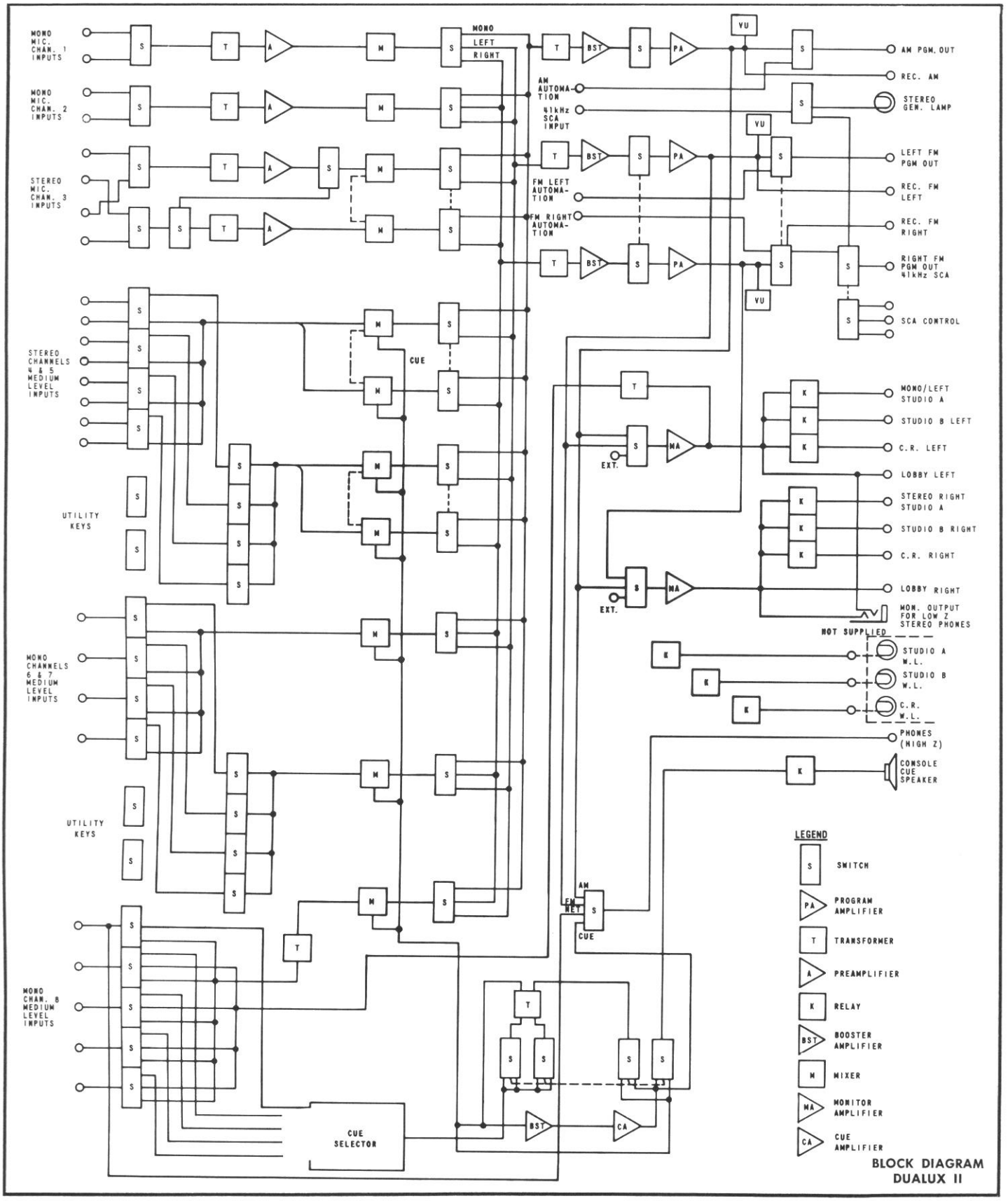
SIZE: 51¾" wide, 17" deep, 11½" high.

SHIPPING DATA: Packed weight: domestic, 140 lbs.; export, 220 lbs. Cubage: 16 cubic feet.

ORDERING INFORMATION

Dualux II, eight channel mono/stereo console for tri-channel operation. Complete with four M-6549B preamplifiers, six M-6550B program/monitor/cue output modules (interchangeable), two M-6553 and M-6553A solid state muting modules, and M-6551A and M-6552 power supply modules. An M-6556B transformer panel and eight speaker transformers (478-0275) are also supplied with the console_____**994-6542**

Dual Programming Transistor Console With Stereo–Dualux II



BLOCK DIAGRAM DUALUX II

Eight Channel Monophonic Transistor Console

THE GATESWAY II

Field-proven successor to the world famous Gatesway, the Gatesway II blends excellent audio and unusual flexibility with handsome, functional styling. The result: a completely transistorized control board that gives you a wide choice of input facilities, *plus* operating simplicity.

Features include: eighteen inputs into eight mixing channels; inbuilt cue/intercom system; provision for remote announcer operation of studio microphone channels; a novel variable program equalizer which may be instantly switched into the circuit for special effects or line correction; instantaneous solid state "Micro-muting"; illuminated program keys; and large "feel-of-the-board" control knobs.

INPUTS: The versatility of the Gatesway II is in its wide selection of inputs. Eighteen inputs can be switched into eight mixing channels. These include six microphones, four turntables, four tapes (cartridge or reel-to-reel), three remotes and network. Four unwired utility keys are provided for expansion.

MICROPHONE CHANNELS: Six microphones from control room and two studios may be mixed on channels 1, 2 and 3. A flexible muting assignment terminal strip allows the engineer to tailor loudspeaker muting and warning light controls to the channels which fit a particular programming situation. On-off control of one microphone channel may be given to the announcer through the addition of a simple relay module on channel 2 (optional). Input capability of the Solid Statesman preamplifiers is —17 dBm, making this audio control console virtually immune to microphone overload.

SOLID STATE MUTING: The Gatesway II has Gates "Micro-muting" which mutes loudspeakers in microseconds—so fast that a microphone placed directly in front of the monitor speaker cannot feed back. This instantaneous solid state muting is exceptionally quiet in operation.

MEDIUM LEVEL CHANNELS: Four turntables or similar devices may be mixed in any combination through flexible input switching on channels 4 and 5. (The same four devices are controlled from either channel). Similarly, four cartridge or reel-to-reel tape recorders may be accommodated on channels 6 and 7. Channel 8 has input switching for three remote lines and network. All medium level faders are equipped with cue positions to the self-contained cue intercom amplifier.

PROGRAM EQUALIZER: An exclusive feature of the Solid-Statesman Gatesway II is an inbuilt equalizer for correcting response deficiencies of tapes, remotes, etc., and also for special effects. Both low and high frequency correction may be made with separate controls which tailor the over-all console response ±10 dB at 100 Hz and 10,000 Hz. A three position lever key instantly switches in equalization, either continuously or momentarily. In the "out" position the Gatesway II has a superb flat response from 20 to 20,000 Hz.

UNSURPASSED AUDIO: Gates advanced solid state plug-in amplifiers are one of the many reasons for the outstanding performance of the Gatesway II. Audio response is excellent, with distortion at a very low level. Consequently, the Gatesway II provides an audio quality which makes it the perfect console for high fidelity broadcasting.

MODULAR CONSTRUCTION: All amplifiers are packaged in extruded aluminum housings and use plug-in connections. All components are mounted on etched circuit boards to add reliability and contribute to the excellent crosstalk and noise specifications of the console. Silicon transistors are used to allow wide frequency response and assure optimum console performance over a wide ambient temperature range. All amplifiers are completely accessible when the top of the console is opened, simplifying maintenance.

HARRIS INTERTYPE CORPORATION GATES

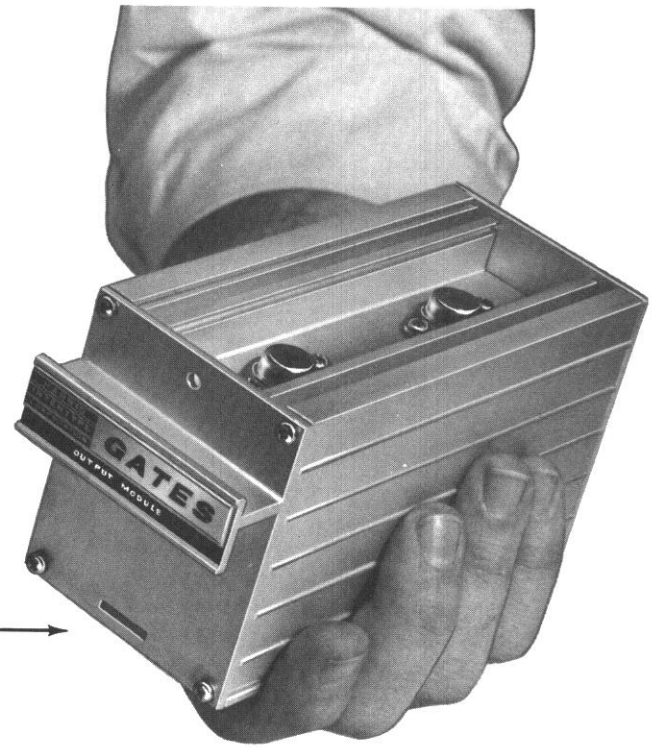
Eight Channel Monophonic Transistor Console—Gatesway II

HIGH LEVEL, HIGH FIDELITY OUTPUT: The wide dynamic range of the preamplifiers will accommodate microphone levels from —77 dBm to —17 dBm without overload or distortion. The program amplifiers deliver +32 dBm output and the monitor amplifiers +40 dBm, all with unsurpassed frequency response, low distortion and low noise.

STYLING: This "second generation" Solid-Statesman console is beautifully styled with anodized front panels, the exclusive Gates VA mixing control knobs, and a cabinet richly finished in beige-gray tones to complement any control room decor. Illuminated program keys complete the over-all leadership look of the Gatesway II.

IMMEDIATE ACCESSIBILITY: You can reach every component in the Gatesway II with ease. No console made is easier to maintain.

AMPLIFIER INTERCHANGEABILITY: Program, cueing and monitor amplifiers all have the same electrical design and construction and can be interchanged at random. As a result, three backup program amplifiers are provided as part of the console.



SPECIFICATIONS

MIXING CHANNELS: Total—8. Three microphone, two turntables, two tapes and one remote/network.

AMPLIFIERS AND POWER SUPPLIES PROVIDED: Three preamplifiers, three output modules—program, monitor and cue (interchangeable as supplied). Two muting modules (solid state speaker muting), three power supply modules.

OPERATING MODE: Single channel mono with audition positions.

INPUT CIRCUITS: Total—18. Six microphone, four turntables, four tapes, three remote lines, one network.

OUTPUT CIRCUITS: One program output @ +8 dBm, one audition output @ —14 dBm, one monitor speaker output unmuted for lobby, three monitor speakers muted, two studio intercom outputs (Studio A, Studio B), and one headphone output.

MONITOR OUTPUT: 8 ohms nominal, for use with only one of the following: (A) A single 8 ohm speaker. (B) Two 16 ohm speakers in parallel. (C) Up to six 48 ohm speakers (using the 48/8 ohm transformers supplied) in parallel. (D) Any combination of speakers and/or transformers with a resultant network impedance of 8 ohms or higher.

IMPEDANCES: Microphones: 30/50 or 150/250 ohms balanced. Turntable/tape: 150/250 ohms unbalanced. Network/remote: 500/600 ohms balanced. Audition output: 600 ohms unbalanced. Monitor output: 8 ohms nominal unbalanced. Program output: 600/150 ohms balanced.

GAIN: Microphone to line: 100 dB ±2 dB. Medium level to line: 60 dB, ± 2 dB.

RESPONSE: Program and monitor: ±1.0 dB, 20 Hz to 20 kHz.

DISTORTION: Program circuit: 0.5% maximum, 20 Hz to 20 kHz @ +18 dBm. Monitor circuits: 1.0% maximum, 20 Hz to 20 kHz @ +40 dBm (10 watts).

NOISE: Program circuits: 74 dB below +18 dBm with —50 dBm input (—124 dBm equivalent input noise, measured 20 Hz to 20 kHz). Monitor circuits: 74 dB below +40 dBm with —50 dBm input (—124 dBm equivalent input noise, measured 20 Hz to 20 kHz). Medium level inputs: (Program) 74 dB below +18 dBm.

POWER: 117 volts, 50/60 Hz, 1-phase.

FINISH: Satin anodized aluminum panels, with lettering in black. Cabinet color—two tone beige-gray.

SIZE: 48¼" wide, 17" deep, 8¾" high.

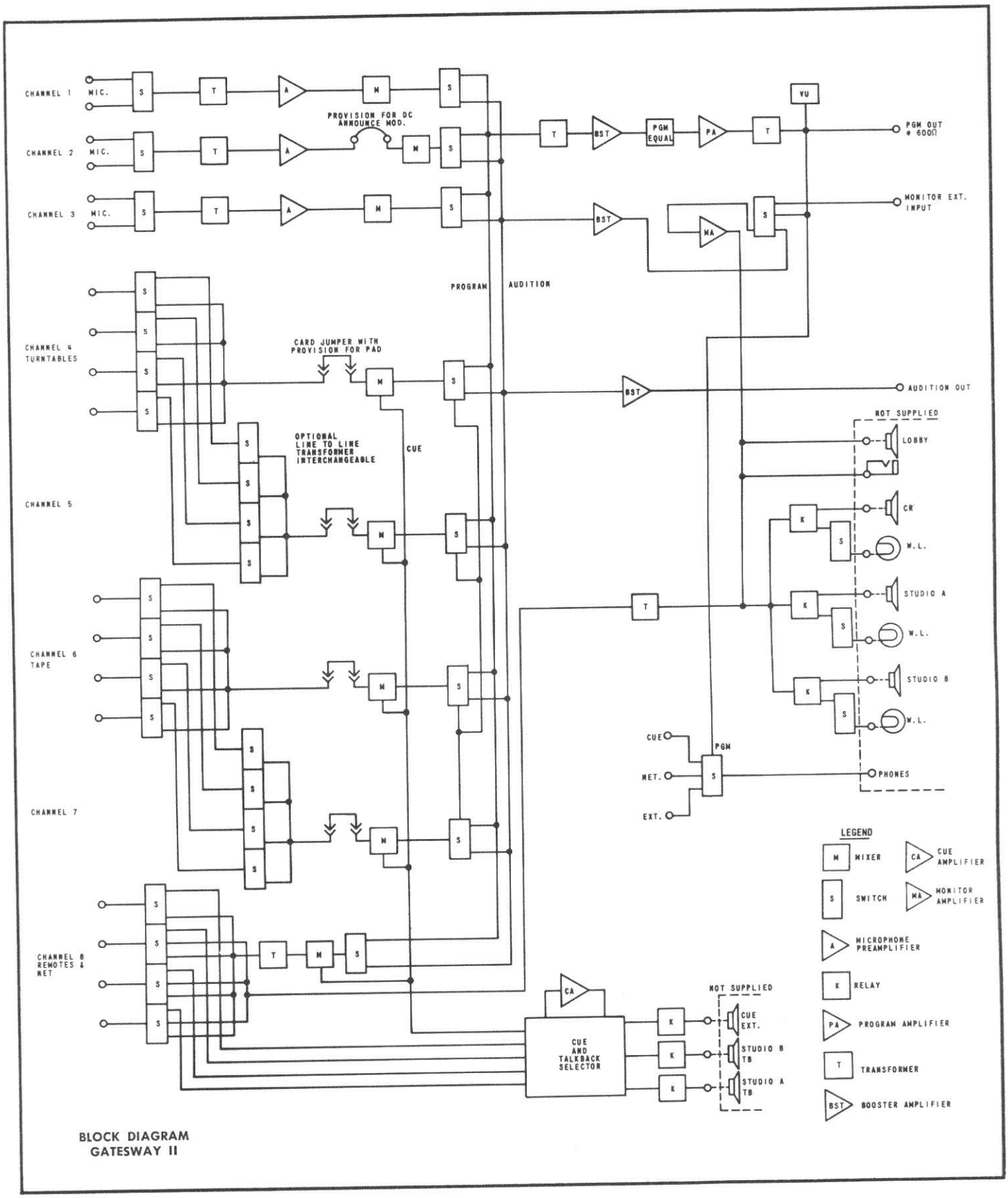
SHIPPING DATA: Packed weight: Domestic, 210 lbs. Export, 250 lbs. Cubage, 17.5 cubic feet.

ORDERING INFORMATION

Gatesway II, eight channel console, complete with three M-6549B preamplifiers, three M-6550B program/monitor/cue output modules (interchangeable), two M-6554A solid state muting modules, two M-6551B power supply modules, one M-6552 power supply module, one M-6556A transformer panel, and four speaker matching transformers (478-0275)_____994-6541

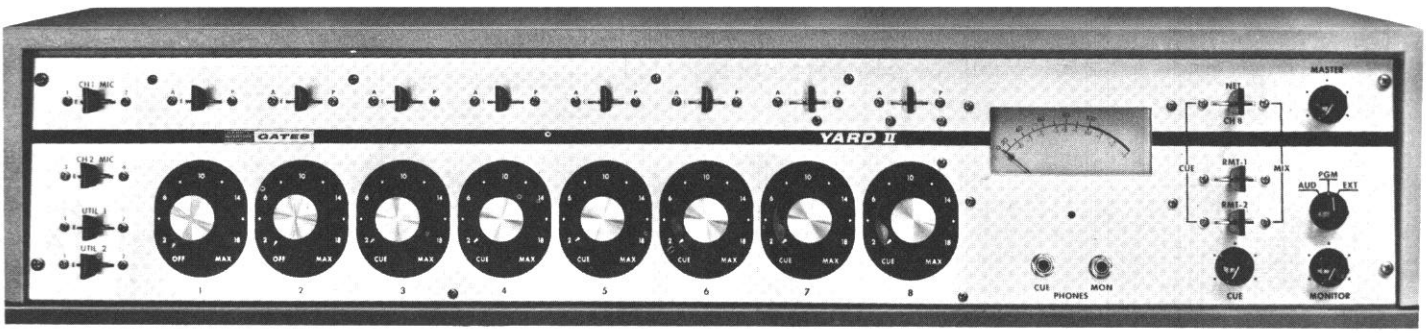
HARRIS INTERTYPE CORPORATION GATES

Eight Channel Monophonic Transistor Console–Gatesway II



BLOCK DIAGRAM
GATESWAY II

Eight Channel Monophonic Transistor Console

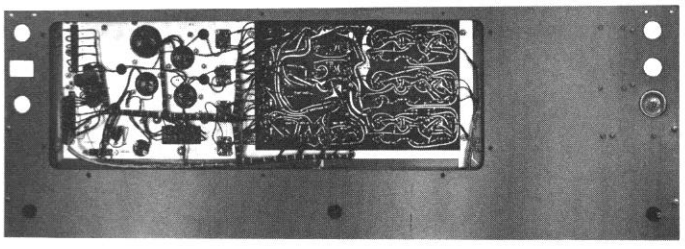


THE YARD II

Successor to the famous Yard console, the new Yard II now offers even greater versatility with the added reliability of total solid state design. Just over a yard wide, Gates Yard II console offers 12 inputs into 8 mixing channels. It is ideal as a full control facility for smaller AM and FM monophonic stations and a perfect submaster control or production console in larger operations. The low silhouette styling is a definite "plus" for television use.

Functionally arranged, the eight mixing channels are in the center of the board with the meter to the right, along with master gain controls. Preamplifiers used on microphone channels 1 and 2 may select from two low impedance microphones on each input. Five medium level channels can be used with any sources, such as turntables, tape recorders, etc. The eighth channel is specifically designed for use with network and two remote sources, and separate front panel switches provide selection of any of these inputs.

INDEPENDENT CHANNEL MONITORING AND RECORDING: Any of the 8 input channels may be switched to either the program or audition position to permit independent monitoring or recording of any incoming sources without disturbing programming.



All wiring on the printed circuit board is accessible through a removable cover plate on the bottom of the console. The entire console is hinged to permit easy access.

HIGH FIDELITY PERFORMANCE: Frequency response of the Yard II is uniform ±1 dB from 30 to 15,000 Hz. Noise is better than 73 dB below normal output with crosstalk below the noise at normal levels and control settings. Distortion is less than 0.75% from 30 to 15,000 Hz at a +18 dBm output.

LOW SILHOUETTE STYLING: Only 8½ inches high, the Yard II offers an excellent over the top view, especially adaptable for TV operation.

ACCESSIBILITY: All components can be quickly reached through the lift off top. The entire console is hinged at the rear for complete access to the under side of the console.

INPUTS: Four microphones, five medium level inputs, and three external line inputs. Cue bus is connected to mixers 3 through 8 to provide rapid cueing on all six channels.

CUE AMPLIFIER: Built-in cue speaker in the top of the console provides cue from channels 3 through 8 to either the speaker built into the console or through the separate cue headphone jack.

BOOSTER AMPLIFIER: A monitor booster amplifier is provided as standard equipment to allow switching the monitor amplifier from program to audition without changing level.

MUTING RELAYS: Two muting relays are supplied to operate warning lights as well as muting of the control room and studio speakers. A terminal strip on the console permits flexible selection of muting relay operation by simply changing jumper wires.

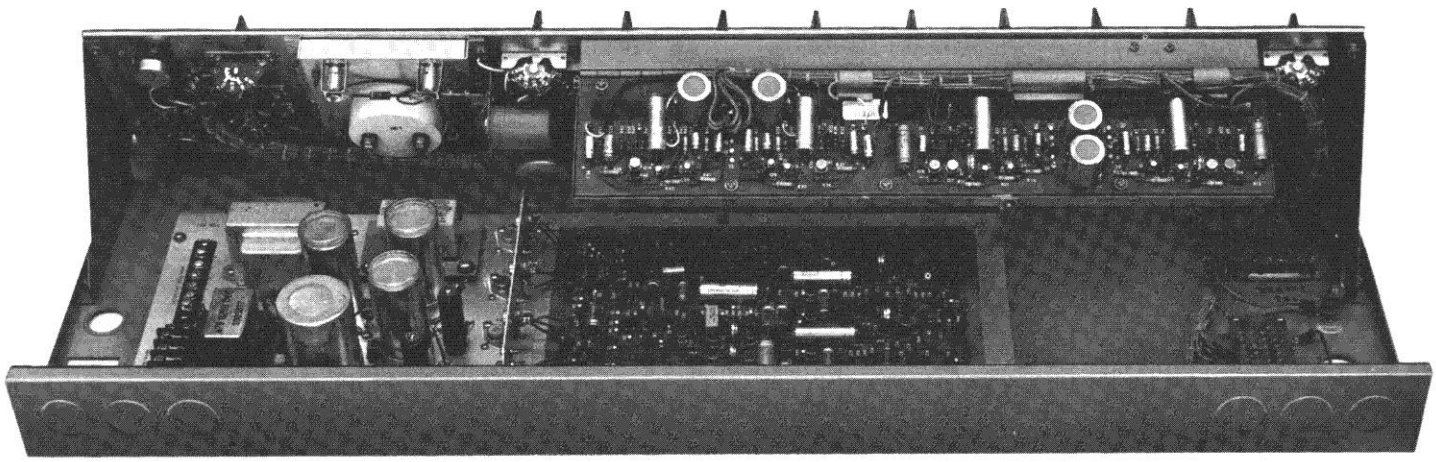
VU METER: A four-inch illuminated 'B' scale VU meter is flush mounted with the Yard II front panel for accurate level measurement.

COLOR CODED CONTROLS: Mixer knobs are supplied with various colored disc inserts to color code controls such as red for turntables, green for studio A, etc.

COMPACT AND LIGHTWEIGHT: The 38" Yard II console is one of the most compact, full facility consoles ever produced. It measures 38" wide, 8½" high, and 13" deep, and weighs only 54 pounds.

HARRIS INTERTYPE CORPORATION GATES

Eight Channel Monophonic Transistor Console—Yard II



Complete access to all components is via the easily removed cover of the Yard II. All input and output connections can be made through the rear or the bottom of the console. Convenient knock-outs on the rear apron provide entry for wiring cables.

SPECIFICATIONS

GENERAL

MIXING CHANNELS: Total of eight, all monaural. Two microphone, five medium level, one network/remote.

AMPLIFIERS PROVIDED: Two preamplifiers, two booster amplifiers, one program amplifier, one monitor amplifier, and one cue amplifier.

OPERATING MODE: Monaural.

INPUT CIRCUITS: Four for microphones, two for turntables, two for tape, one utility, three for network/remote.

OUTPUT LINES: One program, two muted speaker, one non-muted speaker, one cue speaker (muted), two headphone (monitor and cue).

MICROPHONE (CH. 1 & 2) TO PROGRAM LINE OUT

MAXIMUM GAIN: 103 ±2 dB.

FREQUENCY RESPONSE: ±1 dB, 30 to 15,000 Hz.

DISTORTION: Less than 0.75%, 30 to 15,000 Hz, at +18 dBm output.

NOISE: More than 73 dB below +18 dBm output with −50 dBm input. Equivalent input noise is better than −123 dBm, 30 to 15,000 Hz.

CROSSTALK: Below noise level, with normal levels and control settings.

MICROPHONE IMPEDANCE: 30/50 or 150/250 ohms, balanced.

MEDIUM LEVEL (CH. 3-7) TO PROGRAM LINE OUT

MAXIMUM GAIN: 63 ±2 dB.

FREQUENCY RESPONSE: ±1 dB, 30 to 15,000 Hz.

DISTORTION: Less than 0.75%, 30 to 15,000 Hz at +18 dBm output.

NOISE: More than 73 dB below +18 dBm output with −10 dBm input, 30 to 15,000 Hz.

CROSSTALK: Below noise level, with normal levels and control settings.

INPUT IMPEDANCE: 150 ohms, unbalanced.

NETWORK/REMOTES (CH. 8) TO PROGRAM LINE OUT

MAXIMUM GAIN: 43 ±2 dB.

FREQUENCY RESPONSE: ±1 dB, 30-15,000 Hz.

DISTORTION: Less than 0.75%, 30 to 15,000 Hz at +18 dBm output.

NOISE: More than 73 dB below +18 dBm output with +10 dBm input, 30 to 15,000 Hz.

CROSSTALK: Below noise level, with normal levels and control settings.

INPUT IMPEDANCE: 600 ohms, balanced.

MONITOR CIRCUITS

***GAIN:** Mic. —Pgm. —Mon. Out 124 ±2 dB
Mic. —Aud. —Mon. Out 106 ±2 dB
Med. —Aud. —Mon. Out 66 ±2 dB
Ext. Mon. —Mon. Out 46 ±2 dB

*Approximately 11 dB additional gain is available by shorting out the R37, 10,000 ohm resistor, connected between the Monitor Selector Switch and the Monitor Gain control.

FREQUENCY RESPONSE: ±1 dB, 30 to 15,000 Hz.

DISTORTION: Less than 1%, 30 to 15,000 Hz at +40 dBm (10 watts) output.

NOISE: More than 73 dB below +40 dBm (10 watts) output, 30 to 15,000 Hz.

CROSSTALK: Below noise level, with normal levels and control settings.

POWER REQUIREMENTS

LINE VOLTAGE AND FREQUENCY: 117V (as shipped) /234V, 50/60 Hz.

POWER CONSUMPTION: 60 watts, maximum.

PHYSICAL SIZE

CONSOLE: 38" wide, 13" deep, 8½" high.

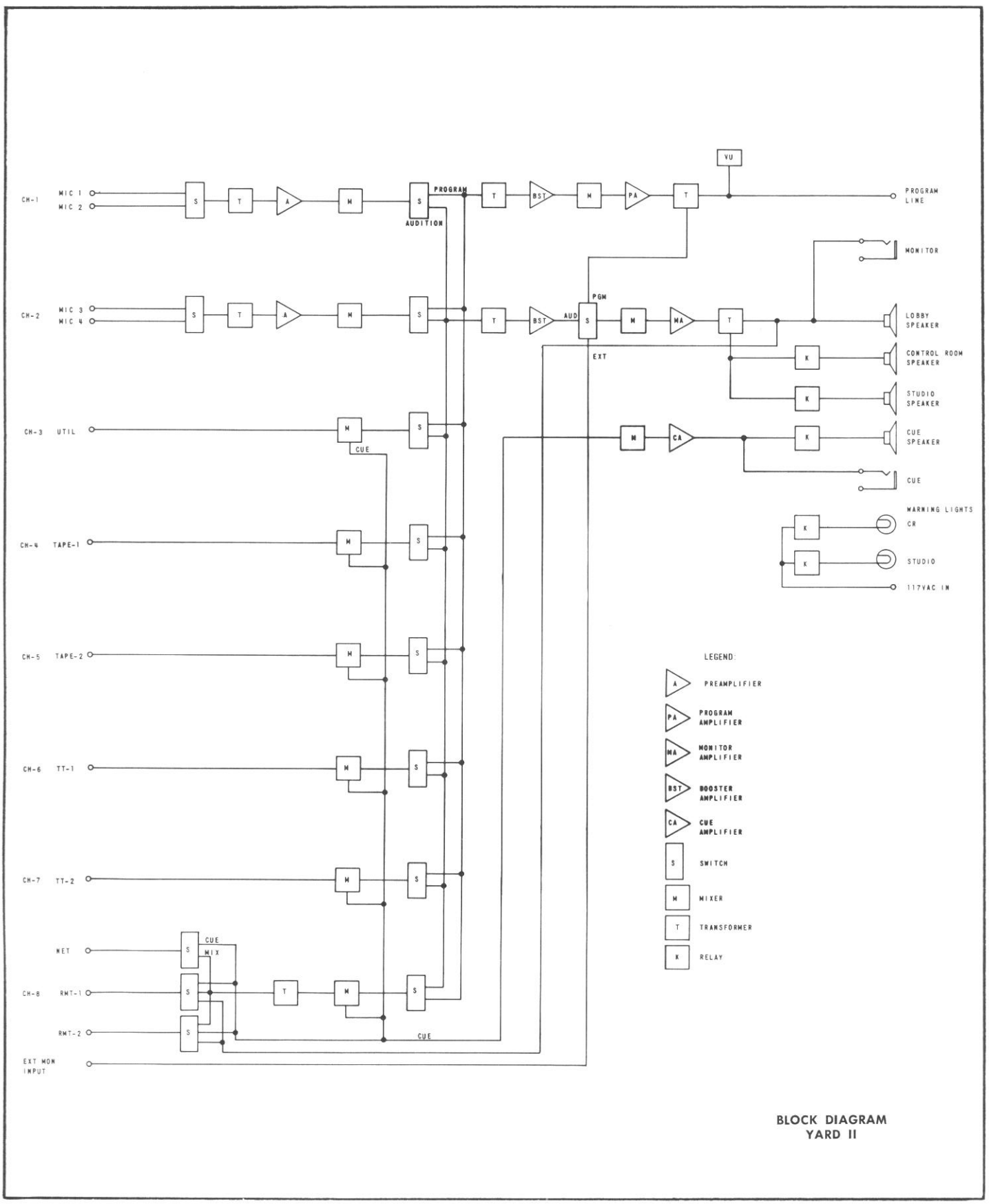
CONSOLE WEIGHT: 54 lbs.

POWER TRANSFORMER: Approximately 6½" long x 4" wide x 3½" high.

ORDERING INFORMATION

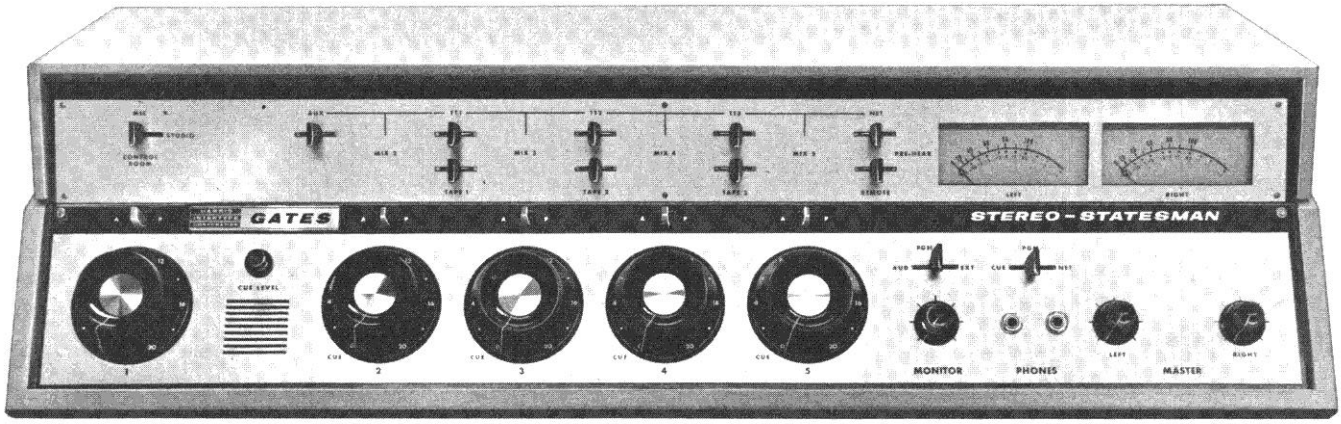
Yard II Audio Console_____**994-6616**

Eight Channel Monophonic Transistor Console–Yard II



BLOCK DIAGRAM
YARD II

Five Channel Stereo Transistor Console



THE STEREO STATESMAN

Designed and built to provide the soundest sound for the new era of FM broadcasting, the completely transistorized Stereo Statesman console is equally at home in the studio of the small market broadcaster, or with the large, metropolitan broadcaster as a production or secondary control board.

The performance figures of this console are at the quality level which builds and holds listeners. Frequency response is 20 to 20,000 Hz with less than 1 dB variation. Distortion is less than 0.5% at all frequencies.

Other important features include: Full logic audio switching; cue/intercom to two studios; all solid state modular amplifiers with printed circuit boards; two monitor amplifiers; illuminated program keys; and Gates exclusive control knobs.

VERSATILE INPUT SWITCHING: Eleven inputs may be switched into the five stereo mixing channels in a manner that satisfies virtually any stereo programming requirement. These inputs can include: two stereo microphone pairs; three stereo turntables; three stereo tape reproducers; one remote; one network and one auxiliary stereo source.

MICROPHONE CHANNEL: Two stereo pairs of microphones may be selected into channel 1. One position is designated "Control Room" and the other position "Studio". Muting is automatically transferred when key is operated.

MEDIUM LEVEL CHANNELS: Channels 2, 3, 4 and 5 may be used for turntables, tape or other medium level inputs. Three tapes, three turntables and one auxiliary source may be switched into these four channels. Each tape and turntable input are switchable to either of two mixers, with tab switches for maximum flexibility. Channel 5 may also select from "Network" or "Remote". If these signals are monophonic, they may be split to drive both the right and left stereo mixer on that channel.

POSITIVE PROGRAM CONTROL: Three-position illuminated key switches above each mixing knob control program selection. The selector key glows green in "audition" position, red in "program" position and amber in center "off" position.

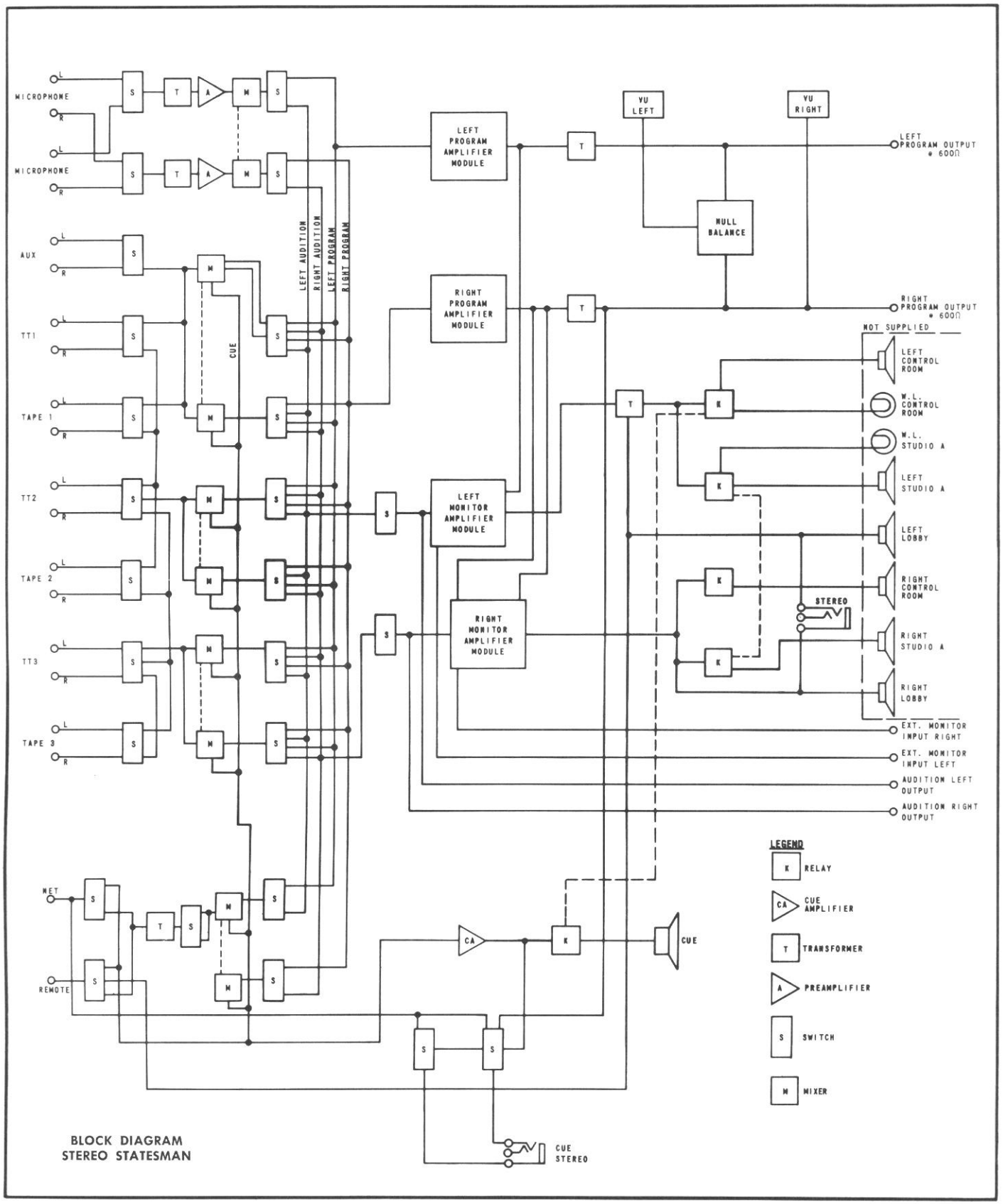
HIGH FIDELITY SOUND: The superb audio qualities of the Stereo Statesman—such as a frequency response of 20 to 20,000 Hz with less than 1 dB variation, and a signal to noise ratio of —74 dB—are achieved through the use of silicon transistors, and low impedance mixing.

AMPLIFIERS: All amplifiers are modular in construction, with plug-in connections for easy interchange and maintenance. Components are mounted on etched circuit boards to increase reliability and contribute to the excellent crosstalk and noise specifications of the console. Silicon transistors assure optimum console performance over a wide ambient temperature range. All amplifiers are completely accessible when the top of the console is opened, simplifying maintenance.

WIDE DYNAMIC RANGE: The preamplifiers in the Stereo Statesman will accommodate microphone levels from —77 to —17 dBm without overload or distortion. The program amplifiers deliver +32 dBm output and the monitor amplifiers +40 dBm output, all with excellent frequency response, low distortion and low noise.

MONITORING: Two monitor amplifiers, each capable of providing up to 10 watts each (+40 dBm) are included. Monitor input is selectable from "program", "audition" or "external source". Muting is provided for control room and studio loudspeakers and the console cue speaker. Conventional high impedance headset jacks for stereophonic headphones are provided on the front of the console and can be switched to monitor program, network or external.

Five Channel Stereo Transistor Console–Stereo Statesman



BLOCK DIAGRAM
STEREO STATESMAN

Five Channel Stereo Transistor Console—Stereo Statesman

SPECIFICATIONS

MIXING CHANNELS: Total—5. One microphone. Four tape, turntable, remote or network.

AMPLIFIERS AND POWER SUPPLIES PROVIDED: Two preamplifiers, five program/monitor/cue amplifiers (interchangeable as supplied), three power supply modules.

OPERATING MODE: Stereophonic.

INPUT CIRCUITS: Total—11. Two pairs of stereo microphones, three turntables, three tape, one remote, one network, one auxiliary.

OUTPUT CIRCUITS: Two program outputs at +8 dBm, two audition outputs at −12 dBm, two stereo pair muted speakers (control room, studio), one stereo pair unmuted speakers (lobby), headphone.

IMPEDANCES: Microphones: 30/50 or 150/250 ohms balanced. Turntable/tape: 150/250 ohms. Network/remote: 150/250 ohms. (478-0009 line matching transformer optional). Audition output: 600 ohms. Monitor output: 8 ohms nominal. Program output: 600/150 ohms balanced.

GAIN: Microphone to line: 102 dB, ±2 dB. Medium level to line: 60 dB, ±2 dB.

RESPONSE: Program and monitor: ±1.0 dB, 20 Hz to 20 kHz @ +18 dBm.

DISTORTION: Program circuits: 0.5% maximum, 20 Hz to 20 kHz @ +18 dBm. Monitor circuits: 1.0% maximum, 20 Hz to 20 kHz @ +40 dBm.

NOISE: Program circuits: 74 dB below +18 dBm with −50 dBm input (−124 dBm equivalent input noise measured 20 Hz to 20 kHz). Monitor circuits: 74 dB below +40 dBm with −50 dBm input (−124 dBm equivalent input noise measured 20 Hz to 20 kHz). Medium level inputs: (Program) 80 dB below +18 dBm.

POWER: 117 volts, 50/60 Hz, 1 phase.

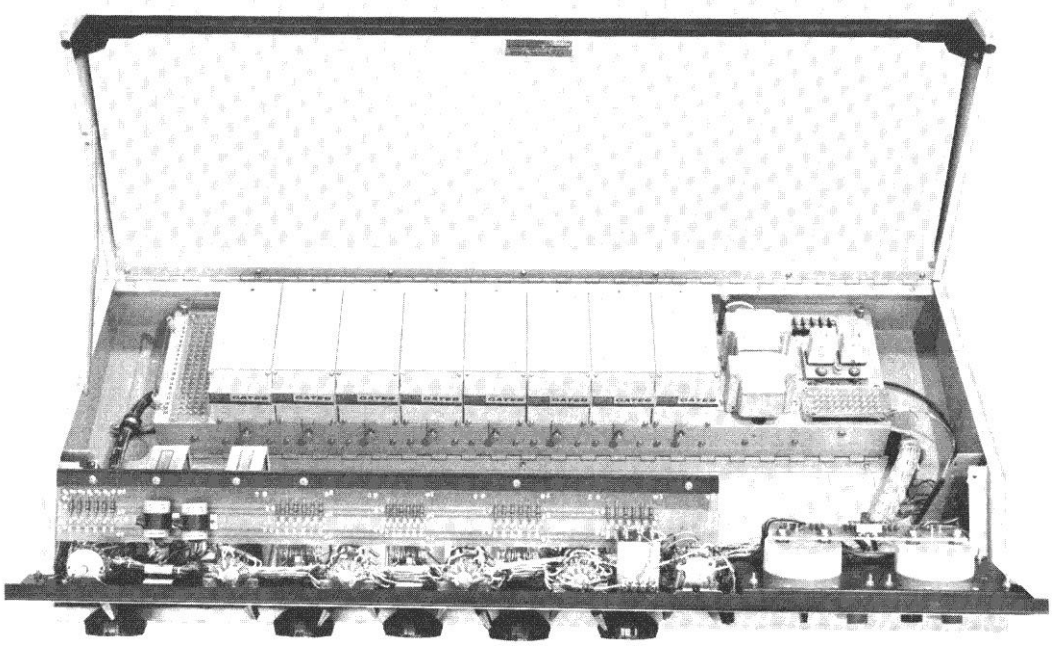
FINISH: Satin anodized aluminum panels with lettering in black. Cabinet color—two-tone beige-gray.

SIZE: 36¾" wide, 17" deep, 8¾" high.

SHIPPING DATA: Packed weight: Domestic, 170 lbs. Export, 210 lbs. Cubage, 13 cubic feet.

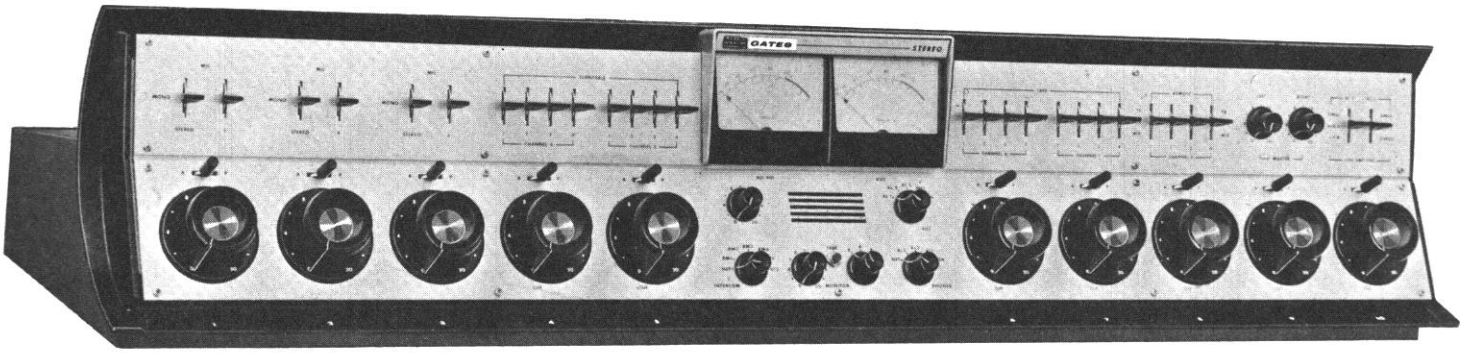
ORDERING INFORMATION

Stereo Statesman, five channel stereophonic audio console, complete with two M-6549A preamplifiers, five M-6550A program/monitor/cue modules (interchangeable), one M-6551 and two M-6552 power supply modules, and one M-6556 transformer panel.....994-6540



The Stereo Statesman top cover hinges up and the front panel swings down to reveal every "behind the panel" component. This layout and logical access is typical of the complete line of Gates consoles, and reflects the engineering and planning required for neat, professional installations.

Ten Channel Stereo Or Monaural Transistor Console



THE EXECUTIVE

With ten full stereo mixers, the dual channel Executive is one of the most complete transistorized audio consoles for stereo or monaural programming on the market today.

Amazingly versatile, this console is a member of Gates Solid-Statesman family—a term applied only to transistorized products that meet the most rigid engineering and manufacturing specifications.

STEREO AND MONAURAL: All ten mixing channels of the Executive are stereo, including network and remote inputs. These channels may also be operated monaurally. By simply adding a third plug-in program amplifier, a compatible "left plus right" signal is available to feed monaural and stereo programming simultaneously to AM and FM (monaural to AM, stereo to FM). Likewise, stereo may be carried on FM with completely different monophonic programming being broadcast on AM.

AMPLIFIERS: The amplifier complement includes six microphone preamplifiers (three stereo pairs), two program amplifiers, two high fidelity monitoring amplifiers, and a cue/intercom amplifier. Also supplied are two audition booster amplifiers, which are part of the internal circuit arrangement. Space is provided for two additional preamplifiers and one additional program amplifier. The power supply is also self-contained and is fully regulated. The amplifiers and power supply are completely solid state.

MIXING SYSTEM: The mixing system contains 10 channels, all with dual (stereo) controls. Channnels 1, 2 and 3 are for microphones. Channels 4 and 5 will accept four stereo turntables in any combination, while channels 6 and 7 accommodate four stereo tape inputs. Channel 8 handles four remote lines, and channels 9 and 10 are network and auxiliary channels respectively. The separate fader for incoming network programming is especially convenient for taping delayed broadcast material without tieing up the other high-level input to the console. Faders 4 through 10 are all cueing attenuators which feed the inbuilt cue/intercom system.

MICROPHONE INPUTS: Six preamplifiers in three stereo pairs are connected to dual-postion input selector keys, permitting 12 microphones (6 stereo pairs) to be selected. Space is provided for two additional M-6034 preamplifiers.

TURNTABLE-TAPE INPUTS: Four turntables may be switched to mixers 4 and 5, and four tape sources may be switched into channels 6 and 7 in any sequence. All faders are stereo, and cue positions are provided on each of these attenuators.

REMOTE-NETWORK INPUTS: Four remote lines may be switched into channel 8 through a line isolation transformer provided. Channel 9 is for network input. Both channels are stereo control equipped, but have removable splitting pads attached for present monophonic signals. Cue positions are provided on these attenuators.

AUXILIARY CHANNEL: This tenth channel has dual line isolation transformers and is uniquely equipped to accommodate extra stereo or monaural functions, either in the studio or from an external source. A cue position is also provided on this fader.

CUE-INTERCOM SYSTEM: An inbuilt cue-intercom amplifier is included, with its speaker centered below the VU meters. The cue signals from mixers 4 through 10 feed the system. The cue-intercom also provides remote talk-back, studio intercom and network preview monitoring. The console muting system also protects against feedback from the cue-intercom speaker.

OPERATING MODES: Stereo only, or monaural only, may be fed to either program or audition mixer circuits. Likewise, monaural FM may be broadcast separately from monaural AM. When the optional M-5700 program amplifier is added, stereo FM and monaural AM may be broadcast either simultaneously, or separately.

Ten Channel Stereo Or Monaural Transistor Console—Executive

VU METERS: Dual 4-inch illuminated meters are provided. The left meter connects to the left channel, while the right meter connects to the right channel (or it may be switched to the output of the optional M-5700 program amplifier). The right meter also switches to parallel the left meter for stereo calibration or to check incoming network level. A third external VU meter, in an attractive "shadow mold" housing, is available for larger installations where simultaneous metering of three program channels is required.

MUTING RELAYS: Three are supplied to mute three pairs of loudspeakers. Warning light contacts are also provided. These relays operate from the microphone keys and cue-intercom system.

ADDITIONAL FACILITIES: These include: dual headphone jacks; a cue-intercom selector switch; left and right master gain controls for the program amplifier; a dual monitoring amplifier gain control; a fully regulated power supply; and 28 tab keys (top row) performing a large number of switching functions.

STYLING: Exclusively styled by one of America's leading industrial designers, the Executive's satin anodized aluminum control panel floats in a 3-dimensional setting, and the "shadow mold" styling is strikingly modern in appearance. The front panel hinges down and the cabinet top cover hinges up.

SPECIFICATIONS

MIXING CHANNELS: Total—10. All stereo. (3) microphone, (2) turntables, (2) tape or projectors, (1) remote, (1) network, (1) all purpose.

AMPLIFIERS PROVIDED: 2 program, 2 booster, 2 monitor, 6 preamplifiers (3 pairs), 1 cue amplifier. Space provided for two optional added preamplifiers and one optional added program amplifier.

OPERATING MODE: Stereo and monaural.

INPUT CIRCUITS: 12 for mics., 4 turntables, 4 tape/projectors, 4 remote lines, 1 network line, 1 all purpose utility.

OUTPUT LINES: 2 program, 6 muted speaker (3 pairs), 2 non-muted speaker, 2 intercom, 2 headphones, 2 record. NOTE: Add one more program output if optional program amplifier is purchased.

IMPEDANCES: Microphones: 30/50 or 150/250 ohms. Turntable/tape: 150/250 ohms unbalanced. Remote lines: 500/600 ohms, balanced. Network: 500/600 ohms. Utility: 500/600 ohms. Programming output: 500/600 ohms. Recording output: 500/600 ohms. Intercom output: 48 ohms. Monitor speaker output: 8/16 ohms.

GAIN: Turntable, tape, network (high level) input to program line output, 55 dB. To monitor amplifier output, 55 dB. From microphone input to program line output, 102 dB. To monitor amplifier output, 102 dB. NOTE: All measurements ±2 dB.

RESPONSE: All segments of program circuit ±1 dB, 30-15,000 Hz. Monitoring circuit ±1½ dB, 30-15,000 Hz. NOTE: Typical response all circuits: 20-20,000 Hz, ±2 dB.

DISTORTION: Any segment of program circuit 0.5% or less between 30-15,000 Hz at +8 dBm output level or 0.5% at +18 dBm, 50-15,000 Hz. Monitor amplifier 1% at +39 dBm (8 watts).

NOISE: Program circuits 70 dB or better below +18 dBm output, with −50 dBm input (equivalent noise input is −120 dBm). Monitor circuits, 60 dB below +39 dBm output. Crosstalk: All circuits below noise level with normal gain settings for proper programming.

STEREO ISOLATION: Below noise level all channels.

POWER: 115 volts, 50/60 Hz, 1 phase. Power consumption, 50 watts at 60 Hz.

FINISH: Cabinet, beige-gray. Panel, natural anodized aluminum lettered in black. Knobs with decal color inserts.

SIZE: 53½" wide, 11½" high, 17½" deep.

SHIPPING DATA: Packed weight: Domestic, 220 lbs. Export, 270 lbs. Cubage: 27 cubic feet.

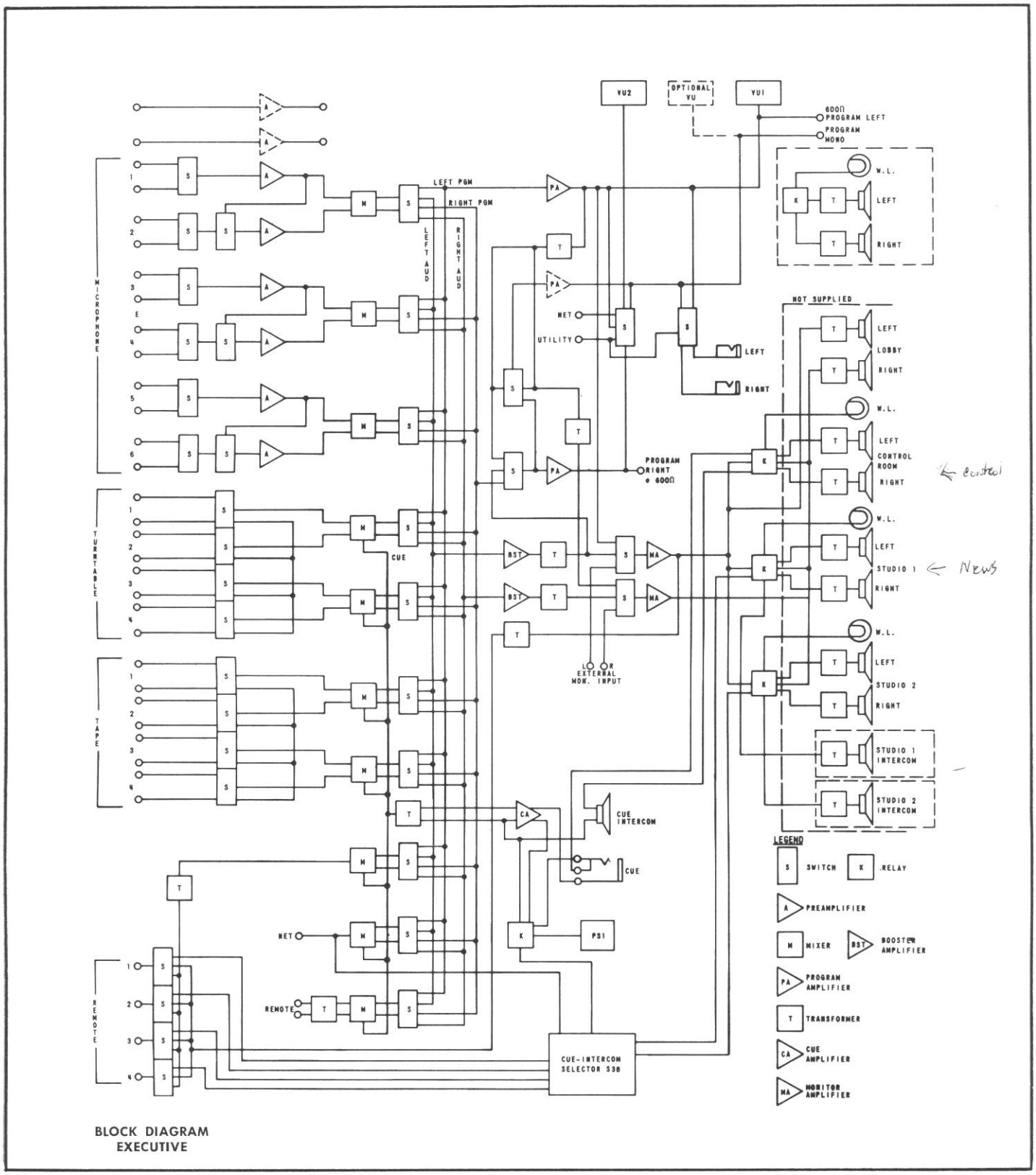
OPTIONAL ACCESSORIES: Space is provided to add two model 994-6034 preamplifiers, and one model 994-5700 program amplifier.

NOTE: For optimum performance the load on the monitor amplifier should not be less than 8 ohms. Where it is necessary to operate several loudspeakers on one amplifier, use the 478-0275 matching transformer. Four of these transformers are supplied with the console.

ORDERING INFORMATION

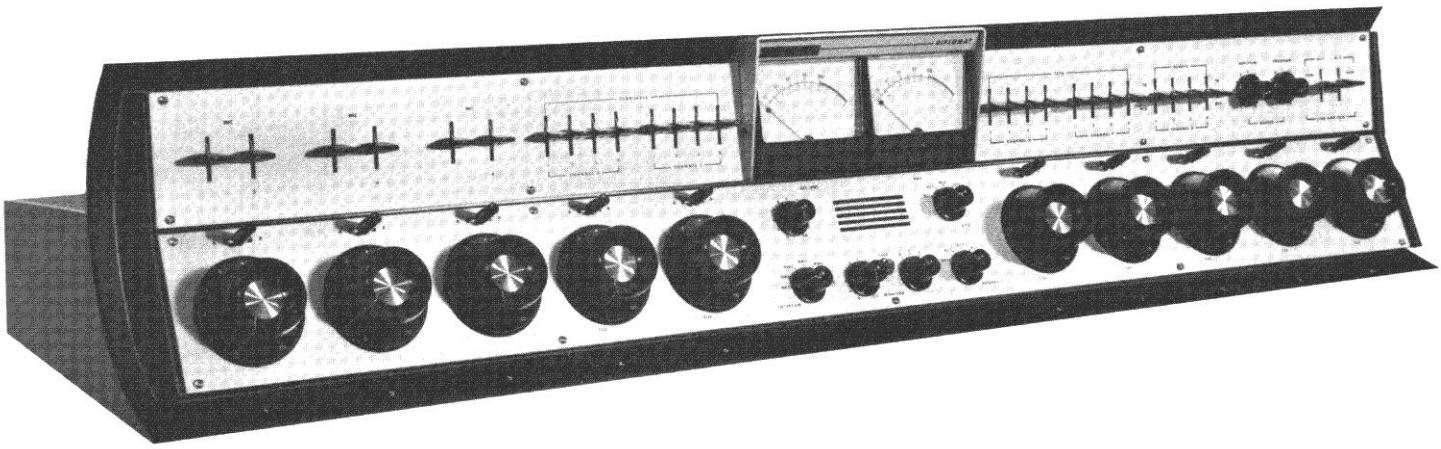
Executive Audio Console (includes 4 speaker matching transformers)	**994-6158**
Optional Preamplifier	**994-6034**
Optional program amplifier	**994-5700**
Speaker matching transformer	**478-0275**
Optional 3rd VU meter	**994-6208**
Intercom sub-station	**994-6424**

Ten Channel Stereo Or Monaural Transistor Console–Executive



BLOCK DIAGRAM
EXECUTIVE

Dual Programming Ten Channel Transistor Console



THE DIPLOMAT

The Diplomat is the senior partner in the fully transistorized Gates line of Solid-Statesman monaural consoles. This dual channel console has 10 mixing channels, cue-intercom, 28 upper level tab keys for nearly every conceivable input and output circuit function, and features the VA knob and "shadow mold" styling—designed exclusively for Gates by one of the country's leading industrial stylists.

MIXING SYSTEM: The mixing system is a ten channel, low impedance type, using ladder controls throughout in a minimum loss circuit design. The key switch above each channel control switches the mixer to either program amplifier.

MICROPHONE CHANNELS: Six microphones are tab key selected into 3 preamplifiers and associated mixing channels 1, 2 and 3. Channel keys operate the three muting relays.

TURNTABLE CHANNELS: Mixing channels 4 and 5 handle four turntables into either mixer in any sequence. Four upper level tab keys on each channel select the turntable to be used. Cue position on faders connects any turntable input to the cue amplifier.

TAPE CHANNELS: Mixing channels 6 and 7 handle four tape or projector inputs into either mixer in any sequence. Four upper level tab keys on each channel select the input to be used. Cue position on fader connects any tape input to cue amplifier.

REMOTE CHANNEL: Mixing channel 8 accommodates four remote lines by upper tab key selection. A line isolation transformer is part of this circuit. Cue position on fader connects any remote line to cue amplifier.

NETWORK CHANNEL: Mixing channel 9 is for network or similar input. Cue position on fader connects network to cue amplifier for preview.

AUXILIARY CHANNEL: Mixing channel 10 is for any input source such as a second network or much used remote. This auxiliary channel has a cue position on the fader connected to cue amplifier.

CUE-INTERCOM SYSTEM: The built-in intercom system provides network monitoring, remote over-ride, remote talk-back, studio intercom, turntable cueing, tape cueing and general previewing and cueing. The control room and studio speakers are muted by the channel keys and muting relays when there is a live microphone in any of these locations. The cue amplifier and speaker/microphone is self-contained, and the cue speaker/microphone is located directly under the VU meters.

PROGRAM SWITCHING FUNCTIONS: A single key changes the master operation of the console from simultaneous to separate operation as desired by the operator. Dual program amplifiers are standard equipment. Space is provided for an optional third program amplifier. If the third program amplifier is utilized, this will permit, for example, recording while broadcasting AM and FM simultaneously from the second of the dual channels.

VU METERS: Two 4" illuminated VU meters are supplied. The left meter is connected to program channel 1 at all times. The right meter may be switch selected to (a) program channel 1 for calibration, (b) program channel 2, (c) output of optional third program amplifier, (d) network input, or (e) external connections.

MONITORING AMPLIFIER: The self-contained 8 watt monitoring amplifier input may be switched to (a) output of master program channel, (b) output of program channel 2 or (c) external input. Amplifier output feeds the loudspeaker system.

MUTING RELAYS: Three relays mute speakers and operate studio warning lights in the control room and are controlled from microphone mixer channel keys. Intercom is also interlocked to prevent feedback.

Dual Programming Ten Channel Transistor Console–Diplomat

PHONE JACKS: Phone jacks are provided on a separate mounting plate which attaches to the desk, thus eliminating phone cords over the desk top.

POWER SUPPLY: The power supply is fully regulated and self-contained except for the small AC transformer, which is external to assure extremely low noise.

SERVICING: The Diplomat front panel hinges down and cabinet lid hinges up to expose all components for easy maintenance. All terminations are in the rear.

RECOMMENDED USE: The Diplomat may be described as an unusually wide facility audio console of network or large station caliber. It is excellent for TV as well as radio.

SPECIFICATIONS

MIXING CHANNELS: Total 10. Three microphone, two turntable, two tape/projector, one remote, one network and one auxiliary.

AMPLIFIERS PROVIDED: 2 program, 1 monitor, 3 preamplifiers, 1 cue amplifier. Room provided for 1 additional program amplifier and 2 additional preamplifiers.

OPERATING MODE: Dual channel monaural.

INPUT CIRCUITS: 6 for microphones, 4 turntables, 4 tape/projectors, 4 remote lines, 1 network line, 1 auxiliary line.

OUTPUT CIRCUITS: 2 program, 1 audition, 3 muted speakers, 1 non-muted speaker, 2 intercom, 2 headphones.

IMPEDANCES: Microphones: 30/50 or 150/250 ohms. Turntable: 600 ohms. Tape/projector: 600 ohms. Remote lines: 600 ohms. Network: 600 ohms. Auxiliary: 600 ohms. Programming output: 600 ohms. Audition output: 600 ohms. Intercom output: 48 ohms. Monitor speakers: 8/16 ohms. Recording outputs: 600 ohms.

NOTE: Where more than two loudspeakers are used, it is mandatory that the 478-0275 speaker matching transformer or similar be used with each loudspeaker. This assures correct loudspeaker performance and protects power transistors in the monitoring amplifier.

GAIN: Turntable, tape, network (medium level) input to program line output 55 dB. From microphone input to program line output 102 dB. All measurements ±2 dB.

RESPONSE: All segments of program circuit ±1 dB 30-15,000 Hz. Monitoring circuit ±1½ dB 30-15,000 Hz.

NOTE: Typical response: 20-20,000 Hz.

DISTORTION: Any segment of program circuit 0.5% or less between 30-15,000 Hz at +8 dBm output level, or at +18 dBm output 0.5% 50-15,000 Hz. Monitor amplifier 1% at +38 dBm (8 watts). Intermodulation distortion: 0.5% program and 1.0% monitor circuits.

NOISE: Program circuits: 70 dB or better below +18 dBm output, with −50 dBm input (equivalent noise input −120 dBm). Monitor circuits: 60 dB below +39 dBm output. Crosstalk: All circuits below noise level with normal gain settings for proper programming.

POWER: 117 volts, 50/60 Hz, 1 phase. Power consumption 34 watts at 60 Hz.

FINISH: Satin anodized aluminum panel with lettering in black. Cabinet in beige-gray, with shadow mold in black. Knob color insert decal kit included.

SIZE: 53½" wide, 11⅜" high, 17⅜" deep.

SHIPPING DATA: Packed weight: Domestic, 220 lbs.; export, 242 lbs. Cubage: 26 cubic feet.

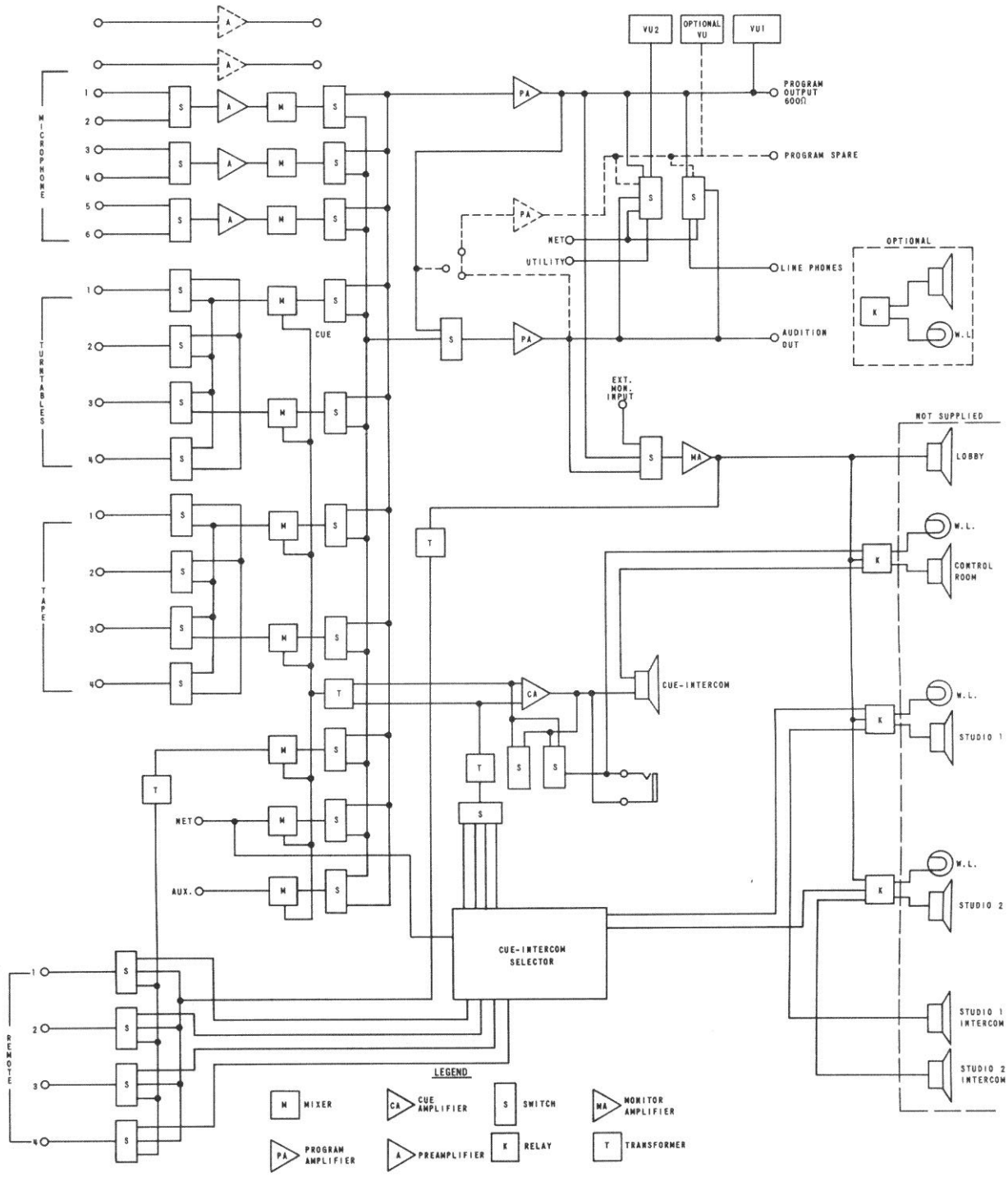
ORDERING INFORMATION

Diplomat audio console complete with four speaker matching transformers	**994-6377**
Optional program amplifier	**994-5700**
Optional preamplifier	**994-6034**
Speaker matching transformer	**478-0275**
Spare 100% semi-conductor kit	**990-0505**
Studio cue/intercom speaker	**994-6424**

IMPORTANT: For optimum performance the load on the monitor amplifier should not be less than 8 ohms. Where it is necessary to operate several loudspeakers on one amplifier, use the 478-0275 matching transformer. Four of these transformers are supplied with the console.

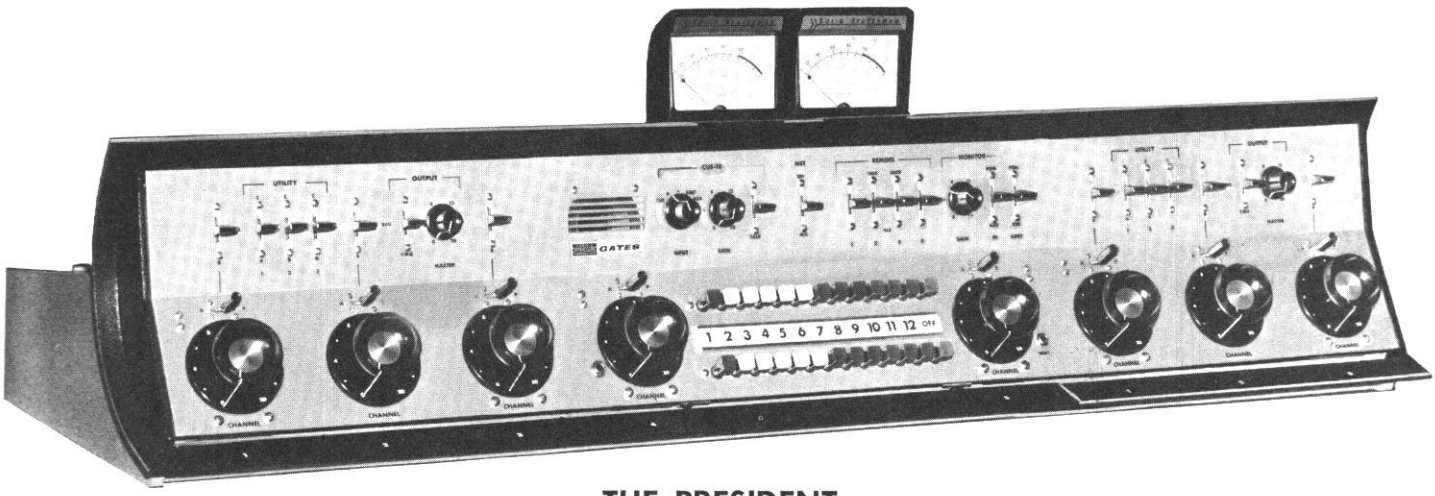
STUDIO CUE-INTERCOM SPEAKER
Beautifully styled to match all Gates Solid Statesman products. Cast aluminum housing in non-reflecting black with heavy fabric grill cloth front. Speaker 600/48 ohms to match console intercom impedances. Size: 5⅛" wide, 6⅜" high, 4" deep. ORDER MODEL 994-6424.

Dual Programming Ten Channel Transistor Console–Diplomat



BLOCK DIAGRAM
DIPLOMAT

Dual Programming Eight Channel Transistor Console



THE PRESIDENT

The President is a completely transistorized dual channel, 8 mixer audio control console, featuring Gates unique Control Center, with its extreme versatility and operating simplicity. Control Center frees engineers from the mechanics of patching, yet all program inputs are available instantly.

With a full amplifier complement, the President console is particularly well suited for television operation. Six of twelve microphones can be mixed simultaneously, while still providing mixing facilities for the extensive medium level signals in television such as: film projectors, video tape recorders, auxiliary mixers, and the usual turntable, cartridge and reel-to-reel equipment.

MIXING SYSTEM: Eight monophonic mixing channels are provided, utilizing low impedance, ladder type controls. Key selection allows any mixer to feed either program channel. Cue positions are on several controls (see Cue-Intercom System).

MICROPHONE INPUTS: This standard console provides eight microphone inputs switchable into four mixing channels. Channels 3 and 8 each provide two medium level inputs, or may be converted to microphone level by use of the optional plug-in microphone preamplifiers. If the preamplifiers are connected ahead of the input selector switch on these channels, each fader can then fill the dual role of a microphone and medium level channel.

MEDIUM LEVEL INPUTS: Control Center consists of two banks of twelve push keys, plus OFF. The upper bank feeds the left mixer. The lower bank feeds the right mixer. Any push key when depressed automatically releases any other key in the same row. All push keys not in use automatically connect to the cue amplifier/speaker. Each bank of push keys has four red, four white, four blue colors, plus green for OFF.

They may be placed in any sequence, and illuminate when the respective key is depressed. Each push key is numbered with a large block figure. A typewritten identification card, identifying each source in the system, may be substituted if desired.

Any of twelve medium level circuits may be punched into either mixing channel, assuring full fader control. Two faders do the work of twelve in the President Control Center. Isolation transformers are used in both circuit banks to assure balance, whether the input is in studio or out of studio.

Push key switches, utilizing gold program circuit contacts, provide reliable maintenance-free operation. Silver alloy DC switching contacts used to illuminate the "in use" stations also provide 30 volts DC for the control of external equipment. The Gates KCP-5 relay is available as optional equipment. It has D.P.D.T. contacts and requires 5 mA to operate.

CUE-INTERCOM SYSTEM: A fully interlocked cue-intercom system is incorporated. The cue position of mixing channels 3 and 8, the network input, or any of the twelve pushbutton stations may feed the cue amplifier, regardless of the position of the cue amplifier input selector switch. Completely self-contained, the cueing system also provides talk-back control to two studios and remote lines.

MUTING RELAYS: Speaker muting relays are provided for the control room and two studio speakers. These relays have extra intercom muting contacts to prevent feeding an intercom signal into the studios when a live microphone is in use. The control room muting relay is factory wired to mute the console speaker with any signal source when the control room microphone is in use. A cue phone jack permits headphone monitoring of the cue-intercom circuits at all times. Added contacts are provided for studio warning lights.

AMPLIFIER COMPLEMENT: The President is completely transistorized, incorporating Gates exclusive Solid-Statesman transistor amplifiers. The standard amplifier complement consists of four plug-in microphone preamplifiers, two plug-in program amplifiers, one cue-intercom amplifier, and an 8 watt transistorized monitoring amplifier. Space is provided for two optional additional preamplifiers. The power supply is self-contained and is fully regulated.

The 10 dB overload capacity of the M-5700 program amplifiers used in the President, coupled with at least a 20 dB overload capacity in the microphone preamplifiers, makes the President almost impervious to excessive program levels. A 6 dB line isolation pad permits the connection of this console to highly reactive telephone lines without any noticeable interaction.

The +39 dBm (8 watts) rating of the transistor monitor amplifier is combined with flat response, and low harmonic and intermodulation distortion that is typical of Solid-Statesman engineering.

The regulated power supply protects the console amplifiers from variations due to line and load regulation. In addition, the power supply ripple is reduced to insure uniformly low noise in all of the console circuits. The power supply is short-circuit protected to prevent damage during operation or maintenance.

VU METERS: Four-inch, illuminated VU meters provide visual monitoring of both output channels. The meters can be mounted anywhere along the top rail of the console, or placed on the console desk.

SPECIFICATIONS

MIXING CHANNELS: Total—8. Monophonic.

AMPLIFIERS PROVIDED: 2 program, 1 monitor, 4 preamplifiers, 1 cue/intercom amplifier. (2 additional preamplifiers optional).

OPERATING MODE: Dual channel monaural.

INPUT CIRCUITS: 8 microphones into 4 preamplifiers, standard. 12 microphones into 6 preamplifiers, by use of two optional preamplifiers. 11 turntables, tape, projector or external inputs into 2 mixers. 4 remote lines. One network line into 1st "Control Center" push key.

OUTPUT LINES: 2 program lines, 3 muted speaker outputs, 1 unmuted speaker output, 2 interlocked studio intercom speakers, 1 intercom, 2 headphone outputs.

IMPEDANCES: (Input) Mics: 30/50 or 150/250 ohms. Mixing channels 3 and 8: 600 ohms unbalanced if optional preamplifiers are not used. (Output) 2 program lines each 500/600 ohms. Monitor amplifier: 8/16 ohms. Intercom speakers: 45 ohms.

GAIN: Microphone input to line output: 104 dB ±3 dB. Turntable input to line output: 56 dB ±2 dB. Microphone input to speaker output: 104 dB minimum. Turntable input to speaker output: 56 dB minimum.

RESPONSE: Rated ±1.0 dB from 30 to 15,000 Hz in all regular program circuits. Capable: 20-20,000 Hz. Rated ±1.5 dB from 30 to 15,000 Hz in all monitoring speaker circuits. Capable: 20-20,000 Hz.

DISTORTION: Rated 0.5% maximum, 30 to 15,000 Hz at +8 dBm output in all regular program circuits. Capable: 20-20,000 Hz. Rated 0.5% maximum, 50 to 15,000 Hz at +18 dBm output in all regular program circuits. Rated 1.0% maximum, 50 to 15,000 Hz at +39 dBm (8 watts) in speaker outputs. Capable: 1% or less 20-20,000 Hz at +38 dBm.

NOISE: Program circuits, 70 dB or better below +18 dBm with −50 dB input (equivalent noise input is −120 dBm). Turntable, tape and all Control Center input circuits 70 dB below +18 dBm output. Monitoring circuits 60 dB below +39 dBm output.

CROSSTALK: Below noise level in all channels.

POWER: 115 volts, 50/60 Hz, 44 watts.

FINISH: Panel, natural aluminum with knobs and lettering in black. Cabinet color—beige-gray. Mixer knobs supplied with decal color insert kit. Control Center knobs in four colors and illuminated.

SIZE: 52½" wide, 11½" high, 17½" deep.

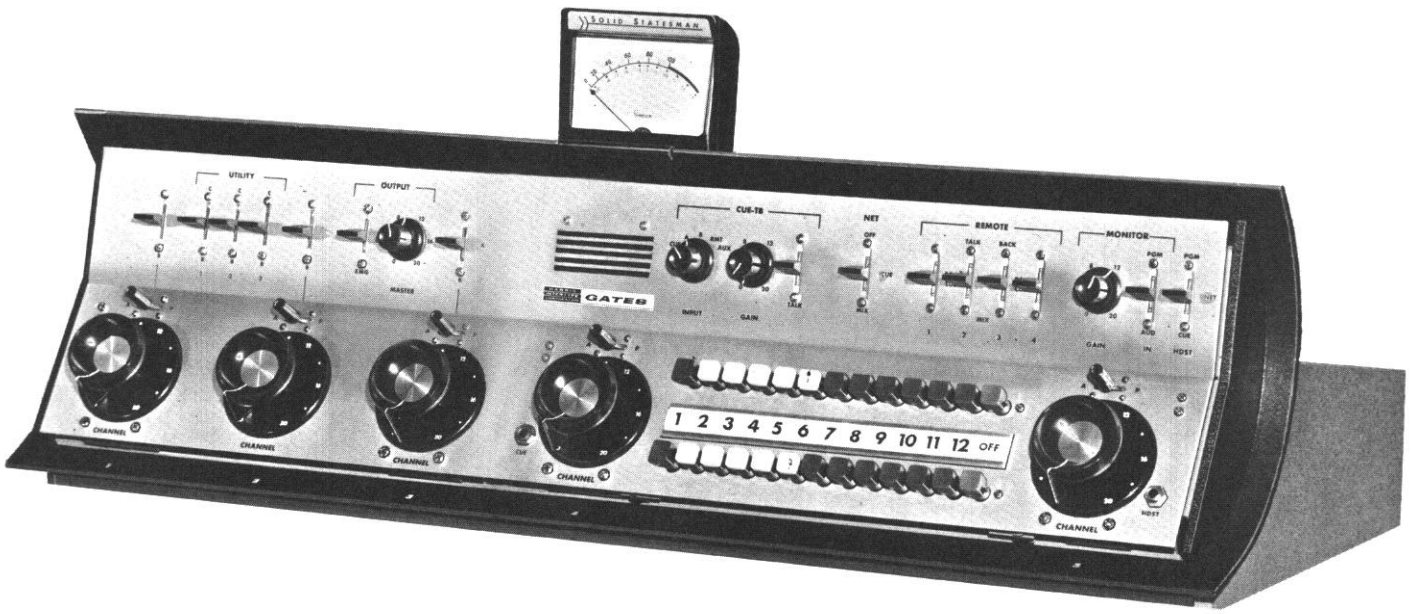
SHIPPING DATA: Weight packed: domestic, 220 lbs.; export, 290 lbs. Cubage: 27 cubic feet.

OPTIONAL ACCESSORIES: Space provided for 2 added M-6034 plug-in amplifiers.

ORDERING INFORMATION

The President, dual channel audio control console, includes 2 external VU meters, 4 speaker matching transformers, 4 mic preamps, monitor amplifier, cue amplifier, and 2 program amplifiers	**994-6209**
Optional plug-in microphone preamplifiers	**994-6034**
External VU meter with housing	**994-6208**
Intercom sub-station, deluxe	**994-6424**
Spare 100% semi-conductor kit	**990-0503**
Speaker matching transformer	**478-0275**
KCP-5 Relay, 30 volt D.P.D.T. to start-stop external equipment	**994-6482**

Five Channel Monophonic Transistor Console



THE AMBASSADOR

A premium quality Solid-Statesman console, the Ambassador features Gates exclusive Control Center, plus superb electrical performance and great operating versatility in a compact size.

The unique Control Center has two mixing channels doing the work of 12. This, combined with the multiple microphone facilities, cue-intercom and many other features, results in a fine console for use in AM, FM and TV broadcasting.

AMPLIFIER COMPLEMENT: The Ambassador is completely transistorized, incorporating Solid-Statesman plug-in transistor amplifiers to meet superior performance and reliability standards. It includes: (2) plug-in microphone preamplifiers (space provided for optional 3rd preamplifier), (1) plug-in program amplifier, (1) plug-in audition booster amplifier, (1) plug-in cue/intercom amplifier and (1) eight-watt monitoring amplifier. The preamplifiers have a full 20 dB overload capacity. The distortion is actually lower than that of many test oscillators. The program amplifier has a full 10 dB overload factor above the +14 dBm rating used to feed the 6 dB line isolation pad to the program line. Performance standards are not altered by substantial level variations and high telephone line reactances, and provide quality that only the more sophisticated test systems are capable of measuring.

The monitoring amplifier provides a full +39 dBm (8 watts) output to the speakers with low harmonic and intermodulation distortion. The response of all amplifiers is flat over a wide audio spectrum. An isolation transformer bridges the output of the monitor amplifier for emergency program feed and remote program cue. The cue-intercom system is peaked for maximum intelligibility.

A fully regulated power supply protects the console amplifiers from variations due to line and load regulation. Power supply ripple is reduced almost to the point of non-existence to assure uniformly low noise in all of the console circuits. The power supply is also protected to prevent damage to any of the transistors in either the power supply or amplifiers from a momentary or sustained short in any of the load circuits.

MIXING SYSTEM: Five monophonic input mixing channels are provided, utilizing low impedance, ladder-type controls. The Ambassador accommodates 22 inputs with expansion facilities to 31 by using the three unwired utility switches left available for the user. Key selection allows any mixer to feed program amplifier or audition output through the audition booster amplifier.

CONTROL CENTER: The heart of the Ambassador is Control Center, operating into mixers 4 and 5. It consists of two rows of 12 push-keys, plus an OFF key, with the upper bank of 12 push-keys feeding the left mixer (#4) and the lower bank of 12 push-keys feeding the right mixer (#5). Any push-key, when depressed, automatically releases any other key in the same row. Any push-keys which are not feeding either mixer 4 or 5 are connected to the cue amplifier/speaker. Push-keys are color-coded for convenience in identifying inputs such as turntables, tapes, etc.

To further expand the medium level facilities in the Ambassador, push-key #1 selects from any one of four remote lines or network as switched by the upper row tab keys above the Control Center. A large, numbered designation strip between the push-key rows may be replaced with typewritten identification cards. Any of the 12 circuits may be switched into either mixing channel, assuring full fader control.

The 30 volt circuit for illumination of each push-key is also brought to a pair of terminals. In this manner, the push-keys may start a mechanical device such as a Criterion, projector or turntable at the same time as the audio is engaged. A relay kit (994-6482) is available for this service and is listed on the next page.

Five Channel Monophonic Transistor Console–Ambassador

Mixing channels one through three provide six more inputs for either microphone or medium-level signals. The standard Ambassador is equipped with two plug-in preamplifiers to accommodate up to four studio and control room microphones through faders 1 and 2. Fader 3 has a cueing attenuator and is for medium-level inputs. Provision for a third, optional, plug-in preamplifier is included. This optional 994-6034 preamplifier may be connected ahead of the input selector switch of channel three for a dual function of microphone input plus medium-level input—or, it may be wired after the input selector to provide two additional microphone inputs.

CUE/INTERCOM SYSTEM: The inbuilt cue/intercom system permits preview listening from all Control Center circuits such as remotes, network, turntables, tapes, projectors. In addition, preview from mixing channel 3 and auxiliary is provided. Talk back is possible to two studios, remote lines and a spare input circuit. The 994-6424 sub-station listed below is suggested for studio use in talk back service.

MUTING RELAYS: Three muting relays, energized by microphone channel keys, disconnect loudspeakers adjacent to a live microphone, provide contacts for warning lights and additional contacts to mute the intercom system when a studio is in use. A cue phone jack is provided to allow headphone monitoring of cue circuits where necessary.

MOVABLE VU METER: Mounted in a cast aluminum housing, the illuminated VU meter may be located where desired—along the top rail of the console cabinet or at either side of the console. In this way, the VU meter may be placed in the most convenient visual location, which varies from one station to another. A connecting cable and plug is part of the meter assembly.

VERSATILITY: The creative design of the Ambassador makes it very nearly a custom console. Control Center, with its array of 24 illuminated touch control keys into two channels, plus 3 additional mixing inputs with their associated switching, and three utility keys, provides many exciting possibilties in audio control.

The VA mixer knob is used on all faders. Designed first in similar style for the Voice of America Studios, it is a substantial advance in the "feel-of-the-board" concept. "Shadow-mold" styling is from one of America's leading industrial stylists, engaged by Gates for the Solid-Statesman line of equipment.

SPECIFICATIONS

MIXING CHANNELS: Total—5. Monophonic.

AMPLIFIERS PROVIDED: 1 plug-in program, 1 plug-in booster, 1 eight-watt monitor, 2 plug-in preamplifiers, 1 plug-in cue amplifier.

OPERATING MODE: Single channel monaural.

INPUT CIRCUITS: 4 microphones into 2 preamplifiers, as supplied; 6 microphones into 3 preamplifiers, 3rd preamplifier optional; 12 turntables, tape, projector, or any medium-level input into 2 mixers; 4 remote lines; 1 network line.

OUTPUT LINES: 1 program, 1 audition, 3 muted speaker, 1 non-muted speaker, 2 studio intercom, 1 spare intercom.

IMPEDANCES: Microphones 30/50 or 150/250 ohms; turntable/tape 600 ohms unbalanced; remote lines 600 ohms; network 600 ohms; programming output 600 ohms; audition output 600 ohms; intercom output 45 ohms; monitor output 8-16 ohms.

GAIN: Turntable, tape, network (high level) input to program line output 56 dB. To monitor amplifier output 56 dB minimum. From microphone input to program line output 104 dB. To monitor amplifier output 104 dB minimum. Note: All measurements ±2 dB.

RESPONSE: All segments of program circuit: ±1.0 dB, 30-15,000 Hz. Capable: 20-20,000 Hz. Monitoring circuit ±1.5 dB, 30 to 15,000 Hz. Capable: 20-20,000 Hz.

DISTORTION: Any segment of program circuit 0.5% or less between 30-15,000 Hz at +8 dBm output level. Capable: 20-20,000 Hz. Monitor amplifier: 1.0% between 30-15,000 Hz, at +39 dBm (8 watts output level). Capable: 20-20,000 Hz.

NOISE: Program circuits: −70 dB or better below +18 dBm output, with −50 dBm (equivalent noise input is −120 dBm). Monitor circuits: 60 dB below +39 dBm output. Crosstalk: All circuits below noise level with normal programming gain settings.

POWER: 117 volts, 50/60 Hz, single phase. Power consumption 40 watts at 60 Hz.

FINISH: Panel: Natural satin anodized aluminum with black nomenclature. Decal color insert kit supplied for mixer knobs. Cabinet: beige-gray with black trim.

SIZE: 37½" long, 11⅜" high, 17⅜" deep.

SHIPPING DATA: Packed weight: Domestic, 245 lbs.; export, 265 lbs. Cubage: 20.5 cubic feet.

OPTIONAL ACCESSORIES: Space is provided to add, when desired, one model 994-6034 preamplifier.

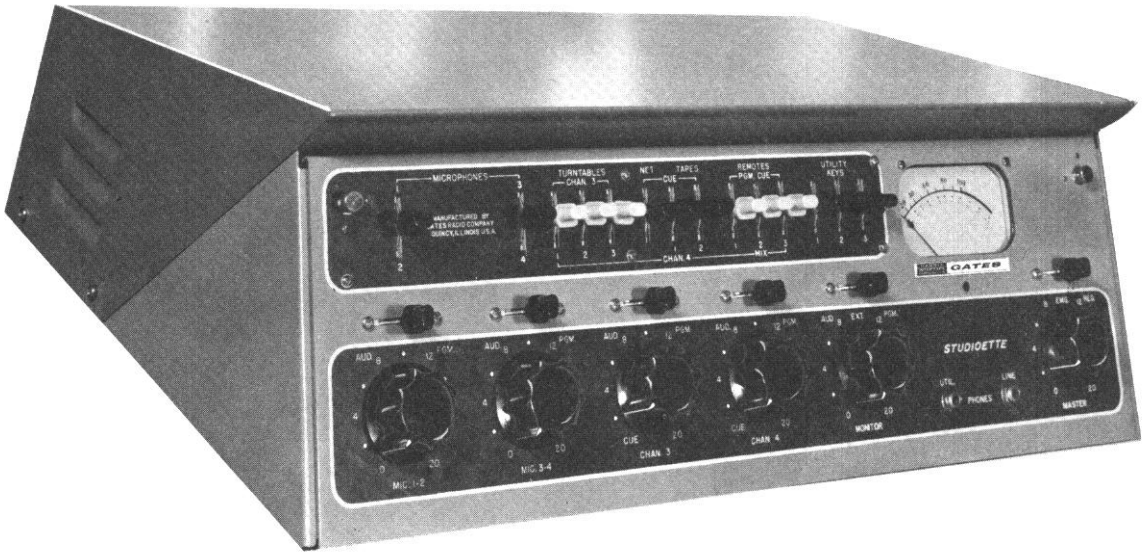
ORDERING INFORMATION

Ambassador, single channel console, complete with 2 preamplifiers and 4 speaker matching transformers	**994-5564**
Extra plug-in microphone preamplifier	**994-6034**
Intercom sub-station, deluxe	**994-6424**
Speaker matching transformer	**478-0275**
Relay kit for use with Control Center to start mechanical device	**994-6482**
Spare 100% semi-conductor kit	**990-0499**
Plug-in jumper board	**913-6060**

NOTES: (1) Four speaker matching transformers are supplied with each console. If more than 4 speakers are to be used, order an added 478-0275 transformer for each added speaker. (2) If it is desired to use mixing channels 1 or 2 as medium level inputs, order 913-6060 plug-in jumper board to replace preamplifiers.

HARRIS INTERTYPE CORPORATION GATES

Four Channel All-Purpose Console



THE STUDIOETTE

A single channel monophonic consolette with 13 inputs into four mixing channels, the Studioette has found wide application as a main console in modest sized stations, as a sub-console for large installations, or as a second console for independent programming or recording. The demand for an attractive, compact, large facility console has made the Studioette equally popular in mobile audio installations.

OPERATION: Completely self-contained including power supply, the Studioette provides 4 mixing channels with channel keys, and a row of 14 tab keys for multiple circuit combinations. Three utility keys are provided for specialized station needs and may be wired into any input. Step type ladder mixing controls, illuminated 4" VU meter, and the same quality amplifiers found on larger Gates consoles are all included in the Studioette.

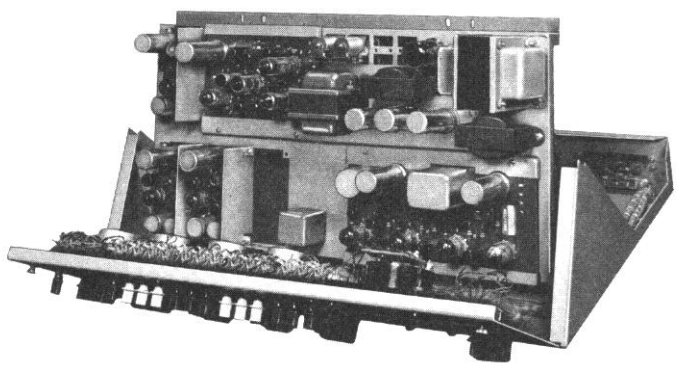
Four microphones may be key selected into two preamplifiers. Three turntables, two tape/projectors, three remote lines and network are also accommodated. The 10 watt ultra-linear monitoring amplifier is standard equipment. Dual muting relays handle speaker and warning light functions. Space is provided for a third (optional) preamplifier. The Studioette is a functional all-purpose console, performance proven by hundreds of broadcasting and recording users around the world.

When mixing channels 3 and 4 are in cue position, they automatically connect to terminals from which a cueing amplifier may be fed. Gates 994-5377 cueing amplifier is ideal for this service. With this feature, all circuits feeding mixing channels 3 and 4 may be prechecked, including turntables, network, tape inputs and remote lines.

MONITOR BOOSTER: A two-stage amplifier is located between the audition bus of the mixer and input to the monitoring amplifier. This feature provides balanced level between the program and audition outputs so that there is no need for readjustment of gain settings when switching.

RELAYS: Two relays are supplied for operating warning lights and muting loudspeakers. There is also space for two additional relays. These relays operate in conjunction with the microphone keys and almost any muting arrangement is possible with this design.

ADDITIONAL FACILITIES: Additional facilities include an output emergency key for switching the program line to the monitoring amplifier output in case of a noisy tube, etc., in the program amplifier. A monitor selector key switches the monitoring amplifier input to: (1) program line for monitoring, (2) terminals for external monitor input, and (3) audition output of the mixing system. A headphone jack is always available across the program line. The 4" illuminated VU meter is flush mounted. This meter is connected to the program line to indicate +8 VU at 0 scale reading.



The Studioette top cover may be completely removed, and the front panel hinges out to reach every "behind the panel" component. The amplifier deck hinges up so that muting relay contacts are at your finger tips when touch-up burnishing is required.

Four Channel All-Purpose Console–Studioette

SPECIFICATIONS

MIXING CHANNELS: Total—4. Key selected to program or audition bus. Channels 1 and 2 for microphones, 3 and 4 for multi-input use such as turntables, tapes, etc. Cue position on faders 3 and 4.

AMPLIFIERS PROVIDED: 1 program, 1 monitor, 2 preamplifiers.

OPERATING MODE: Single channel monaural.

INPUT CIRCUITS: 4 microphones, 3 turntables, 2 tapes or projectors, 3 remote lines, 1 network line. (1 external monitor amplifier input).

OUTPUT LINES: 1 program, 1 audition, 2 muted speaker, 1 non-muted speaker, 1 turntable cue, 1 remote/tape cue.

IMPEDANCES: Microphones 30/50 or 150/250 ohms; turntable/tape 150/250 ohms unbalanced; remote lines 600 ohms; network 600 ohms; Programming output 600 ohms; audition output 20,000 ohms; monitor speakers 8/16 ohms. Note: Where more than two loudspeakers are used, the 478-0275 speaker matching transformer should be used.

GAIN: Turntable, tape, network (medium level) input to program line output 63 dB; to monitor amplifier output 100 dB. From microphone input to program line output 103 dB; to monitor amplifier output 103 dB. All measurements ±2 dB.

RESPONSE: Program circuit ±1½ dB 30 to 15,000 Hz. Monitoring circuit ±2 db 30 to 15,000 Hz.

DISTORTION: Program circuit 1% or less between 30-15,000 Hz at +8 dBm output level. Monitor amplifier 2% at +40 dBm (10 watts).

NOISE: Program circuits: 70 dB or better below +18 dBm output, with −50 dBm input (equivalent noise input is −120 dBm). Monitor circuits: 55 dB below +40 dBm output. Crosstalk: all circuits below noise level with normal gain settings for proper programming.

POWER: 117 volts, 50/60 Hz, 1 phase. Power consumption 120 watts at 60 Hz.

FINISH: Panels, anodized black and gray. Cabinet, beige-gray.

SIZE: 24" wide, 8¼" high, 17" deep.

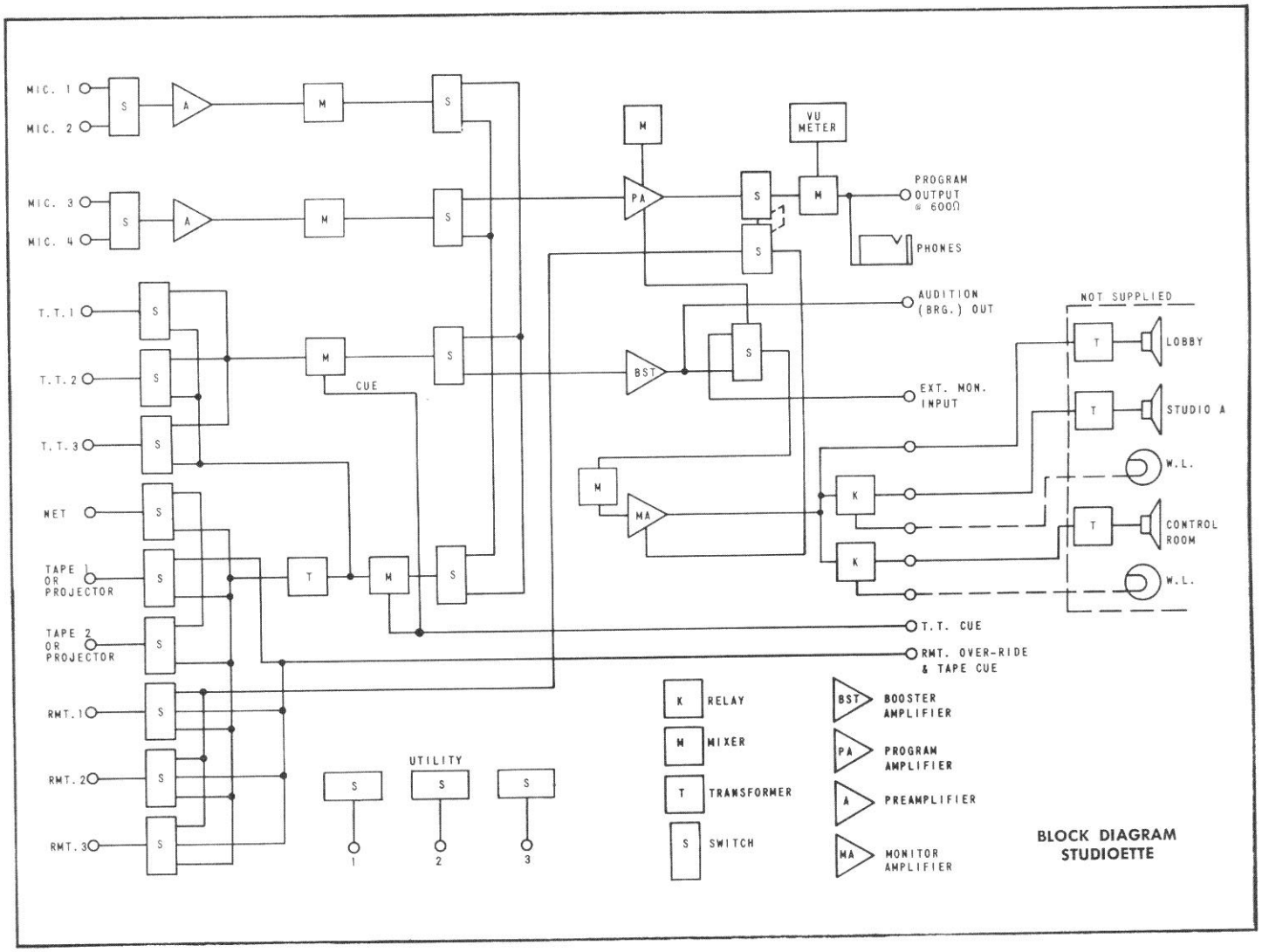
SHIPPING DATA: Packed weight: Domestic, 70 lbs.; export, 110 lbs. Cubage: 12 cubic feet.

TUBES: (9) EF86/6267, (3) 12AX7, (2) EL84, (2) OAT and (1 each) 12AU7, GZ34.

OPTIONAL ACCESSORIES: Space is provided to add 1 model 994-5304 preamplifier and two 572-0072 muting relays.

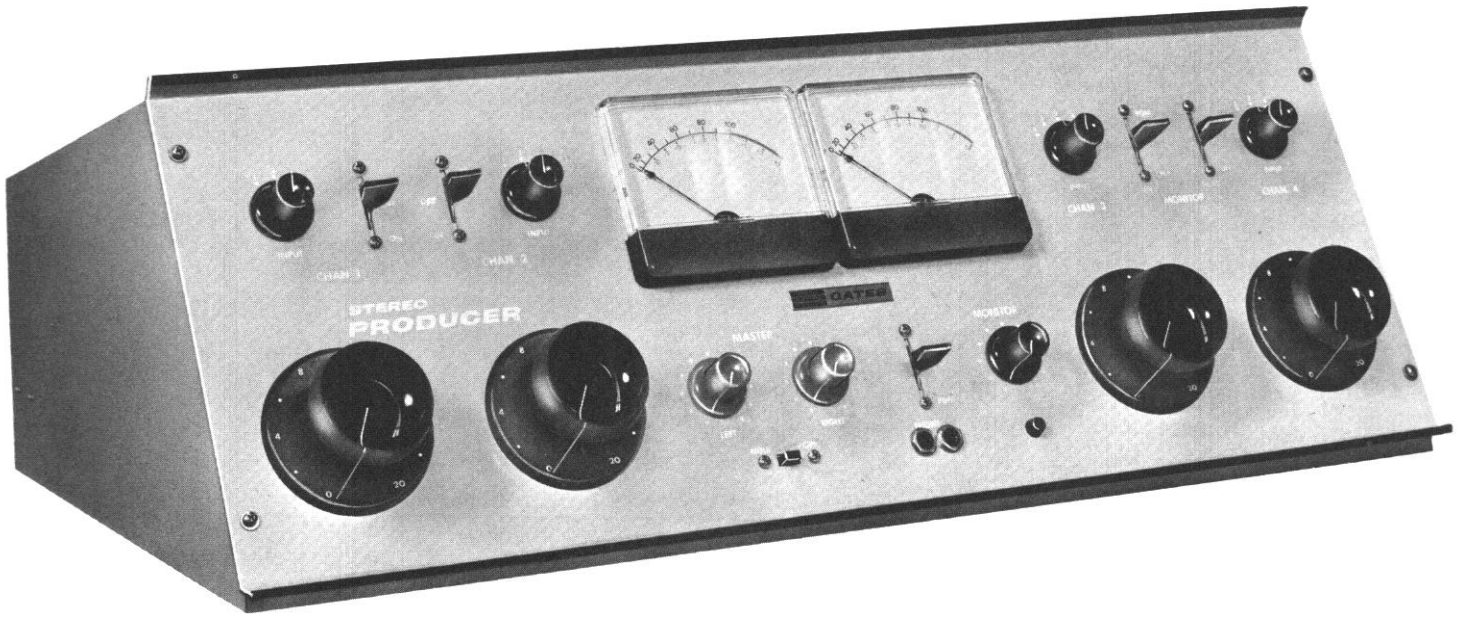
ORDERING INFORMATION

Studioette audio console	**994-5381**
100% spare tube kit	**990-0444**
Optional preamplifier	**994-5304**
Speaker matching transformer	**478-0275**
Extra muting relay	**572-0072**
Optional cueing amplifier	**994-5377**



BLOCK DIAGRAM STUDIOETTE

Four Channel Stereo Recording Mixer



THE STEREO PRODUCER

Gates' Stereo Producer is a solid-state four-channel stereophonic production mixer, providing all facilities for direct recording, dubbing, sound-on-sound recording, editing and monitoring.

ADAPTABILITY: The Stereo Producer may be used in almost any situation not requiring a complete speech input console. It is small enough to take to sporting events, concerts, city council meetings, etc. for on-the-spot remote coverage. Ideal for stereo newscasts, and as a sub-studio console for programming outside the main control room.

SOUND-ON-SOUND: An important feature of the Stereo Producer is its ability to make sound-on-sound recordings. The monitoring amplifiers normally bridge the program amplifier outputs. However, if it is desired to add voice-over on a prerecorded music or voice track, the monitor amplifier is switched to either of the high-level inputs, ahead of the mixers, to prevent acoustic feedback.

STEREO BALANCING: Circuitry is provided to allow accurate stereo channel balancing, using the "null" method, with the aid of the large, 4-inch console VU meters.

INPUTS: The console has transformer-balanced inputs on each channel. Inputs include: six microphones into two faders, and ten turntable, cartridge or reel-to-reel recorders into two faders (for each stereo channel).

OUTPUTS: High-gain program amplifiers furnish 600-ohm balanced outputs at +8 VU, after an isolation pad. The monitor amplifiers provide +32 dBm (1½ watts) for driving monitoring loudspeakers. Monitor-speaker muting on the microphone channels is standard.

Large "feel-of-the-board" VA control knobs are used for speed and accuracy in mixing. Installation of the Stereo Producer is simple, with all cable connections made to barrier-type terminal strips. All components are readily accessible through the lift-off top.

Four Channel Stereo Recording Mixer–Stereo Producer

SPECIFICATIONS

MIXING CHANNELS: Total of 4. 2 microphone channels, 2 medium level (TT/Tape/Projector) channels. Cue provision on medium level channels.

AMPLIFIER SYSTEM: 2 identical printed-circuit board assemblies are used, 1 for each stereo channel. Each printed-circuit board contains 2 microphone preamps, 1 booster amp, 1 program amp, 1 monitor amp, and 1 power supply.

OPERATING MODE: Stereophonic.

INPUT CIRCUITS: 6 microphone or low-level, 10 medium level per stereo channel.

OUTPUT LINES: Stereo program line, stereo monitor output, and stereo high impedance headphone jack.

IMPEDANCES (All Balanced): Microphone, 30/50 or 150/250 ohms. Medium level, 150/600 ohms. Program output, 150/600 ohms. Monitor outputs, 8/16 ohms.

GAIN: Microphone input to line output, 100 dB ±3 dB.
Medium level input to line output, 55 dB ±3 dB.
Medium level input to monitor output, 80 dB ±3 dB.

RESPONSE: ±1.0 dB from 30 to 15,000 Hz in program circuits. ±1.5 dB from 30 to 15,000 Hz in monitoring circuits.

DISTORTION: Harmonic, 1.0% maximum, 50 to 15,000 Hz @ +18 dBm output in program circuits, and @ +32 dBm in monitor circuits. Intermodulation, 1.0% maximum in program circuits.

NOISE: −120 dBm relative input noise on microphone channels. −75 dBm relative input noise on medium level channels.

CROSSTALK: 55 dB below −60 dBm input and +8 dBm output, 30 Hz to 15,000 Hz, microphone channels. 55 dB below −15 dBm input, +8 dBm output, 30 Hz to 15,000 Hz, medium level channels.

POWER: 117 volts, 50/60 Hz, power consumption 28 watts.

FINISH: Beige/gray with black trim.

SIZE: 28" long, 10½" high, 18" deep.

WEIGHT: 60 lbs.

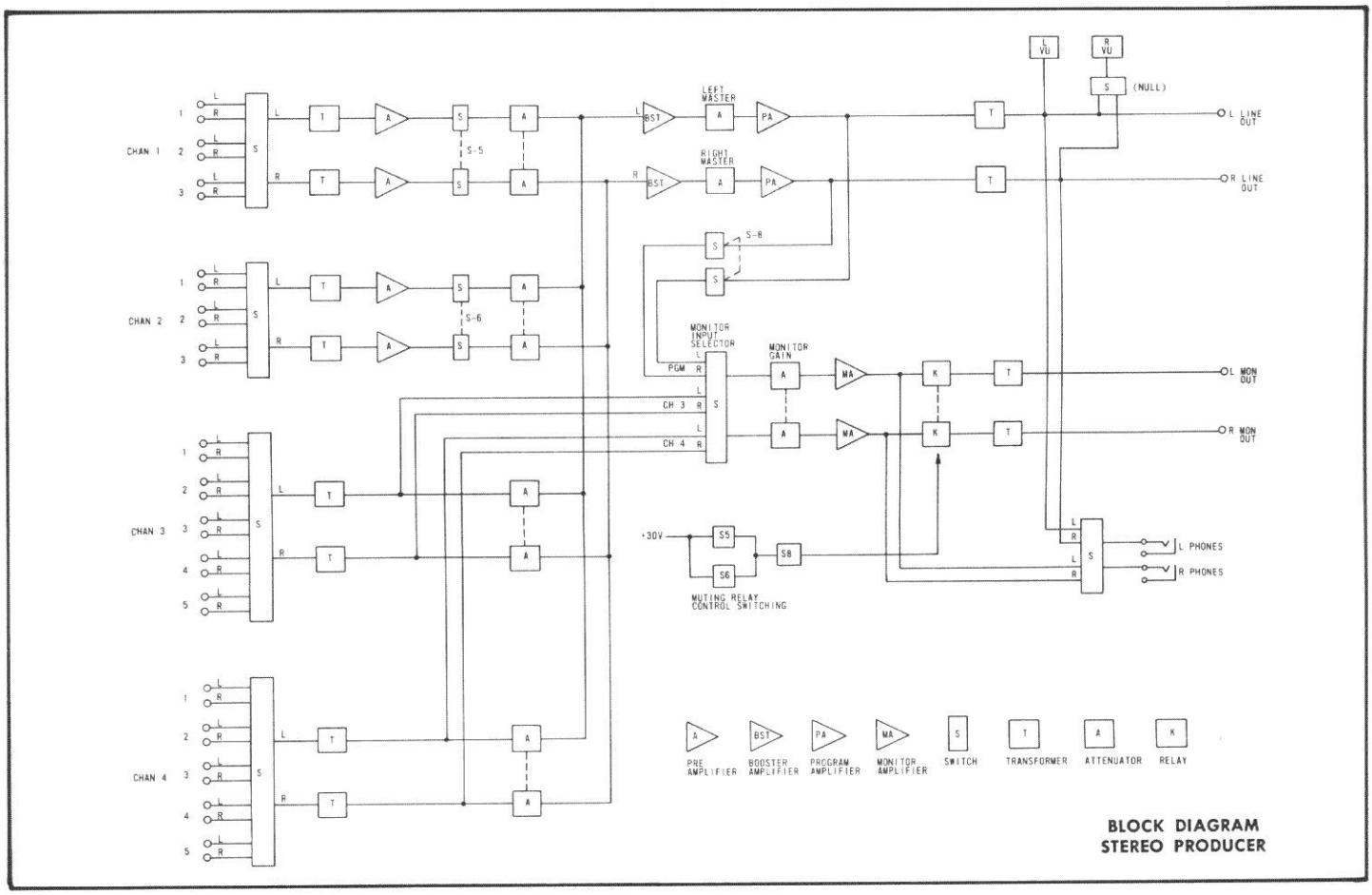
SHIPPING DATA: Packed weight, domestic, 75 lbs.; export, 125 lbs., cubage, 5 cubic feet.

ORDERING INFORMATION

M-6642 Stereo Producer recording mixer, four channels complete with preamplifiers, program amplifiers, monitor amplifiers and self-contained power supplies 994-6642

100% spare semi-conductor kit for the Stereo Producer 990-0583

Speaker matching transformers for using external 8-ohm speakers, 48/8 ohms (two required for stereo) 478-0291



BLOCK DIAGRAM STEREO PRODUCER

HARRIS INTERTYPE CORPORATION GATES

Four Channel Recording Mixer

THE PRODUCER

The rapid growth of cartridge tape recorders and increased use of reel-to-reel recorders in radio and television broadcasting demands an audio control system specifically designed for production mixing. Completely transistorized, Gates Producer provides the facilities for direct recording, dubbing, sound-on-sound recording, editing and monitoring. The use of the VA mixing control knob, the same as used on all Gates Solid Statesman consoles, adds to the accuracy and speed called for in the handling of a production operation.

ADAPTABILITY: Though designed primarily for recording, the Producer is adaptable to other services not requiring a complete speech input console. Such services might include news rooms, mobile units and small sub-stations.

INPUTS: Professional in every respect, the Producer provides transformer balanced inputs on each channel. Twelve inputs through the four mixing channels provide six microphones into two faders, plus six turntables, cartridges, or reel-to-reel recorders into two faders. Two-stage, 45 dB preamplifiers on microphone channels 1 and 2 provide high level mixing. Completely self-contained, the Producer also includes a high gain program amplifier which furnishes a 600 ohm balanced output at +8 VU, after a 6 dB pad. A monitor amplifier is provided, driving the 3" x 5" loudspeaker mounted internally (or an external speaker, if desired). Monitor speaker muting on the microphone channels is standard. Muting defeat is also provided.

SOUND-ON-SOUND: An exclusive feature in the Producer is the ability to make "sound-on-sound" recordings with ease. The monitoring amplifier normally bridges the program amplifier output. If it is desired to add voice over a pre-recorded voice or music track, this amplifier is switched to monitor either high level input, ahead of the mixers, without fear of feedback.

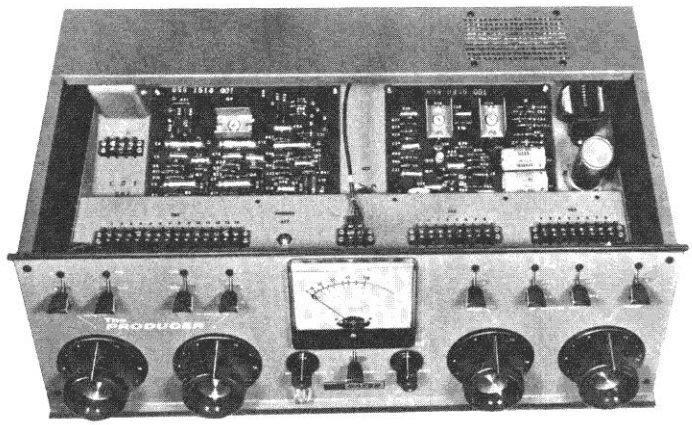
A four-inch illuminated VU meter, a headphone monitor jack, and a self-contained power supply are all standard on the Producer.

DESIGN: This console is a fine example of functional design and versatility, tailored specifically for broadcast production requirements. All amplifier components are on two printed boards, one containing the two microphone preamplifiers and program amplifier, the other housing the monitor amplifier and power supply. All transistors are plug-in for ease of maintenance.

The regulated power supply is short-circuit protected by a self-restoring sealed circuit breaker, eliminating the need for fuses. Installation of the Producer is fast and simple, with all cable connections made to barrier-type terminal strips.

Four Channel Recording Mixer–Producer

Note complete transistorized construction and immediate access to all components. Self-contained 3" x 5" speaker located at top rear is ideal for cueing and production.



SPECIFICATIONS

MIXING CHANNELS: Total—4. 2 microphone channels, 2 TT/tape/projector channels. Cue provision on high level channels.

AMPLIFIERS PROVIDED: 1 program, 2 preamplifiers, 1 monitor amplifier and power supply.

OPERATING MODE: Single-channel monophonic.

INPUT CIRCUITS: 6 microphone or low level, 6 turntable/tape or high level.

OUTPUT LINES: 600 ohms balanced. One 45/48 ohm internal or external loudspeaker. One high-impedance headphone monitor.

IMPEDANCES: Microphone, 30/50 or 150/250 ohms. Turntable, tape, or cartridge, 150 or 600 ohms. Programming output, 600 ohms balanced. Loudspeaker, 45/48 ohms.

GAIN: Microphone input to line output, 100 dB ±3 dB. Turntable input to line output, 55 dB ±3 dB. Microphone input to speaker output, 125 dB ±3 dB. Turntable input to speaker output, 80 dB ±3 dB.

RESPONSE: ±1.0 dB from 30 to15,000 Hz in program circuits. ±1.5 dB from 30 to 15,000 Hz in monitoring circuits.

HARMONIC DISTORTION: 0.5% maximum, 30 to 15,000 Hz at +8 dBm output in program circuits.

INTERMODULATION DISTORTION: 0.5% maximum in program circuits.

NOISE: −120 dBm relative input noise on microphone channels. −75 dBm relative input noise on turntable channels.

POWER: 117 volts, 50/60 Hz, power consumption 30 watts.

FINISH: Beige-gray with black trim.

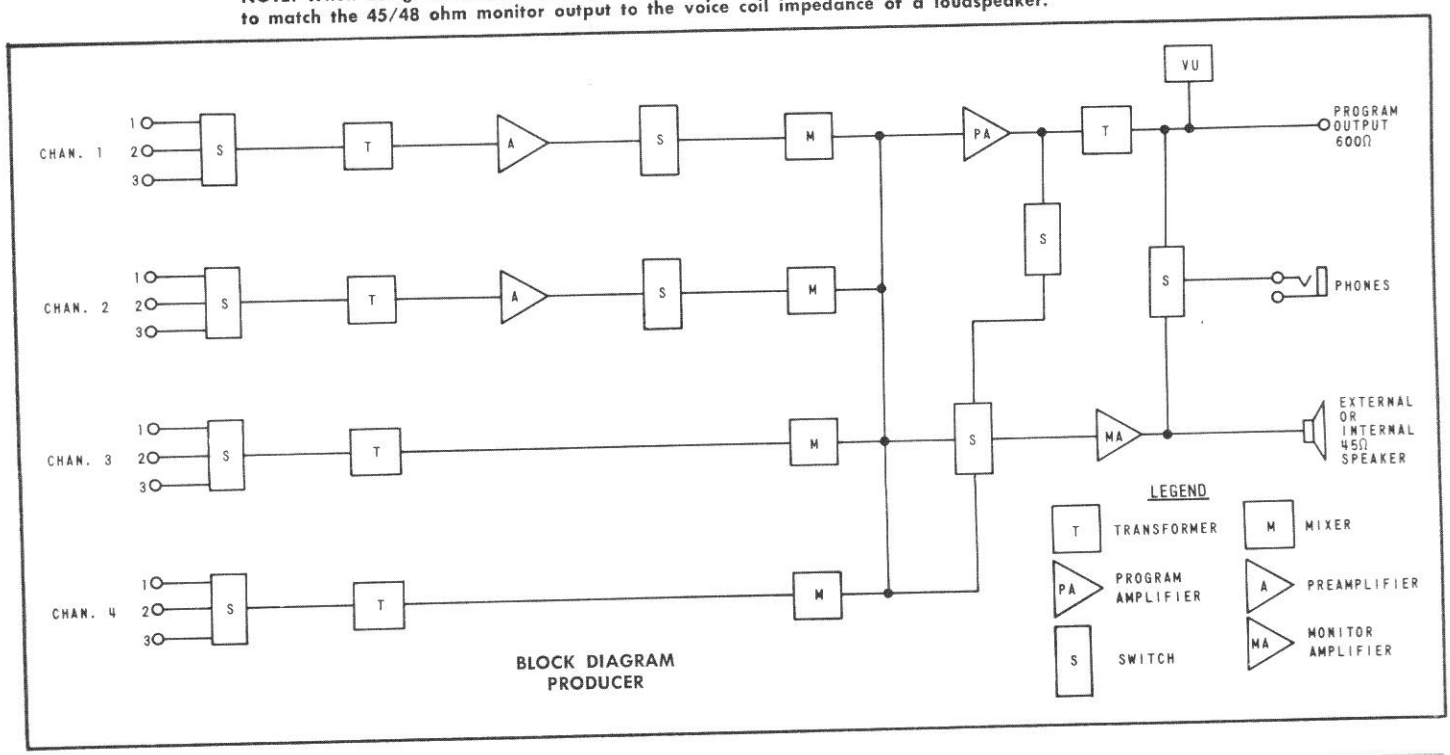
SIZE: 24" long, 10½" high, 15" deep.

SHIPPING DATA: Packed weight, domestic, 50 lbs.; export, 80 lbs. Cubage; 4.6 cubic feet.

ORDERING INFORMATION

The Producer recording mixer	**994-6407**
100% spare semi-conductor kit	**990-0512**
Speaker matching transformer	**478-0275**

NOTE: When using external monitoring loudspeakers, the 478-0275 matching transformer must be used to match the 45/48 ohm monitor output to the voice coil impedance of a loudspeaker.



BLOCK DIAGRAM
PRODUCER

HARRIS INTERTYPE CORPORATION GATES

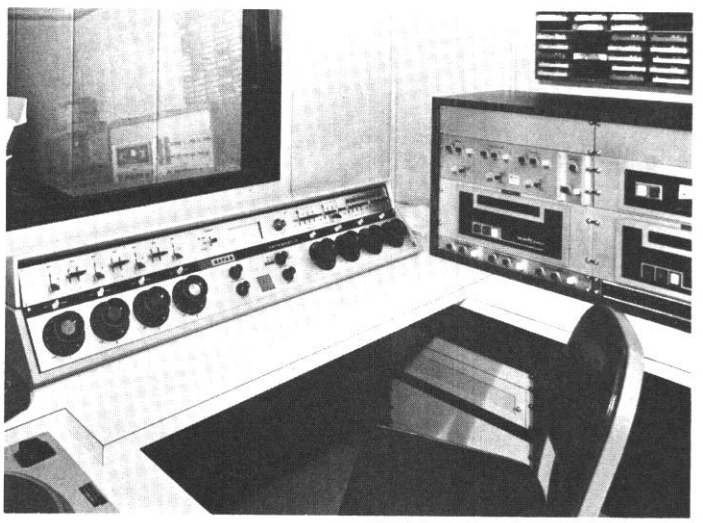
Audio Installations

STEREO STATESMAN CONSOLE AND GATES' CB-77 TURNTABLES
KCOR, SAN ANTONIO

TELEVISION AUDIO CONSOLE
CBS TELEVISION, NEW YORK

Gates standard and custom audio equipment is designed to meet the highest quality standards, with special attention given to both the performance and reliability of every unit. Because of this insistence on quality, and proven superior capabilities in design and manufacturing, Gates has long been the leader in filling the audio equipment needs of the entire broadcast industry—from the smaller individual stations to the largest major networks.

Photographs on this page illustrate how Gates audio systems contribute to the total communications flexibility of a dynamic media. In planning new installations, assistance is available to every AM, FM, TV, and educational station or government agency upon request.



GATESWAY II CONSOLE AND CARTRIDGE TAPE EQUIPMENT
WEEI, BOSTON

VOICE OF AMERICA
GATES' CUSTOM AUDIO SYSTEM