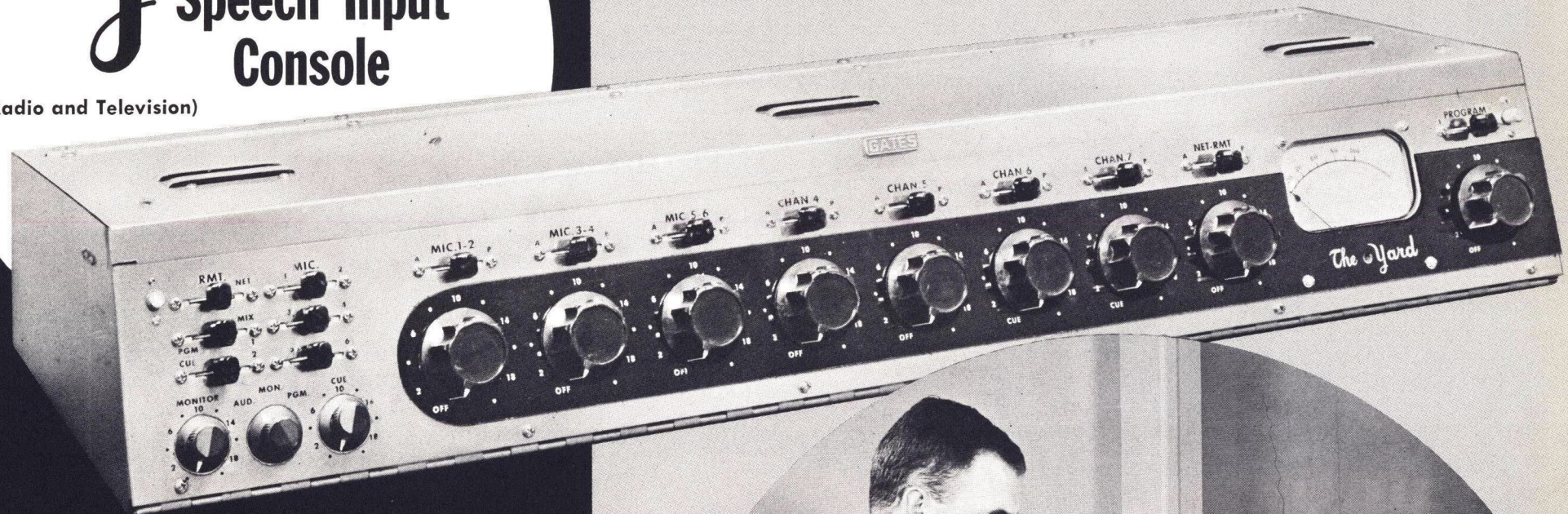




the yard Speech Input Console

(for Radio and Television)

wide versatility for all station requirements



- Eight mixing channels key selected to program or monitor bus
- Space for 8 pre-amplifiers (3 are standard)
- Inbuilt cue-amplifier and speaker for turntable/projector channels and remote lines
- Ultra linear 10 watt monitoring amplifier at 1% distortion



GATES

LEADER IN CREATIVE ENGINEERING

..... the yard Speech Input Console..... GENERAL

DESIGN: Master gain is to the right and is isolated from other controls by the 4" VU meter which falls adjacent to it. VU meter glass is flush with panel for smooth moving from control to control. Secondary controls such as remote line switching, monitor gain, cue-amplifier gain, etc., are all located to the left. The center position of the console is for CONTROL only. Over-all height of the "YARD" is only 5¾" for easy over-the-top viewing in either radio or television production. Panel is anodized aluminum in natural and black. Cabinet finish is medium gray.

SERVICING: All printed circuit amplifiers are the same depth and mount on a channel strip extending the full width of the console. The front panel hinges out to reach all controls and switches instantly. Cabinet lid hinges up for reaching every part, tube and termination.

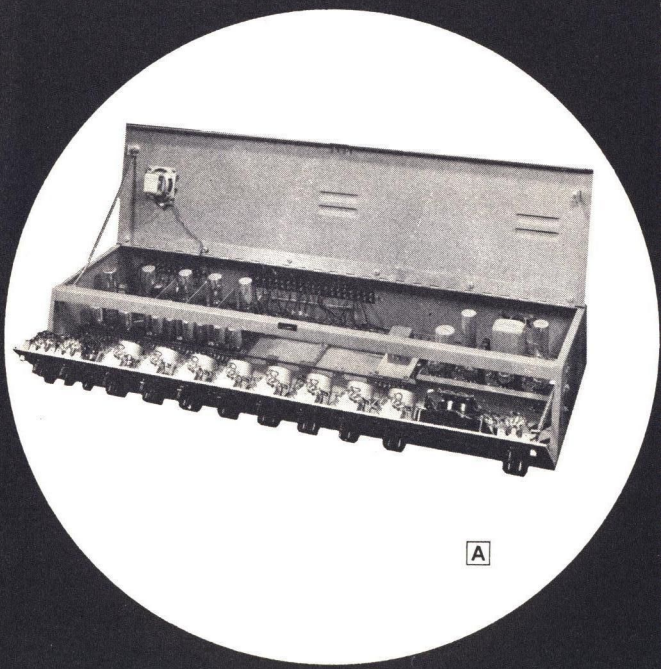
MIXING SYSTEM: Eight channels are each key selected into the program or monitoring amplifier bus. Controls are low impedance and have 20 steps of 2 db. Channels 6 and 7 have cue connection at infinity (off). This cue feeds the output from channel 6 and 7 to cueing amplifier/speaker as employed for turntable, tape or projector cue up. Muting relays operate in conjunction with the mixer keys and are wired to the first three channels. Sufficient contacts are on all channel keys where more muting relays are added. Monitor mixer bus is switch selectable to either the monitoring amplifier or external terminals for recording.

PREAMPLIFIERS: Three are provided as standard. Space for five more is available. Each of the three preamplifiers has an input key to select two microphones to each preamplifier, giving a six microphone capacity. Muting relays may be connected in any usable combination

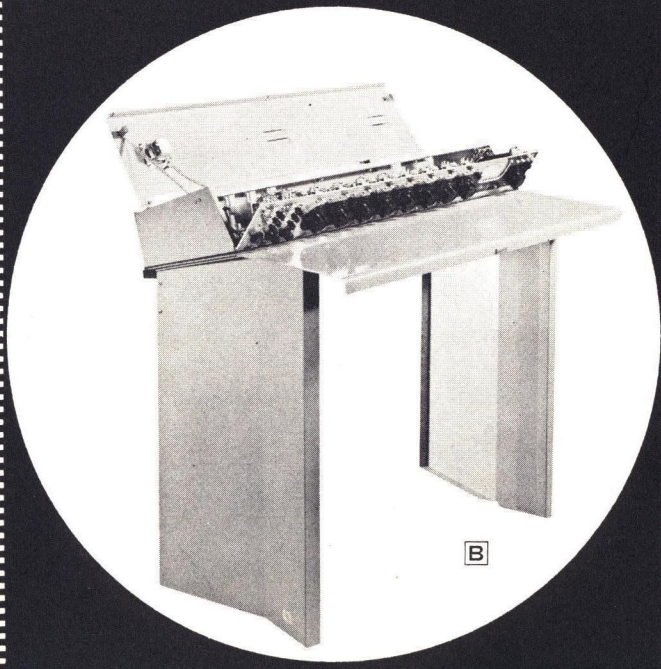
with both input and mixing channel keys. Additional M-5304 preamplifiers require only insertion and readied termination to the available filament and plate supply in the console. When using the maximum of eight preamplifiers, the total microphone capacity is 11.

CUE-AMPLIFIER/SPEAKER is inbuilt and has its own control at the left. Speaker is mounted in the console lid. Output from remote lines and mixing channels 6 and 7 are switchable to the cueing amplifier. The "YARD" is the only console in its price range with an inbuilt cueing system.

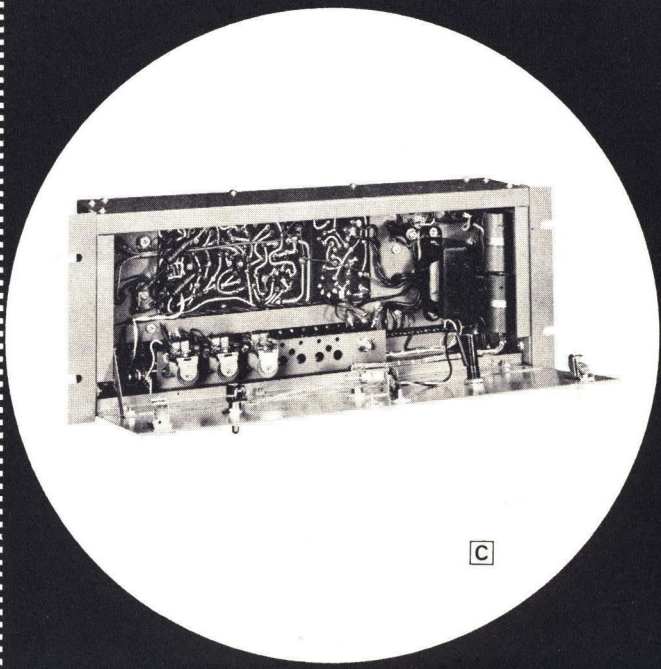
MONITORING AMPLIFIER: In today's modern broadcasting, loudspeaker distribution is increasingly important. Standard "YARD" equipment includes an ultra linear 10 watt, 1% distortion amplifier. The popular EL84 tubes are utilized in the push-pull output circuit.



A



B



C

INFORMATION

MONITOR BOOSTER: This added "YARD" exclusive provides a separate voltage amplifier to bring the monitor-audition bus level to equal the program bus level. This makes it possible to switch from program to monitor with no change in level. The output of this amplifier may be switched from monitor amplifier input to a pair of terminals for recording direct from any mixing channel. The monitoring amplifier, power supply and muting relay unit are in a separate unit as illustrated.

PROGRAM AMPLIFIER has four stages and an abundance of gain for wide control. Both input and output are low impedance. High quality components are used throughout to give reliable performance.

POWER SUPPLY is fully regulated employing a 4-tube circuit and electronic filtering for low noise. All filament, plate and relay voltages are provided.

MUTING RELAYS: Provision is made for five relays. Two relays are supplied as standard. These mount behind the drop-down panel of the power supply/monitor unit. Contacts are provided for both speaker muting and warning lights. Muting relays are of a high quality telephone type and operate from control keys on console in a wide variety of circuit combinations to suit the purchasers desires.

A The "YARD" opens up completely for fast servicing, tube change and cleaning. Three pre-amplifiers are standard equipment but note the room provided for five more.

B "YARD" utility cannot be denied in this open view on the optional M-5528 desk. The desk, when purchased with the "YARD", is negligible in cost.

C The front panel drops down to meet the muting relays. Two are standard but punch-outs are provided for three more if ever needed.

REMOTE/NET KEYS: Three incoming lines are selected by three keys to the extreme left. All lines feed through a line isolation transformer. The two remote lines are selectable to "program cue", "cueing amplifier" and "broadcast". The "network" key may be used for a remote line where the station is independent.

VU METER is standard 4" illuminated, flush mounted meter and operates at all times in the program line circuit.

OUTPUT KEY: Selects the output of the program amplifier to a choice of two lines.

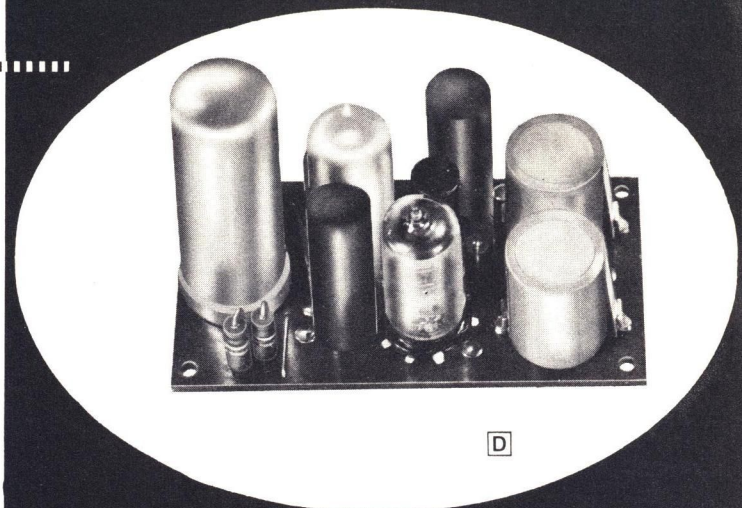
PRINTED WIRING: All amplifiers and the power supply are constructed on heavy printed wiring boards. The advantages of printed wiring are manifold. Top in importance is absolute uniformity. Performance is always the same. By eliminating the point to point wiring cost and including printed wiring, cost savings can be invested in greater facilities and finer materials without an increase in selling price. Printed wiring is approved in many delicate equipments manufactured by Gates for the United States Signal Corps.

TERMINATIONS are to numbered terminal boards and installation is simplified by easy accessibility to all terminals.

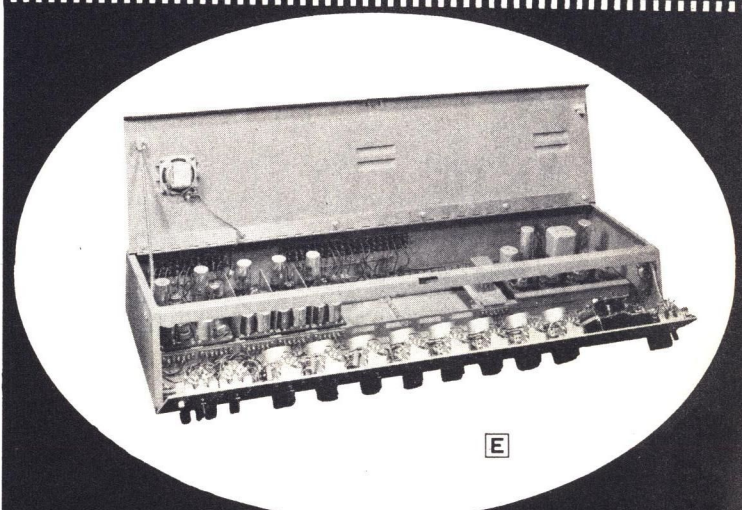
D Want to add another microphone channel? There is room for five more M-5304 printed wiring two-stage preamplifiers. Add as you wish, or a TV station might wish all eight at once.

E Functional design and human engineering played an important part in "YARD" design. Modern looks, simplicity, and accessibility are all outstanding assets.

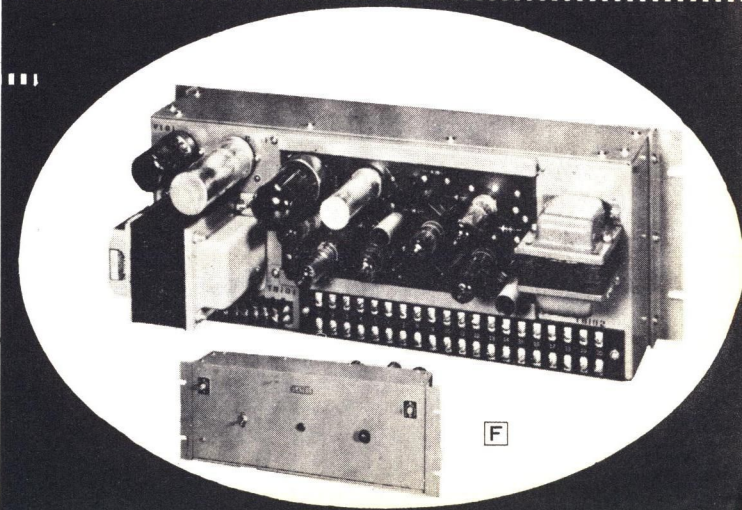
F Monitoring amplifier, regulated power supply and muting relays are a separate husky rack or desk mount unit. Note the clean uniform and easy to service "printed wiring".



D



E



F

SPECIFICATIONS

- GAIN:** (a) Any preamplifier input to program line output: 103 db.
 (b) Any preamplifier input to monitoring amplifier output: 130 db.
 (c) Any turntable, tape, projector or network input to program line output: 60 db.
 (d) Any turntable, tape, projector or network input to monitoring amplifier output: 87 db.

NOTE: Gain of monitoring amplifier is reduced by fixed pad when operating from output of program amplifier. All gain measurements stated are ± 2 db.

RESPONSE: Program circuits $\pm 1\frac{1}{2}$ db, 30-15,000 cycles. Monitor circuits ± 2 db, 30-15,000 cycles.

DISTORTION: Program circuit 1% or less 30-15,000 cycles at +8 dbm.
 Monitor circuit 1% or less 50-15,000 cycles at +40 dbm or 10 watts.

NOISE: Program circuit including preamplifier 60 db or better below +8 dbm output with -60 dbm input.
 Equivalent noise input is -120 dbm.
 Monitor circuit 62 db below +40 dbm output.

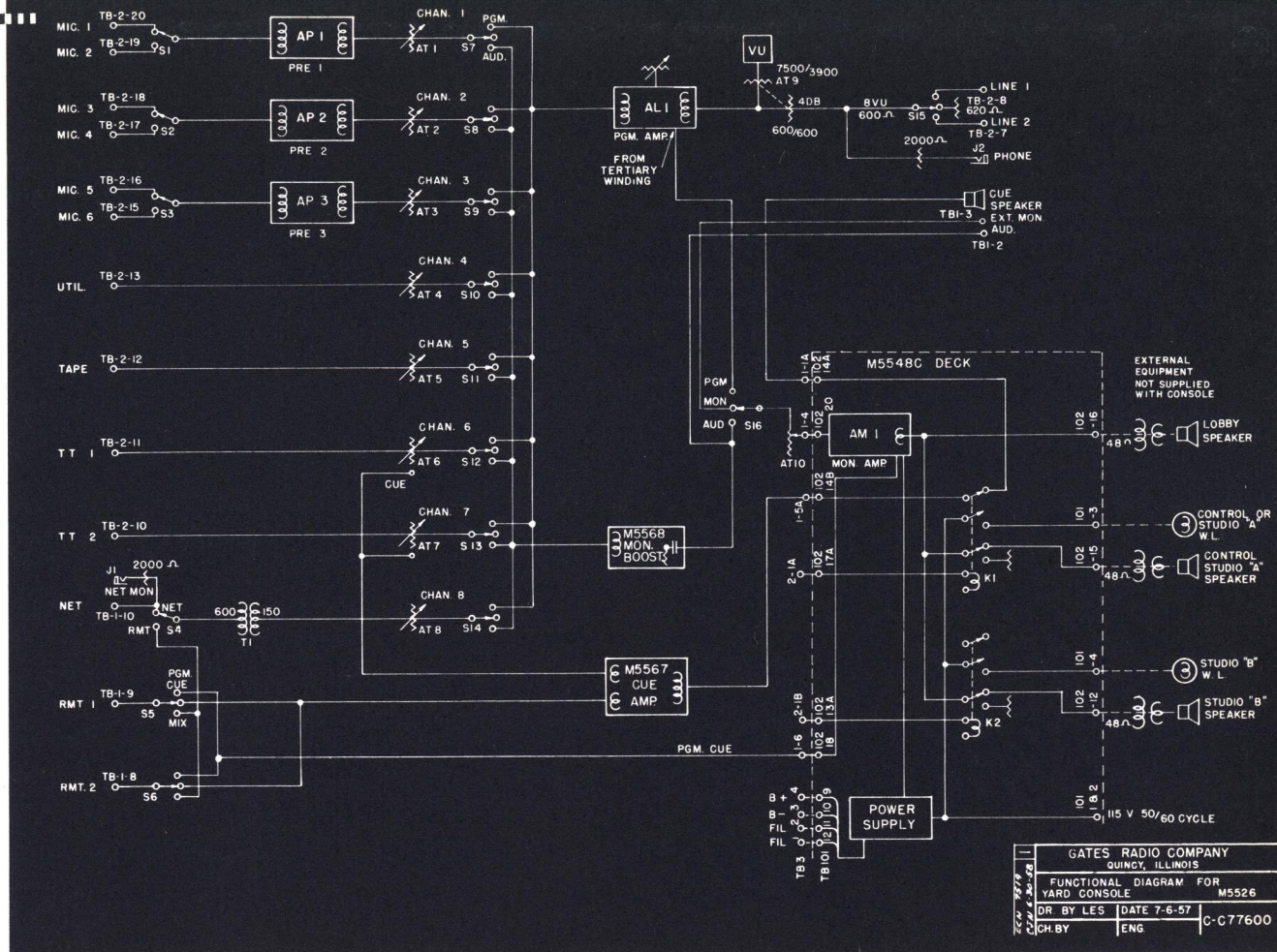
IMPEDANCES: Microphone input to preamplifiers, 30/50 — 150/250 ohms.
 Turntable, projector, tape input to mixer, 150/250 ohms.
 Remote line, network input to mixer, 100/250 — 500/600 ohms.

Program line output, 500/600 ohms.
 Monitoring amplifier output, 8 or 16 ohms.

POWER: 115 volts, 50/60 cycles at 130 watts.

SIZE: Console, 36" wide, 5 $\frac{3}{4}$ " high, 12 $\frac{1}{2}$ " deep.
 Power/monitoring/muting unit, 19" wide, 7" high, 8" deep. Front panel drops down to service.
 Optional desk, 30" high, 36" wide, 25 $\frac{1}{2}$ " deep with desk (front to console) depth 12".

TUBES: Preamplifiers each (2) 5879.
 Program amplifiers (3) 5879 and (1) 12AU7.
 Cueing amplifier (1) 12AX7 and (1) 6AK6.
 Monitor booster amplifier (1) 12AX7.
 Monitoring amplifier (2) 12AX7 and (2) EL84.
 Power supply, one each OA2, 5879, 6080, 5V4 (GZ34).
 Total tubes (stand. model with 3 preamplifiers) — 21.
 Total tube types — 8.



FINISH: Cabinet medium gray. Panel, anodized aluminum in natural and black. Knobs furnished with color decal kit. Desk, medium gray to match cabinet of "YARD".

SPEAKER MATCHING TRANSFORMER. Available as an accessory where several speakers are multiplied to the 16 ohm output. Primary 48 ohms, secondary 8 ohms. Not required where 2 or 3 speakers are the maximum.

ORDERING INFORMATION

- Yard console complete with three preamplifiers, power supply/monitoring amplifier/muting relay unit and 100% set of tubes.....**M-5526**
- Spare 100% tube kit for M-5526 Yard.....**TK-282**
- Extra preamplifier with tubes.....**M-5304**
- Extra muting relays.....**AK-12626**
- Desk complete as illustrated.....**M-5528**
- Speaker matching transformer.....**A30601**

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