

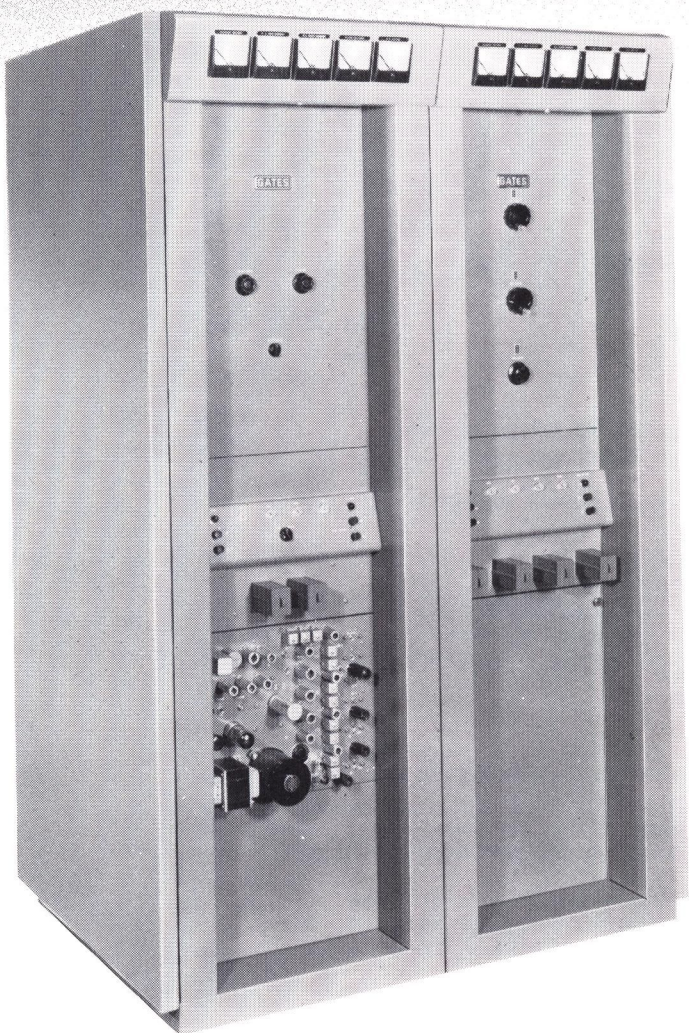


GATES TRANSMITTER GUIDE



CONTENTS

- 5000/10,000 Watt AM
- 1000 Watt AM
- 500 Watt AM
- 250 Watt AM
- 5000 Watt FM
- 1000 Watt FM
- 250 Watt FM
- 50 Watt FM
- 10 Watt FM
- 500 Watt TV
- 100 Watt TV
- Accessories



5000 WATT FM MODEL FM-5B

SPECIFICATIONS

POWER OUTPUT: Rated 5000 watts. Capable 5500 watts.

FREQUENCY RANGE: 88-108 Mc. (Other frequencies to 170 Mc available on special order.)

RADIO FREQUENCY OUTPUT: 51½ ohms into 1 5/8" coaxial flange connector.

OUTPUT METER: Reads directly in watts power plus standing wave ratio.

MODULATION: Phase shift with pulse techniques.

MODULATION CAPABILITY: ±100 Kc, (±75 Kc equals 100% modulation).

AUDIO INPUT: 600 ohms at +10 dbm ±2 dbm.

FREQUENCY RESPONSE: Within 1 db of standard 75 microsecond pre-emphasis curve or flat ±1 db from 50-15,000 cycles. If preference, please specify.

DISTORTION: (at 100% modulation)
1% or less 50-15,000 cycles.

NOISE: 65 db below 100% modulation (FM).
60 db below 100% equivalent AM modulation.

TUBES: (7) 6AU6, (6) 575A, (4) 12AX7, (3) 6J6, (2) OA2, (2) 6076, (2) 8008 and one each, 6360, 6AQ5, 6080, GZ34/5AR4, 4X250B.

Total tubes: 31.

Total tube types: 12.

POWER: 230 volts, 50/60 cycles, 3 phase, 20 KVA demand. 115 volts, 50/60 cycles, single phase, 500 watts.

MULTIPLEX: (optional accessory) Attaches to lower front of left cabinet.

SIZE: (overall) width 51", height 78", depth 36½". (each cubicle) width 24", height 78", depth 36½".

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GATES

FM-1B 1000 WATT FM — FM-250B 250 WATT FM

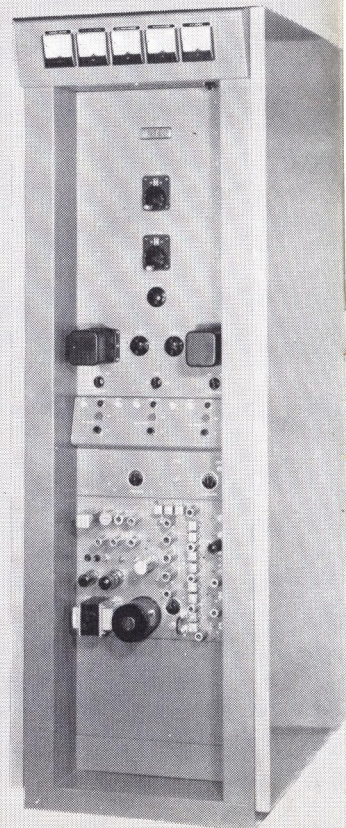
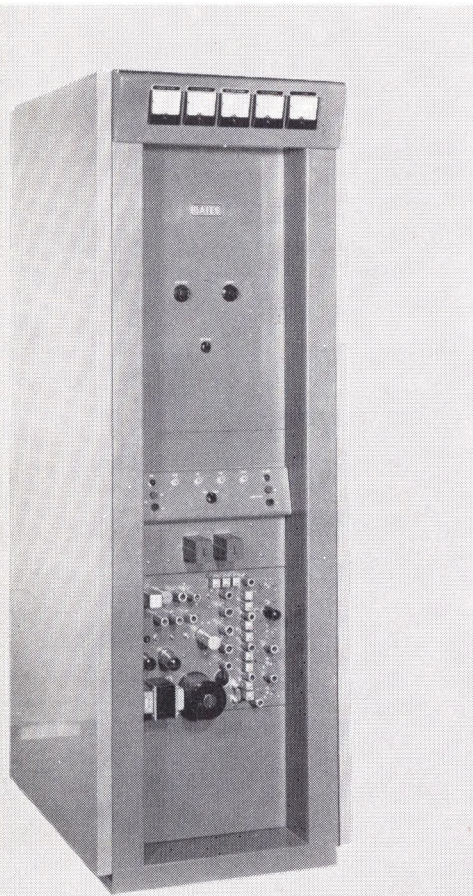
1000 WATT FM — MODEL FM-1B SPECIFICATIONS

- POWER OUTPUT:** Rated 1000 watts. Capable 1100 watts.
- FREQUENCY RANGE:** 88-108 Mc. (On special order, available for other frequencies between 40 and 88 Mc.)
- RF OUTPUT:** 51 1/2 ohms into a 7/8" coaxial flange connector.
- OSCILLATOR:** Direct crystal controlled.
- FREQUENCY STABILITY:** 0.001%.
- HARMONICS:** Suppression meets or exceeds FCC requirements.
- MODULATION:** ±100 Kc, (±75 Kc required for 100% modulation).
- AUDIO INPUT:** 600 ohms at ±10 dbm ±2 db.
- RESPONSE:** Within 1 db of standard 75 microsecond pre-emphasis curve or flat ±1.0 db from 50 to 15,000 cycles. If preference, please specify.
- DISTORTION:** (at 100% modulation)
1% or less 50-100 cycles.
0.5% or less 100-10,000 cycles.
1% or less 10,000-15,000 cycles.
- NOISE:** 65 db below 100% modulation (FM).
60 db below equivalent 100% AM modulation.
- POWER INPUT:** 230 volts, 50/60 cycles, single phase, 3-wire, 5 KVA demand.
- TUBES:** (7) 6AU6, (4) 12AX7, (3) 6J6, (2) OA2, (2) 6146, (2) 4-400A, (2) 8008 and one each, 6360, 6AQ5, 6080, GZ34/5AR4 and 5R4GYA.
- METERING:** Filament volts, PA grid current, PA plate current, plate volts and power output/VSWR. (Pin jacks permit detailed checking of exciter with volt-ohm-meter and standard prods.)
- SIZE:** 27" wide, 78" high, 36 1/2" deep. Width may be reduced to 24" by removing end bells.
- WEIGHT:** Net 880 lbs. Packed 1140 lbs. Cubage 44.

Multiplex Optional

250 WATT FM — MODEL FM-250B SPECIFICATIONS

- POWER OUTPUT:** Rated 250 watts.
- FREQUENCY RANGE:** FM-250B (Broadcast), 88-108 Mc.
FM-250C (Communications), 40-88 Mc and 108-220 Mc, as ordered.
- FREQUENCY SWING:** FM-250B, ±100 Kc (75 Kc considered 100% modulation).
FM-250C, available as ordered.
- FREQUENCY STABILITY:** 0.001% via temperature controlled crystal.
- OSCILLATOR:** Direct crystal controlled.
- RF OUTPUT:** 51 1/2 ohms to coaxial line to Type N connector.
- AUDIO INPUT:** 600 ohms at +10 dbm, ±2 db (for 100% modulation).
- FREQUENCY RESPONSE:** Within 1.0 db of standard 75 microsecond pre-emphasis curve or flat ±1.0 db, 50-15,000 cycles, as desired. Specify if preference.
- DISTORTION:** (at 100% modulation)
1% or less 50-100 cycles.
0.5% or less 100-10,000 cycles.
1% or less 10,000-15,000 cycles.
- NOISE:** 65 db below 100% modulation (FM).
60 db below equivalent 100% AM modulation.
- RF HARMONICS:** Suppression meets or exceeds all FCC requirements.
- POWER INPUT:** 115 volts, 50/60 cycles, single phase, 2 KVA demand.
- TUBES:** (7) 6AU6, (4) 12AX7, (3) 6J6, (2) OA2, (2) 866A and one each 6360, 6AQ5, 6080, GZ34/5AR4, 4X250B.
- METERING:** Filament volts, PA grid current, PA plate current, plate volts, power output/VSWR. Pin jacks measure each circuit in exciter using standard volt-ohm-meter and prods.
- RELAY PROTECTION:** Grid underload, plate overload, air pressure, door interlock, filaments or end plate voltage on.
- SIZE:** 78" high, 27" wide, 36 1/2" deep. If end bells removed, width reduces to 24".
- WEIGHT:** Net 510 lbs. Packed 820 lbs. Cubage 44.
- FINISH:** Medium gloss gray with escutcheons in black and trim in chrome.

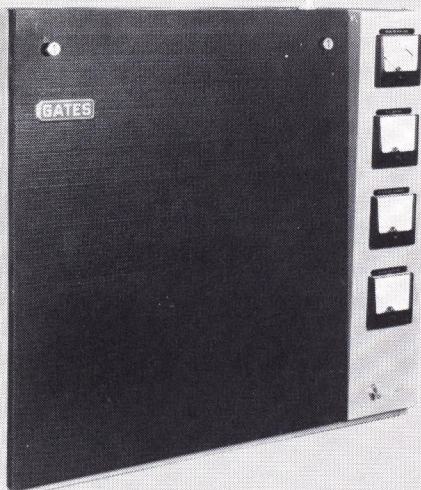
Multiplex Optional

BF-E-10B 10 Watt FM — BF-E-50B 50 Watt FM 250 WATT AM

10 WATT AND 50 WATT FM RADIO TRANSMITTERS

SPECIFICATIONS

- POWER OUTPUT:** BF-E-10B, ten watts. BF-E-50B, fifty watts.
- FREQUENCY RANGE:** 88-108 Mc, as ordered.
- RF OUTPUT:** 51 ohms (Type N connector).
- OSCILLATOR:** Direct crystal controlled, 0.001% stability.
- MODULATION:** Phase shift, employing pulse techniques.
- FREQUENCY SWING:** ± 100 KC. (± 75 Kc equals 100% modulation in FM broadcasting).
- INPUT:** +10 dbm ± 2 db at 600 ohms impedance.
- RESPONSE:** Within 1 db of standard 75 microsecond pre-emphasis curve or flat ± 1 db, 50-15,000 cycles, as desired, (If preference, state when ordering.)
- DISTORTION:** 1% or less 50-100 cycles.
 $\frac{1}{2}$ % or less 100-10,000 cycles.
 1% or less 10,000-15,000 cycles.
- NOISE:** 65 db below 100% modulation (FM).
 60 db below equivalent 100% AM modulation.



METERING: RF output, audio level, plate current, plate voltage.

POWER: 115 volts, 50/60 cycles. BF-E-10B, 120 watts. BF-E-50B, 230 watts.

RF HARMONICS: Suppression meets or exceeds all FCC requirements.

TUBES: BF-E-10B — (7) 6AU6, (4) 12AX7, (3) 6J6, (2) OA2, and one each 6AQ5, GZ34/5AR4, 6080, 6360.

BF-E-50B — Same as above, with (2) 6146 and (1) 5R4GYA tubes added.

SIZE: 26 1/2" high, 28" wide, 14" deep.

WEIGHT: BF-E-10B — Packed 115 lbs. Cubage 8.5.

BF-E-50B — Packed 165 lbs. Cubage 8.5.

Multiplex Optional

BC-250T 250 WATT AM TRANSMITTER SPECIFICATIONS

POWER OUTPUT: Rated 250 watts. Capable 300 watts.

MODULATION: High level Class B.

RF FREQUENCY RANGE: 540-2000 Kc.

RF OUTPUT: Full Tee-network variable coil tuning to match 50-75 ohms.

RF STABILITY: Rater ± 10 cycles. (Typical: ± 2 cycles) Vacuum mounted, ovenless crystals (provision for 2) used throughout.

CARRIER SHIFT: 3% or less 0-100% modulation.

AUDIO INPUT: 150/250 or 500/600 ohms at +8 dbm for 100% modulation.

AUDIO RESPONSE: $\pm 1 \frac{1}{2}$ db, 30-12,000 cycles.
 (Typical: $\pm 1 \frac{1}{2}$ db 30-16,000 cycles under practical programming conditions.)

NOISE: 60 db or better below 100% modulation.

DISTORTION: 3% or less 50-10,000 cycles. (At 95% modulation).
 (Typical: 2% or less 50-16,000 cycles under practical programming conditions.)

TUBES: 12BY7A oscillator, 12BY7A first IPA, (2) 6BG6G second IPA, (2) 810 power amplifier, (2) 6BG6G first audio, (2) 6BG6G cathode follower drivers, (2) 810 modulators, (2) 866A intermediate power rectifiers, (2) 8008 main power rectifiers, (1) 5R4GY bias rectifier.

Total tubes: 17.

Total tube types: 6.

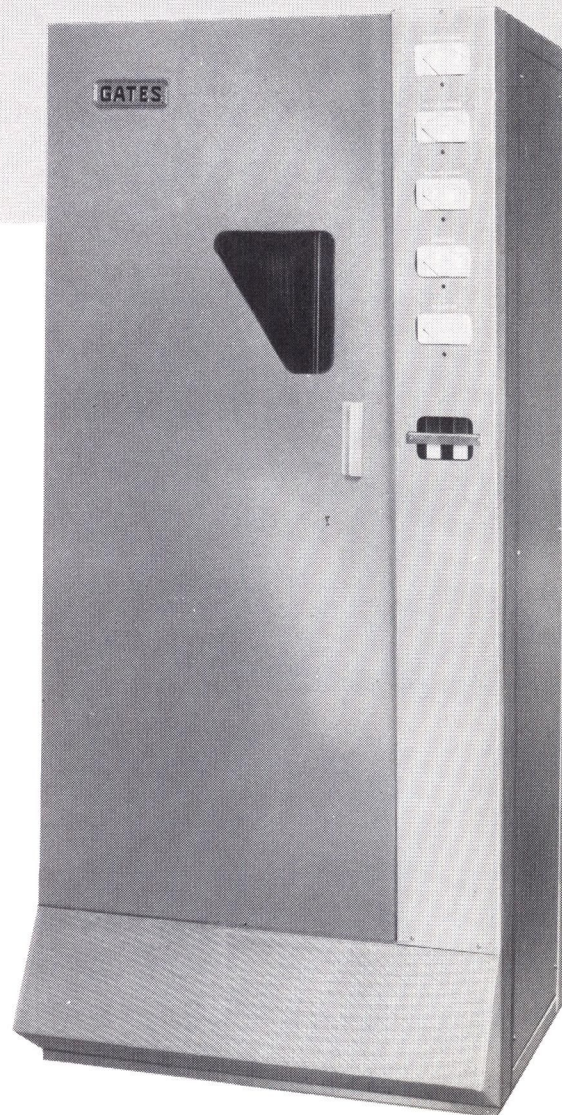
VENTILATION: Convex through wide bottom front grill.

SIZE: 78" high, 36" wide, 32" deep. Front door swing 28".* Floor space, 8 sq. ft.

WEIGHT: Net 750 lbs. Packed 1070 lbs. Cubage 71.

FINISH: Medium hand rubbed gloss gray in two tones.

* Back and side removable. As design is for 100% service from the front, transmitter may be located near or against back wall.

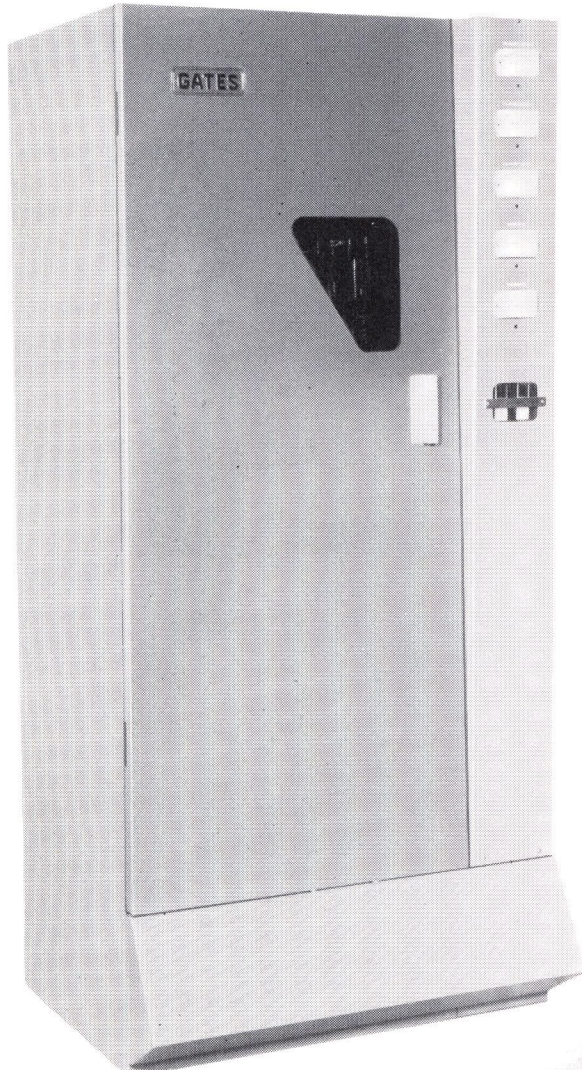




BC-500T 500 WATT AM BC-1T 1000 WATT AM

BC-500T 500 WATT AM TRANSMITTER SPECIFICATIONS

- POWER OUTPUT:** Rated 500 watts. Capability 600 watts.
- AUDIO INPUT:** +9 db \pm 2 db for 100% modulation at impedance choice of 150, 250 or 600 ohms.
- AUDIO RESPONSE:** \pm 1 1/2 db 30-12,000 cycles. (Typical: \pm 1 1/2 db 30-16,000 cycles under practical programming condition.)
- AUDIO DISTORTION:** 3% or less 50-10,000 cycles (95% modulation).
(Typical: 2% or less 50-16,000 cycles under practical programming conditions.)
- NOISE (unweighted):** Below 100% modulation, rated 60 db, capable 65 db.
- RF RANGE:** 540 kc to 2000 kc, as ordered.
- RF OUTPUT IMPEDANCE:** 50/70 ohms.
- FREQUENCY STABILITY:** \pm 10 cycles. (Typical: \pm 2 cycles.)
- MONITOR IMPEDANCES:** Will match all current makes of frequency and modulation monitors.
- MODULATION:** High level Class B.
- POWER INPUT:** 230 volts, 2 wire, 50/60 cycles from 1960 watts at zero modulation to 2660 watts at 100% modulation.
- CARRIER SHIFT:** 3% or less at 100% modulation.
- DUMMY ANTENNA:** 51 1/2 ohms at 500 watts 100% modulation.
- TUBES:** 12BY7A oscillator.
12BY7A 1st IPA.
(2) 6BG6G 2nd IPA.
(1) 833A power amplifier.
(2) 6BG6G 1st audio.
(2) 6BG6G 2nd audio.
(2) 833A modulators.
5R4GY rectifier.
(2) 866A LV rectifiers.
(2) 8008 HV rectifiers.
Total number of tubes: 16.
Total tube types: 6.
- SIZE:** 78" high, 36" wide, 32" deep. Front door swing 28". Floor space 8 sq. ft.
- WEIGHT:** 700 lbs. net. 990 lbs. packed. Cubage, 61.
Export, 1400 lbs. estimated packed. Export cubage, 110.0.



BC-1T 1000 WATT AM TRANSMITTER SPECIFICATIONS

- POWER OUTPUT:** Rated 1000 watts. Capability 1100 watts.
- AUDIO INPUT:** +12 db \pm 2 db for 100% modulation at impedance choice of 150, 250 or 600 ohms.
- AUDIO RESPONSE:** \pm 1 1/2 db 30-12,000 cycles. (Typical: \pm 1 1/2 db 30-16,000 cycles under practical programming conditions.)
- AUDIO DISTORTION:** 3% or less 50-10,000 cycles (at 95% modulation).
(Typical: 2% or less 50-16,000 cycles under practical programming conditions.)
- NOISE (unweighted):** Below 100% modulation, rated 60 db, capable 65 db.
- RF RANGE:** 540 kc to 2000 kc, as ordered.
- RF OUTPUT IMPEDANCE:** 50/70 ohms.
- FREQUENCY STABILITY:** \pm 10 cycles. (Typical: \pm 2 cycles.)
- MONITOR IMPEDANCES:** Will match all current makes of frequency and modulation monitors.
- MODULATION:** High level Class B.
- POWER INPUT:** 230 volts, 2 wire, 50/60 cycles from 2740 watts at zero modulation to 3940 watts at 100% modulation.
- CARRIER SHIFT:** 3% or less at 100% modulation.
- DUMMY ANTENNA:** 51 1/2 ohms at 1000 watts 100% modulation.
- SIZE:** 78" high, 36" wide, 32" deep. Front doors swing 28". Floor space 8 sq. ft.
- WEIGHT:** 800 lbs. net. 1090 lbs. packed. Cubage, 61. Export, 1500 lbs. estimated packed. Cubage, 110.0.

- TUBES:** 12BY7A oscillator
12BY7A 1st IPA
(2) 6BG6G 2nd IPA
(2) 833A power amplifiers
(2) 6BG6G 1st audio
(2) 6BG6G 2nd audio
(2) 833A modulators
5R4GY rectifier
(2) 866A LV rectifiers
(2) 8008 HV rectifiers
Total number of tubes: 17
Total tube types: 6

BC-5P 5KW AM

BC-10P 10KW AM

GATES

BC-5P 5KW AM

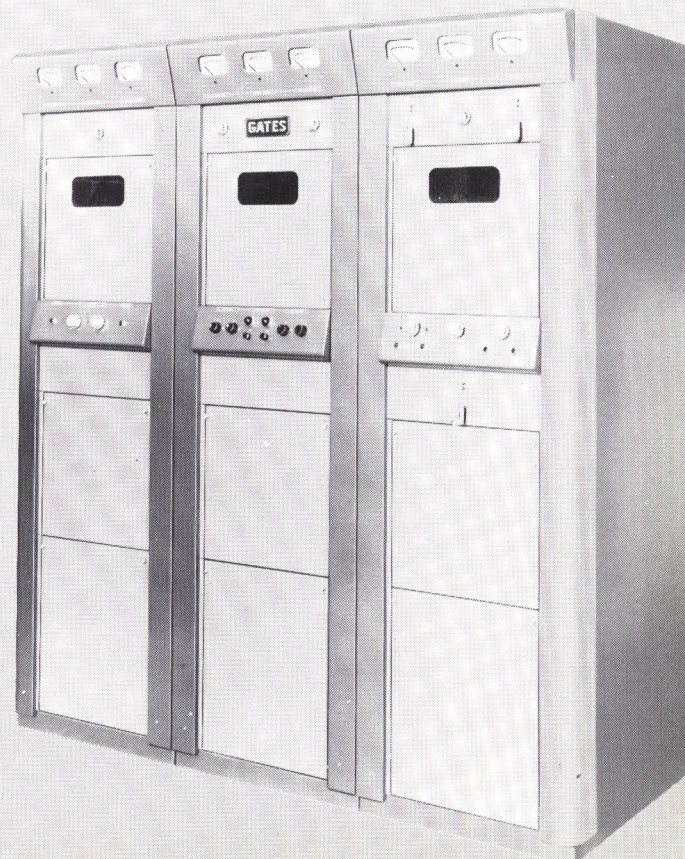
SPECIFICATIONS

- RATED POWER OUTPUT:** 5000 watts.
- CAPABLE POWER OUTPUT:** 5600 watts.
- POWER INPUT:** 230 volts, 3 phase, 50/60 cycles.
- POWER DEMAND:** Carrier, 11KW. Average modulation, 12½KW. 100% modulation, 17KW.
- POWER REDUCTION:** Carrier reduction to 1KW.
- POWER FACTOR:** 90%.
- CARRIER SHIFT:** 3% or less at 100% modulation.
- IMPEDANCES:** Audio input, 600/150 ohms at -5 dbm. RF output, 40-270 ohms, as ordered.
- FREQUENCY RANGE:** 535-2000 kc, as ordered.
- FREQUENCY STABILITY:** ±5 cycles.
- AUDIO RESPONSE:** Average programming ±1½ db, 30-12,000 cycles. Where ordered, transmitter will be supplied to maximum high frequency response of 7500 cycles to meet proposed new FCC regulations for lower sideband radiation.
- AUDIO DISTORTION:** 3% or less, 50-7500 cycles at 95% modulation.
- INTER-MODULATION DISTORTION:** At 90% modulation typical inter-modulation of 3% at 60 and 7000 cycles is measured.
- NOISE:** 60 db or better below 100% modulation at 5KW power.
- SIZE:** 78" high, 39½" front to back, 73½" wide.
- WEIGHT:** Net weight: 2610 lbs.
Gross weight: domestic packed, 3040 lbs.
export packed, 3390 lbs. Cubage 321.

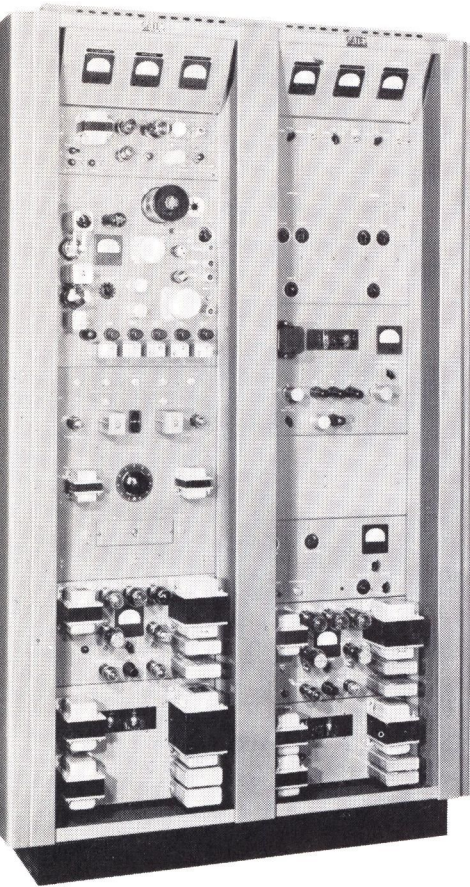
BC-10P 10KW AM

SPECIFICATIONS

- RATED POWER OUTPUT:** 10,000 watts.
- CAPABLE POWER OUTPUT:** 10,600 watts.
- POWER INPUT:** 230 volts, 3 phase, 50/60 cycles.
- POWER DEMAND:** Carrier, 18KW. Average modulation, 21KW. 100% modulation, 26KW.
- POWER REDUCTION:** Carrier reduction to low power (2500 watts) for tune-up. Other power reductions on special order.
- POWER FACTOR:** 90%.
- CARRIER SHIFT:** 3% or less at 100% modulation.
- IMPEDANCES:** Audio input, 600/150 ohms at 0 dbm. RF output, 40-270 ohms, as ordered.
- FREQUENCY RANGE:** 535 Kc to 2000 Kc as ordered.
- FREQUENCY STABILITY:** ±10 cycles (typical ±2 cycles).
- AUDIO RESPONSE:** ±1½ db, 30-10,000 cycles at 95% modulation. ±1½ db, 30-15,000 cycles under typical programming conditions.
- AUDIO DISTORTION:** 3% or less 50-7500 cycles at 95% modulation including all harmonics to 45,000 cycles.
- CONELRAD:** As each radio frequency cubicle is independent to the overall transmitter, a second RF cubicle for Conelrad may be purchased at less cost than a separate Conelrad transmitter. Simple instantaneous relay switching to Conelrad.
- NOISE:** 60 db or better below 100% modulation.
- TUBES:** (2) 12BY7A osc./isolation buffer, 6146 IPA, 4-250A RF driver, (2) 3X2500F3 RF power amplifiers, (5) 5R4GYA LV power supply rectifiers, (6) 673 HV power supply rectifiers, (2) 6W4 hold bias rectifiers, 6SN7 first audio, (2) 6BG6 second audio, (4) 6528 cathode follower driver amplifiers, (2) 3X2500F3 modulators.
- SIZE:** 73½" wide, 39½" deep, 78" high. Largest cubicle (for door entrance) 27¾" x 39½" x 78" high.



BT100A 100 WATT TV — BTIA 500 WATT TV



BT100A 100 WATT TV TRANSMITTER SPECIFICATIONS

	<u>Visual Section</u>	<u>Aural Section</u>
TYPE OF EMISSION:	A5	F3
FREQUENCY RANGE (channels):	2-13	2-13
POWER OUTPUT:	100 watts	60 watts
RF OUTPUT IMPEDANCE:	51 ohms	51 ohms
CARRIER STABILITY:	±1000 cycles	±4000 cycles
MODULATION CAPABILITY:	85%	±40 Kc
METHOD OF MODULATION:	Amplitude grid modulation of PA stage.	Phase, employing pulse timing
FREQUENCY RESPONSE:	±2 db at 500 Kc ±2 db at 1.5 Mc ±2 db at 2 Mc ±2 db at 3 Mc ±3 db at 4 Mc.	±1½ db 50 to 15,000 cycles
INPUT IMPEDANCE:	73 ohms	600 ohms
INPUT LEVEL:	1.4 VPP	+10 dbm
DISTORTION:	-----	1½% or less 50 to 15,000 cycles
NOISE:	-----	FM: 55 db below 100% mod. AM: 50 db below 100% mod.
POWER INPUT:	117 volts, 50/60 cycles, 1700 watts	
SIZE:	50" wide, 84" high, 21" deep.	
OPERATION CYCLE:	Continuous duty.	
WEIGHT:	1400 lbs. approximate.	
CUBAGE:	68 cu. ft.	
TUBES:	One each, 6X5, 6BA6, 6V6, 6SN7, 829B, AX9903, 6AL5, 6AH6, 6CL6, 5V4, VR105; two each, 6SH7, 12AY7, 12AX7, 815, 4X150A; three each, OC3, 6AG7, 6SJ7, 6CD6; four each, 866A, 5U4G; seven each, 6AS7/G.	

BTIA 500 WATT TV TRANSMITTER SPECIFICATIONS

FREQUENCY RANGE: Model BTA-L, channels 2-6.
Model BTIA-H, channels 7-13.

RATED POWER OUTPUT: 500 watts visual, 250 watts aural.

RF OUTPUT: 51 ohms visual, 51 ohms aural.

RF STABILITY: Aural ±4 Kc. Visual ±1 Kc.

INPUT: Visual, 75 ohms at 1.4 volts peak to peak.
Aural, 600 ohms at +10 dbm ±2 db.

MODULATION CAPACITY: Aural, 100% equals ±25 Kc swing.
Visual, 90%.

AURAL RESPONSE: ±1½ db 50-15,000 cycles.

VISUAL RESPONSE: ±2 db at 0.5 Mc.
±2 db at 1.25 Mc.
±2 db at 2 Mc.
±2 db at 3 Mc.
±3 db at 4 Mc.

NOISE: Aural, -60 db FM or -50 db AM.
Visual, (amplitude variation over 1 frame) less than 5% of sync peak level.

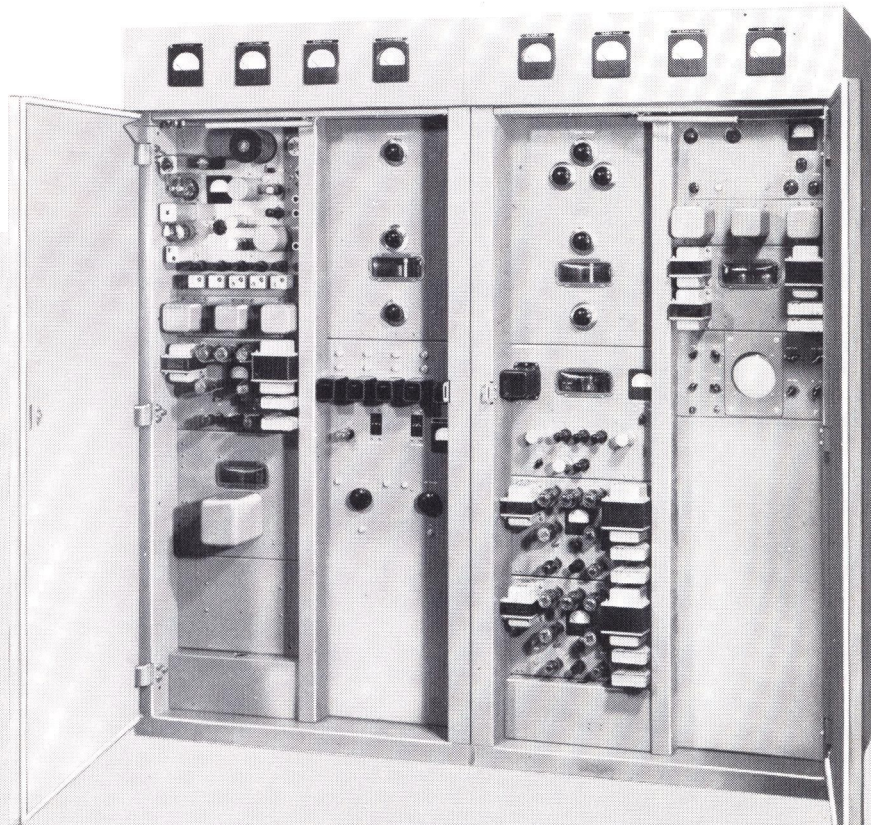
TYPE OF MODULATION: Aural, phase shift.
Visual, grid amplitude.

BUILT-IN MONITOR: Wave form and modulation monitor is built-in for visual section. — Direct power output and VSWR indicators built-in for both visual and aural sections.

PRIMARY: 230 volt, 60 cycle, single phase at approximately 14½ amperes load.

SIZE: 89" wide, 35" deep, 78" high. Door swing, 35".

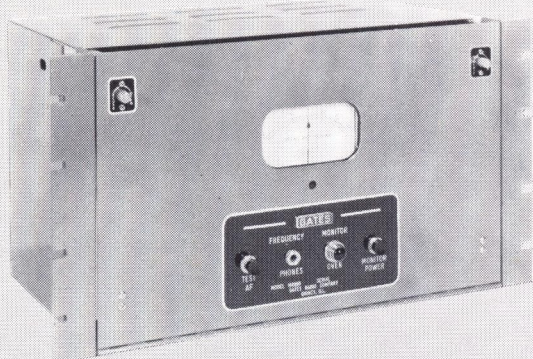
TUBES: Following tubes used in both BTIA-L and BTIA-H:
(9) 6AS7, (6) 5U4G, (5) 6AG7, VR105, 6SJ7, (4) 12AY7, (3) 6SH7, 6CD6, (2) 866A, 8008, (1) 6V6, 6SN7, 12AX7, 6BA6, 6X5, 5BP1A, 1X2, 6X4.
—add to above for BTIA-L only: (4) 4-400A, (2) 815, 829B, (1) 6AG7.
—add to above for BTIA-H only: (4) 4X250B, (2) 5894, 5763, (1) 815, 829B.



METERING: Eight 4" meters and seven 3" meters reading: RV Power/VSWR Visual, RF Power/VSWR Aural, PA Grid Aural, PA Filament Aural, PA Plate Aural, PA Plate Visual, PA Filament, Plate Volts both Aural and Visual, PA Multi-Meter Aural Exciter, Screen Current PA Visual, Line Volts AC, 3 Multi-Meters for the 3 regulated power supplies.

POWER CONTROL: Variable front panel control powerstats allow full 0-maximum control of both primary line voltage and DC high voltage to power amplifiers.

SIDEBAND FILTER: Mounted external to cabinet.



FREQUENCY MONITOR M-4990 SPECIFICATIONS

OSCILLATOR: Colprits electron coupled 1000 cycles below assigned frequency.

FREQUENCY RANGE: 540-1600 kc as ordered.

DEVIATION RANGE: Meter reads $-30/0/+30$ cycles.

INPUT VOLTAGE: Supplied with external fixed pad to handle wide range of input voltages from 5 to 50 volts direct connected and down to 5 Mv with whip antenna.

INPUT SIGNAL: Modulated or unmodulated.

INPUT IMPEDANCE: 50/70 ohms.

OVERALL STABILITY: ± 2 parts in one million.

OSCILLATOR STABILITY: ± 0.5 parts in one million.

LINE VOLTAGE: 105-125 volts, 50/60 cycles at 85 watts.

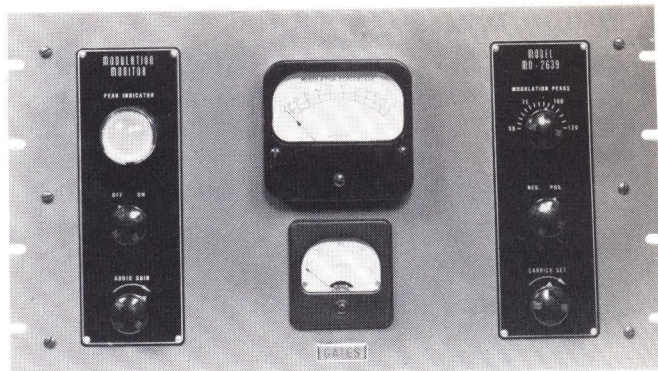
TUBES: 12BY7A oscillator, 6AU6 oscillator amplifier, 6AU6 input amplifier, 6C4 mixer, 6AU6 audio amplifier, 6AU6 limiter, 6AQ5 cathode follower, 12AT7 AVC, 6AL5 discriminator rectifier, 6AL5 VTVM rectifier, 6X4 high voltage rectifier, 6AQ5's Series regulators, 6AU6 voltage amplifier, OB2 voltage reference, 13-4 Ballast.

SIZE: 19" wide, 10 1/2" high, 10 5/8" deep.

FINISH: Medium gloss gray.

WEIGHT: 32 lbs. net. 53 lbs. packed. Cubage 4.

FCC APPROVAL: No. 3-102.



MODULATION MONITOR MO-2639 SPECIFICATIONS

FREQUENCY RANGE: MO-2639, 200-2000 Kc. MO-2639A, 2-33 Mc.

RF INPUT: High impedance requiring less than 1/2 watt excitation.

LOUDSPEAKER IMPEDANCE: 4 to 8 ohms.

MODULATION PERCENTAGE RANGE: 0-110%.

CARRIER LEVEL METER RANGE: 0-200%

DECIBEL SCALE RANGE: Calibrated to 15 db below 100% modulation.

AUDIO AMPLIFIER: Range exceeds best quality speaker capabilities.

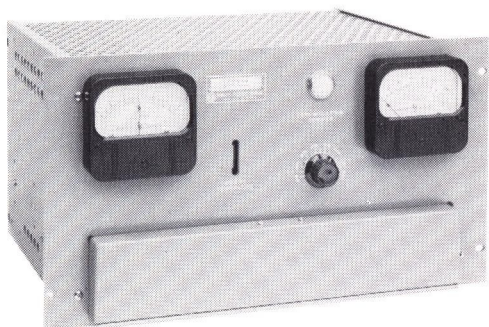
POWER: 115 volts, 50/60 cycles at 65 VA.

TUBES: 3 each 6X5, 6C5; 1 each 6F6, 885, VR-150.

WEIGHT: Packed, 40 lbs. Net, 27 lbs. Cubage 4.

DIMENSIONS: 19" wide, 10 1/2" high, 13 1/2" deep.

FINISH: Medium hand rubbed gloss gray with escutcheons in black.



FM MONITOR MODEL 335B SPECIFICATIONS

Frequency Monitor

FREQUENCY RANGE: Any channel, 88 to 108 mc.

DEVIATION RANGE: +3 kc to -3 kc mean deviation.

ACCURACY: Better than $\pm 1,000$ cps ($\pm .001\%$).

POWER DRIVE: Approximately 2 watts.

Modulation Meter

MODULATION RANGE: 100% at 75 kc deviation, 133% at 100 kc deviation.

ACCURACY: Within 5% over entire scale.

CHARACTERISTICS: Meter damped in accordance with F.C.C. regulations.

FREQUENCY RESPONSE: Flat within $\pm 1/2$ db, 50 to 15,000 cps.

EXTERNAL METERS: Circuit provided to operate remote modulation meter.

Audio Output

FREQUENCY RANGE: 20 cps to 20 kc. Response flat within $\pm 1/2$ db.

DISTORTION: Less than 0.25% at 100% modulation.

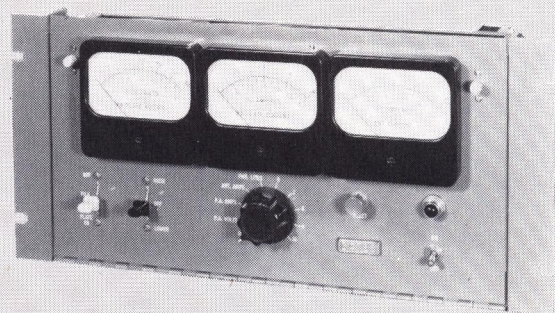
OUTPUT VOLTAGE: 10 v into 20,000 ohms.

NOISE: 75 db or more below audio output level resulting from 100% modulation (low frequencies).

MONITORING OUTPUT: 1.0 mw into 600 ohms, balanced, at 100% modulation (low frequencies).

SIZE: Front panel 10 1/2" x 19" x 13" deep.

POWER: 115V 50/60 cps primary power. Requires approximately 150 watts.



REMOTE CONTROL RDC-10

- 3 four-inch meters.
- 10 metering positions.
- 22 control functions possible.
- Positive action switch for meter selection—no dialing.
- Built-in relays for switching both filament and plate voltage.
- Constant voltage source provided for line checking.
- Abundantly meets FCC requirements.
- Drop down front panel to service.

WHAT IS SUPPLIED: Both studio and transmitter units, M-4720 plate current unit for reading plate current of transmitter, M-4719 plate voltage unit for reading plate voltage and the inbuilt light indicator with external current transformer.

TRANSMITTER ACCESSORIES

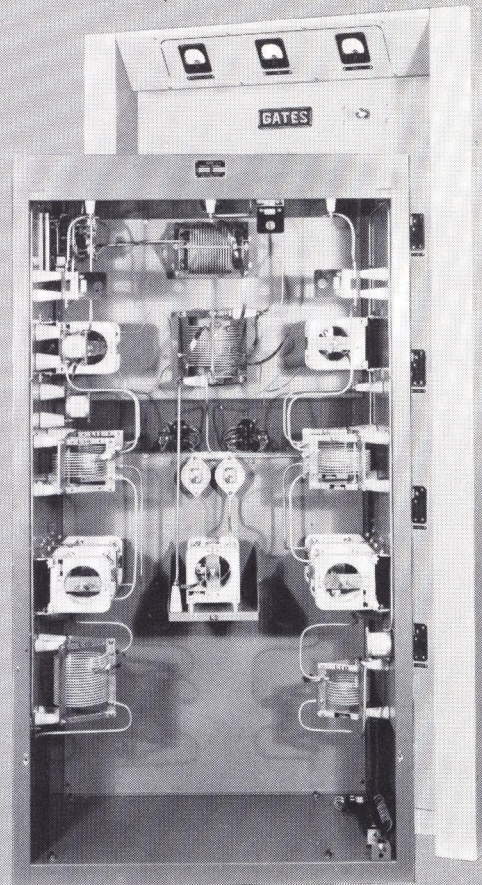
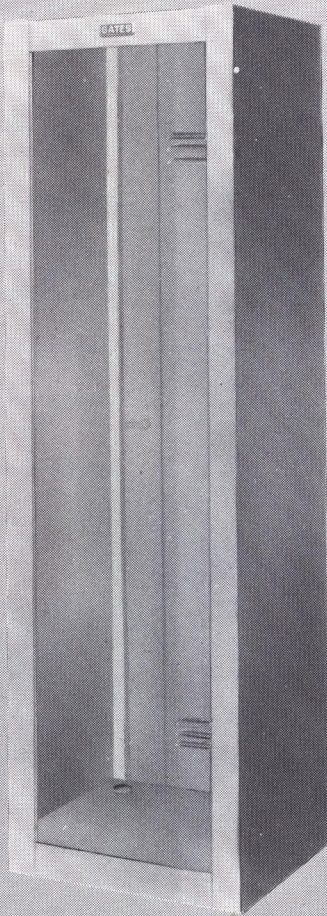
DIRECTIONAL PHASING EQUIPMENT

Stability of pattern and reliability of components, many of which are manufactured by Gates, are two reasons for the definite preference for Gates phasing equipment. Also, minimum tune-up time and minimum maintenance make Gates phasors less expensive in the long run, though nothing is spared in the design cost. Gates manufactures directional phasing equipment up to 100 kilowatts in power and for any number of elements.

The directional phasing equipment illustrated on this page was manufactured to the specifications of the customer's consultant, and is typical of the hundreds of quality phasors designed and manufactured by Gates.

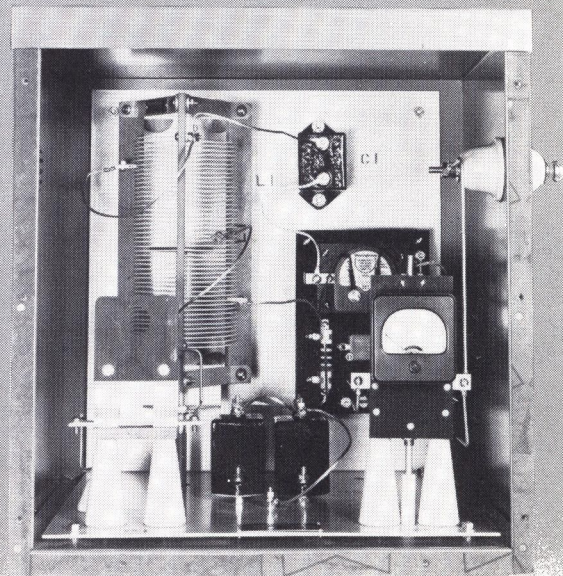
RAK-7 RACK CABINET SPECIFICATIONS

DEPTH OVERALL: 19½".
DOOR SWING: 20½".
PANEL SPACE: 19" x 71¾".
CLEARANCE BEHIND PANEL: 17".
PANEL MOUNTING: Standard rack multiples 12/24, mounting screws provided.
FINISH: Medium gray.
NET WEIGHT: 120 lbs.
SHIPPING WEIGHT: 140 lbs.



MODEL 44 ANTENNA COUPLER SPECIFICATIONS

CARRIER POWER: 1250 watts or less.
INPUT IMPEDANCE: 50 to 360 ohms, concentric or open line.
ANTENNA RESISTANCE: 10 to 1000 ohms.
ANTENNA REACTANCE: Plus J 600 to minus J 300 ohms from 540 to 1000 kc. Plus J 600 to minus J 500 ohms above 1000 Kc.
CIRCUIT: Tee network.
LIGHTNING PROTECTION: Meter shorting switch.
METERING: Plug-in 3" meter normally located as antenna meter but may be used as line meter for tune-up. Plug-in shorting bar provided for unused meter jack.
REMOTE METERING: Provision for either thermocouple or diode type as ordered.
SHIPPING WEIGHT: 98 lbs.
SIZE: 20" high, 20¼" wide, 18¾" deep.



GATES

GATES RADIO COMPANY

QUINCY, ILLINOIS

Subsidiary of Harris-Intertype Corporation

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