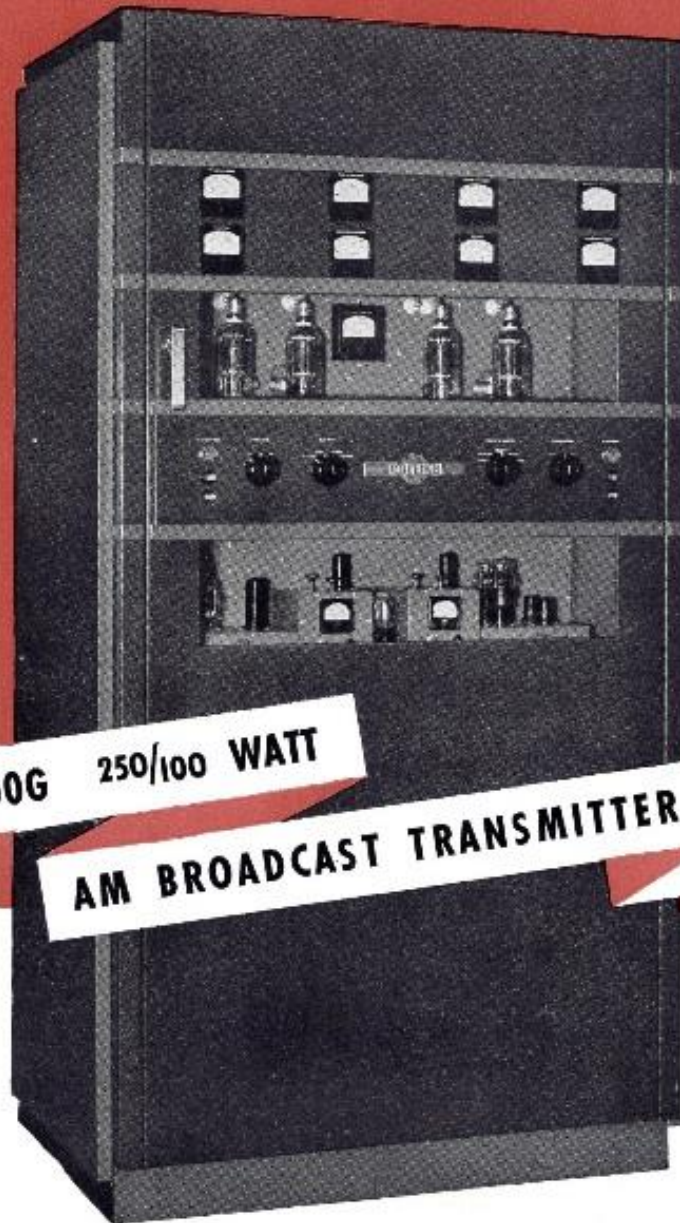


COLLINS



Featuring

RELIABILITY

ACCESSIBILITY

The 300G is a completely reliable 250/100 watt broadcast transmitter designed for continuous high fidelity service. It is an embodiment of the forward-looking research and thorough development typical of all Collins radio equipment. Materials and components used in the design and construction of the 300G are of highest quality, and assure long life with trouble-free operation.

A single cabinet of modern design houses the entire transmitter circuit. All tubes can be reached from the front of the cabinet, and can be seen in operation through windows in the full-length front door. Double rear doors provide quick and easy access to the vertical chassis.

The power output can be reduced from 250 watts to 100 watts merely by actuating a switch on the control panel.

Frequency Control

Designed for use in the AM broadcast band, this transmitter delivers full rated power output on any frequency between 540 and 1600 kc. Two separate and complete oscillators are standard equipment, and by temperature control maintain the carrier frequency to within

± 10 cycles per second. Either oscillator may be selected conveniently and easily by means of a switch located on the r-f and audio driver unit. Plug-in connections allow complete removal of a control unit for adjustment or repair.

Audio

The input impedance to the speech amplifier is 600 ohms, with an input level of +18 dbm* required for 100% modulation. High level



40F Frequency Control Unit

Fulfilling the Tradition of...

ECONOMY

class B modulation is utilized, and terminals are provided for the attachment of modulation and frequency monitors. A feedback circuit incorporated in the audio system maintains a practically flat frequency response from 30-10,000 cps, with a maximum deviation of ± 1.0 db from the mean value of the two extremes of response.

Safety

Magnetic circuit breakers form an integral part of the principal power circuits, serving both as an isolation for the major circuits and as an overload device. Switching is accomplished in the primary circuits. All doors are provided with interlock switches in order to insure that high voltages are removed before maintenance personnel can gain entrance to the transmitter.

A special feature of the 300G is a voltage regulating transformer which is used to keep filament voltages constant over a $\pm 15\%$ fluctuation of a-c line voltage.

Audio Control

The Collins 6X line amplifier and monitor or the Collins 26W-1 limiting amplifier is recommended for use with the 300G transmitter.

Operating Specifications:

Temperature Range: $+15^{\circ}\text{C.}$ to $+50^{\circ}\text{C.}$
 Humidity Range: 0 to 95%.
 Altitude Range: Up to 6000 ft.
 Power Output: 250 watts or 100 watts.
 Antenna Impedance: 70 to 200 ohm resistive transmission line.
 Frequency Range: Any specified frequency between 540 kc and 1600 kc.
 Frequency Stability: ± 10 cycles per second.

Audio Characteristics:

Input Impedance: 600 ohms (150 ohms on special order).
 Input Level (for 100% modulation): $+18$ dbm* ($+8$ dbm with input pad removed).
 Frequency Response: ± 1 db from 30-10,000 cps.
 Noise Level: More than 60 db below 100% modulation level.
 Distortion: Less than 3% up to 95% modulation.
 Power Source: 115 volts a-c, single phase, 60 cps, or 208/230 volts a-c, 60 cps, single phase neutral system.
 Power Consumption: 1.5 kw in normal operation, 85% power factor.
 Dimensions: 41" wide, 29 $\frac{3}{4}$ " deep, 78" high.
 Weight: 1390 lbs. (approx.).
 Shipping Weight and Volume (approx.):

	Weight	Volume	Cases
Domestic (less spares)	1725 lbs.	140 cu. ft.	11
Export (less spares)	1800 lbs.	150 cu. ft.	11

Tube Complement:

Oscillator (2)	6F6
Isolation Buffer	6L6
Int. Amplifier	2—907
R. F. Amplifier	2—810
1st Audio	2—6J5
Audio Driver	2—6A5G or 2—6B4G
Modulator	2—810
Rectifier	6—866A/866
Voltage Regulator	2—OC3/VR105

Other Collins high fidelity AM transmitters:

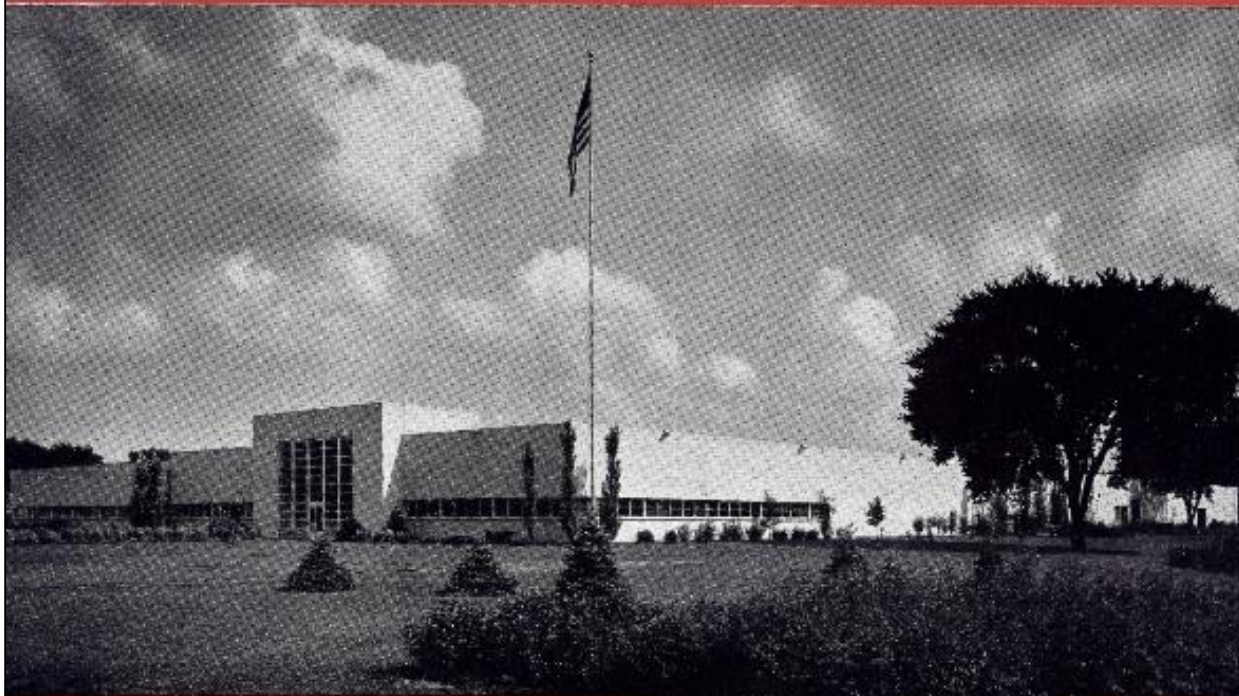
21A 5000/1000 watts, efficient and economical.
 20K 1000/500 watts, reliability with low operating cost.

Collins studio and field equipment suitable for either AM or FM high fidelity applications:

212A-1 Studio console, controls all studio functions.
 6M Program amplifier, efficient, dependable service.
 6P Preamplifier, low level input for high quality microphones.
 6X Line amplifier and monitor, wide range of input level.
 212Y Single channel a-c or battery operated remote amplifier for unattended operation.
 12Z Four-channel a-c or battery operated remote amplifier for on-the-spot broadcasts.
 26W-1 Limiting amplifier, positive audio control.

*1 milliwatt 600 ohm base

Collins Quality Leadership



The Collins main plant in Cedar Rapids is a modern, completely air and light controlled structure, containing 150,000 square feet of floor space. It is designed for the most efficient office, engineering and manufacturing use. The Collins management, organization and equipment are devoted entirely to the designing and production of radio communication equipment.

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FOR BROADCAST QUALITY, IT'S



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