

# 150B—the Popular 100 watt Transmitter

The 150B is a general purpose 100 watt radio telegraph and radio telephone transmitter. It is entirely self-contained except for speech input equipment and is ideal for amateur broadcast and general communication work. General specifications follow:

**Rated Output**—100 watts.

**Frequency Range**—1500—15,000 kc. (Provision for operation on higher and lower frequencies on special order.) Coils for one band furnished with transmitter.

**Frequency Control**—Direct crystal control.

**Radio Frequency Tubes**—47 crystal oscillator, 46 first buffer, 2-46's second buffer, 203A final amplifier.\*

**Rectifier Tubes**—2-866's in 1200C 1000 volt power supply, 1-80 and 1-83 in low voltage power supplies.

**Type of Modulation**—The final class C amplifier is modulated by two 203A's class B.

**Audio Frequency Range**—70-10,000 cycles within  $\pm 1.5$  db.

**Amplitude Distortion**—Less than % at 100% modulation.

**Maximum Percentage of Modulation**—100%.

**Keying**—Grid block in second buffer. Provision is made for switching off the crystal oscillator to permit reception on the crystal frequency.

**Power Source**—110 volts, 60 cycles, single phase is standard. Provision for other voltages and frequencies on special order. Special converters and engine generators are available for use when no AC supply is obtainable.

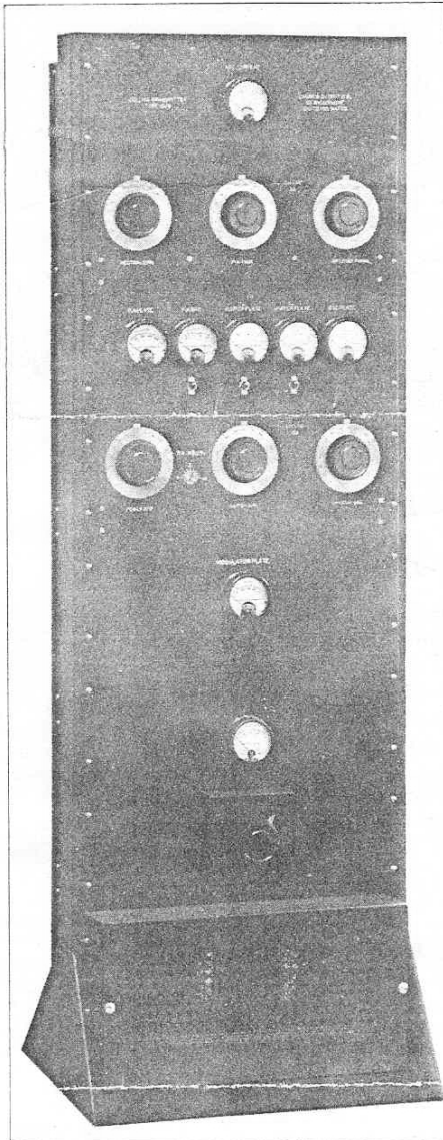
**Instruments**—Seven surface type high grade instruments are furnished. All tuning operations and adjustments can be checked by means of the meters.

**Dimensions**—60½" high, 20½" wide, 20" deep overall. The transmitter is mounted in a standard size relay rack with special rear enclosures.

**Weight**—Approximately 290 pounds. Shipping weight 350 pounds. —

The 150B transmitter is built up of standard Collins units including type 3A radio frequency power amplifier, type 10B radio frequency excitation unit, type 404A 400-300 volt dual wwer supply, 30B class B modulator

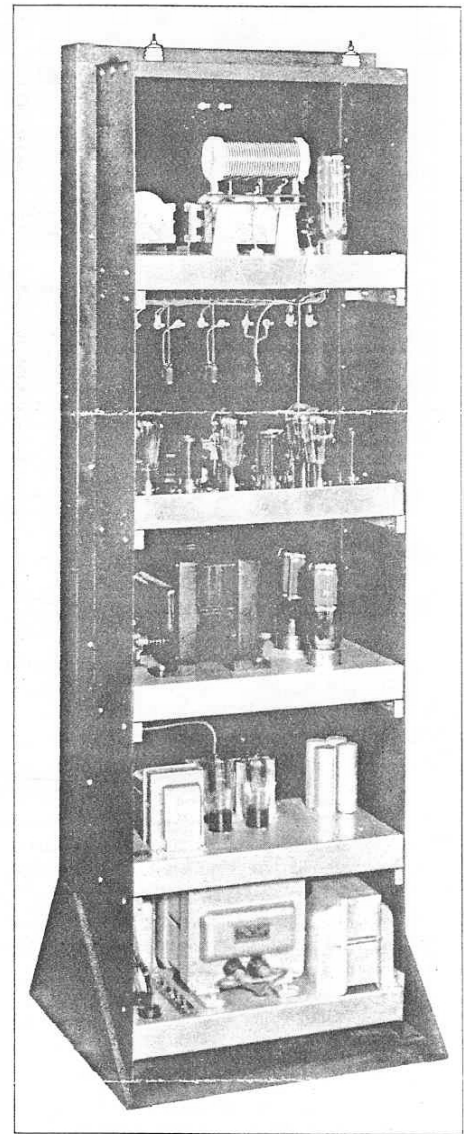
\*Some current models use the 10A excitation unit with a type 10 second buffer—otherwise identical.



unit, 1200C power supply. These units are assembled in the 150B rack with appropriate meters and panels and are interconnected by means of a special interunit cable. Electrical design and mechanical construction are consistent with usual Collins practice.

Quick change of frequency is possible as in other Collins transmitters by means of interchangeable coils and calibrated dial settings. The final amplifier is heavily excited so that its efficiency is high.

The class B modulation system embodies numerous refinements which make possible a high degree of audio



fidelity. The 7B amplifier is the only external speech equipment required exclusive of microphones. Provision is made in the 150B transmitter to receive the output of the 7B amplifier over a short shielded line.

150B TRANSMITTER—Code word ZONPA.

The 150A transmitter is identical to the 150B except that the modulation equipment is omitted, thus providing an efficient CW transmitter. Provision is made for addition of the modulators at any time.

150A TRANSMITTER—Code word ZONYV.