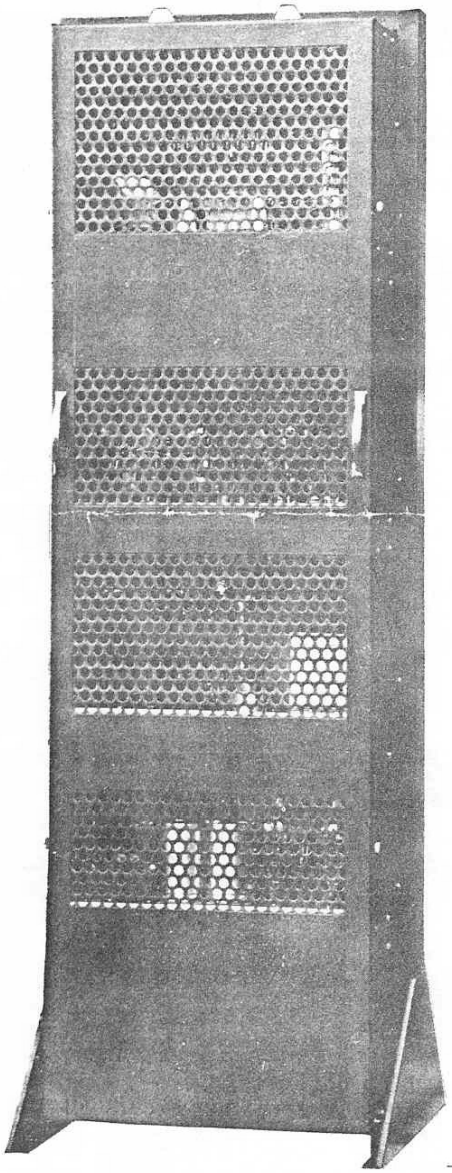

THE 32B TRANSMITTER

NEW SPECIFICATIONS

The 32B transmitter was first announced during March, 1933, as an interesting addition to the general line of Collins transmitters. It was originally intended for use by amateurs who wanted an all-purpose transmitter delivering a high-quality signal of medium power. Within the few months that the 32B has been available it has established itself as the most popular and most versatile of all of the transmitters which the Collins Radio Company has built to date. This enthusiastic acceptance is probably due to the fact that its power (20-25 watts) is sufficiently high to afford reliable communication and yet the transmitter is compact, self-contained, easy to install, has a high-quality audio system requiring only the connection of a suitable microphone, and the price is within the reach of almost every user of transmitting equipment.

Improvements and refinements of the original design have been made and, therefore, it seems desirable to issue this new description of the 32B transmitter. Complete specifications and discussion of its design and operation follow:

GENERAL SPECIFICATIONS OF 32B TRANSMITTER

Power Output—20-25 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 with isolation of the crystal oscillator from the power amplifier by suitably designed buffer stage.

Radio Frequency Tubes—47 crystal oscillator, 46 buffer, two 46 power amplifiers.

Audio Tubes—57 voltage amplifier, 46 driver, 2-46's class B modulators.

Rectifier Tubes—80 and 83.

Maximum Percentage of Modulation—100.

Audio Frequency Range—70-10,000 cycles within ± 1.5 db.

Amplitude Distortion—Less than 5% at 100% modulation.

Keying—Grid block in final amplifier. 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. The total power drain is less than 250 watts under complete modulation.

(Continued on next page)

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 power supply, 30B class B modulator 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.

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