



Collins 7P Amplifier

The 7P Amplifier (shown at left) is a general purpose amplifier well adapted to class B modulation systems. The circuit and performance are essentially the same as those given for the 7A Amplifier. (See April-August Signal.) A 57 Input Tube is followed by a 56 and push-pull 2A3's in true class A.

A power supply with a 5Z 3 rectifier is incorporated on the same chassis and it is sufficiently large to supply 100 ma at 350 volts to any external load, such as, speaker fields, receivers, microphone amplifiers, etc. The undistorted output is 10 watts, with wide range fidelity. The hum is reduced to a low value by using an external input transformer.

Rack mounting space required is 10½".

Code word, YAECT.

Net weight: 33 pounds.

Shipping weight: 45 pounds.

sible to make use of the all-band feature of the transmitter to the fullest extent. The 46 tubes are operated at full efficiency with adequate grid excitation which provides a remarkably high output without resorting to the more expensive "transmitting" type tubes.

The 10B unit can also be used for exciting a larger power amplifier of the 203A type if it is desired to increase power.

AUDIO FREQUENCY SECTION AND POWER SUPPLIES

The speech amplifier, modulators and the two power supplies are mounted on the lower chassis. A type 57 voltage amplifier receives the output of a condenser, crystal or double button microphone at approximately minus 40 db. The 57 is resistance-coupled to a 46 class A driving the 46 class B modulators. The audio system makes use of exclusive Collins features which have established a wide reputation for high fidelity.

In order to provide most efficient operation two power supplies are used. A 400 volt power supply using a heavy duty transformer, type 83 rectifier and a choke input filter delivers plate voltage to the buffer, power amplifier, and class B modulators. A second power supply with an 80 rectifier delivers 300 volts to the crystal oscillator and the 57 and 46 audio tubes. This arrangement effectively prevents fluctuations in load resulting from keying or modulation affecting the frequency stability of the crystal oscillator.

CONSTRUCTIONAL DETAILS

The external dimensions of the 32B transmitter have been outlined under GENERAL SPECIFICATIONS. The 10B unit employs a dull finish Bakelite panel with white engraving. The chassis sub-assembly is of burnished aluminum accurately formed and pierced. Wiring is rigid conductor or laced cable. Coupling condensers are high-grade mica and resistors are of the wire wound vitreous enamel type. Special Cardwell condensers are used for tuning. Inductances are wound on low-loss synthetic resin forms.

The audio-power supply chassis is heavily copper-plated steel finished with aluminum duco. Transformers are fully encased and every component is designed for continuous duty under full load. Wiring is entirely in laced cables. Power connection is made by means of a heavy duty rubber covered cord and flexible connectors are provided for the key and stand-by switch. The transmitter frame is finished in aluminum crinkle and is fitted with soft rubber friction feet.

MICROPHONE CONNECTION

Audio input to the transmitter is made directly to the grid cap of the 57 tube. Normally a microphone control box is located near the transmitter. The Collins 1A microphone input unit is designed for this purpose and contains a gain control and a microphone transformer.

PERFORMANCE

In spite of its compact construction and very moderate cost, the 32B transmitter has a performance which does justice to a much more bulky and expensive installation. On

telegraph the transmitter delivers a powerful crystal-clear signal to the antenna with clean cut keying so that the transmitter attracts immediate attention on the air. Numerous reports of international DX are constantly being received from users of 32B transmitters and very reliable communication can be carried on over moderate distances. When the 32B transmitter is used for radio telephone work, the 100% modulation feature and high fidelity gives the signal ability to cut through heavy interference and be readily intelligible. Several 32B transmitters have established records for international DX communication on voice where they have been used with an efficient antenna system.

Guarantee: In common with other Collins products, the 32B transmitter is unconditionally guaranteed to give complete satisfaction and every purchaser is given individual attention to see that his particular installation is performing at greatest efficiency.

32B TRANSMITTER—Code word, ZOVAB.

To those operators who are interested in telegraph transmission alone or who wish to start out with a CW outfit and later add equipment to change over to phone, the 32A transmitter is available. The 32A is identical to the 32B in every respect except that the modulation equipment is not supplied. The price is proportionately lower.

32A TRANSMITTER—Code word, ZOWOC.