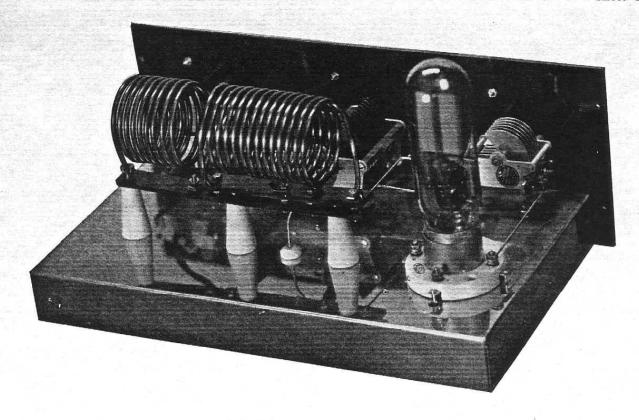
Collins Transmitters -

Bulletin 100

Sheet 4



3A POWER AMPLIFIER

The 3A Power Amplifier is used in connection with the 10A Crystal Control Unit to deliver 150 watts of power to the antenna. It employs a UV 203A transmitting tube operated as Class C in a high efficiency circuit. Heavy duty tank inductances are arranged on a plug-in mounting so that it is possible to shift frequency readily. A simple method of neutralization is employed in connection with a special tank connection which prevents parasitic oscillations. The 203A tube is used in preference to a screen grid tube such as the UX 860 because of its lower cost and higher efficiency and also because of the lower cost of a 1000 volt power supply as against a 2000 volt power supply delivering the same wattage to the plate. The neutralization process is so simple that it is not a handicap even when shifting quickly from one band to another. The 3A Amplifier can be used in connection with Class B Modulation to deliver a 150 watt, 100% modulated carrier to the antenna.

Tubes Employed — One UV 203A tube.

Power Output — 150 watts on 1.7, 3.5 and 7 mc. 120 watts on 14 mc.

Insulation — Formica and Isolantite.

Chassis - Burnished aluminum

10" x 17%". 7" x 19" Formica panel. A vertical space of 9 in. is required behind the panel when mounting in a relay rack. Ordinarily an additional 7" x 19" Formica panel is used above the 3A Unit to carry the antenna thermoammeter. The power cable is connected to a single plug-in mounting beneath the chassis.

Note — A special amplifier, 33A, can be furnished which is similar to the 3A except that it employs two 203A's in push-pull. Write for specifications.