

# "Genalex" A.C./D.C.

Circuit Diagram appears on page 229

Genalex model "195" is a five-valve receiver designed for broadcast coverage and operation from 200-260 v. A.C. or D.C. mains. This receiver is of the console type and is fitted with three controls, these being for volume, tuning and tone (3 positions). The loudspeaker employed is an 8-inch diameter unit with a field-coil resistance of 7,500 ohms. This model was marketed during 1934.

In the analysis of this receiver, it should be remembered that the type 41 output pentode has a heater current rating of 0.45 A., whereas the other types

# Broadcast Model 195

used only require 0.3 A. Consequently, a shunt is provided for the excess current: this shunt being the 180 ohms resistor (to the right of the second detector bias system) in the circuit. Note also that the 120 ohms shunt across the rectifier heater is only correct when a 12Z3 rectifier (12.6 v. heater) is employed; some of these receivers are equipped with a type 1V rectifier (6.3 v. heater), in which case the rectifier heater shunt has a resistance of only 60 ohms. The heater shunt carries 150 mA. continuously and this fact must be borne in mind should replacement be necessary at any time.

## OPERATING VOLTAGES.

The following measurements were made, under "no signal" conditions, with a "1,000 ohms per volt" meter between the negative bus-bar and the socket contact indicated. The volume control (which alters the bias of the I.F. amplifier) should be placed at its maximum setting.

**6C6, "Autodyne" Type Frequency Converter:** Plate, 200 v.; screen, 40 v.; cathode, 5 v. Plate current, 0.75 mA.

**6D6, 445 kC. I.F. Amplifier:** Plate, 200 v.; screen, 85 v.; cathode, 2 v. Plate current, 6 mA.

**6C6, "Anode-bend" Second Detector:** plate, 110 v.; screen, 40 v.; cathode, 2 v. Plate current, 0.5 mA.

**41, Output Pentode:** Plate, 195 v.; screen, 200 v.; cathode, 16 v. Plate current, 14 mA.

# "Genalex" A.C./D.C. Operated Broadcast Model 195

