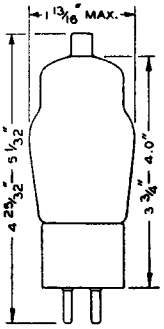
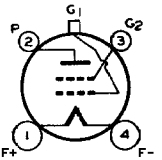


RCA-32

RADIO-FREQUENCY AMPLIFIER



The 32 is a screen-grid tube recommended primarily for use as a radio-frequency amplifier in battery-operated radio receivers where economy of filament-current drain is important.

CHARACTERISTICS

Filament Voltage (D. C.)		2.0	Volts
Filament Current		0.060	Ampere
Plate Voltage	135	180 *max.*	Volts
Screen Voltage (Grid No. 2)	67.5 *max.*	67.5 *max.*	Volts
Grid Voltage (Grid No. 1)	−3	−3	Volts
Plate Current	1.7	1.7	Milliamperes
Screen Current (Maximum)	0.4	0.4	Milliampere
Plate Resistance	0.95	1.2	Megohms
Amplification Factor	610	780	
Transconductance	640	650	Micromhos
Grid-Plate Capacitance (With shield-can)		0.015 *max.*	$\mu\mu$f
Input Capacitance		5.3	$\mu\mu$f
Output Capacitance		10.5	$\mu\mu$f
Bulb			ST-14
Cap			Small Metal
Base			Medium 4-Pin

INSTALLATION AND APPLICATION

For **socket** mounting and **filament** operation, refer to INSTALLATION for type 30.

The **screen voltage** may be obtained from a tap on the plate battery or a bleeder circuit across the supply battery in whole or in part. Never attempt to obtain the screen voltage for the 32 by connecting the screen through a series resistor to a high-voltage source. The results will not be satisfactory because of voltage-drop variation produced by the different screen currents of individual tubes. **Volume control** may be effected by variation of the screen voltage between 0 and 67.5 volts. The variation must, however, be made by a potentiometer shunted across the screen-voltage supply and not by a high-resistance rheostat.

Complete **shielding** of all stages is recommended if maximum gain per stage is to be obtained.

As a **detector,** the 32 may be operated either with grid leak and condenser or with grid bias. For grid bias detection, suitable operating conditions are: Plate-supply voltage, 180 volts applied through a plate-coupling resistance of 0.1 megohm or an equivalent impedance; screen voltage, 67.5 volts; and a negative grid bias (approximately 6 volts) adjusted so that a plate current of 0.2 milliampere is obtained with no input signal. In designing circuits to use the 32 as a detector, it is desirable to work from the detector stage directly into the power-output stage.

The d-c resistance in the grid circuit of the 32 should not exceed 2 megohms.

A family of plate characteristic curves is given on page 118.