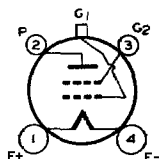


RCA-32

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	Milliamperes
PLATE RESISTANCE	0.95 1.2	Megohms
AMPLIFICATION FACTOR	610 780	
TRANSCONDUCTANCE	640 650	Micromhos
GRID-PLATE CAPACITANCE (With shield-can)	0.015 max.	μ f
INPUT CAPACITANCE	5.3	μ f
OUTPUT CAPACITANCE	10.5	μ 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 milliamperes 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.