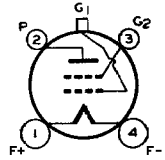


RCA-32

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 <i>max.</i> Volts
SCREEN VOLTAGE (Grid No. 2)	67.5 <i>max.</i>	67.5 <i>max.</i> 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 <i>max.</i>	μ mf
INPUT CAPACITANCE		μ mf
OUTPUT CAPACITANCE		10.5 μ mf
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.



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