



RCA Radiotron

RCA-232

RADIO-FREQUENCY AMPLIFIER

The '32 is a screen grid tube recommended primarily for use as a radio-frequency amplifier. It contains a coated filament which takes as little power as possible consistent with satisfactory operating performance. This feature makes the '32 particularly suitable in battery-operated radio receivers employing the '34, '31, and/or '33 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	67.5	67.5 <i>max.</i> Volts
GRID VOLTAGE	-3	-3 Volts
PLATE CURRENT	1.7	1.7 Milliampere
SCREEN CURRENT (Maximum)	0.4	0.4 Milliampere
PLATE RESISTANCE	950000	1200000 Ohms
AMPLIFICATION FACTOR	610	780
MUTUAL CONDUCTANCE	640	650 Micromhos
EFFECTIVE GRID-PLATE CAPACITANCE	0.015 <i>maximum</i>	$\mu\text{f.}$
INPUT CAPACITANCE	6.0	$\mu\text{f.}$
OUTPUT CAPACITANCE	11.7	$\mu\text{f.}$
OVERALL LENGTH		4 ²⁵ / ₃₂ " to 5 ¹ / ₃₂ "
MAXIMUM DIAMETER		1 ¹³ / ₁₆ "
BULB (See page 42, Fig. 11).....		S-14
CAP		Small Metal
BASE		Medium 4-Pin

INSTALLATION

The **base** pins of the '32 fit the standard four-contact socket. The socket should be installed so that the tube will operate in a vertical position. Although the '32 is very free from microphonic disturbances, cushioning of its socket may be found desirable. For socket connections, see page 39, Fig. 4.

The coated **filament** of the '32 may be operated conveniently from dry-cells, from a single lead storage-cell, or from an air-cell battery. For dry-cell operation, a filament rheostat should be used together with a permanently installed voltmeter to insure the proper filament voltage. For operation from a 2-volt lead storage-cell, the '32 requires no filament resistor. Operation with an air-cell battery requires a fixed resistor in the filament circuit. This resistor should have a value such that with a new air-cell battery, the voltage applied across the filament terminals will not initially exceed 2.15 volts. *Series operation of the filaments of these tubes is not recommended.*

The positive **screen voltage** may be obtained from a tap on the plate battery or a bleeder circuit across the supply battery in part or in full. 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 very satisfactorily accomplished by variation of the screen voltage between 0 and 67.5 volts. The variation must, however, be accomplished

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