

RCA-6F7

TRIODE-PENTODE

Heater * Coated Uni-potential Cathode
 Voltage 6.3 a-c or d-c volts
 Current 0.3 amp.

Direct Interelectrode Capacitances:

Triode Unit:		
Grid to Plate	2.0	μf
Grid to Cathode	2.5	μf
Plate to Cathode	3.0	μf
Pentode Unit:		
Grid to Plate	0.008 max. Ⓢ	μf
Input	3.2	μf
Output	12.5	μf

Overall Length
 Maximum Diameter

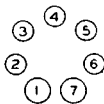
4-9/32" to 4-17/32"
 1-9/16"
 ST-12

Bulb

Cap

Base

Pin 1-Heater
 Pin 2-Pentode Plate
 Pin 3-Pentode Screen
 Pin 4-Triode Plate



Small Metal
 Small 7-Pin ⚴

Pin 5-Triode Grid
 Pin 6-Cathode
 Pin 7-Heater
 Cap -Pentode Grid

BOTTOM VIEW

AMPLIFIER SERVICE

	Triode Unit	Pentode Unit	
Plate Voltage	100 max.	100	250 max. volts
Screen Voltage	-	100	100 max. volts
Grid Voltage	-3	-3	-3 min. volts
Amp. Fact.	8	300	900
Plate Res.	16000	290000	850000 ohms
Mut. Cond.	500	1050	1100 μmhos
Mut. Cond. at -35 volts bias	-	9	10 μmhos
Plate Cur.	3.5	6.3	6.5 ma.
Screen Cur.	-	1.6	1.5 ma.

CONVERTER SERVICE

	Triode Unit	Pentode Unit
Plate Voltage	100 max.	250 max. volts
Screen Voltage	-	100 max. volts
Grid Voltage	##	-3 min.* volts
Oscillator Plate Cur. (av.)	4 max.	- ma.
Typical Operation:		
Plate	100 Ⓢ	250 volts
Screen	-	100 volts
Grid Bias	##	-10 Ⓢ volts
Plate Resistance	-	2 megohms
Conversion Conductance	-	300 μmhos
D-c Plate Current	2.4	2.8 ma.
D-c Grid Current	0.15	0 ma.
Screen Current	-	0.6 ma.
Oscillator Peak Voltage Input	-	7 volts

Usually obtained by means of a grid leak.

** Grid bias should be at least .3 volts greater than the peak oscillator voltage applied to the pentode grid.

Ⓢ May be obtained from 250-volt source through 60000-ohm dropping resistor.

ⓈⓈ Obtained by means of 1700-ohm self-biasing (cathode) resistor.

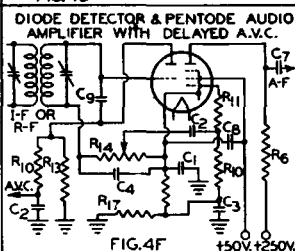
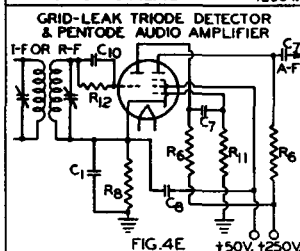
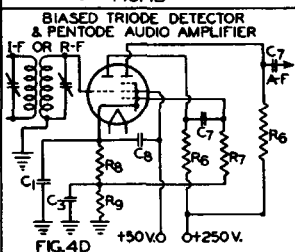
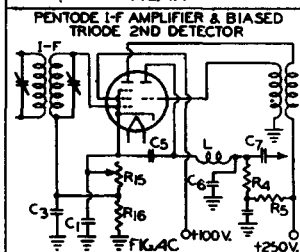
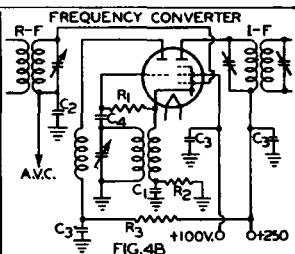
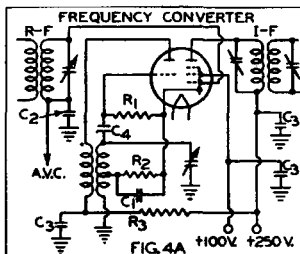
* In circuits where the cathode is not directly connected to the heater, the potential difference between heater and cathode should be kept as low as possible.

⚴ Requires different socket than medium 7-pin base.

Ⓢ With shield-can.

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TYPICAL CIRCUITS



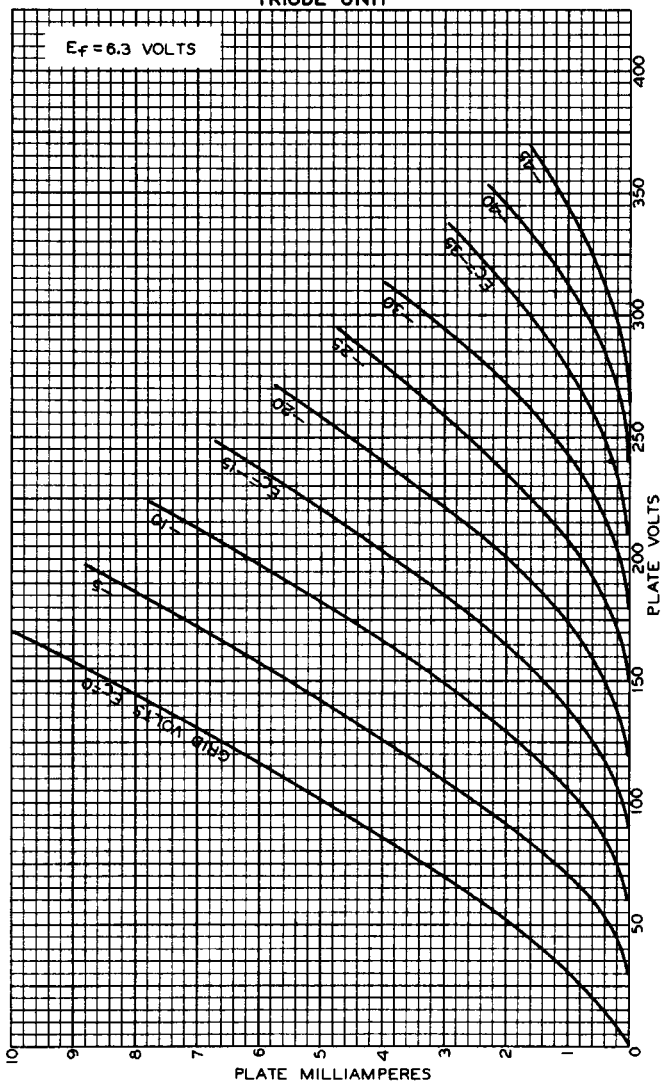
APPROXIMATE VALUES

$C_1 = 5 \mu f$
 $C_2 = 0.05 \mu f$
 $C_3 = 0.1 \mu f$
 $C_4 = 0.0002 \mu f$
 $C_5 = 0.0024 \mu f$
 $C_6 = 0.00016 \mu f$
 $C_7 = 0.01 \mu f$
 $C_8 = 0.5 \mu f$
 $C_9 = 0.0005$ TO $0.001 \mu f$
 $C_{10} = 0.00025 \mu f$
 $L = I-F$ CHOKE COIL
 $R_1 =$ OSCILLATOR GRID LEAK-0.1 MEGOHM

$R_2 =$ PENTODE SELF-BIASING RESISTOR-1500 OHMS
 $R_3 =$ VOLTAGE DROPPING RESISTOR-50000 OHMS
 $R_4 =$ PLATE COUPLING RESISTOR-170000 OHMS
 $R_5 =$ FILTER RESISTOR-30000 OHMS
 $R_6 =$ PLATE COUPLING RESISTOR-300000 OHMS
 $R_7 =$ PENTODE GRID LEAK-0.5 MEGOHM
 $R_8 =$ PENTODE SELF-BIASING RESISTOR-5000 OHMS
 $R_9 = 10000$ OHMS. $R_9 + R_8 =$ TRIODE BIASING RESISTOR
 $R_{10} =$ FILTER RESISTOR-1.0 MEGOHM
 $R_{11} =$ GRID RESISTOR-500000 OHMS
 $R_{12} =$ TRIODE GRID LEAK-1.0 MEGOHM
 $R_{13} =$ A.V.C. DIODE LOAD-1.0 MEGOHM
 $R_{14} =$ A-F DIODE-LOAD POTENTIOMETER-0.5 MEGOHM
 $R_{15} =$ PENTODE SELF-BIASING RES. 4000 OHMS VAR.
 $R_{16} = 1500$ OHMS. $R_{16} + R_{15} =$ TRIODE BIASING RESISTOR

The license extended to the purchaser of tubes appears in the License Notice accompanying them. Information contained herein is furnished without assuming any obligations.

AVERAGE PLATE CHARACTERISTICS
TRIODE UNIT



6F7



RCA Radiotron

RCA-6F7

Cunningham
RADIO TUBES

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AVERAGE PLATE CHARACTERISTICS PENTODE UNIT

