

## RCA-6F7 TRIODE-PENTODE

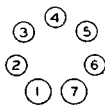
Heater \* Coated Uni-potential Cathode  
 Voltage 6.3 a-c or d-c volts  
 Current 0.3 amp.

**Direct Interelectrode Capacitances:**

<b>Triode Unit:</b>		
Grid to Plate	2.0	μuf
Grid to Cathode	2.5	μuf
Plate to Cathode	3.0	μuf
<b>Pentode Unit:</b>		
Grid to Plate	0.008 max. <sup>⊙</sup>	μuf
Input	3.2	μuf
Output	12.5	μuf

Overall Length 4-9/32" to 4-17/32"  
 Maximum Diameter 1-9/16"  
 Bulb ST-12  
 Cap Small Metal  
 Base Small 7-Pin <sup>△</sup>

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



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

BOTTOM VIEW

AMPLIFIER SERVICE

	<u>Triode Unit</u>	<u>Pentode Unit</u>		
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.

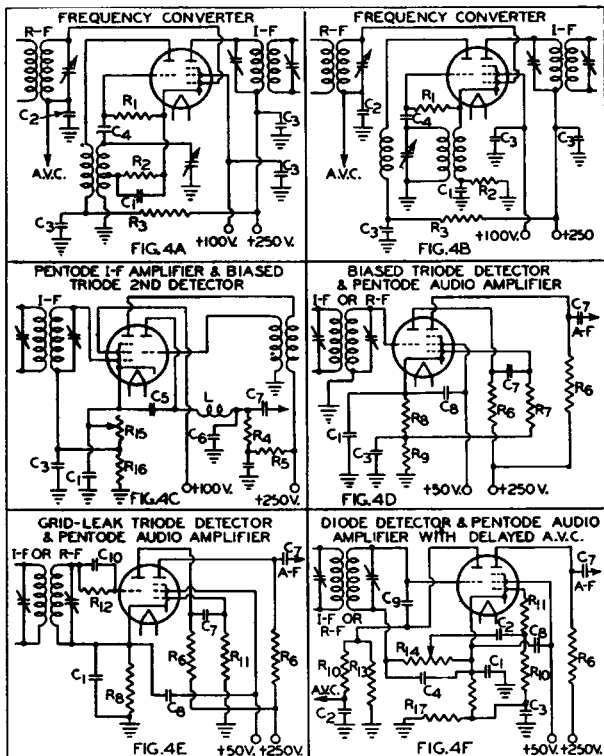
CONVERTER SERVICE

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

## RCA-6F7

## TYPICAL CIRCUITS



## APPROXIMATE VALUES

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

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

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RCA Radiotron

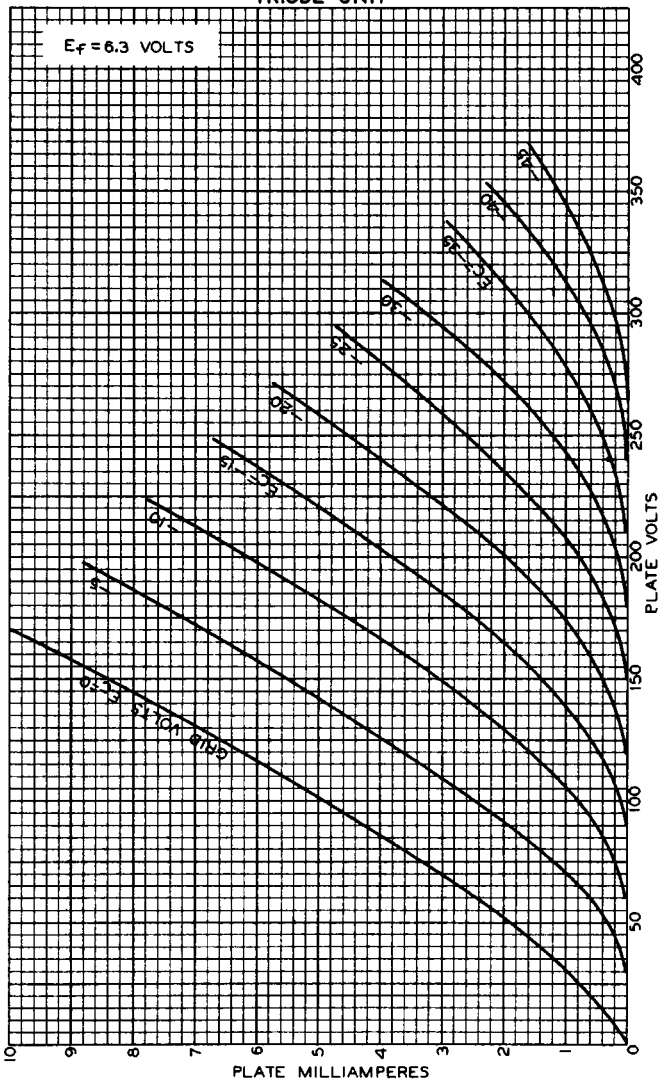
RCA-6F7

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RADIO TUBES

C-6F7

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AVERAGE PLATE CHARACTERISTICS  
TRIODE UNIT



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### AVERAGE PLATE CHARACTERISTICS PENTODE UNIT

