

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 μ f
 Grid to Cathode 2.5 μ f
 Plate to Cathode 3.0 μ f

Pentode Unit:
 Grid to Plate 0.008 max. μ f
 Input 3.2 μ f
 Output 12.5 μ f

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

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

	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 μ mhos
Mut. Cond. at -35 volts bias	-	9	10 μ mhos
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 $\circ$	250	volts
Screen	-	100 $\circ$	volts
Grid Bias	**	-10 $\circ$	volts
Plate Resistance	-	2	megohms
Conversion Conductance	-	300	μ mhos
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.

$\circ$ May be obtained from 250-volt source through 60000-ohm dropping resistor.

$\circ$ Obtained by means of 1700-ohm self-biasing (cathode) resistor.

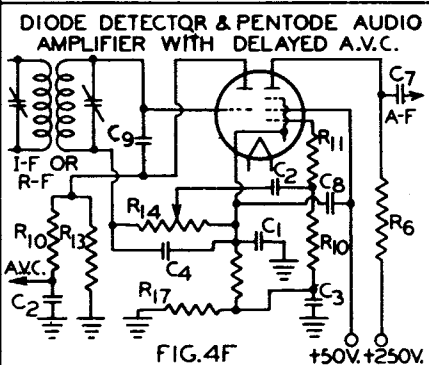
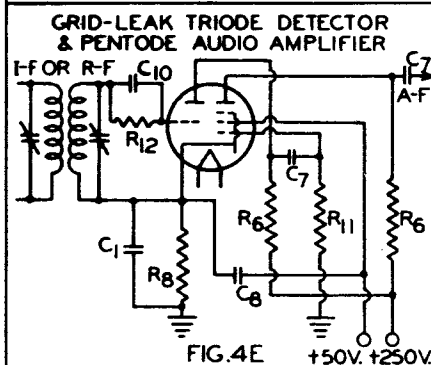
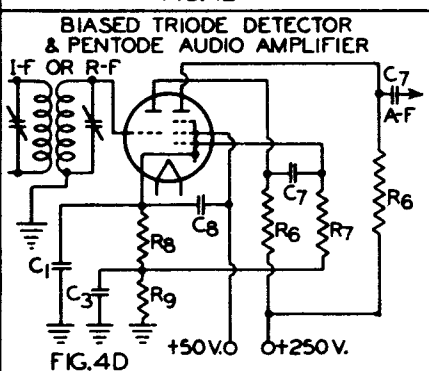
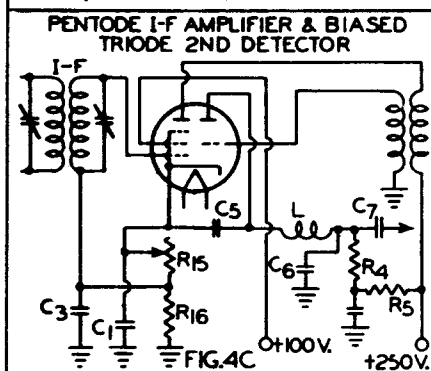
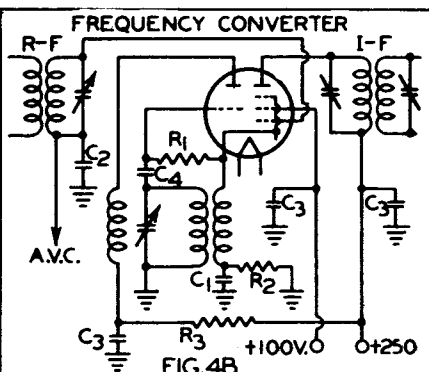
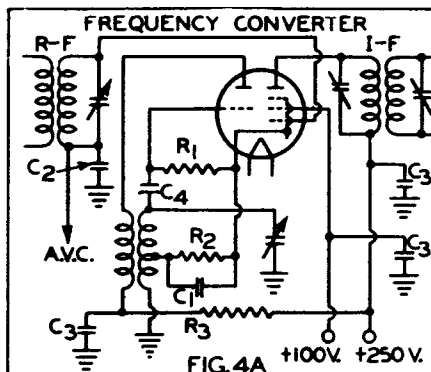
* In circuits where the cathode is not directly connected to the heater, the potential difference between heater and cathode should be kept as low as possible.

Δ Requires different socket than medium 7-pin base.

$\circ$ With shield-can.

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TYPICAL CIRCUITS



APPROXIMATE VALUES

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

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

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



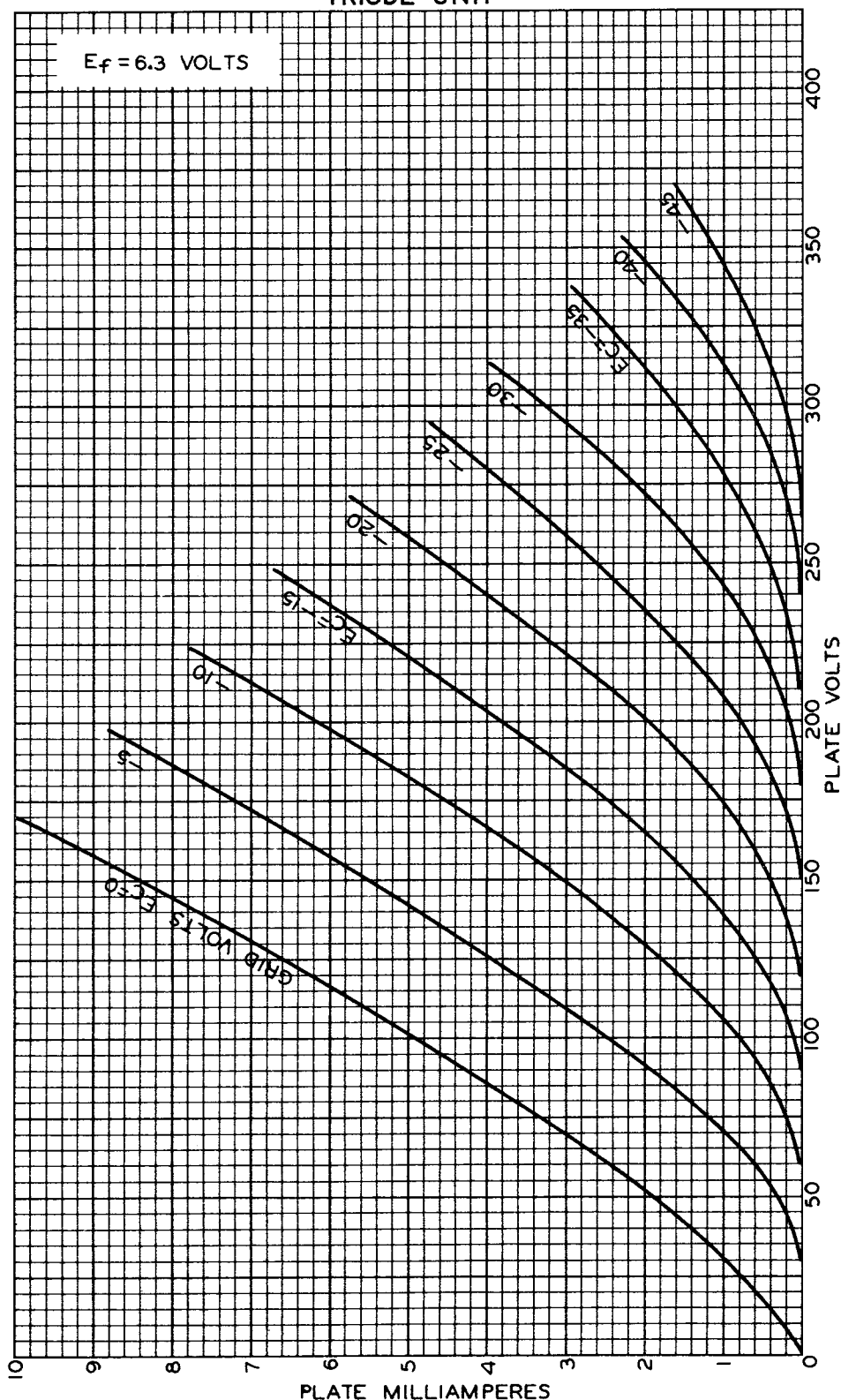
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Cunningham
RADIO TUBES

C-6F7

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AVERAGE PLATE CHARACTERISTICS TRIODE UNIT



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Radiotron

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AVERAGE PLATE CHARACTERISTICS
PENTODE UNIT