

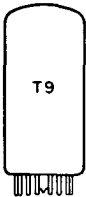
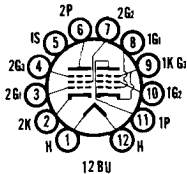
6G11

12G11

FM DETECTOR
AUDIO POWER AMPLIFIER

Double Dissimilar Pentode

Construction.....Compactron T-9
Base Button 12 Pin, E12-70
Basing 12BU
Outline 9-58
Maximum Diameter 1.188 In.
Maximum Seated Height 2.000 In.
Maximum Overall Height 2.375 In.



ELECTRICAL DATA

HEATER OPERATION

	12G11	6G11
Heater Voltage.....	12.6	6.3 Volts
Heater Current	600	1200 Ma
Heater Warm-up Time	11	— Seconds
Maximum Heater-Cathode Voltage		
Heater Negative with Respect to Cathode		
Total DC and Peak.....		200 Volts
Heater Positive with Respect to Cathode		
DC		100 Volts
Total DC and Peak.....		200 Volts

DIRECT INTERELECTRODE CAPACITANCES (Unshielded)

Section 1

Grid No. 1 to Plate	0.26 Pf
Input: 1g1 to (h + 1k + 1g2 + bp + IS)	12 Pf
Output: 1p to (h + 1k + 1g2 + bp + IS)	12 Pf

Section 2

Grid No. 1 to Plate	0.034 Pf
Grid No. 3 to Plate	2.8 Pf
Grid No. 1 to All Except Plate: 2g1 to (h + 2k + 2g2 + 2g3 + IS)	6.5 Pf
Grid No. 3 to All: 2g3 to (h + 2k + 2g1 + 2g2 + 2p + IS).....	7.5 Pf
Grid No. 1 to Grid No. 3	0.24 Pf
Plate, Section 1 to Plate, Section 2.....	0.12 Pf

RATINGS (Design Maximum Rating System)

Section 1

Plate Voltage	150 Volts
Screen Voltage.....	135 Volts
Plate Dissipation	6.5 Watts
Screen Dissipation.....	1.8 Watts
DC Cathode Current	65 Ma

Section 2

Plate Voltage	330 Volts
Suppressor Voltage	28 Volts
Screen Supply Voltage	330 Volts
Screen Voltage	See Rating Chart (Gen. Info. Sec.)
Positive DC Grid No. 1 Voltage	0 Volt
Plate Dissipation	1.7 Watts
Screen Dissipation.....	1.1 Watts

CHARACTERISTICS AND TYPICAL OPERATION

Section 1

Class A1 Amplifier

Plate Voltage	120 Volts
Screen Voltage.....	110 Volts
Grid No. 1 Voltage	-8.0 Volts
Peak AF Grid No. 1 Voltage	8.0 Volts
Plate Resistance (Approx.)	10,000 Ohms
Transconductance	7500 μ mhos
Zero Signal Plate Current.....	49 Ma
Maximum Signal Plate Current	50 Ma
Zero Signal Screen Current	4.0 Ma
Maximum Signal Screen Current	8.5 Ma
Load Resistance	2500 Ohms
Total Harmonic Distortion (Approx.)	10 Percent
Maximum Signal Power Output	2.3 Watts

Section 2

Plate Voltage	150 Volts
Suppressor Voltage	0 Volt
Screen Voltage.....	100 Volts
Cathode Bias Resistor	560 Ohms
Plate Resistance (Approx.)	0.15 Megohm
Grid No. 1 Transconductance	1000 μ mhos
Grid No. 3 Transconductance	400 μ mhos
Plate Current	1.3 Ma
Screen Current	2.0 Ma
Grid No. 1 Voltage (Approx.) $I_b = 10 \mu$ a	-4.5 Volts
Grid No. 3 Voltage (Approx.) $I_b = 10 \mu$ a	-4.5 Volts

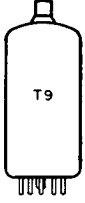
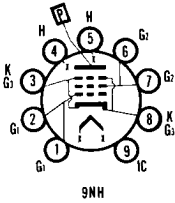
HORIZONTAL DEFLECTION
AMPLIFIER

6GB5/EL500

13GB5/XL500, 18GB5,
27GB5/PL500, 28GB5

Beam Power Pentode

Construction	Magnoval T-9
Base	Button 9 Pin E9-23
Top Cap	C1-2
Basing.....	9NH
Outline	
Maximum Diameter	1.188 In.
Maximum Seated Height	3.750 In.
Maximum Overall Height	4.125 In.



ELECTRICAL DATA
HEATER OPERATION

	28GB5	27GB5 /PL500	18GB5	13GB5 /XL500	6GB5 /EL500
Heater Voltage.....	28	28	18	13	6.3 Volts
Heater Current	300	300	450	600	1380 Ma
Maximum Heater-Cathode Voltage					
Heater Negative with Respect to Cathode					
DC					125 Volts
Total DC and Peak.....					250 Volts
Heater Positive with Respect to Cathode					
DC					125 Volts
Total DC and Peak.....					250 Volts

RATINGS (Design Maximum Rating System)

DC Plate Voltage (Max.)	275 Volts
Peak Positive Pulse Plate Voltage (Max.)	7700 Volts
Screen-Grid Voltage (Max.)	275 Volts
Average Cathode Current (Max.).....	275 Ma
Plate Dissipation (Max.)	17 Watts
Screen-Grid Dissipation (Max.)	5 Watts
Control-Grid Circuit Resistance	2.2 Megohms

CHARACTERISTICS AND TYPICAL OPERATION

Supply Voltage.....	170	200	230 Volts
Minimum Value of Screen-Grid Resistor ⁽¹⁾	1.2	1.5	2.2 Kilohms
Screen-Grid Voltage	130	150	180 Volts
Plate Voltage at End of Scan ⁽²⁾	55	59	65 Volts
Control-Grid Voltage at End of Scan ⁽³⁾	-10	-10	-10 Volts
Peak Plate Current	210	270	360 Ma

Non-Stabilized Circuits (Drive Below the Knee)

Supply Voltage.....	170	200	230 Volts
Minimum Value of Screen-Grid Resistor	2.2	2.2	2.2 Kilohms
Control-Grid Voltage at End of Scan ⁽³⁾	+1	+1	+1 Volt
Peak Plate Current ⁽⁴⁾	200	250	320 Ma

INSTANTANEOUS PLATE KNEE VALUES

$E_b = 75$ V, $E_{c2} = 200$ V and $E_{c1} = -10$ V
 $I_b = 440$ Ma and $I_{c2} = 37$ Ma

NOTES:

- (1) The quoted values are the minimum values of R_{g2} which are required to prevent an excessive screen-grid dissipation during the warm-up period.
- (2) These values refer to nominal line voltage. At a line voltage 10% below nominal the tube will still operate above the knee.
- (3) The minimum required control-grid voltage for cut-off during the flyback is -120 volts.
- (4) To allow for tube spread, deterioration during the life and line voltage 10% below nominal, the specified values for peak plate current should not be exceeded at the specified conditions for a nominal line voltage.