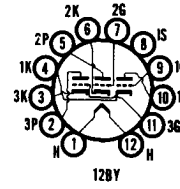
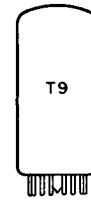
6AV11

Color Television Type

AMPLIFIER, PHASE INVERTER or OSCILLATOR

Triple Medium Mu Triode





Construction.....Compactron T-9
Base .....Button 12 Pin, E12-70
Basing 12BY
Outline 9-56
Maximum Diameter .....1.188 In.
Maximum Seated Height .....1.500 In.
Maximum Overall Height .....1.875 In.

ELECTRICAL DATA

HEATER OPERATION

Heater Voltage	6.3 Volts
Heater Current	600 Ma
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	Section 2	Section 3
Grid to Plate (g to p)	1.2	1.2	1.2 Pf
Input: g to (h + k + IS)	1.9	1.9	1.9 Pf
Output: p to (h + k + IS)	1.8	0.7	2.0 Pf

RATINGS (Design Maximum Rating System) (Each Section)

Plate Voltage (Max.)	330 Volts
Plate Dissipation (Max.)	2.75 Watts
Total Plate Dissipation (All Plates) (Max.)	6.0 Watts
DC Cathode Current (Max.)	20 Ma
Grid Circuit Resistance	
With Fixed Bias (Max.)	0.25 Megohm
With Cathode Bias (Max.)	1.0 Megohm

CHARACTERISTICS AND TYPICAL OPERATION (Each Section)

Plate Voltage	100	250 Volts
Grid Voltage	0	−8.5 Volts
Amplification Factor	20	17
Plate Resistance (Approx.)	6500	7700 Ohms
Transconductance	3100	2200 μmhos
Plate Current	11.8	10.5 Ma
Grid Voltage (Approx.)		
Ib = 10 μa	—	−24 Volts

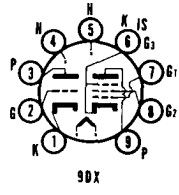
6AW8A

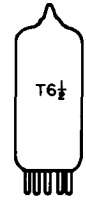
8AW8A

Color Television Type

SYNC SEPARATOR (T) VIDEO AMPLIFIER (P)

High Mu Triode and Sharp Cutoff Pentode





Construction .....Miniature T-6½
Base .....Button 9 Pin, E9-1
Basing 9DX
Outline 6-3
Maximum Diameter .....0.875 In.
Maximum Seated Height .....2.375 In.
Maximum Overall Height .....2.625 In.

ELECTRICAL DATA

HEATER OPERATION

	8AW8A	6AW8A
Heater Voltage	8.4	6.3 Volts
Heater Current	450	600 Ma
Heater Warm-up Time	11	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

	Shielded(1)	Unshielded
Triode		
Grid to Plate: (g to p)	2.2	2.2 Pf
Input: g to (h + k)	3.4	3.2 Pf
Output: p to (h+Tk+Pk+Pg3+IS)	3.0	1.8 Pf
Pentode		
Grid to Plate: (g1 to p) (Max.)	0.05	0.06 Pf
Input: g1 to (g + k + g2 + g3 + IS)	10.0	10.0 Pf
Output: p to (h + k + g2 + g3 + IS)	4.5	3.6 Pf
Coupling		
Pentode Grid No. 1 to Triode Plate (Max.)	0.005	0.008 Pf
Pentode Plate to Triode Grid	0.006	0.016 Pf
Pentode Plate to Triode Plate (Max.)	0.025	0.150 Pf

RATINGS (Design Maximum Rating System)

	Triode	Pentode
Plate Voltage (Max.)	330	330 Volts
Grid No. 2 Supply Voltage (Max.)	—	330 Volts
Grid No. 2 Voltage	See Rating Chart (Gen. Info. Sec.)	
Plate Dissipation (Max.)	1.1	3.75 Watts
Grid No. 2 Dissipation (Max.)	—	1.1 Watt
Negative Grid No. 1 Voltage (Max.)	—	50 Volts
Positive Grid No. 1 Voltage (Max.)	0	0 Volt
Grid No. 1 Circuit Resistance		
Fixed Bias (Max.)	0.5	0.25 Megohm
Self Bias (Max.)	1.0	1.0 Megohm

CHARACTERISTICS AND TYPICAL OPERATION
Class A1 Amplifier

	Triode	Pentode
Plate Voltage	200	150 Volts
Grid No. 2 Voltage	—	150 Volts
Grid No. 1 Voltage	-2	0 Volts
Cathode Bias Resistor	—	150 Ohms
Plate Current	4.0	15 Ma
Grid No. 2 Current	—	3.5 Ma
Transconductance	4000	9500 μmhos
Amplification Factor	70	—
Plate Resistance (Approx.)	—	0.20 Megohm
Grid No. 1 Voltage (Approx.) for Ib = 20 μa	-5	-8 Volts

INSTANTANEOUS PLATE KNEE VALUES
Eb = 65 V, Ec2 = 150 V, and Ec1 = 0 V;
Ib = 46 Ma; and Ic2 = 15 Ma

NOTE:
(1) Shield No. 315 ties to Pins 4 and 5.

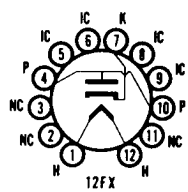
DAMPER

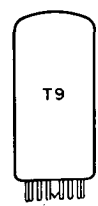
6AX3

12AX3, 17AX3

Heater-Cathode Diode

Construction.....Compactron T-9
Base .....Button 12 Pin, E12-70
Basing 12FX
Outline
Maximum Diameter .....1.188 In.
Maximum Seated Height .....2.250 In.
Maximum Overall Height .....2.596 In.





ELECTRICAL DATA
HEATER OPERATION

	17AX3	12AX3	6AX3
Heater Voltage	16.8	12.6	6.3 Volts
Heater Current	450	600	1200 Ma
Heater Warm-up Time	11	11	— Seconds