

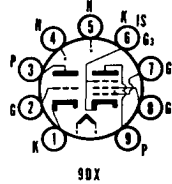
**SYNC SEPARATOR/CLIPPER, PHASE
INVERTER (T)
VIDEO AMPLIFIER (P)**

6JA8

10JA8

**High Mu Triode and
Beam Power 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

	10JA8	6JA8
Heater Voltage	10.5	6.3 Volts
Heater Current	450	750 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)

Triode Section

Grid to Plate	4.0 Pf
Input: g to (h + Tk + Pk, g3, IS)	2.6 Pf
Output: p to (h + Tk + Pk, g3, IS)	2.6 Pf

Pentode Section

Grid No. 1 to Plate (Max.)	0.1 Pf
Input: g1 to (h + Pk, g3, IS + g2)	11 Pf
Output: p to (h + Pk, g3, IS + g2)	4.4 Pf

Coupling

Triode Grid to Pentode Plate (Max.)	0.005 Pf
Pentode Grid No. 1 to Triode Plate (Max.)	0.018 Pf
Pentode Plate to Triode Plate (Max.)	0.17 Pf

RATINGS (Design Maximum Rating System)

	Triode Section	Pentode Section
Plate Voltage (Max.)	300	330 Volts
Grid No. 2 Supply Voltage (Max.)	—	330 Volts
Grid No. 2 Voltage	See Rating Chart (Gen. Info. Sec.)	
Positive Grid No. 1 Voltage (Max.)	0	0 Volt
Plate Dissipation (Max.)	1.0	5.0 Watts
Grid No. 2 Dissipation (Max.)	—	1.5 Watts
Grid No. 1 Circuit Resistance		
Fixed Bias (Max.)	0.5	0.25 Megohm
Cathode Bias (Max.)	1.0	1.0 Megohm

CHARACTERISTICS AND TYPICAL OPERATION

	Triode Section		Pentode Section	
Plate Voltage	135	200	135	200 Volts
Grid No. 2 Voltage	—	—	135	135 Volts
Grid No. 1 Voltage	—2	—2	—1.5	—1.5 Volts
Plate Current	1.0	3.5	17	18 Ma
Grid No. 2 Current	—	—	4.2	4.0 Ma
Transconductance	1550	3700	12,000	14,000 μmhos
Amplification Factor	60	70	—	—
Plate Resistance (Approx.)	39,000	19,000	66,000	70,000 Ohms
Ec1 for Ib = 100 μa (Approx.)	—	—	—5	—5 Volts
Ec1 for Ib = 10 μa (Approx.)	—4.8	—7.0	—	— Volts

INSTANTANEOUS PLATE KNEE CHARACTERISTICS (Pentode Section)

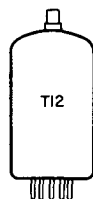
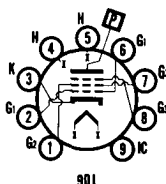
Eb = 30 V, Ec2 = 135 V and Ec1 = 0 V
Ib = 32 Ma and Ic2 = 14 Ma

6JB6

12JB6, 17JB6

**HORIZONTAL DEFLECTION
AMPLIFIER****Beam Power Pentode**

Construction Novar T-12
 Base Button 9 Pin, E9-76
 Top Cap C1-2 or C1-3
 Basing 9QL
 Outline
 Maximum Diameter 1.563 In.
 Maximum Seated Height 3.170 In.
 Maximum Overall Height 3.550 In.

**ELECTRICAL DATA
HEATER OPERATION**

	17JB6	12JB6	6JB6
Heater Voltage.....	16.8	12.6	6.3 Volts
Heater Current	450	600	1200 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 (Unshielded)

Grid to Plate	0.2 Pf
Input: g ₁ to (h + k + g ₂ + g ₃)	15 Pf
Output: p to (h + k + g ₂ + g ₃)	6.0 Pf

RATINGS (Design Maximum Rating System)**Horizontal Deflection Amplifier⁽¹⁾**

DC Plate Supply Voltage (Boost + DC Power Supply) (Max.)	770 Volts
Peak Positive Plate Voltage (Max.)	6500 Volts
Peak Negative Plate Voltage (Max.)	1500 Volts
Grid No. 2 Voltage (Max.)	220 Volts
Peak Negative Grid No. 1 Voltage (Max.)	330 Volts
Plate Dissipation (Max.) ⁽²⁾	17.5 Watts
Grid No. 2 Input (Max.)	3.5 Watts
Average Cathode Current (Max.).....	175 Ma
Peak Cathode Current (Max.)	550 Ma
Grid No. 1 Circuit Resistance (Max.)	1.0 Megohm
Bulb Temperature (At Hottest Point) (Max.)	240 °C

CHARACTERISTICS AND TYPICAL OPERATION

Plate Voltage	250 Volts
Grid No. 2 Voltage	150 Volts
Grid No. 1 Voltage	-22.5 Volts
Plate Current	70 Ma
Grid No. 2 Current	2.1 Ma
Transconductance	7100 μmhos
Amplification Factor ⁽³⁾	4.4
Plate Resistance.....	15,000 Ohms
Ec1 for Ib = 1 Ma (Approx.)	-42 Volts

INSTANTANEOUS PLATE KNEE VALUES

Eb = 60 V, Ec2 = 150 V, and Ec1 = 0 V;

Ib = 390 Ma; and Ic2 = 32 Ma

NOTES:

- (1) For operation in a 525 line, 30 frame system as described in "Standards of Good Engineering Practice for Television Broadcast Stations; Federal Communications Commission," the duty cycle of the voltage pulse must not exceed 15% of one horizontal scanning cycle.
- (2) In stages operating with grid leak bias, an adequate cathode bias resistor or other suitable means is required to protect the tube in the absence of excitation.
- (3) Amplification factor with tube operating as a triode with 150 volts on the plate and Grid No. 2 and -22.5 volts on Grid No. 1.