

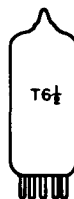
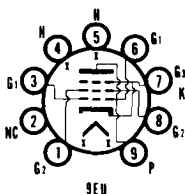
- (5) Driver stage should be capable of supplying the specified driving power at low distortion to the No. 1 grids of the AB2 stage.
- (6) To minimize distortion, the effective resistance per Grid No. 1 circuit of the AB2 stage should be held at a low value. For this purpose the use of transformer coupling is recommended. In no case, however, should the total dc Grid No. 1 circuit resistance exceed 30,000 ohms when the tube is operated at maximum ratings. For operation less than maximum ratings, the dc Grid No. 1 circuit resistance may be as high as 100,000 ohms.
- (7) Obtained preferably from a separate, well-regulated source.
- (8) Referenced to either of the two tones and without the use of feedback to enhance linearity.
- (9) Obtained preferably from a separate source modulated with the plate supply, or from the modulated plate supply through a series resistor.
- (10) Obtained from Grid No. 1 resistor or from a combination of Grid No. 1 resistor with either fixed supply or cathode resistor.
- (11) Obtained preferably from separate source, or from the plate-supply voltage with a voltage divider or through a series resistor. A series Grid No. 2 resistor should be used only when the tube is used in a circuit which is not keyed. Grid No. 2 voltage must not exceed 435 volts under key-up conditions.
- (12) Obtained from fixed supply, by Grid No. 1 resistor, by cathode resistor, or by combination methods.
- (13) When Grid No. 1 is driven positive and the tube is operated at maximum ratings, the total dc Grid No. 1 circuit resistance should not exceed the specified value of 30,000 ohms. If this value is insufficient to provide adequate bias, the additional required bias must be supplied by a cathode resistor or fixed supply. For operation at less than maximum ratings, the dc Grid No. 1 circuit resistance may be as high as 100,000 ohms.

AUDIO POWER AMPLIFIER

6973

Beam Power Pentode

Construction Miniature T-6½
 Base Button 9 Pin, E9-1
 Basing 9EU
 Outline 6-4
 Maximum Diameter 0.875 In.
 Maximum Seated Height 2.812 In.
 Maximum Overall Height 3.062 In.



ELECTRICAL DATA

HEATER OPERATION

Heater Voltage.....	6.3 Volts
Heater Current.....	450 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)

Grid No. 1 to Plate	0.4 Pf
Input	9.0 Pf
Output	6.0 Pf

RATINGS (Design Maximum Rating System)

	Ultra-Linear Conn.	Pentode Conn.
Plate and Grid No. 2 Voltage (Max.)	410	— Volts
Plate Voltage (Max.)	—	440 Volts
Grid No. 2 Voltage (Max.)	—	330 Volts
Plate Dissipation (Max.)	12	12 Watts
Grid No. 2 Input (Max.)	1.75	2 Watts
Grid No. 1 Circuit Resistance		
Fixed Bias (Max.)	0.5	0.5 Megohm
Self Bias (Max.)	1.0	1.0 Megohm
Bulb Temperature (Max.)	250	250 °C

CHARACTERISTICS AND TYPICAL OPERATION

	S. T. Class A	P-P Class AB Fixed Bias			P-P Class AB Self Bias	
Plate Voltage	250	250	350	400	300	310 Volts
Grid No. 2 Voltage	250	250	280	290	300	310 Volts
Grid No. 1 Voltage	-15	-15	-22	-25	—	— Volts
Cathode Resistor	—	—	—	—	230	270 Ohms
Peak AF Grid No. 1 Voltage	—	15	22	25	24	22.5 Volts
Plate Current (Zero Signal)	46	92	58	50	80	77 Ma
Plate Current (Max. Signal)	—	105	106	107	96	92 Ma
Grid No. 2 Current (Zero Signal) ..	3.5	7	3.5	2.5	6	5 Ma
Grid No. 2 Current (Max. Signal) ..	—	16	14	13.7	14	14 Ma
Transconductance	4.8K	—	—	—	—	— μ mhos
Plate Resistance	73K	—	—	—	—	— Ohms
Load Resistance (P to P)	—	8K	7.5K	8K	5.5K	6K Ohms
Power Output	—	12.5	20	24	15	17 Watts
Total Harmonic Distortion	—	2	1.5	2	2	4 Percent
E _{c1} for I _b = 100 μ a	-40	—	—	—	—	— Volts

Class AB Ultra-Linear Conn.

Plate Supply Voltage	375 ⁽¹⁾	370 ⁽²⁾	Volts
Grid No. 1 Voltage	-33.5	—	Volts
Cathode Resistor	—	355	Ohms
Peak AF Grid No. 1 Voltage	33.5	31	Volts
Cathode Current (Zero Signal)	62	74	Ma
Cathode Current (Maximum Signal) ..	95	84	Ma
Load Resistance (P to P)	12.5K	13K	Ohms
Power Output	18.5	15	Watts
Total Harmonic Distortion	1.5	1.2	Percent

NOTES:

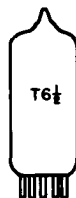
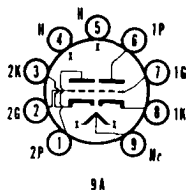
- (1) Obtained from taps on the primary winding of the output transformer. The taps are located on each side of the center tap so as to apply 50 percent of the plate signal voltage to Grid No. 2 of each output tube.
- (2) Obtained from taps on the primary winding of the output transformer. The taps are located on each side of the center tap so as to supply 43 percent of the plate signal voltage to Grid No. 2 of each output tube.

7025

Color Television Type

**AF AMPLIFIERS or
PHASE INVERTERS****Double High Mu Triode**

Construction Miniature T-6½
 Base Button 9 Pin, E9-1
 Basing 9A
 Outline 6-2
 Maximum Diameter 0.875 In.
 Maximum Seated Height 1.937 In.
 Maximum Overall Height 2.187 In.
 The Type 7025 is identical to the Type 12AX7/ECC83 except for improved noise and hum characteristics.

**7189A****AUDIO POWER AMPLIFIER****Beam Power Pentode**

Construction Miniature T-6½
 Base Button 9 Pin, E9-1
 Basing 9LE
 Outline 6-4
 Maximum Diameter 0.875 In.
 Maximum Seated Height 2.812 In.
 Maximum Overall Height 8.062 In.

