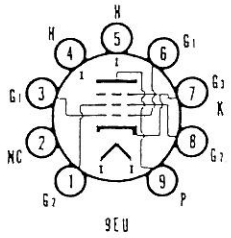
Electro-Harmonix

AUDIO POWER AMPLIFIER

6973EH

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.



9EU

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 Rèsistor	—	—	—	—	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	—	—	—	—	— μmhos
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
Ec1 for Ib = 100 μa	−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.