

# N37 N108



## N37 and N108 OUTPUT PENTODES

### DESCRIPTION

Types N37 and N108 are high slope indirectly heated pentodes mounted on the B7G miniature base. Both types are identical except for the heater rating, and are intended for use as audio power amplifiers in universal equipments. The N37, owing to its heater rating, has special application in D.C./A.C. television receivers.

### RATINGS

	N37	N108	
Heater Current ... ..	0.3	0.1	amp
Heater Voltage ... ..	13	40	approx. volts
Peak Heater/Cathode Voltage ... ..		150	max. volts
	<b>Pentode connected</b>	<b>Triode connected</b>	
Anode Voltage ... ..	165	165	max. volts
Screen Voltage ... ..	165		max. volts
Anode Dissipation ... ..	9	11.3	max. watts
Screen Dissipation ... ..	2.3		max. watts
Amplification Factor* ... ..	285	105	
Impedance* ... ..	28,500	950	ohms
Mutual Conductance* ... ..	10	11.25	mA/V

\* measured at  $V_a = V_{g_2} = 165$ ;  $V_{g_1} = -8$ .

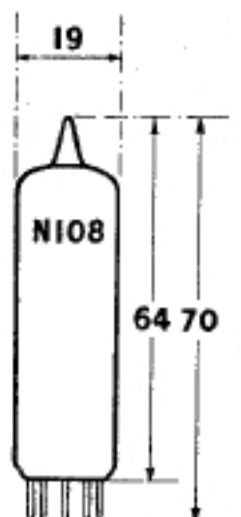
### Capacitances :

Anode to all other electrodes ... ..	10.5	approx. pF
Control Grid to all other electrodes ... ..	10.5	" "
Anode to Control Grid ... ..	0.3	" "

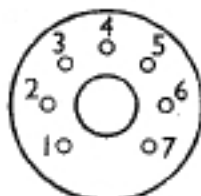
### VENTILATION

It is recommended that free air circulation be employed wherever possible. Where a retaining device in the form of a metal cannister is employed the surfaces should be blackened.

### DIMENSIONS



All dimensions are in mm. and are the maximum except where otherwise stated.



View looking on underside of base.

### BASE

#### B7G

- Pin 1: Control Grid
- 2: Cathode and Suppressor
- 3: Heater
- 4: Heater
- 5: Anode
- 6: IC
- 7: Screen Grid

The dimensions of N37 are identical.

IC indicates that this pin must not be used for any external connection.

# TYPES N37 and N108

## OPERATING CONDITIONS

### Single Valve, Class A, Pentode Connection.

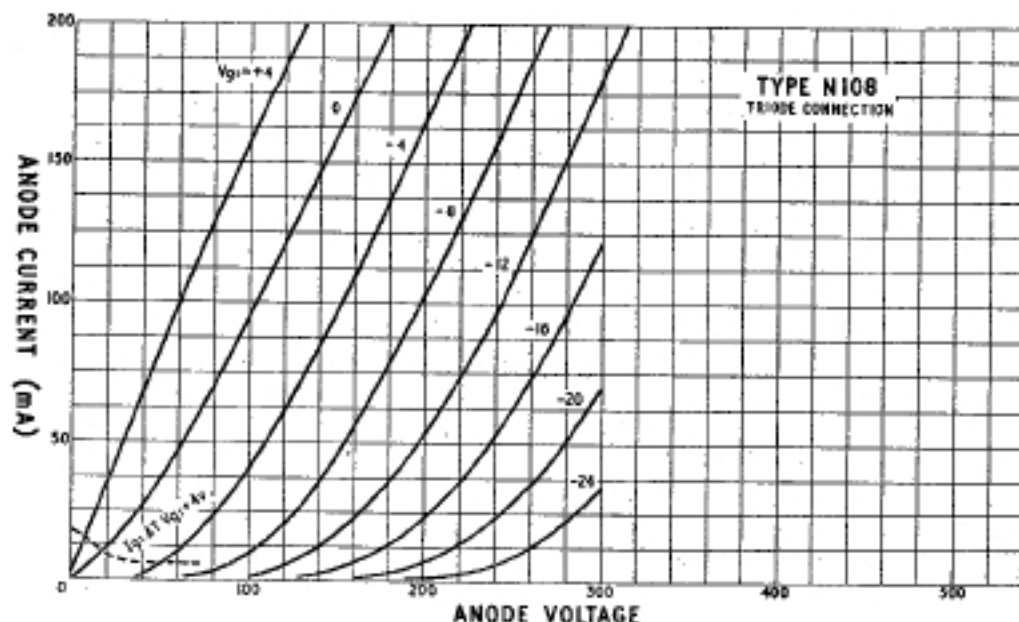
Anode Voltage	...	...	...	...	...	...	...	165	volts
Screen Voltage	...	...	...	...	...	...	...	165	volts
Control Grid Voltage	...	...	...	...	...	...	...	-8	approx. volts
Anode Current (no signal)	...	...	...	...	...	...	...	54.5	mA
Screen Current (no signal)	...	...	...	...	...	...	...	7	mA
Anode Dissipation	...	...	...	...	...	...	...	9	watts
Screen Dissipation	...	...	...	...	...	...	...	1.2	watts
Anode Load	...	...	...	...	...	...	...	3 000	ohms
Input Signal Voltage	...	...	...	...	...	...	...	7.7	peak volts
Power Output	...	...	...	...	...	...	...	4	watts
Distortion (total)	...	...	...	...	...	...	...	10	%
Cathode Bias Resistor	...	...	...	...	...	...	...	120	ohms

### Low Voltage Condition.

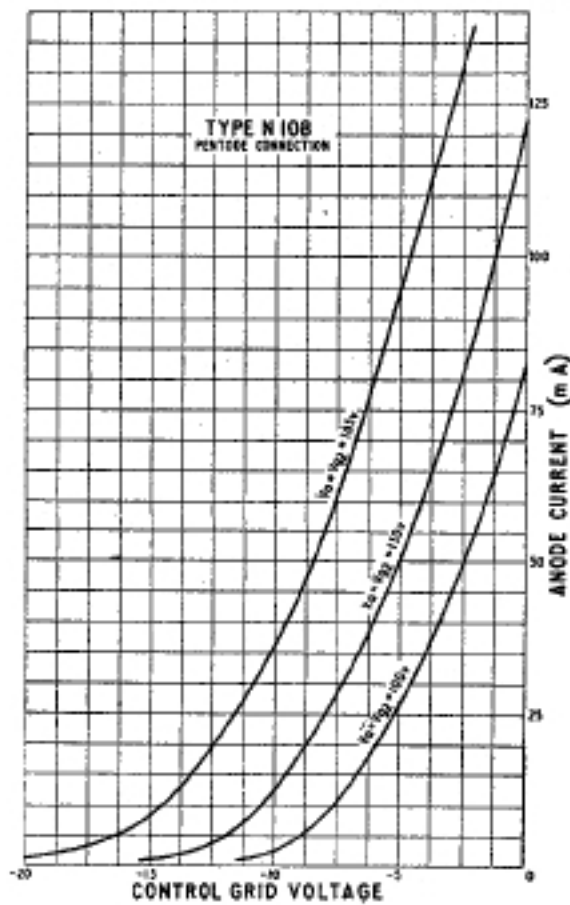
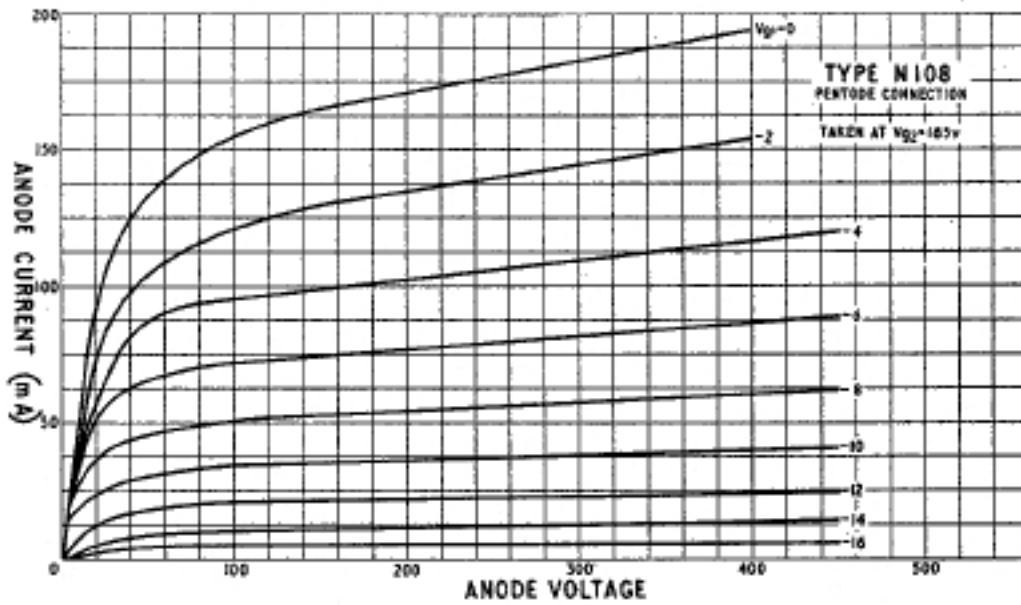
Anode Voltage	...	...	...	...	...	...	...	100	volts
Screen Voltage	...	...	...	...	...	...	...	100	volts
Control Grid Voltage	...	...	...	...	...	...	...	-4.4	approx. volts
Anode Current (no signal)	...	...	...	...	...	...	...	31	mA
Screen Current (no signal)	...	...	...	...	...	...	...	3.3	mA
Anode Dissipation	...	...	...	...	...	...	...	3.1	watts
Screen Dissipation	...	...	...	...	...	...	...	0.33	watts
Anode Load	...	...	...	...	...	...	...	3,000	ohms
Input Signal Voltage	...	...	...	...	...	...	...	4	peak volts
Power Output	...	...	...	...	...	...	...	1.2	watts
Distortion (total)	...	...	...	...	...	...	...	10	%
Cathode Bias Resistor	...	...	...	...	...	...	...	120	ohms

The external grid circuit resistance should be kept as low as possible, and should not exceed 250,000 ohms with auto bias or 100,000 ohms with fixed bias.

*270K + 20%*



# TYPES N37 and N108



CHARACTERISTIC CURVES OF AVERAGE VALVE.