MAZDA

AC.2/PEN.DD

A.C. Mains Double-diode Pentode

RATING.

Heater Voltage	4.0
Heater Current (Amps.)	2.0
Maximum Anode Voltage	250
Maximum Screen Voltage	250
Maximum Anode Dissipation (watts)	8
*Mutual Conductance (mA/V)	8.0

*Measured at $Vs=100$; $Vg=0$.

OPERATING CONDITIONS.

Pentode.

Anode Voltage	250
Screen Voltage	250
Anode Current (mA)	32
Bias Voltage	5.3
Optimum Load (ohms)	6,700
Self Bias Resistance (ohms)	140
Delay Voltage	10.5

DIMENSIONS.

Maximum overall length	...150 m.m.
Maximum diameter	... 54 m.m.

PRICE **21/-**

GENERAL.

The AC2/PEN.DD is an indirectly heated double diode output pentode for A.C. mains operation designed to combine the functions of detector, A.V.C. and output valve in one bulb. The diodes and the pentode form two entirely separate units within the same bulb, mounted on a common cathode with two separate emitting surfaces. The pentode section is identical to the Mazda AC2/PEN.

APPLICATION.

The Mazda AC2/PEN.DD is suitable for use in practically any circuit where delayed automatic volume control is required, and by its use it is possible to dispense with an intermediate L.F. stage.
In order to obtain maximum power output, care should be taken to prevent R.F. voltages being applied to the grid of the pentode. In connection with this fact, particular care should be taken to filter out any H.F. from the grid of the pentode, and it is found more satisfactory in practice to insert the conventional H.F. choke between the diode anode and the diode load resistance instead of in the grid lead of the pentode as is usual. This choke should be of the super-heterodyne type and should have an inductance of the order of 300,000 mH. In addition to the filtering provided by the choke, a .001 mfd condenser is desirable between the anode and cathode of the pentode.

THE EDISON SWAN ELECTRIC CO. LTD.
Radio Division Showrooms :
155 Charing Cross Road, London, W.C.2
Showrooms in all the Principal Towns
Mazda Valves are manufactured in Great Britain for
The British Thomson-Houston Co., Ltd.,
London and Rugby

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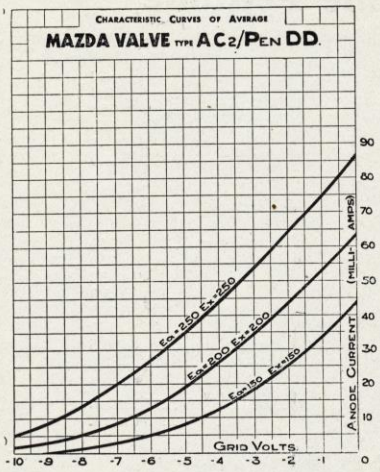
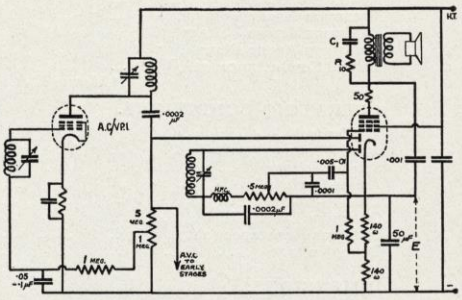
MAZDA

AC.2/PEN.DD

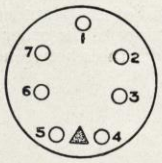




Efficient filtering of H.F. from the pentode will lead inevitably to some attenuation of the higher audio frequencies and the condenser in the anode impedance limiting circuit may with advantage be reduced to a smaller value than that usually fitted.
A resistance of approximately 50 ohms should be inserted in the anode circuit close to the anode pin to prevent parasitic oscillations.
It is recommended that a delay voltage of the order of 10–15 should be employed.
The lowest reflected speaker speech coil impedance in the audio frequency spectrum should be equal to the optimum load.
The resistance of the grid to cathode circuit should not exceed 1 megohm.

HEATER VOLTAGE.

It is recommended that the heater voltage should be 4 volts + 5% under normal working conditions.



BASE CONNECTIONS.

Pin No. 1.—Diode.
Pin No. 2.—Pentode Anode.
Pin No. 3.—Diode.
Pin Nos. 4 & 5.—Heaters.
Pin No. 6.—Cathode.
Pin No. 7.—Screen Grid.
Top Cap.—Control Grid.

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