

MAZDA

DC 2/PEN

D.C. Mains Pentode Valve



RATING.

Filament Volts (Approx.)	...	...	35
Filament Amps.	...	...	0.1
Maximum Anode Voltage	...	...	250
Maximum Screen Voltage	...	...	200
*Mutual A.C. Conductance (mA/V)	...	...	2.5

*at $E_a=100$; $E_s=100$; $E_g=0$.

DIMENSIONS.

Maximum overall length	...	...	132 m.m.
Maximum diameter	...	...	58 m.m.

PRICE 20/-

GENERAL.

The Mazda DC 2/Pen is an indirectly-heated, super-power, pentode for D.C. mains operation. Mazda D.C. mains valves are operated with their cathodes connected in parallel and their heaters in series, the latter being connected to the supply mains through a voltage dropping resistance. The screen connection is made to the terminal at the side of the base.

APPLICATION.

The DC 2/Pen will satisfactorily operate a moving-coil or power cone speaker at full volume. The optimum load impedance is given in the table overleaf, and the output transformer ratio should be chosen accordingly. With the B.T.H. Senior R.K. Speaker a ratio of 25:1 will be found suitable, and with the Minor R.K. Speaker a ratio of 42:1.

The rise of load impedance with frequency should be limited by connecting a condenser of 0.01 mfd. in series with a resistance of 10,000 ohms across the primary of the transformer.

The DC 2/Pen may also be used as a power-grid detector with the loud speaker connected directly in its anode circuit. Under these conditions the anode current should not exceed 40 mA.



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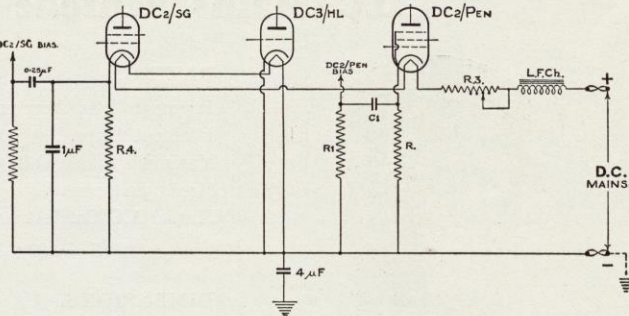
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HEATER SUPPLY.

The heater of this valve is designed to operate with a current of 0.1 amp. and the current should accordingly be adjusted to this value by means of a resistance R3, as shown in the figure.

OPERATING CONDITIONS.

The following table gives the optimum operating conditions for various values of anode and screen voltages. R1 in the figure is a decoupling resistance of 50,000 ohms. The resistance of the grid to cathode circuit should never exceed 500,000 ohms.



Heater Circuit diagram—Pentode Output—for Mazda 0.1 D.C. Mains Valves

Anode Volts	...	...	...	200	250
Screen Volts	...	...	...	200	200
Anode Current	...	...	...	30	30
Grid Bias (Volts)...	...	...	...	-10	-10
Self-bias Resistance (Ohms)	...	...	...	300	300
Optimum Load Resistance(Ohms)	...	...	...	9,000	10,000

