

# MAZDA

DC 2/P

## D.C. Mains Power Valve



### RATINGS.

Filament Current (amps.)	...	...	...	0.1
Filament Volts (approx.)	...	...	...	35
Maximum Anode Volts	...	...	...	200
*Amplification Factor...	...	...	...	10
*Mutual A.C. Conductance (mA/V)	...	...	...	3.75
*Anode A.C. Resistance	...	...	...	2,650

\* $E_a=100$  ;  $E_g=0$ .

### DIMENSIONS.

Maximum overall length (mm.)	...	...	...	125
Maximum diameter (mm.)	...	...	...	50

PRICE **15/-**

### GENERAL.

The Mazda DC 2/P is an indirectly-heated, three-electrode valve for D.C. mains operation requiring a heater current of only 0.1 amp. The heaters of these valves are run in series, being connected to the supply mains through a voltage-dropping resistance (see Fig. 1).

Used in the last stage of a receiver this valve will deliver ample power to operate a moving-coil or power-cone speaker.

It has a low anode A.C. resistance combined with a high amplification factor for this class of valve. The inter-electrode capacity (grid-cathode) is only 4.5 micromicrofarads.



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4/33

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## DC 2/P

### HEATER SUPPLY.

The heater of this valve is rated at 0.1 amp. and the current should be adjusted to this value by the resistance R3. The valve should never be removed from its holder without first switching off the mains supply, as otherwise large voltage surges may be produced across the heater circuit choke, due to the sudden interruption of the heater current.

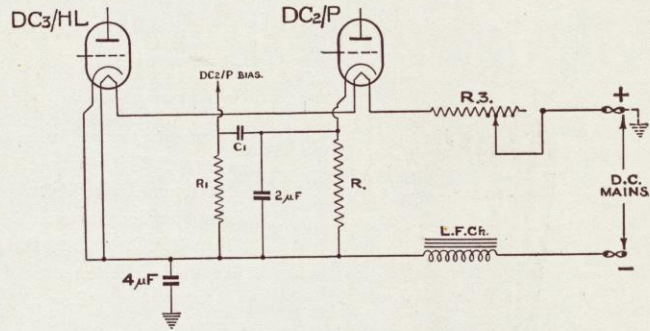


Fig. 1. Heater Circuit diagram—Triode Output—for Mazda 0.1 D.C. Mains Valves

### APPLICATION.

The Mazda DC 2/P should be used in the last stage of the receiver. Owing to the great amplification obtainable per stage, two stages of L.F. amplification are not recommended, as trouble would be experienced both in keeping down mains interference and in preventing instability.

### GRID BIAS.

Grid bias must always be used, and the self-biasing method is recommended, with a resistance in series with the cathode. A condenser of at least 2 mfd. should be connected across the bias resistance, and the grid circuit should be suitably decoupled. The table below gives the correct value of bias and self-biasing resistance required :

Anode Volts ...	100	150	200
Grid Bias Volts ...	-6	-9	-13.5
Resistance (R) ...	800	800	800

The value of the decoupling resistance R1 may be 50,000 to 100,000 ohms.

The optimum anode load resistance for an anode voltage of 200 volts is 6,000 ohms.

