

MAZDA

DC2/SG

D.C. Mains Screened Grid Valve



RATING.

Filament Voltage (Approx.)	...	...	20
Filament Amps.	...	...	0.1
Maximum Anode Voltage	...	...	200
Maximum Screen Voltage	...	...	100
Maximum Anode Current (mA)	...	...	12
† Amplification Factor	...	...	1,200
* Mutual A.C. Conductance (mA/V)	...	...	2.0
† Anode A.C. Resistance (ohms)	...	...	550,000

† at $E_a=150$; $E_s=60$; $E_g=-1.5$
 * at $E_a=200$; $E_s=80$; $E_g=0$.

INTER-ELECTRODE CAPACITIES.

Anode to Grid	...	...	0.0015 $\mu\mu\text{F}$.
Anode to Cathode	...	...	11.0 $\mu\mu\text{F}$.
Grid to Cathode	...	...	9.0 $\mu\mu\text{F}$.

DIMENSIONS.

Maximum overall length	...	...	130 m.m.
Maximum diameter	...	...	45 m.m.

PRICE **19/-**

GENERAL.

The Mazda DC 2/SG Valve is an indirectly-heated screened-grid valve for D.C. Mains operation. Mazda D.C. valves are operated with their cathodes connected in parallel, the heaters being run in series connected to the supply mains through a voltage resistance. The DC 2/SG has been designed to give a minimum amount of cross modulation, even with relatively large signal inputs, whilst still preserving a high amplification factor and a high mutual conductance.

APPLICATION.

H.F. Amplification.

Owing to its low anode to grid capacity, a very high amplification per stage is possible without instability. The DC 2/SG should preferably be used with the tuned transformer type of coupling.

Detector.

The DC 2/SG makes a very sensitive cumulative-grid detector, and should be coupled to the output valve with either a low ratio transformer having a high primary inductance, or a high inductance choke. A resistance should be connected across the primary to ensure that its impedance remains practically constant with frequency. A condenser of about 0.0001 μF and a grid leak of 1 megohm will be found suitable. The anode voltage should be not less than 150 volts. The valve may also be used as an anode-bend detector with R.C. coupling or in super-heterodyne sets.



THE EDISON SWAN ELECTRIC CO. LTD.
 Incorporating the Wiring Supplies, Lighting Engineering and
 Radio Business of the British Thomson-Houston Co. Ltd., and
 Metro-Vick Supplies.

Radio Division Showrooms:
 155 Charing Cross Road, London, W.C.2
 Showrooms in all the Principal Towns

EDISWAN

MAZDA

DC2/SG

HEATER SUPPLY.

In general, apart from the filament connections, circuits for use with these valves follow standard practice. The diagram (Fig. 1) show the required connections to the mains. The heater of this valve is rated at 0.1 amp. and the current should be adjusted to this value by the suitable choice of R3, which must be able to carry this current continuously without overheating. The heater voltage may vary between individual valves of the same type and should not, therefore, be used for providing bias.

OPERATING VOLTAGES.

The anode voltage should be preferably 150 volts or over. Grid bias must always be used and may be about -1.5 to -3.0 volts according to the screen volts, and the amplification required. Care should be taken to provide suitable decoupling in the grid circuit.

IMPORTANT.

In all cases where the cathode is not directly connected to earth potential, a non-inductive condenser should be provided between it and earth. A non-inductive condenser must also be connected between the screen grid and earth.

CURVES.

The curves below indicate the performance of an average valve. The amplification factor and mutual conductance were obtained dynamically with a grid bias of -1.5 volts.

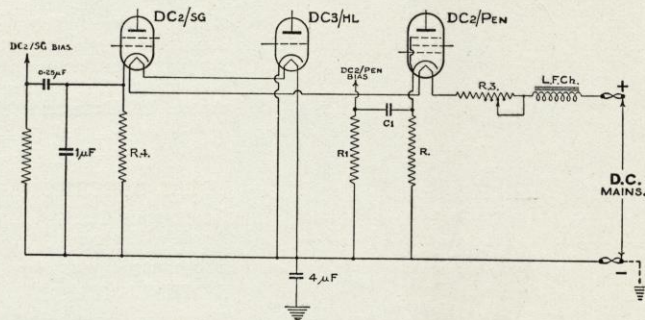


FIG. 1.

