MAZDA

HL 42 DD

A.C. MAINS DOUBLE DIODE TRIODE

RATING

Heater Voltage	4.0
Heater Current (Amps.)	0.65
Maximum Anode Voltage	250
*Mutual Conductance (m/AV)	2.9
*Amplification Factor	23
*Anode A.C. Resistance (ohms)	8,000

*Taken at Ea=100, Eg=0

TYPICAL OPERATION.

H.T. Supply	260	260
Decoupling Resistance (ohms)	20,000	20,000
Anode Load Resistance (ohms)	50,000	100,000
Bias Volts (initial)	1.25	1.25
Self-Bias Resistance (ohms)	450	700
Anode Current (initial) (mA)	2.8	1.75
Voltage Amplification at Vg—1.25	17.5	18.5
Voltage Amplification at Vg—20 (approx.)	2	2.7

INTER-ELECTRODE CAPACITIES.

*Anode to Earth	4.5 $\mu\mu$F
*Grid to Earth	3.5 $\mu\mu$F
Anode to Grid	3.5 $\mu\mu$F
*Diode to Earth	3.25$\mu\mu$F
*Diode to Earth	3.25$\mu\mu$F
Diode 1 to Diode 2	0.65$\mu\mu$F

*"Earth" denotes the electrodes of any second valve section and the remaining earthy potential electrodes of the section under measurement, H and M. joined to cathode.

DIMENSIONS.

Maximum Overall Length	105 mm.
Maximum Diameter	32 mm.

GENERAL.

The HL.42 DD. is an indirectly heated double diode triode for use in A.C. Mains receivers. The triode section has variable gain characteristics. The valve consists of two separate diodes and a triode on a common cathode sleeve, and the diode section is completely screened within the valve from the triode section. The valve is fitted with a Mazda Octal base, the connexions to which are given overleaf.

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APPLICATION.

The valve is particularly suitable for use in all-wave receivers where it is desired to improve inadequate A.V.C. characteristics with low delay voltages. For this purpose a portion of the A.V.C. voltage is applied to the grid of the HL.42 DD. and an extra gain control of 8 or 9 to 1 may be obtained for a bias of 20 to 25 volts. The L.F. output under these conditions is sufficient to drive a Pen. 44 valve with negligible distortion. The valve may also be employed as a variable gain L.F. valve for manual volume control in remote control receivers. Under these conditions when it is desired to reduce the sound output the portion of the characteristic beyond –20 to –25 volts may be employed by using an available negative bias of the order of 50 volts. It is undesirable to employ negative feed back circuits with the HL. 42 DD.

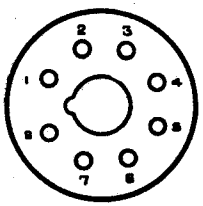
NOTE.

For L.F. signal handling capacity curves see page headed "Suggested Circuit diagram for use with Mazda Variable-mu Double Diode Triode valves" filed at the end of Section 4.

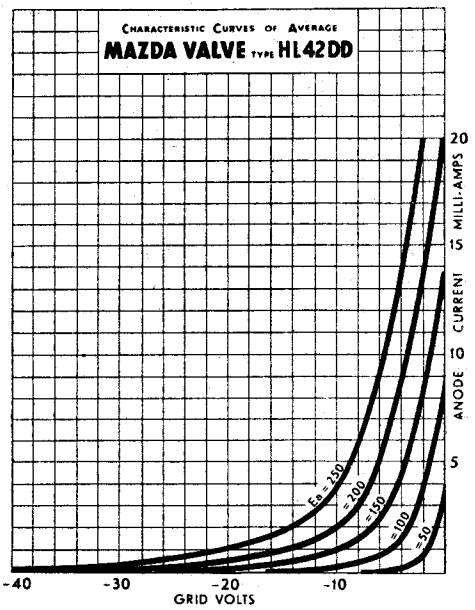
BASING.

Pin No. 1. Heater.
2. Cathode.
3. Anode.
4. Blank.
5. Diode 2.
6. Metallising.
7. Diode 1.
8. Heater.

Top Cap. Control Grid.



Viewed from the free end of the base.



Mazda Radio Valves are manufactured in Great Britain for the British Thomson-Houston Co. Ltd., London and Rugby, and distributed by

THE EDISON SWAN ELECTRIC CO., LTD.,
115, CHARING CROSS ROAD, LONDON W.C.2