

# MAZDA

## HL.1320

### AC/DC Indirectly heated Triode

#### RATING.

Heater Voltage ... ..	13
Heater Amps. ... ..	0.2
Maximum Anode Voltage ... ..	250
Maximum Anode Current (mA) ... ..	12
*Mutual A.C. Conductance (mA/V) ... ..	3.0
*Amplification Factor ... ..	30
*Anode A.C. Resistance (ohms) ... ..	10,000

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

#### INTER-ELECTRODE CAPACITIES.

Anode—Grid ... ..	3.25 $\mu\mu F.$
Anode—Cathode ... ..	5.25 $\mu\mu F.$
Grid—Cathode ... ..	6.5 $\mu\mu F.$

#### DIMENSIONS.

Maximum overall length ... ..	525 m.m.
Maximum overall diameter ... ..	39 m.m.

**PRICE 13/6**

#### GENERAL.

The Mazda HL. 1320 Valve is an indirectly-heated triode, for use in D.C., A.C./D.C. or automobile receivers. It has a high amplification factor as well as a low anode A.C. resistance, and the control grid is connected to a cap at the top of the bulb. The valve is metallised, the coating being connected to a separate pin in the 7-pin base.

#### APPLICATION.

##### Anode Bend Detector.

The low impedance of this valve makes it particularly suitable for use as an anode-bend detector.

##### Amplifier.

The HL. 1320 may be used as a low-frequency amplifier with either transformer, choke, or resistance-capacity coupling. With resistance-capacity coupling an anode resistance of 50,000 to 100,000 ohms will be found suitable.

When using transformer or choke coupling the primary inductance need not be excessively high. In order to reduce hum to a minimum the grid-cathode resistance should not exceed 0.25 meg. The table of bias values is given overleaf.



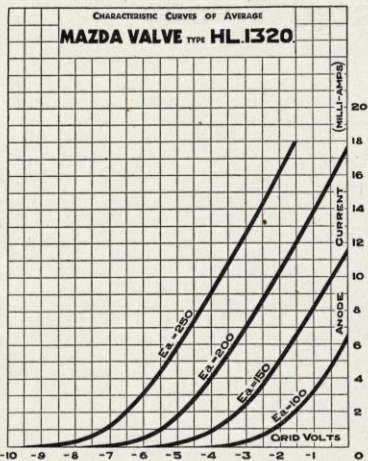
**THE EDISON SWAN ELECTRIC CO. LTD.**  
*Radio Division Showrooms:*  
**155 Charing Cross Road, London, W.C.2**  
*Showrooms in all the Principal Towns*  
 Mazda Valves are manufactured in Great Britain for  
 The British Thomson-Houston Co., Ltd.,  
 London and Rugby

**EDISWAN**

R723-64

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### BIAS.

Anode Volts	...	...	100	150	200
Bias Anode-bend Detector			-3	-4.7	-6.2
Bias Amplifier	...	...	-1.5	-2.5	-3.5

It is recommended that self bias should be obtained by means of a 600 ohm. resistance in the cathode circuit.

### Oscillator.

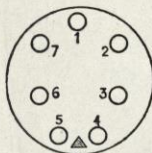
The valve is particularly suitable as an oscillator in superheterodyne receivers. The connection of the metal coating to a separate pin enables re-radiation to be reduced to a minimum.

### HEATERS.

The heaters of Mazda A.C./D.C. valves are designed to operate at a current of 0.2 amp., and when the heaters are wired in series the ballast resistance should be such that the current has this value at the average line voltage.

If a resistance is employed to control the heater current it is recommended that it be tapped every 10 volts in the 200—250-volt range. The valve should be operated direct from the battery when used in automobile receivers.

### CONNECTIONS TO BASE.



Pin No. 1.—Metal Coating.  
Pin No. 2.—  
Pin No. 3.—  
Pin No. 4.—Heater.

Pin No. 5.—Heater.  
Pin No. 6.—Cathode.  
Pin No. 7.—Anode.  
Top Cap.—Control Grid.

