MAZDA

AC/HL

A.C. MAINS TRIODE

RATING.

Heater Voltage	4·0
Heater Current (amps.)	1·0
Maximum Anode Voltage	200
Maximum Anode Current (mA)	12
*Mutual Conductance (mA/V)	3
*Amplification Factor	35
*Anode A.C. Resistance (ohms)	11,700

*At Ea=100 v. ; Eg=0.

OPERATION.

Anode Voltage	100	150	200
Bias (Anode-bend Detector) ...	—3 to —4·5	—3 to —6	—4·5 to —7·5
Bias (Amplifier)	—1·5	—1·5 to —3	—3 to —4·5

INTER-ELECTRODE CAPACITIES.

	Clear	Metallised
*Anode to Earth	7·0	11·5 $\mu\mu$F.
*Grid to Earth	7·0	8·0 $\mu\mu$F.
Anode to Grid	3·5	3·25 $\mu\mu$F.

*"Earth" denotes the remaining earthy potential electrodes and metallising joined to cathode.

DIMENSIONS.

Maximum Overall Length	113 mm.
Maximum Diameter	45 mm.

GENERAL.

The AC/HL is an indirectly-heated triode for A.C. mains operation. It has a high amplification factor as well as a low anode A.C. resistance, and is suitable for use in any position in the set with the exception of the last or output stage. The valve is available with clear or metallised bulb. The valve is fitted with a standard 5-pin base, the connections to which are given overleaf.

APPLICATION.

Detector.

The valve will be found very suitable for use as a cumulative-grid detector ; it has a particularly high-detection efficiency coupled with low damping. A condenser of 0·0001 to 0·0002 micro-farad with a grid leak of 1 to 2 megohms will be found suitable.

This valve is especially suitable for use as a power-grid detector, a condenser of 0·0001 μF., and a leak of 100,000 to 250,000 ohms being required. The anode voltage should be at least 100 volts. With either type of detection the grid return should be connected to the cathode.

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

Amplifier.

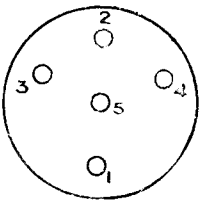
The valve may be used as a low-frequency amplifier with either transformer, choke, or resistance-capacity coupling. With resistance-capacity

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.

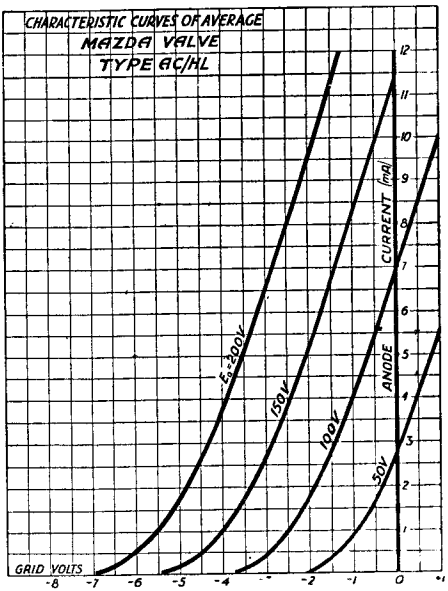
In the case of the metallised valve care should be taken to ensure that the cathode is connected to earth either directly or through a non-inductive condenser.

BASING.



Pin No. 1. Anode.
2. Control Grid.
3. Heater.
4. Heater.
5. Cathode and Metallising.

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.