

MAZDA

HL 2 Receiving Valve [METAL COATED]

RATING.

Filament Voltage	...	...	...	...	2.0
Filament Amps.	...	...	...	...	0.1
Maximum Anode Voltage	...	...	...	...	150
*Mutual A.C. Conductance (mA/Volt)	...	...	...	...	1.5
*Amplification Factor	...	...	...	...	32
*Anode A.C. Resistance (ohms)	...	...	...	...	21,000

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

DIMENSIONS.

Maximum overall length (including pins)	...	...	...	103 m.m.
Maximum diameter	...	...	...	39 m.m.

PRICE 5/6

GENERAL.

Mazda HL 2 Valve is a general purpose 3-electrode valve of great sensitivity, designed for use in a receiver operating from a 2-volt accumulator. The filament may be operated direct from a 2-volt accumulator without the use of a filament rheostat. The bulb of this valve is metallised to eliminate any possibility of external interference and reduce undesirable coupling in the set. The coating is connected filament to pin No. 3 (see diagram).

Owing to the special method of suspension of the filament and the electrode construction employed, the valve is non-microphonic. If, however, any trouble is encountered due to very high audio-frequency amplification, or the speaker having pronounced resonances, or being mounted close to the valve, beneficial results may be obtained by using a resilient valve holder and/or pressing a resilient pad, such as rubber or cotton-wool, on to the bulb of the valve, when this valve is used in the detector position.



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
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MAZDA

HL 2

APPLICATION.

High frequency amplifier.

Owing to the high mutual conductance the valve is very efficient as a high frequency amplifier using aperiodic amplification or neutrodyne tuned circuits.

Detector.

Cumulative grid detection is most suitable for use with this valve. The grid return lead should be connected to the positive side of the filament supply. The valve may be used as an anode bend detector, in which case the grid return lead should be connected to a negative bias.

Low frequency amplifier.

(a) **Resistance capacity coupling.** The valve is particularly suitable for resistance capacity coupled sets with a coupling resistance of 100,000 ohms. The use of such relatively low anode coupling resistances will ensure great purity of reproduction, whilst the exceptionally good characteristics of the valve enable high amplification to be obtained, even with such a moderately low anode resistance. The gain per stage obtained from an average valve with 100,000 ohms coupling resistance is approximately 24.

(b) **Transformer coupling.** The high mutual conductance and high amplification factor of this valve enable a very high stage gain to be obtained when transformer coupling is used.

GRID BIAS.

Owing to the fact that grid current does not flow until approximately 0.3 volt positive, grid bias is not essential in the amplifying stages unless the valve is required to handle a large grid swing and deliver a large grid swing to the succeeding valve. Grid bias, should, however, be used on anode voltages above 100 in order to obtain economy in anode current consumption.

