

MAZDA

HL 210

Receiving Valve



RATING.

Filament Voltage	...	...	...	...	2.0
Filament Amps.	...	...	...	...	0.2
Maximum Anode Voltage	...	...	...	...	150
*Mutual A.C. Conductance (mA/Volt)	...	...	...	...	1.4
*Amplification Factor	...	...	...	...	26
*Anode A.C. Resistance (ohms)	...	...	...	...	18,500

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

DIMENSIONS.

Maximum overall length (including pins)	105 m.m.
Maximum diameter	45 m.m.

PRICE ~~8/6~~ ~~7/6~~ 5/6

GENERAL.

The Mazda HL 210 Valve is a general purpose 3-electrode valve of great sensitivity, designed for use in a receiver operating from a 2-volt accumulator. Owing to its high mutual conductance, coupled with a comparatively low A.C. resistance, the Mazda HL 210 will be found suitable for use in any position in a set with the exception of the output stage. A filament rheostat is unnecessary, but may be used if desired.

APPLICATION.

High-Frequency Amplifier.

Owing to its low A.C. resistance the Mazda HL 210 makes a very efficient high-frequency amplifier when used with aperiodic coupling circuits.

Detector.

The HL 210 makes a very sensitive detector using either cumulative-grid or anode-bend rectification. When



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using cumulative-grid detection the grid return lead should be connected to the positive side of the filament supply and a condenser of about $.0002 \mu\text{F}$ with a grid leak of about 2 megohms will be found suitable. When used as an anode-bend detector the value of negative bias required will depend mainly on the strength of the input signal, a small bias value being required for weak signals and a larger bias for strong signals. The table below is given as a rough guide when choosing bias values.

Anode Voltage	75	100	125	150
Bias as Detector (Anode Rectification) ...	-1.5	-1.5 to -3	-3	-3 to -4.5
Bias as H.F. and L.F. Amplifier	0	0 to -1.5	-1.5	-1.5 to -3

Low-Frequency Amplifier.

The HL 210 is very suitable for use in a L.F. amplifier with either transformer or resistance-capacity coupling. With R.C. coupling the coupling-resistance need not exceed 100,000 ohms.

GRID BIAS.

Grid bias need not be used in the amplifying stages unless it is desired to limit the anode current or handle large swings. Suitable values will be found in the table above.

