



T.P.26

BATTERY ECONOMY TRIODE PENTODE

RATING.

Filament Voltage	2.0
Filament Current (Amps.)	0.2

Pentode Section.

Maximum Anode Voltage	150
Maximum Screen Voltage	150
*Mutual Conductance (mA/V)	1.55

*Taken at $E_a=120$; $E_s=60$; $E_g=0$.

Triode Section.

*Mutual Conductance (mA/V)	1.3
*Amplification Factor	28
*Anode A.C. Resistance (ohms)	21,500

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

TYPICAL OPERATION.

Cathode Injection.

H.T. Battery Voltage	90	108	108	120
Anode Voltage (approx.)	77	95	92	103
Screen Voltage (approx.) (Initial)	61	61	65	65
Fixed Bias	*—	*—	*—	*—
Anode Current (mA)	1.0	1.0	1.2	1.2
Screen Current (mA)	0.25	0.25	0.3	0.3
Peak Heterodyne Volts	4.0	4.0	3.0	3.0
Conversion Conductance ($\mu A/V$)	480	500	525	550
Grid Leak from G.1 to L.T. -ve (megohms)	3	3	3	3
Series Screen Resistance (megohms)	0.1	0.17	0.13	0.17
†Max. Signal Handling Capacity (Peak Carrier Volts)	—	0.9	0.9	1.2
†Grid Bias for above (Volts)	—	7.5	7.5	8.5
Triode Anode Current (mA) (approx.)	0.9	0.9	0.9	0.9

*Bias volts are obtained by self bias due to grid current through a 3-megohm resistance returned to L.T. -ve.

†For 5% total audio harmonic distortion and 60% modulated carrier, the screen volts rise with increase of bias to the anode voltage.

INTER-ELECTRODE CAPACITIES.

Pentode Section.

*Anode to Earth	8.25 $\mu\mu F$.
*Grid to Earth	6.75 $\mu\mu F$.
Anode to Grid	0.02 $\mu\mu F$.

Triode Section.

*Anode to Earth (less Go to Ao)	4.25 $\mu\mu F$.
*Grid to Earth (less Go to Ao)	3.75 $\mu\mu F$.
Anode to Grid	2.0 $\mu\mu F$.

**"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 filament.



DIMENSIONS.

Maximum Overall Length	105 mm.
Maximum Diameter	32 mm.

GENERAL.

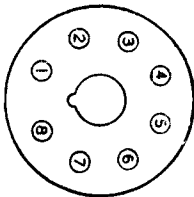
The TP 26 is a triode pentode for use as a self-oscillating frequency changer designed for use in battery portable receivers. The valve is characterised by its high gain and high signal-to-noise ratio. The bulb is of small dimensions and metallised, and the valve is fitted with a Mazda Octal base, the connexions to which are given below.

APPLICATION.

The valve is designed for operation on the medium and long wave bands only. It is designed for use with cathode injection which enables a high conversion conductance and good signal-to-noise ratio to be obtained with low feed currents. The characteristics of the valve have been so designed as to be capable of handling the maximum input signal that is likely to occur in a portable receiver under any conditions of operation. It is recommended that both the anode and screen of the pentode section should be decoupled to the negative end of the filament and not to chassis. The circuit diagram shows a suggested arrangement. When used with a VP 23 I.F. stage, half the A.V.C. bias applied to the V.P 23 should be applied to the TP 26.

BASING.

- | | |
|------------|-------------------|
| Pin No. 1. | Filament. |
| 2. | — |
| 3. | Pentode Anode. |
| 4. | Oscillator Anode. |
| 5. | Oscillator Grid. |
| 6. | Metallising. |
| 7. | Pentode Screen. |
| 8. | Filament. |
| Top Cap. | Pentode Grid. |



Viewed from the free end of the base.

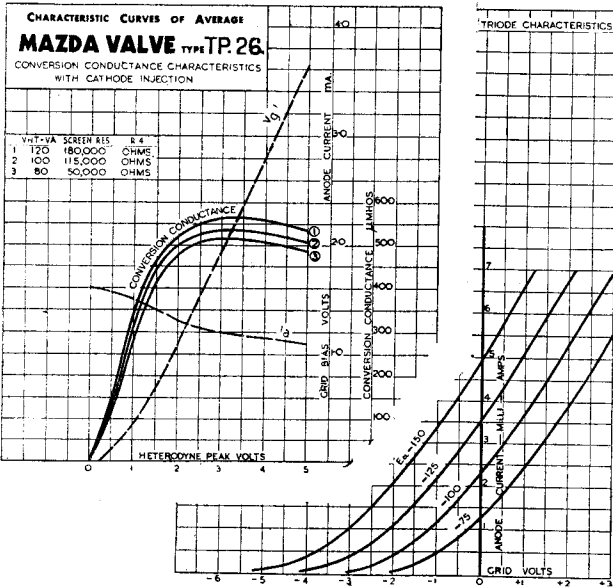
- C1. C2. .0005 μ F Tuning Cond.
- C3. 5-40 μ μ F Trimmers.
- C4. .05 μ F
- C5. .05 μ F
- C6. .0003 μ F
- C7. .1 μ F
- C8. Medium Wave Padder.
- C9. Long Wave Padder.
- C10. Long Wave Pre-Set.

- R1 3 Megohms.
- R2 50,000 Ohms.
- R3 500-2,000 Ohms.*
- R4 170,000 Ohms.
- R5 10,000 Ohms.
- R6 40,000 Ohms.*

- L1-L2 M. & L. Wave Frame Aerial.
- L3-L4 M Wave Oscillator Coils.
- L5-L6 L. Wave Oscillator Coils.
- L7-L8 Filament Chokes.

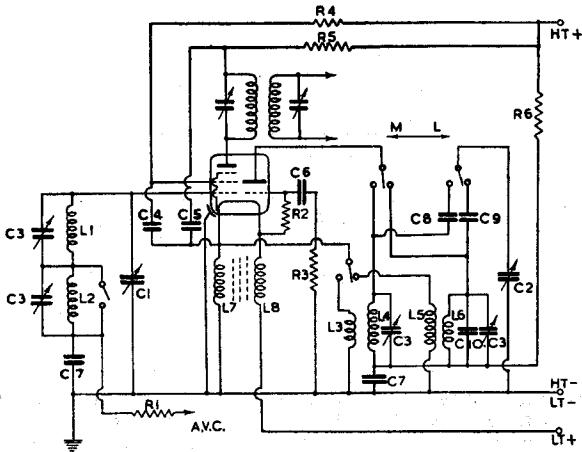
*Exact value depends upon Oscillator Coils.

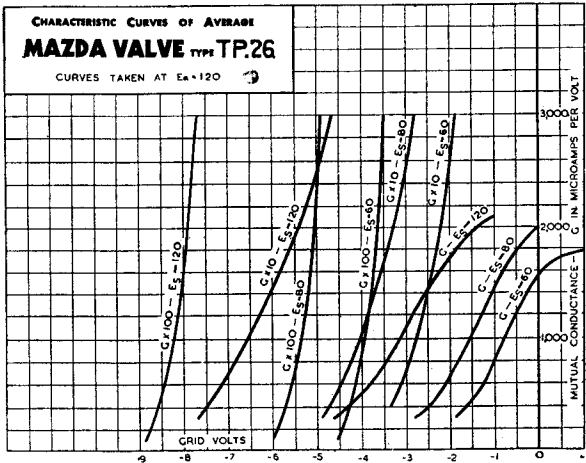
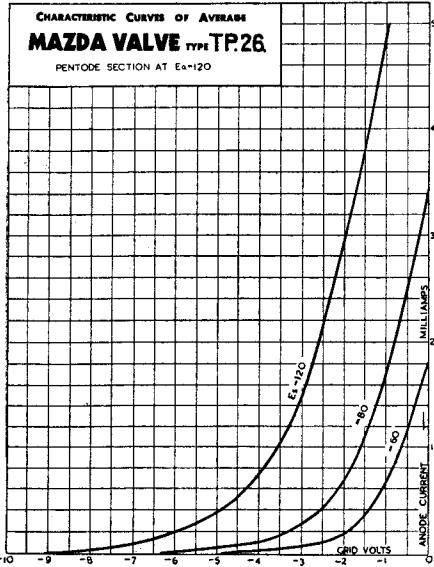
MAZDA



The screen voltage is adjusted by means of a series screen resistance to give a total anode and screen current of 1.5 mA. at a Heterodyne voltage of 3v peak.

The mean bias on the control grid (V_{g1}) is obtained by means of the rectified grid current through the 3 megohm resistance R_1 which is connected to $LT-$; see circuit below.





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.
 155, CHARING CROSS ROAD, LONDON, W.C.2

