

MAZDA

30C12

CATHODE RAY TUBE—ALL ELECTROSTATIC Indirectly heated—for Radio D.F. Compass

30C12

GENERAL

The 30C12 is a precision constructed instrument which provides bearings with an error not exceeding $\pm 1^\circ$ at any point. No degree scale is attached but a centre cross and mark are provided, in line with the axis of the Y Plates, accurate to $\pm 0.25^\circ$. The tube is suitable for use in "Pulse D.F." systems and may be supplied with any of the standard phosphor screens described on the Introductory Page to this Section.

RATING

| | | |
|--|----------------|--------|
| Heater Voltage (volts) | V_h | 4.0 |
| Heater Current (amps) | I_h | 0.72 |
| Maximum 1st Anode Voltage (volts) | $V_{a1}(\max)$ | 500 |
| Maximum 2nd Anode Voltage (volts) | $V_{a2}(\max)$ | 1,000 |
| Maximum 3rd Anode Voltage (volts) | $V_{a3}(\max)$ | 4,000 |
| Average sensitivity of X Plates (mm/V) | | 520/V* |
| Average sensitivity of Y Plates (mm/V) | | 520/V* |

* V denotes the voltage on the 3rd Anode.

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INTER-ELECTRODE CAPACITANCES (pF)

| | | |
|--|---------------------------|------|
| X_1 Deflecting Plate/ X_2 Deflecting Plate | C_{X_1, X_2} | 4.5 |
| X_1 Deflecting Plate/All other Electrodes | $C_{X_1, all}$ | 14.0 |
| X_2 Deflecting Plate/All other Electrodes | $C_{X_2, all}$ | 14.6 |
| Y_1 Deflecting Plate/ Y_2 Deflecting Plate | C_{Y_1, Y_2} | 4.4 |
| Y_2 Deflecting Plate/All other Electrodes | $C_{Y_2, all}$ | 13.8 |
| Y_1 Deflecting Plate/All other Electrodes | $C_{Y_1, all}$ | 14.9 |
| X_1, X_2 Deflecting Plates/ Y_1, Y_2 Deflecting Plates | $C_{X_1, X_2 / Y_1, Y_2}$ | 2.7 |
| Grid/All other Electrodes | C_g / all | 8.6 |

DIMENSIONS

| | |
|---------------------------------|-----------------|
| Maximum Overall Length (mm) | 495 |
| Maximum Bulb Diameter (mm) | 175 |
| Maximum Neck Diameter (mm) | 65 |
| Approximate Nett Weight (lbs) | $2\frac{1}{4}$ |
| Approximate Packed Weight (lbs) | $16\frac{1}{2}$ |

TYPICAL OPERATION

| | |
|--|-------|
| 3rd Anode Voltage (volts) | 2,200 |
| 2nd Anode Voltage (volts) | 440\$ |
| 1st Anode Voltage (volts) | 450 |
| Negative bias on Control Grid for cut-off of Beam Current (volts) | 30-90 |
| \$ 2nd Anode Voltage for focus decreases with increase of beam current and the above figure is the voltage required at low currents. | |

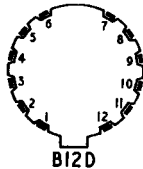
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BASE—B12D



Viewed from free end of Pins

Permissible angular variation of mount $\pm 10^\circ$.

CONNECTIONS

| | | |
|--------|------------------------|-------|
| Pin 1 | Grid | g |
| Pin 2 | Cathode | k |
| Pin 3 | Heater | h |
| Pin 4 | Heater | h |
| Pin 5 | Anode 1 | a1 |
| Pin 6 | Anode 2 | a2 |
| Pin 7 | No Internal Connection | NC |
| Pin 8 | Deflecting Plate Y_2 | Y_2 |
| Pin 9 | Deflecting Plate Y_1 | Y_1 |
| Pin 10 | Anode 3 | a3 |
| Pin 11 | Deflecting Plate X_2 | X_2 |
| Pin 12 | Deflecting Plate X_1 | X_1 |