RADIO MANUFACTURERS ASSOCIATION
ENGINEERING DEPARTMENT

sponsor:
Research Enterprises, Ltd.

Registration No. 364

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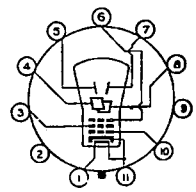
TYPE 12HP~~7~~ 1

Focusing Method	Electrostatic
Deflection Method	Electrostatic
Phosphor	P1
Overall Length	23½" ± 3/8
Diameter of Bulb	12" ± 1/4
Bulb Type	J 96 C 1
Base	11 Pin Magnal
Basing, RMA designation	11J

11J



Base Alignment

D_1 - D_2 trace aligns with pin #8 and axis ± 10°
Angle between traces, 90° ± 4°
Positive voltage on D_2 deflects beam toward pin #8
Positive voltage on D_3 deflects beam toward pin #11

Spot centering[1]. within 45 m.m. square.

Direct Interelectrode Capacitances (Maximum)

Control grid to all other electrodes	12 mmf.
Deflecting Plate D_1 to Deflecting Plate D_2	3 mmf.
Deflecting Plate D_3 to Deflecting Plate D_4	3 mmf.
D_1 to all other electrodes	11 mmf.
D_3 to all other electrodes	11 mmf.
D_1 to all other electrodes except D_2	9 mmf.
D_2 to all other electrodes except D_1	9 mmf.
D_3 to all other electrodes except D_4	9 mmf.
D_4 to all other electrodes except D_3	9 mmf.

Electrical Characteristics

Ratings

Heater Voltage	6.3 volts
Heater Current	.6 ± 10% amps.
Anode #2 (High Voltage Electrode)	5500 volts max.
Anode #1 (Focusing Electrode)	1500 volts max.
Grid Voltage (Control Electrode)	Never positive
Peak Voltage between Anode #2 and any deflection plate	1000 volts max.
Resistance of circuit to grid	1.5 megohms max.
Impedance of any deflecting electrode circuit at heater supply frequency	1.0 megohms max.

Typical Operation

Heater Voltage	6.3 volts
Anode #2 Voltage	5000 volts
Anode #1 Voltage for focus	1150 + 25% - 30% volts ✱
Anode #1 current at E_{c1} = 0 and E_{b1} adjusted for focus	3000 ma. max.
Grid Voltage for cut-off[2].	- 90 ± 50 volts

✱ Required for focus when E_{c1}, is 75% of cut-off value.

Deflection Factor

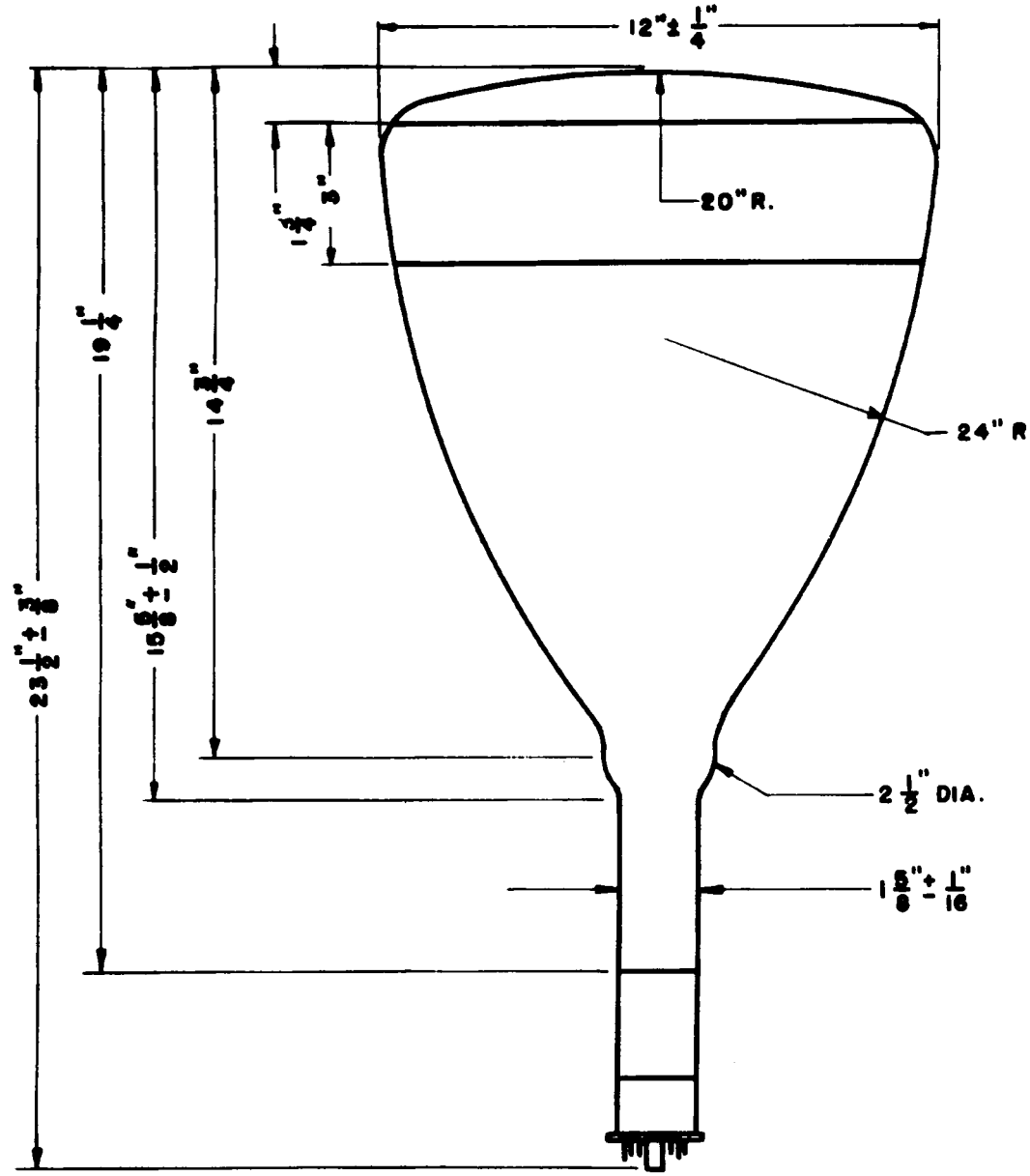
Electrodes D_1 and D_2	19 volts / (inch KV) ± 20%
Electrodes D_3 and D_4	25 volts / (inch KV) ± 20%

Notes

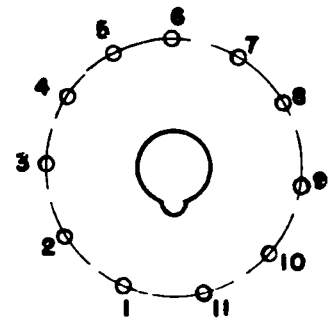
1. When the tube is operated under typical conditions, and E_{c1} set to avoid damage to the screen, the focused undeflected spot will fall within a square of the given size centered at the geometric centre of the tube face and having one side parallel to the trace produced by D_1, D_2.

2. Cut-off voltage is voltage necessary for visual extinction of stationary focused spot.

HIGH VACUUM CATHODE RAY TUBE 12HP1



PIN NO.	ELEMENT
1	H.
2	INTERNAL CONNECTION
3	P1
4	D4
5	D1
6	P2
7	D2
8	D3
9	N.C.
10	G.
11	H & K.



BOTTOM VIEW OF BASE CONNECTIONS

BULB - J96C1

BASE - 11 PIN MAGNAL, METAL SHELL