FERRANTI

RADAR TUBES

12/03 HB

12/03 JB

12in. diameter Radar Display Tubes with metal backed screens, magnetic deflection and low voltage electrostatic focus.

FOCUS	Low Voltage. Electrostatic.
DEFLECTION	Magnetic.

SCREEN.

	12/03HB	12/03JB
Phosphor	‡Type 'H'	Type 'J'
Fluorescence	Orange	Blue
Afterglow	Orange	Yellow
Persistence	very long	long.

For further details, refer to the relevant phosphor characteristics at the front of this section of the handbook.

Both Types have metal backed screens.

PHYSICAL DETAILS.

Base	B12A (Duodecal).
Anode Cap	CT8 Cavity Type.
Max. Overall Length	485 mm.
Mounting Position	Any

For other dimensions see drawing overleaf.

These tubes have an external conductive coating which may be used for E.H.T. smoothing.

BASE CONNECTIONS.

Pin 1—Heater.	Pin 7—No Connection.
Pin 2—Grid.	Pin 8—No Pin.
Pin 3—No Pin.	Pin 9—No Pin.
Pin 4—No Pin.	Pin 10—1st Anode.
Pin 5—No Pin.	Pin 11—Cathode.
Pin 6—3rd Anode.	Pin 12—Heater.

Side Contact—2nd Anode, 4th Anode.

HEATER.

*Heater Voltage	6·3 volts.
Heater Current	0·3 amp.

RATINGS.

Max. A_1 Voltage	500 volts.
Max. $A_2 + A_4$ voltage	15 kV.
Max. Pos. A_3 Voltage	+500 volts.
Max. Neg. A_3 voltage	−500 volts.
Min. A_1 voltage	200 volts.
Min. $A_2 + A_4$ voltage.	8 kV.
Max. V_{h-k}	200 volts.
Max. R_{g-k}	1·5 MΩ
Max. R_{h-k}	1·0 MΩ

TYPICAL OPERATION.

Heater Voltage	6·3 volts.
1st Anode Voltage	300 volts.
2nd and 4th Anode voltage ...	12 kV.
†3rd Anode voltage for focus ...	−300 to + 300 volts.
Vg for visual cut off	−30 to −70 volts.

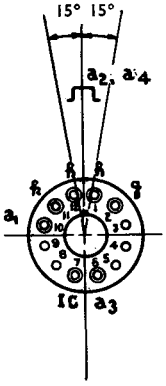
CAPACITANCES.

C_{k-all}	<8 pF.
C_{g-all}	<8 pF.
$C_{a-ext.\ coating}$	1200 pF. approx.

‡This screen material is liable to burn if operated with a spot which is stationary or slow moving. The tube should not be operated under such conditions, even at low beam current.

*When used for series operation, the surge heater voltage should not exceed 9·5 volts r.m.s. and a current limiting device should be incorporated in the circuit to limit switching surge.

†The point of optimum focus lies between these values.



Base Connections Underside View of Base

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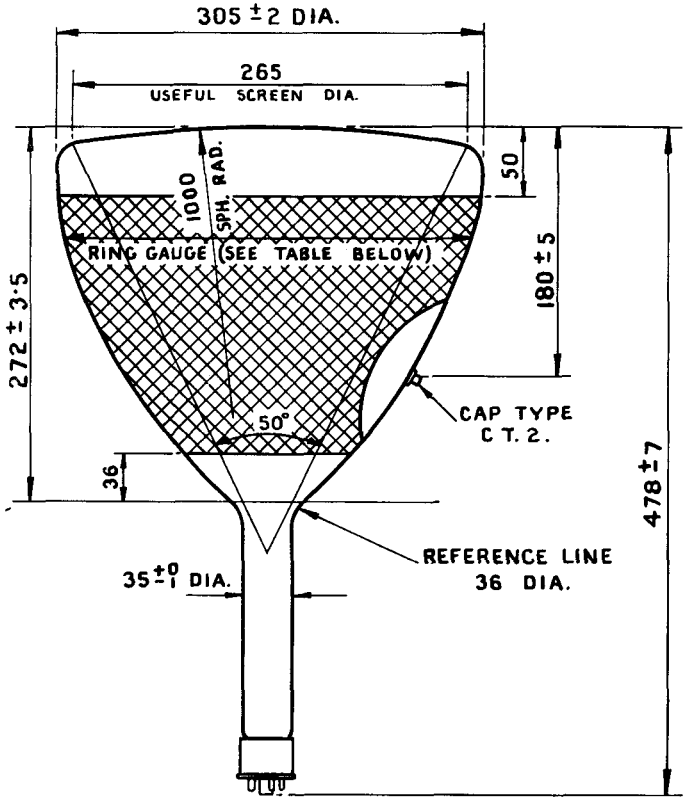

RING GAUGE	DISTANCE FROM CENTRE OF SCREEN		
280	96	±	10
230	150	±	9
180	191	±	8
130	222	±	7
80	249	±	6