

# FERRANTI RADAR TUBES

1650/03HB

1650/03JB

16in. diameter Radar Display Tube with metal backed screen, magnetic deflection and low voltage electrostatic focus. The deflection angle is approximately 50°.

FOCUS ... .. Low Voltage.  
Electrostatic.

DEFLECTION ... .. Magnetic.

## SCREEN.

	1650/03HB	1650/03JB
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.

## PHYSICAL DETAILS.

Base ... ..	B12A (Duodecal).
Anode Cap ... ..	CT8 Cavity Type.
Max. Overall Length ... ..	600 mm.
Deflection Angle ... ..	50°
For other dimensions, see drawing.	
Mounting Position ... ..	Any except vertical screen down.

Both types have an external conductive coating which can be used for E.H.T. smoothing.

## 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 and 4th anodes.	

## HEATER.

Heater Voltage ... ..	6.3 volts.
Heater Current ... ..	0.3 amps.

## RATINGS.

Max. A <sub>1</sub> Voltage ... ..	500 volts.
Max. A <sub>2</sub> + A <sub>4</sub> Voltage ... ..	18 kV.
Max. Pos. A <sub>3</sub> Voltage ... ..	+500 volts.
Max. Neg. A <sub>3</sub> Voltage ... ..	-500 volts.
Min. A <sub>1</sub> Voltage ... ..	200 volts.
Min. A <sub>2</sub> + A <sub>4</sub> Voltage ... ..	8 kV.
Max. V <sub>h-k</sub> ... ..	200 volts.
Max. R <sub>g-k</sub> ... ..	1.5 MΩ
Max. R <sub>h-k</sub> ... ..	1.0 MΩ

## TYPICAL OPERATION.

Heater Voltage ... ..	6.3 volts.
1st Anode Voltage ... ..	300 volts.
2nd and 4th Anode Voltage ... ..	15 kV.
3rd Anode Voltage for focus ... ..	-300 to +300 volts.
†V <sub>g</sub> for visual cut-off ... ..	-40 to -100 volts.

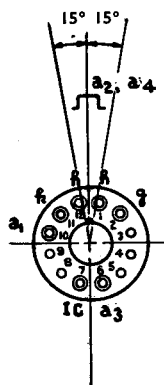
NOTE.— When using static shift coils external to the main deflecting system, care must be taken to shield both neck and lens regions of the tube from fringe fields, otherwise deflection defocusing conditions will result.

## CAPACITANCES.

C <sub>k</sub> -all ... ..	8 pF.
C <sub>g</sub> -all ... ..	8 pF.
C <sub>a</sub> -ext. coating ... ..	1500 pF. approx.

\*The screen material of type 1650/03HB is liable to burn if operated with a stationary or slow moving spot, even at low values of beam current.

†The modulator should never be positive with respect to the cathode, except during the period immediately after switching off, when it may be allowed to rise to +1 volt.



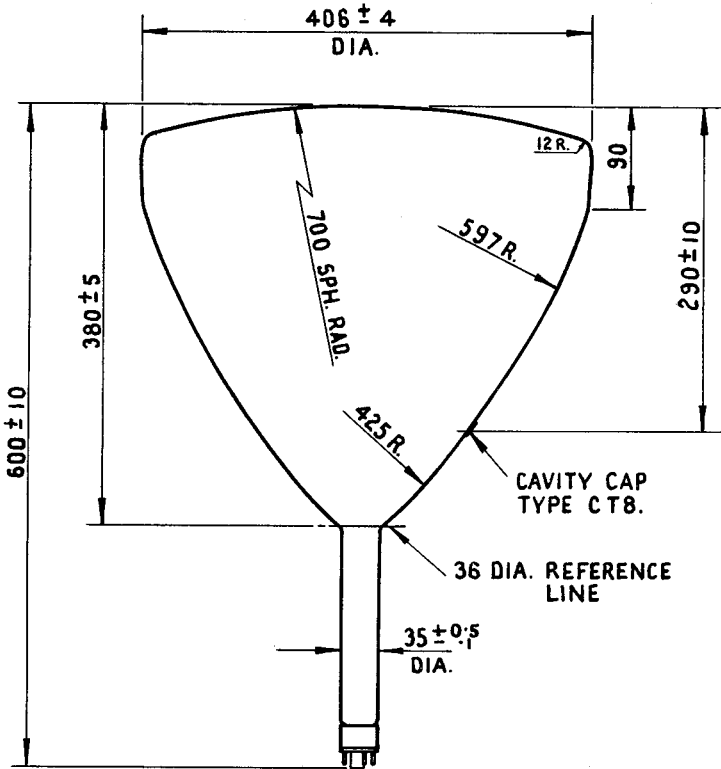
Base  
Connections  
Underside View  
of Base





1650/03HB

1650/03JB



ALL DIMENSIONS ARE IN MM.