

# FERRANTI

## MONITOR TUBE

A 14in. diagonal Rectangular Tube with a metal backed screen and external conductive coating. Designed for use in Television Monitoring Equipment.

FOCUS	...	...	Low Voltage Electrostatic.
DEFLECTION	...	...	Magnetic.
SCREEN	...	...	Metal backed.
Phosphor	...	...	Type 'T'
Fluorescence	...	...	White.
Persistence	...	...	Short.

For further details, refer to Screen Type 'T' phosphor characteristics at the front of this section of the handbook. This tube can be supplied with other screen phosphors.

### PHYSICAL DETAILS.

Base	...	...	B12A (Duodecal).
Anode Cap	...	...	CT8 (Cavity Type.)
Max. Overall Length	...	...	420 mm.
Nom. neck diameter	...	...	37 mm.
For other dimensions see drawing.			
Mounting Position	...	...	Any

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 <sub>1</sub> Voltage	...	...	500 volts
Max. A <sub>2</sub> +A <sub>4</sub> voltage	...	...	15 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.

1st Anode Voltage	...	...	300 volts.
2nd and 4th Anode voltage	...	...	12 kV.
**3rd Anode voltage for focus	...	...	-300 to +300 volts.
†V <sub>g</sub> for visual cut off	...	...	-30 to -70 volts.

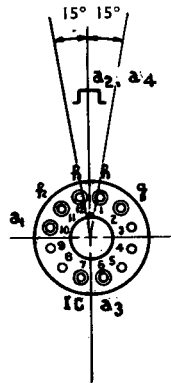
### VAPACITANCES.

C <sub>k</sub> -all	...	...	<8 pF.
C <sub>g</sub> -all	...	...	<8 pF.
C <sub>a</sub> -ext. coating	...	...	1100 pF. (approx.).

\*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.

†The grid 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.



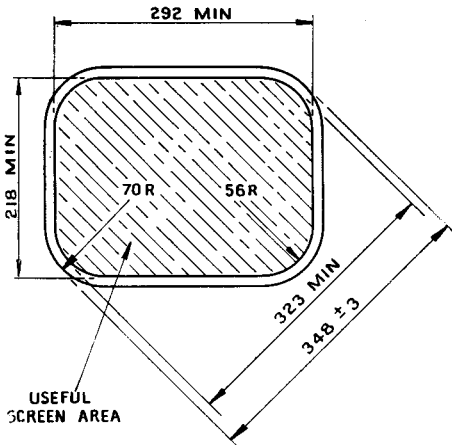
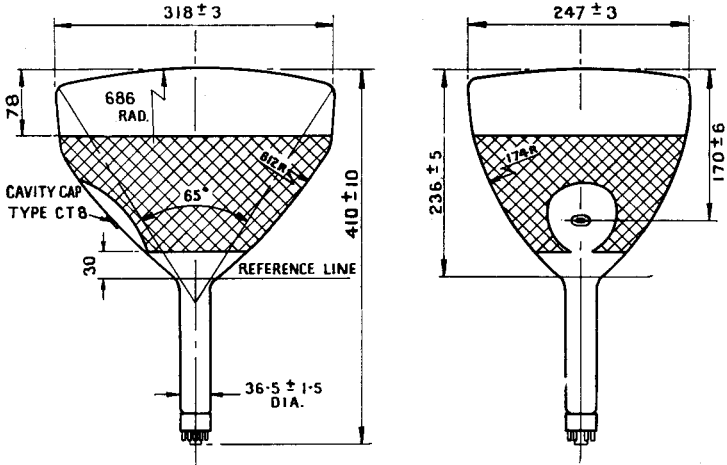
Base  
Connections  
Underside View  
of Base



14/03TB



THIRD ANGLE PROJECTION



# FERRANTI

## TELEVISION MONITOR TUBE

A 14in. diagonal Rectangular Tube with a metal backed screen and external conductive coating. Designed for use in Television Monitoring Equipment.

FOCUS	...	...	...	Magnetic.
DEFLECTION	...	...	...	Magnetic.
SCREEN	...	...	...	Metal Backed.
Phosphor	...	...	...	Type 'T'.
Fluorescence	...	...	...	White.
Persistence	...	...	...	Short.

For further details, refer to Screen Type 'T' phosphor characteristics at the front of this section of the handbook. This tube can also be supplied with other screen phosphors.

### PHYSICAL DETAILS.

Base	...	...	...	B12A (Duodecal).
Anode Cap	...	...	...	CT8 (Cavity Type).
Max. Overall Length	...	...	...	457 mm.
Nom. Neck Diameter	...	...	...	37 mm.
For other dimensions see drawing.				
Mounting Position	...	...	...	Any.

This tube has 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—No Connection.	Pin 12—Heater.
Side Contact—2nd Anode.	

### HEATER.

*Heater Voltage	...	...	...	6.3 volts.
Heater Current	...	...	...	0.3 amp.

### RATINGS.

Max. A <sub>1</sub> Voltage	...	...	...	500 volts.
†Max. A <sub>2</sub> Voltage	...	...	...	16 kV.
Min. A <sub>1</sub> Voltage	...	...	...	200 volts.
Min. A <sub>2</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
Max. A <sub>1</sub> Supply Impedance	...	...	...	1.5 MΩ

### TYPICAL OPERATION.

1st Anode Voltage	...	...	...	300 volts.
2nd and 4th Anode Voltage	...	...	...	14 kV.
→ §V <sub>g</sub> for visual cut off	...	...	...	-30 to -70 volts.
Focus	...	...	...	See Note ** ←

### CAPACITANCES.

C <sub>k</sub> -all	...	...	...	<8 pF.
C <sub>g</sub> -all	...	...	...	<8 pF.
C <sub>a</sub> -ext. coating	...	...	...	1100 pF. (approx.).

\*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.

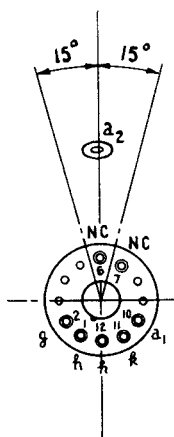
†The product of V<sub>a2</sub> and I<sub>a2</sub> must not exceed 6 watts average value for the whole screen.

‡When the heater supply is from a separate transformer. When the heater is in a series chain or earthed the 50 c/s. impedance between earth and cathode (Z<sub>k</sub>) is 100kΩ (max).

\*\*The recommended centre of the magnetic length of the focus unit should be approx. 100 mm. from the Reference Line.

§The grid 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.

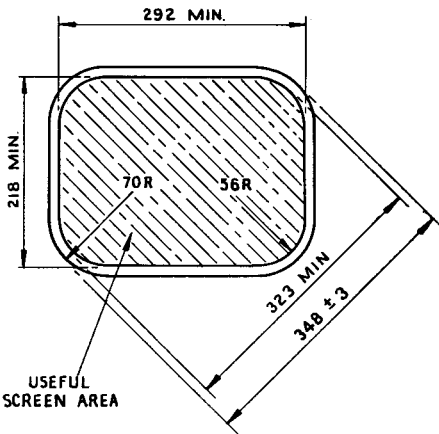
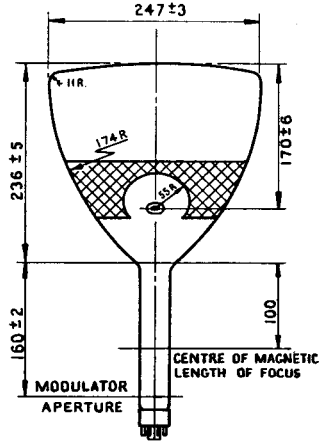
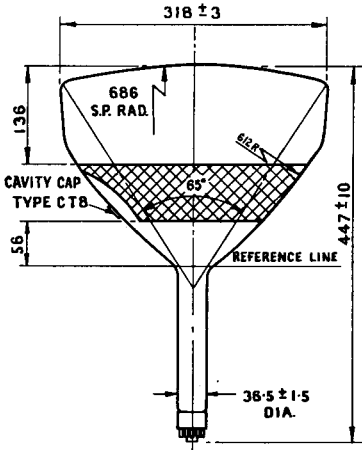
14/04TB



Base Connections  
Underside View of Base



14/04TB



All dimensions are in millimetres