MINISTRY OF SUPPLY (R.R.D.E.)

VALVE ELECTRONIC

CV960

Specification MOS/CV960/Issue 6
Dated:- 1.11.51.
To be read in conjunction with K1003

SECURITY	
Specification	C.R.T.
Unclassified	Unclassified

TYPE OF VALVE:- Cathode Ray Tube

TYPE OF DEFLECTION:- Electrostatic asymmetrical

TYPE OF FOCUS:- Electrostatic

BULB:- Glass. Internally coated with conductive coatg.

SCREEN:- GGN

MARKING

See K1001/4

BASE

B12D

See K1001/A4/D15

Contact	Electrode
1	Grid
2	C
3	H
4	H
5	A1
6	A2
7	Internal Coatg.
8	Y2
9	X2
10	A3
11	X1
12	Y1

RATING		
Heater voltage	(V)	4.0
Heater current	(A)	1.0
Max. Va1	(KV)	2.5
Max. Va2	(KV)	1.08
Max. Va3	(KV)	6.0
Sensitivity, X Plates	(mm/V)	$\frac{625}{Va3}$
Sensitivity, Y Plates	(mm/V)	$\frac{1175}{Va3}$

TYPICAL OPERATING CONDITIONS		
Va1	(KV)	1.8
Va2	(KV)	0.8
Va3	(KV)	5.0
Beam current	(uA)	5

DIMENSIONS

See drawing, page 4

PACKAGING

See K1005

NOTES

A. The suitability of the tube for asymmetrical deflection will be checked at Type Approval. During the tests, symmetrical deflection may be employed.

B. Screen blemishes which impair the operation of the tube must not appear within a rectangular area of width 25 mm symmetrical about the X axis and length 115 mm. symmetrical about the Y axis.

D. The tube must be adequately free from Microphony, Deflection Defocus and Astigmatism. These tests will be covered by Type Approval.

To be performed in addition to those applicable in K1003

	Test Conditions	Tests	Limits Min.	Limits Max.	No Tested
a		Capacitances (pf)			
		1. Each X and Y plate to all other electrodes	-	25	6
		2. Grid to all other electrodes	-	25	per
		3. Each X plate to each Y plate	-	3	week
	FOR ALL TESTS GIVEN BELOW Vh = 4.0V				
b		Ih (A)	0.8	1.3	100%
c	Cathode 100 volts positive to heater	Heater Cathode Current Current (uA)	-	100	100%
	FOR ALL TESTS GIVEN BELOW Va1 = 1.8 KV, Va3 = 5.0 KV				
d	With a raster scan of 120 mm in the X direction and 80 mm in the Y direction, or with raster of approved size, adjust Va2 for optimum focus and Vg for a light intensity of 0.15 candela.	1. -Vg (V)	5	-	100%
		2. Useful screen area (mm)			100%
		X direction	120	-	
		Y direction	80	-	
		3. Va2 (V)	700	900	100%
e	With a line scan of length 100 mm in the X and Y directions successively, Va2 and Vg as in "d".	Line width at centre of trace (mm)	-	0.7	100%
f	Vg adjusted for cut off and Va2 as in "d". See K1003/5.9	1. Vg	25	70	100%
		2. Increase in negative value of Vg compared with value noted in test d.1.	-	30	100%
g	See K1003/5.4.2.	Grid Insulation			100%
	(a) Vg -80v.	Leakage Current (uA)	-	16	
	(b) Alternative method Resistor 5 meg Ω	Increase in voltmeter reading	-	100%	

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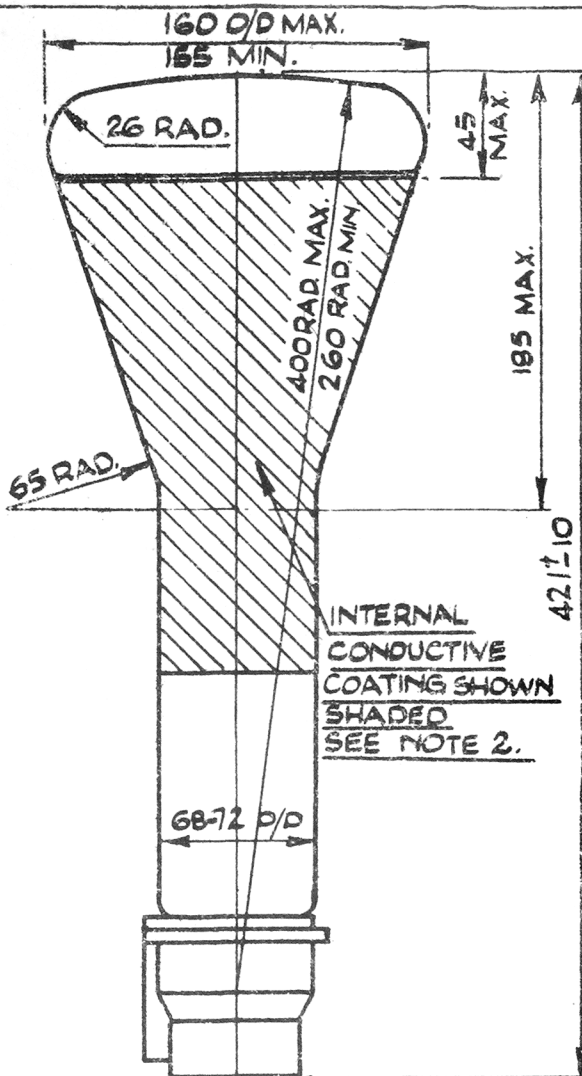
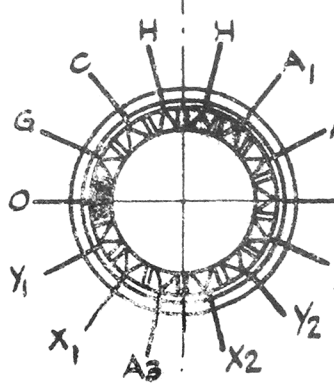
	Test Conditions	Tests	Limits Min.	Limits Max.	No. Tested
h		Deflection Sensitivities			
		1. X plates (mm/V)	$\frac{550}{Va3}$	$\frac{700}{Va3}$	10%
		2. Y plates (mm/V)	$\frac{1000}{Va3}$	$\frac{1350}{Va3}$	(10)
j	See K1003/5.10	Deviation of spot from centre of screen (mm)	-	10	100%
k		Orientation of Deflection Axes			
		1. Orientation of X axis of deflection relative to 00' on drawing	80°	100°	100%
		2. Angle between X and Y axes of deflection	85°	95°	100%





INTERNAL COATING.

ALL DIMENSIONS ARE IN MILLIMETRES.

NOTES.

1. THE TUBE WILL NORMALLY BE OPERATED WITH A3 & CONDUCTIVE COATING TIED IF A MANUFACTURER SO DESIRES THESE ELECTRODES MAY BE STRAPPED INTERNALLY.

2. INTERNAL CONDUCTIVE COATING SHALL BE OF SUCH DIMENSIONS THAT IT FUNCTIONS EFFECTIVELY BUT DOES NOT OBSCURE THE USEFUL SCREEN AREA.

3. LOOKING AT SCREEN WITH THE TUBE POSITIONED SUCH THAT THE BASE SPIGOT IS UPPERMOST A POSITIVE VOLTAGE APPLIED TO THE TERMINAL X1 SHALL DEFLECT THE SPOT TO THE LEFT & A POSITIVE VOLTAGE APPLIED TO THE TERMINAL Y1 SHALL DEFLECT THE SPOT UPWARDS.