

14ACP4

National Video Corporation

4300 W. 47TH STREET CHICAGO 32, ILLINOIS
CLIFFSIDE 4-5600

The tube type 14ACP4 is an electrostatic focus and magnetic deflection direct view picture tube. The all glass 90° deflection bulb has a spherical filter-glass faceplate. The electron gun is designed to be operated at low G₂ voltages and cathode drive to improve the modulation characteristic. The tube has external conductive coating and the electron gun requires an ion trap. The screen has been aluminized for added brightness.

GENERAL CHARACTERISTICS

Focusing Method	Electrostatic	
Deflection Method	Magnetic	
Deflection Angle (Approx.) Horizontal	85	Degrees
Diagonal	90	Degrees
Face Plate Light Transmission (Neutral Density Filter)	78%	Approx.
Phosphor	No. 4	
Fluorescence	White	
Persistence	Short to Medium	
Direct Interelectrode Capacitances (Approx.)		
Cathode to all other electrodes	5	uuf
Grid No. 1 to all other electrodes	6	uuf
External conductive coating to anode	1200	Max. uuf
	800	Min. uuf

MECHANICAL DATA

Overall Length	14 3/16 ± 5/16	Inches
Greatest Dimensions of Bulb:		
Diagonal	14 ± 1/8	Inches
Width	13 1/16 ± 1/8	Inches
Height	10 9/16 ± 1/8	Inches
Minimum Useful Screen Dimensions (Max. Assured)		
Screen Area	104	Sq. Inches
Diagonal	13	Inches
Width	12 1/16	Inches
Height	9 1/2	Inches
Bulb Contact	J1-21	
Base	B6-63	
Basing	12L	
Bulb contact alignment		
J1-21 contact aligns with pin position #6	± 30	Degrees

MAXIMUM RATINGS Design Center Values14ACP4

Heater Voltage	6.3	Volts
Heater Current	0.6 + 10%	Amperes
Anode Voltage ¹	14,000	Max. Volts D.C.
Grid No. 4 Voltage	-500 to +500	Max. Volts D.C.
Grid No. 2 Voltage	200	Max. Volts D.C.
Grid No. 1 Voltage		
Negative peak value	160	Max. Volts D.C.
Negative bias value	110	Max. Volts D.C.
Positive bias value	0	Max. Volts D.C.
Positive peak value	2	Max. Volts D.C.
Peak Heater-Cathode Voltage		
Heater negative with respect to cathode during warm-up period not to exceed 15 seconds	410	Max. Volts D.C.
After equipment warm-up	180	Max. Volts D.C.
Heater positive with respect to cathode	180	Max. Volts D.C.

TYPICAL OPERATING CONDITIONS

Anode Voltage	10,000	Volts D.C.
Grid No. 4 Voltage ²	-50 to +350	Volts D.C.
Grid No. 2 Voltage	125	Volts D.C.
Grid No. 1 Voltage ³	-40 to -80	Volts D.C.
Field strength of PM ion trap magnet ⁴	36	Min. Gaussses

MAXIMUM CIRCUIT VALUES

Grid No. 1 Circuit Resistance	1.5	Max. Megohms
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NOTES

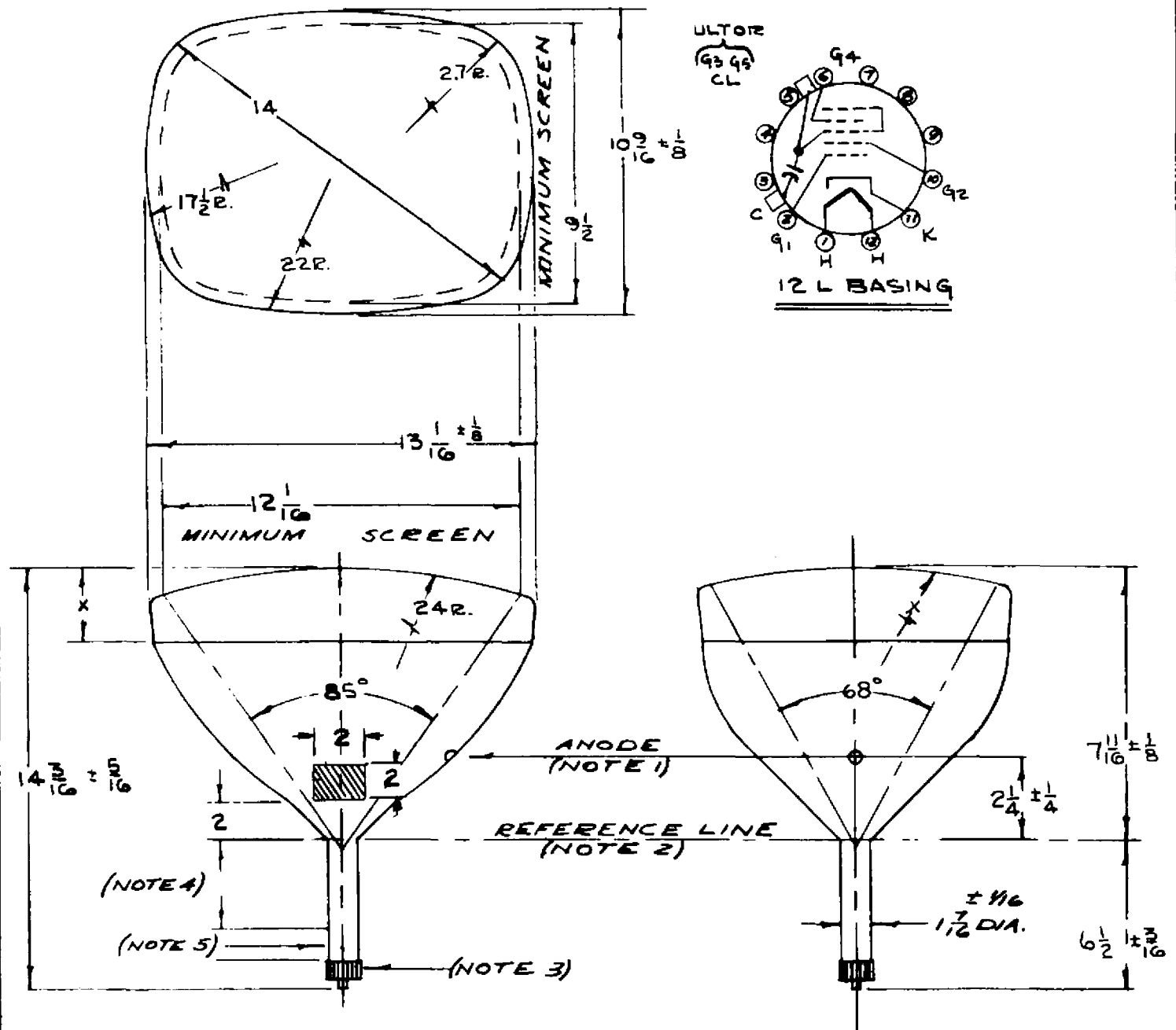
¹Grid number four in this tube is the focus control electrode.

²With the combined grid No. 1 bias voltage and video signal adjusted to produce an anode current of 100 ua on a 12 1/16 x 9 1/2 inch picture adjusted for best overall focus. For other anode voltages, the focus voltage will be from 0% to 5.5%.

³Visual extinction of focused raster.

⁴For the specimen PM ion trap magnet such as the Heppner Model No. E437 or equivalent, positioned to give maximum brightness for a given equipment application, the tolerance range for the strength of the PM ion magnet should be added to the minimum value. The maximum strength of the magnet should not exceed the specified minimum value by more than 6 gaussses. This procedure will insure use of the PM ion trap magnet allowing adequate adjustment to permit satisfactory performance without loss of highlight brightness.

14AC P4



NATIONAL VIDEO CORP.
CHICAGO 32, ILLINOIS

14ACP4				DISTRIBUTION
DRAWN BY	SCALE	EFFECTIVE	SUPERSEDES	
J. FRUGOLI	8" = 1"	13 AUG 1956	ORIGINAL	A, B, C, D, E, F, G, H

NOTES

- NOTE 1: The plane through the tube axis and vacant pin position 6 aligns with the anode contact $\pm 30^\circ$.
- NOTE 2: Reference line is determined by the plane where the standard JETEC reference line gauge #116 will stop against the bulb.
- NOTE 3: Socket for this base should not be rigidly mounted. It should have flexible leads and be free to move.
- NOTE 4: Location of deflection yoke and centering device must be within this space.
- NOTE 5: Keep this space clear for ion-trap magnet.