

19AEP4

National Video Corporation

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

The 19AEP4 is a low voltage, electrostatic focus, magnetic deflection picture tube with a 4 3/8" neck length. The tube has a metal back screen and uses a straight gun which requires no ion trap. This tube operates at 100 volts G₂ and uses a 12.6 volt, 150 milliamperes filament.

ELECTRICAL DATA

Focusing Method	Electrostatic
Deflection Angles, Approximate	
Horizontal	103 Degrees
Vertical	86 Degrees
Diagonal	114 Degrees
External Conductive Coating to Anode	1500 Max. uuf
	1000 Min. uuf
Heater Current at 12.6 volts	150 $\pm$ 5% Ma

OPTICAL DATA

Phosphor Number	P4 Aluminized
Light Transmittance at Center, Approximate	78 Percent

MECHANICAL DATA

Overall Length	11 5/8 $\pm$ 1/4	Inches
Greatest Dimensions of Tube		
Diagonal	18 5/8 $\pm$ 1/8	Inches
Width	16 13/32 $\pm$ 1/8	Inches
Height	13 11/32 $\pm$ 1/8	Inches
Minimum Useful Screen Dimensions (Projected)		
Diagonal	17 9/16	Inches
Horizontal axis	15 1/8	Inches
Vertical axis	12	Inches
Area	172	Sq. Inches
Neck Length	4 3/8 $\pm$ 1/8	Inches
Bulb	J-149	
Bulb Contact	J1-21	
Base	B7-208	
Basing	8HR	

RATINGS (Design Maximum System)

Unless otherwise specified, voltage values are positive and measured with respect to cathode.

Maximum Anode Voltage	17,600	Volts
Maximum Grid (Focusing Electrode) Voltage	~~500~~ -200	
Maximum Grid #2 Voltage	250	Volts
Grid #1 Voltage		
Maximum Negative Value	155	Volts DC
Maximum Negative Peak Value	220	Volts
Maximum Positive Value	0	Volts DC
Maximum Positive Peak Value	2	Volts
Maximum Heater Voltage	13.8	Volts
Minimum Heater Voltage	11.4	Volts
Maximum Heater-Cathode Voltage		
Heater negative with respect to cathode		
During warm-up period not to exceed 15 seconds	450	Volts
After equipment warm-up period	200	Volts
Heater positive with respect to cathode	200	Volts

TYPICAL OPERATING CONDITIONSCATHODE DRIVE SERVICE

Unless otherwise specified, all voltage values are positive with respect to Grid #1.

Anode Voltage	14,000	Volts DC
Grid Voltage (Focusing Electrode) (Notes 2 and 3)	-100 to ~~100~~	Volts DC
Grid #2 Voltage	100	Volts DC
Cathode Voltage (Note 1)	~~32~~ to ~~47~~	Volts DC

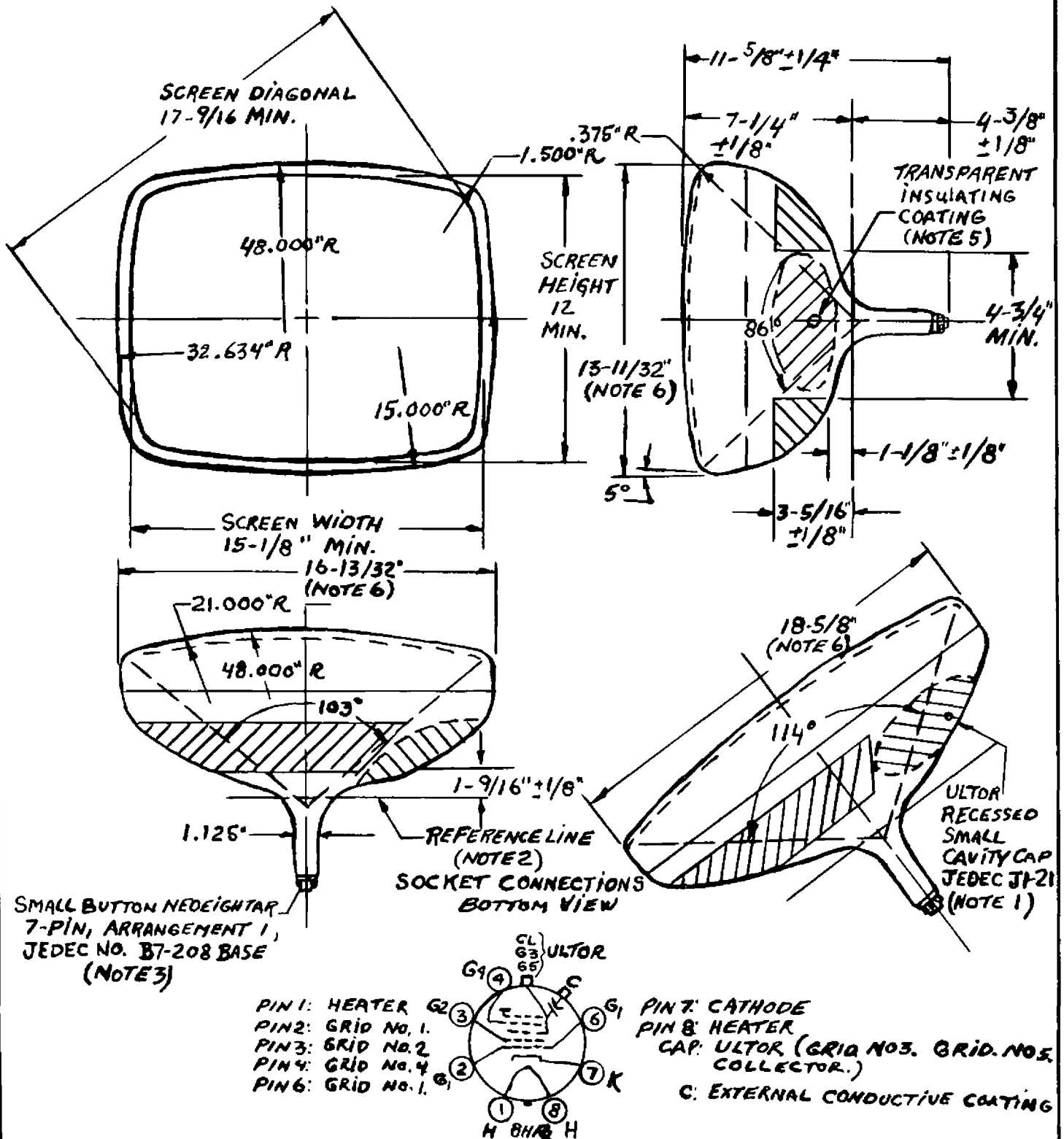
Pin Connections

Pin 1	Heater	Pin 6	Grid #1
Pin 2	Grid #1	Pin 7	Cathode
Pin 3	Grid #2	Pin 8	Heater
Pin 4	Grid #4	Bulb Contact	Ultor

NOTES

1. Visual extinction of focused raster.
2. With combined grid #1 bias voltage and video-signal voltage adjusted to give an anode current of 100 microamperes on a 12 x 15 1/8" pattern from RCA 2F21 Monoscope or equivalent.
3. Individual tubes will have satisfactory focus at some value between -100 and ~~100~~ volts.

NATIONAL VIDEO CORP. CHICAGO 32, ILL



SUPERSEDES

DRAWING NO. 19AEP4

DRAWN BY

SCALE

EFFECTIVE

DISTRIBUTION

S KRUEGER

MECHANICAL NOTES

1. The reference line is determined by reference line gauge JEDEC #126.
2. The area around the button is covered with an insulating coating.
3. Socket for this base should not be rigidly mounted; it should have flexible leads and be allowed to move freely.
4. Bulge at splice line seal may increase the indicated maximum value for envelope width, diagonal and height by not more than 1/8"; however, the bulge will not protrude more than 1/16" beyond the mold match line at any point.
5. Undisturbed area between the mold match line and the panel side of the seal bulge will be a minimum of 3/4".

WARNING

X-ray radiation shielding may be necessary to protect against possible danger of personal injury from prolonged exposure at close range if this tube is operated at anode voltages higher than 16,000 volts.