

19AQP4

National Video Corporation

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

The 19AQP4 is a 4 1/8" neck length, electrostatic focus picture tube. The tube has a metal back screen, a straight gun which requires no ion trap and a 300 milliamperere, 6.3 volt filament.

ELECTRICAL DATA

| | |
|--------------------------------------|------------------|
| Focusing Method | Electrostatic |
| Deflection Angles, Approximate | |
| Horizontal | 114 Degrees |
| Vertical | 103 Degrees |
| Diagonal | 86 Degrees |
| External Conductive Coating to Anode | 1500 Max. uuf |
| | 1000 Min. uuf |
| Heater Current at 6.3 Volts | 0.30 \pm 5% Ma |

OPTICAL DATA

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

MECHANICAL DATA

| | | |
|--|--------------------|------------|
| Overall Length | 11 3/8 \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 1/8 \pm 1/8 | Inches |
| Bulb | J-149 | |
| Bulb Contact | J1-21 | |
| Base | B7-208 | |
| Basing | 8HR | |

RATINGS

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

| | | |
|--|--------|----------|
| Maximum Anode Voltage | 20,000 | Volts |
| Maximum Grid (Focusing Electrode) Voltage | ±1000 | -500 |
| Maximum Grid #2 Voltage | 550 | 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 | 7.0 | Volts |
| Minimum Heater Voltage | 5.7 | Volts |
| Maximum Heater-Cathode Voltage | | |
| Heater negative with respect to cathode | | |
| During warm-up period not to exceed 15 seconds | 410 | Volts |
| After equipment warm-up period | 180 | Volts |
| Heater positive with respect to cathode | 180 | Volts |

TYPICAL OPERATING CONDITIONSGRID DRIVE SERVICE

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

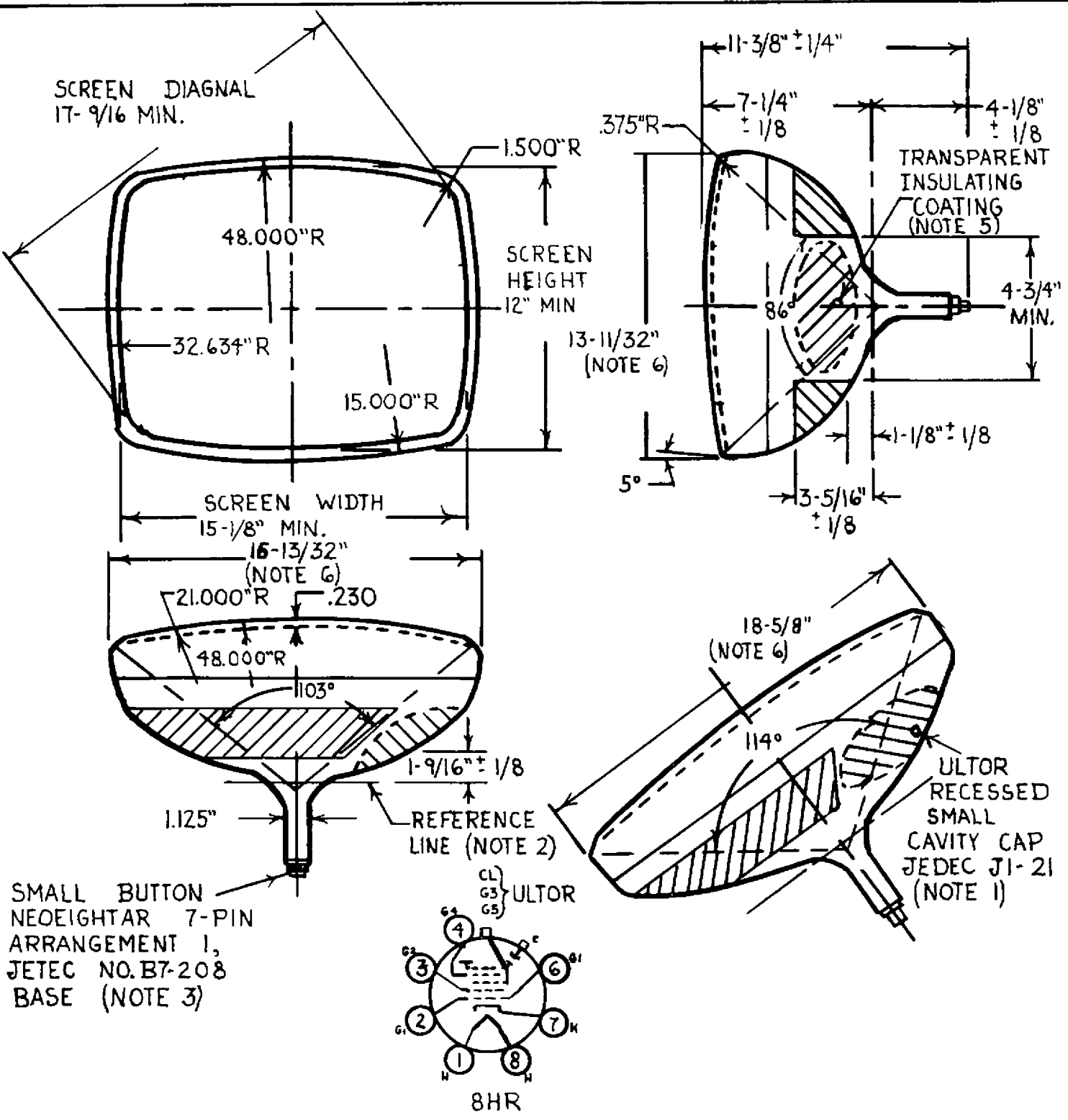
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|--|------------|----------|
| Anode Voltage | 16,000 | Volts DC |
| Grid #4 Voltage (Focusing Electrode) (Notes 2 and 3) | 0 - 400 | Volts DC |
| Grid #2 Voltage | 300 | Volts DC |
| Grid #1 Voltage (Note 1) | -38 to -72 | Volts DC |

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 the 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 0 and 400 volts.



NATIONAL VIDEO CORP.
CHICAGO 32, ILL

| | | | | |
|--------------|-------|------------|--------------|--------|
| SUPERSEDES | | DRAWING NO | | 19AQP4 |
| DRAWN BY | SCALE | EFFECTIVE | DISTRIBUTION | |
| A. L. PRIBYL | | | | |

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.