

Cathode-Ray Tube Type 1ORP4

The 1ORP4 is an all glass, electrostatic focus and magnetic deflection direct view picture tube for television applications. The focusing voltage required is from -0.4% to \pm 2.2% of the anode voltage. It has a clear-glass faceplate and a metal-backed screen to prevent screen burning by ions and to increase light output. An external conductive coating serves as a filter capacitor when grounded.

GENERAL CHARACTERISTICS

Electrical Data

| | | |
|----------------|---------------|---------|
| Heater Voltage | 6.3 | Volts |
| Heater Current | 0.6 \pm 10% | Amperes |

| | | |
|----------------------------|---------------|---------|
| Focusing Method | Electrostatic | |
| Deflecting Method | Magnetic | |
| Deflecting Angle (Approx.) | 50 | Degrees |

| | |
|-----------------------|--------|
| Phosphor ¹ | No. 4 |
| Fluorescence | White |
| Persistence | 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 | (3500 Max. 750 Min.) | uuf uuf |

Mechanical Data

| | | |
|--|--|------------------|
| Overall Length | 16 1/2 \pm 1/4 | Inches |
| Greatest Diameter of Bulb | 10 1/2 \pm 1/8 | Inches |
| Minimum Useful Screen Diameter | 9 1/8 | Inches |
| Bulb Contact (Recessed Small Cavity Cap) | J1-21 | |
| Base (Small Shell Duodecal 6-pin) | B6-63 | |
| Basing | 12L | |
| Bulb Contact Alignment | J1-21 Contact Aligns with Vacant Pin Position #3 | \pm 30 Degrees |

MAXIMUM RATINGS Design Center Values

| | | |
|---|--------------------|----------------|
| Final Anode Voltage ² | 16,000 Max. | Volts D-C |
| Grid No.4 (Focusing Electrode) Voltage Range ³ | -64 to \pm 350 | Max. Volts D-C |
| Grid No.4 Voltage ⁴ | -500 to \pm 1000 | Max. Volts D-C |
| Grid No.2 Voltage | 500 Max. | Volts D-C |
| Grid No.1 Voltage | | |
| Negative-Bias Value | 125 Max. | Volts D-C |
| Positive-Bias Value | 0 Max. | Volts D-C |
| Positive-Peak Value | 2 Max. | Volts |
| 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 Period | 180 Max. | Volts D-C |
| Heater Positive with Respect to Cathode | 180 Max. | Volts D-C |

The Rauland Corporation

Chicago 41, Ill.

Cathode-Ray Tube Type 1ORP4

JETEC COMPARATIVE CONDITIONS

| | |
|--------------------------------------|-----------------------|
| Final Anode Voltage | 12,000 Volts D-C |
| Grid No.4 Voltage Range ³ | -48 to /260 Volts D-C |
| Grid No.4 Current | -15 to /25 uamp D-C |
| Grid No.2 Voltage | 300 Volts D-C |
| Grid No.1 Voltage ⁵ | -28 to -72 Volts D-C |

RECOMMENDED OPERATING CONDITIONS

| | |
|--------------------------------------|-----------------------|
| Final Anode Voltage | 14,000 Volts D-C |
| Grid No.4 Voltage Range ³ | -55 to /300 Volts D-C |
| Grid No.4 Current | -15 to /25 uamp D-C |
| Grid No.2 Voltage | 300 Volts D-C |
| Grid No.1 Voltage ⁵ | -28 to -72 Volts D-C |

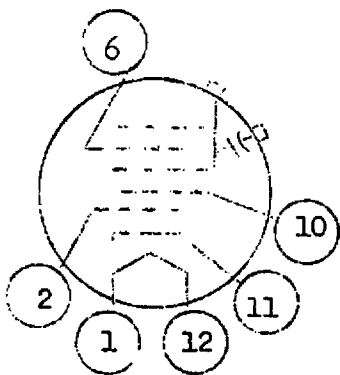
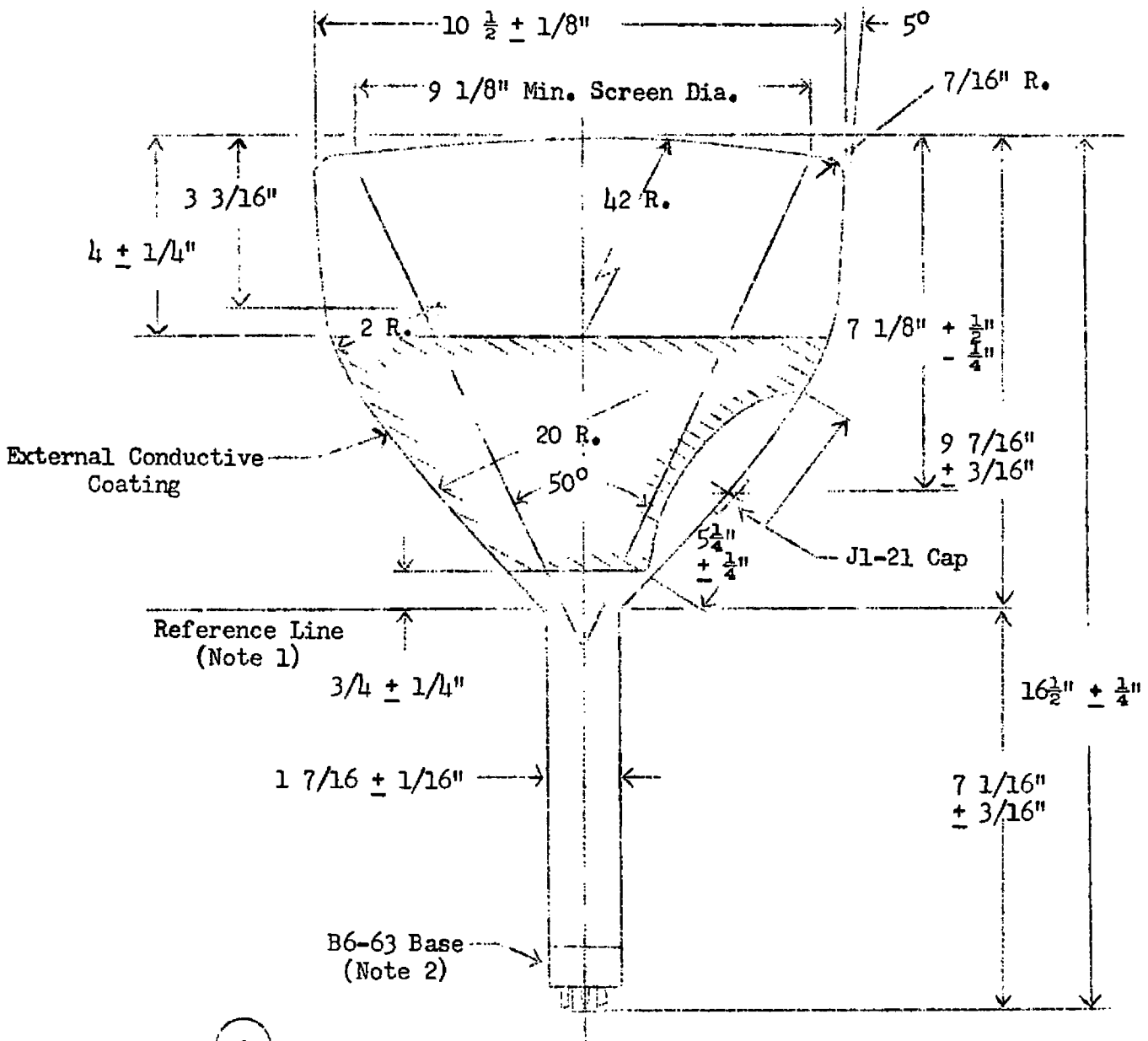
MAXIMUM CIRCUIT VALUES

| | |
|------------------------------|-----------------|
| Grid No.1 Circuit Resistance | 1.5 Max.Megohms |
|------------------------------|-----------------|

NOTES

1. Suitable for both black and white and CBS color television
2. Grid No.3, Grid No.5 and the Collector are connected internally and are referred to herein as "Final Anode."
3. Measured at 100 ua final anode current and equal vertical and horizontal resolution.
4. The focus electrode may be modulated to improve overall focus.
5. Visual extinction of the focused raster.

1ORPL4



B A S I N G

- 1 Heater
- 2 Grid No. 1
- 6 Grid No. 4
- 10 Grid No. 2
- 11 Cathode
- 12 Heater

Cap Grid No. 3 & Grid No. 5

NOTES:

1. Reference line is point where R.T.M.A. Gauge #112 will rest on bulb.
2. Vacant pin position #3 to be aligned with anode cap $\pm 30^\circ$.

THE RAULAND CORPORATION
Chicago 41, Illinois

2/19/53