### ICONOSCOPES

FOR PICKUP FROM MOTION-PICTURE FILM OR SLIDES

#### DATA

**General:**
- **Heater, for Unipotential Cathode:**
  - Voltage: 6.3 ± 10% ac or dc volts
  - Current: 0.6 amp
- **Direct Interelectrode Capacitances (Approx.):**
  - Grid No. 1 to All Other Electrodes: 6.5 μF
  - Signal Electrode to Grid No. 4°: 10 μF
- **Mosaic, Photosensitive:**
  - Response: See Curve
  - Useful Size of Rectangular Image
    - (4 x 3 Aspect Ratio): 5.75" max. diagonal
  - Focusing Method: Electrostatic
  - Deflection Method: Magnetic
  - Deflection Angle (Approx.): 55°
  - Max. Width of Mounted Tube: 8-1/8" ± 3/4"
  - Height of Mounted Tube: 10-3/16" ± 3/4"
  - Depth of Mounted Tube: 12-13/16" ± 3/4"
  - Mounting Position: Mosaic in vertical plane
  - Minimum Deflecting-Coil Inside Diameter: 1-1/2" ± 3/4"
  - Maximum Deflecting-Coil Length: 2-1/4" ± 3/4"
- **Caps (Two):** Medium (JETEC No. C1-5)
- **Base:** Long Medium-Shell Small 6-Pin

#### Bottom View

**Pin 1—Heater**  
**Pin 2—Grid No. 2**  
**Pin 3—Grid No. 3**  
**Pin 4—Grid No. 1**  
**Pin 5—Cathode**  
**Pin 6—Heater**  

**Direction of Light IS NORMAL TO MOSAIC**

#### Maximum Ratings, Absolute Values:

- **AVERAGE MOSAIC ILLUMINATION:** 50 max. ft-c
- **OPERATING TEMPERATURE OF BULB AT LARGE END OF TUBE:** 40 max. °C
- **SIGNAL-ELECTRODE VOLTAGE:** 1200 max. volts
- **GRID-No. 4 (COLLECTOR) VOLTAGE:** 1200 max. volts
- **GRID-No. 3 VOLTAGE:** 450 max. volts
- **GRID-No. 2 VOLTAGE:** 1200 max. volts
- **GRID-No. 1 VOLTAGE:**
  - Negative bias value: 125 max. volts
  - Positive bias value: 0 max. volts
- **PEAK HEATER-CATHODE VOLTAGE:**
  - Heater negative with respect to cathode: 125 max. volts
  - Heater positive with respect to cathode: 10 max. volts
- **GRID-No. 4 CURRENT:** 0.5 max. μamp

° With external shield.

*• Averaged over any interval of 1 sec. max.

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MAY 1, 1951

TUBE DEPARTMENT
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY
Typical Operation and Characteristics:

Signal-Electrode Voltage ............ 1000 volts
Grid-No.4 Voltage .................. 1000 volts
Grid-No.3 Voltage (Beam Focus)—
24% to 36% of Grid-No.4 Voltage .... 240 to 360 volts
Grid-No.2 Voltage .................. 1000 volts
Max. Grid-No.1 Voltage for Pattern
Cutoff—7% of Grid-No.4 Voltage .... -70 volts
Grid-No.4 Current
(With no illumination on mosaic)* .... 0.1 to 0.2 μamp
External Load Resistance ............ 0.1 meghm
Illumination on Mosaic:
Steady Highlight Value for Slides ... 4 to 6 ft-c
Average Pulsed Highlight Value
for Motion-Picture Film ............ 10 to 20 ft-c
Ratio of Peak-to-Peak Highlight
Video-Signal Current to RMS Noise
Current (Approx.) .................. 100 volts
Minimum Peak-to-Peak Blanking Voltage ... 20 volts
Deflecting-Coil Current (Approx.):**
Horizontal (Peak to peak) ........... 600 ma
Vertical (Peak to peak) ............. 140 ma
Maximum Circuit Values:
Grid-No.1-Circuit Resistance .......... 1.0 max. meghm

* Allowance should be made for leakage currents.
** For RCA Deflecting Yoke No. 201076.
**ICONOSCOPE**

*BB' is the plane through the bulb axis AA' and the ideal gun axis.*

Indicates a change.

MAY 1, 1951

TUBE DEPARTMENT

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY
NOTE 1: VARIATION OF TIP CENTER FROM PLANE BB' IS 1/2".

NOTE 2: MAXIMUM ROTATION OF LINE THROUGH PINS 2 AND 5
ABOUT IDEAL GUN AXIS IS ± 10°, MEASURED FROM PLANE BB'.

NOTE 3: DEVIATION OF PLANE OF MOSAIC FROM PLANE PERPENDICULAR TO THE BULB AXIS AA' IS 2.5° MAX. ROTATION OF MOSAIC ABOUT THE BULB AXIS AA' WITH RESPECT TO A LINE OF INTERSECTION FORMED BY MOSAIC PLANE AND PLANE BB' IS 2.5° MAX.
SPECTRAL SENSITIVITY CHARACTERISTIC

FOR EQUAL VALUES OF RADIANT FLUX AT ALL WAVELENGTHS

JUNE 18, 1951

TUBE DEPARTMENT
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

92CM-6404R1
TYPICAL SIGNAL-OUTPUT CHARACTERISTIC

- SCENE: BLACKS AND WHITES BALANCED
- BACK LIGHTING: APPROXIMATELY OPTIMUM
- BEAM CURRENT: 0.2 MICROAMPERE
- TYPE OF LIGHTING: DAYLIGHT FLUORESCENT

JAN. 2, 1951

TUBE DEPARTMENT

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY