



1848

1848 ICONOSCOPE

For use in portable television cameras

Heater	Coated Unipotential Cathode	
Voltage	6.3	a-c or d-c volts
Current	0.6	amp.
Deflection		Magnetic
Type of Pickup		Direct
Direct Interelectrode Capacitance:		
Signal Plate to Collector & Anode No.2		
(with external shielding)	10 approx.	μpf
Control Grid to All Other Electrodes	12 max.	μpf
Dimensions	See Outline Drawing	
Caps (two)		Small Metal
Base	Dwarf Metal Shell Octal 8-Pin	

MAXIMUM RATINGS and TYPICAL OPERATING CONDITIONS

High-Voltage Electrode (Anode No.2)		
& Collector Voltage	1200 max.	volts
Accelerating Electrode (Grid No.2) Voltage	1200 max.	volts
Focusing Electrode (Anode No.1) Voltage	400 max.	volts
Control Electrode (Grid No.1) Voltage	Never Positive	
Grid No.1 Volt. for Current Cut-Off	-50 approx.	volts
Anode No.2 & Collector Current *	0.5 max.	μamp.
Ambient Temperature	40 max.	°C
Typical Operation:		
Heater Voltage °	6.3	volts
Anode No.2 & Collector Voltage	1000	volts
Grid No.2 Voltage	1000	volts
Anode No.1 Voltage ●	300 approx.	volts
Grid No.1 Voltage ▲ #	-40 approx.	volts
Anode No.2 & Collector Current *	0.1 approx.	μamp.

■ Design maximum for 117-volt line.

* When this current is measured, the mosaic should not be illuminated.

° The cathode should be connected to one side or, preferably, to the mid-tap of the heater winding.

▲ Should be adjusted and set at largest negative value which will provide sufficient video output.

* Maximum d-c resistance in the grid circuit should not exceed 1 megohm.

● Should be adjusted and set at value giving best focus.

NOTE: Signal plate-to-collector impedance is a function of bias light, image brilliance, and beam current, and is in the order of a few megohms for normal operation. Normal beam current is in the order of 0.25 microampere.

The signal-plate resistive load should be approximately one-tenth of the signal plate-to-collector impedance if constant signal output without phase shift is required in all frequencies of the picture signal.

A practical design value of signal-plate load impedance is in the order of 0.1 to 0.5 megohm. With low values of load resistance, gain and signal output-to-noise ratio are low. With high values, gain and signal output-to-noise ratio are increased. In either case, the low video frequencies are over-emphasized and must be equalized by a video stage having low low-frequency gain.

Signal output current varies with beam current, illumination level, and bias lighting, but is in the order of 0.15 microampere peak to peak. Good operation can be obtained with a highlight illumination level on the mosaic in the order of 7 foot-candles.

The spectral sensitivity of the 1848 is adjusted for outdoor pickup.

The d-c resistance in the signal-plate circuit should be limited to one megohm.

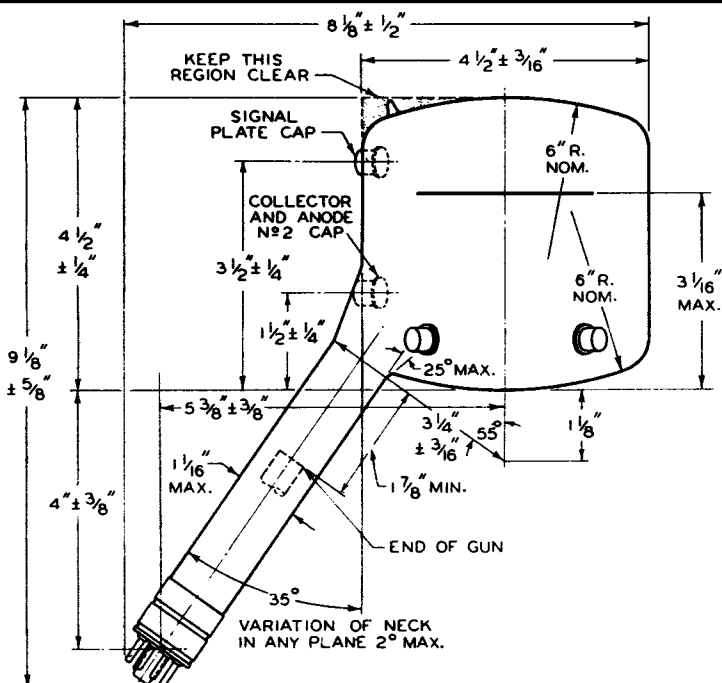
April 15, 1940

RCA RADIOTRON DIVISION
RCA MANUFACTURING COMPANY, INC.

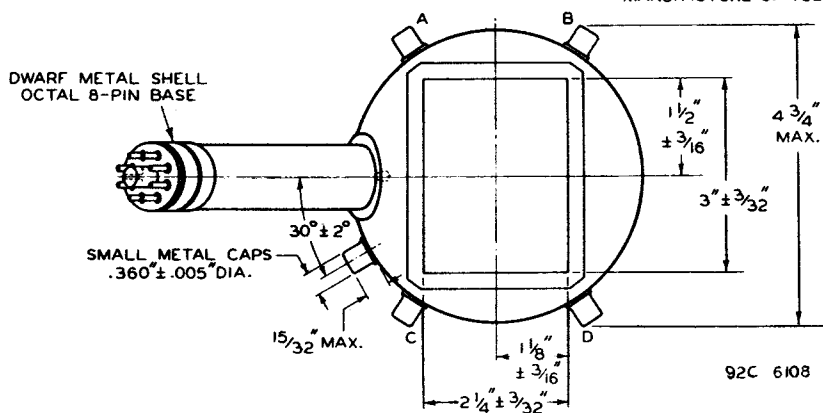
TENTATIVE DATA



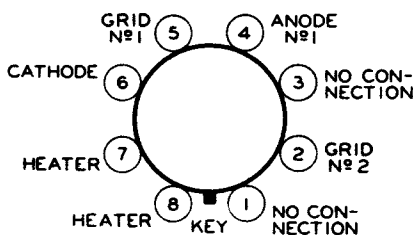
ICONOSCOPE



CAPS A,B,C & D — MAKE NO CONNECTIONS TO THESE CAPS — USED ONLY DURING MANUFACTURE OF TUBE



TOP VIEW OF SOCKET CONNECTIONS



TUBE MOUNTING POSITION
HORIZONTAL
VERTICAL: Base down