

August 4, 1958

### TELEVISION PICTURE TUBE TYPE 17CYP4

90° Magnetic Deflection  
 Rectangular Glass  
 Aluminized  
 Gray Filter Glass

Electrostatic Focus  
 Lightweight Tube  
 4-1/2" Neck Length

External Conductive Coating  
 Spherical Faceplate  
 14-3/4" x 11-11/16" Picture  
 No Ion Trap

**ELECTRICAL:**

Cathode .....	Coated Unipotential
Heater:	
Voltage (ac or dc) .....	6.3 Volts
Current .....	0.6 Ampere
Direct Interelectrode Capacitances:	
Grid 1 to all other Electrodes .....	6 uuf
Cathode to all other Electrodes .....	5 uuf
External Conductive Coating:	
Maximum .....	1500 uuf
Minimum .....	1000 uuf
Screen:	
Phosphor .....	Aluminized P4
Fluorescence .....	White
Persistence .....	Short
Focusing Method .....	Electrostatic
Deflection Method .....	Magnetic
Horizontal Angle, approx. ....	85°
Vertical Angle, approx. ....	68°
Diagonal Angle, approx. ....	90°
No Ion Trap Gun .....	No Magnet Required

**MECHANICAL:**

Mounting Position .....	Any
Screen Dimensions:	
Screen Area, Min. ....	155 Sq. Inches
Height .....	11-11/16" Min.
Width .....	14-3/4" Min.
Diagonal .....	15-5/8" Min.
Faceplate .....	Spherical Inner & Outer Surfaces
Glass .....	Neutral Filter
Transmission .....	77%
Bulb .....	J132½C
Bulb Dimensions:	
Height .....	12-3/4" ± 1/8"
Width .....	15-5/8" ± 1/8"
Diagonal .....	16-9/16" ± 1/8"
Overall Length .....	14" ± 3/8"
Net Weight, approx. ....	10 Pounds
Anode Terminal .....	Recessed Small Cavity Cap (JETEC J1-21)
Base .....	Small Shell Duodecal 6-Pin (JETEC B6-203)

**MAXIMUM RATINGS:**

<b>Design Center Values</b>		
Anode Voltage* .....	16000 max.	Volts
Grid 4 Voltage:		
Positive Value .....	1000 max.	Volts
Negative Value .....	500 max.	Volts
Grid 2 Voltage .....	500 max.	Volts
Grid 1 Voltage:		
Negative Bias Value .....	140 max.	Volts
Positive Peak Value .....	0 max.	Volts
<b>Peak Heater-Cathode Voltage:</b>		
Heater Negative with Respect to Cathode:		
During warmup period of 15 sec. max. . .	410 max.	Volts
After Equipment Warmup Period . . .	180 max.	Volts
Heater Positive with Respect to Cathode .....		
Cathode .....	180 max.	Volts

**TYPICAL OPERATING CONDITIONS:**

Anode Voltage .....	14000	Volts
Grid 4 Voltage .....	-50 to +350	Volts
Grid 2 Voltage ▲ .....	450	Volts
Grid 1 Voltage for Raster Cutoff ■ . . .	39 to 105	Volts

**LIMITING CIRCUIT VALUES:**

Grid 1 Circuit Resistance .....	1.5 max.	Megohms
Grid 2 Circuit Resistance ♣ .....	10000	ohms
Grid 4 Circuit Resistance ♣ .....	10000	ohms

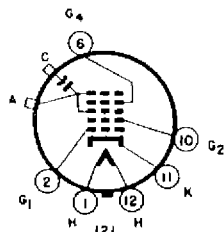
\* Brilliance and definition decrease with decreasing anode voltage. In general, anode voltage should not be less than 12000 volts.

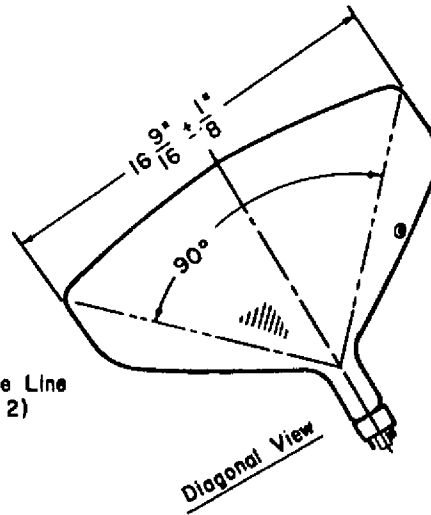
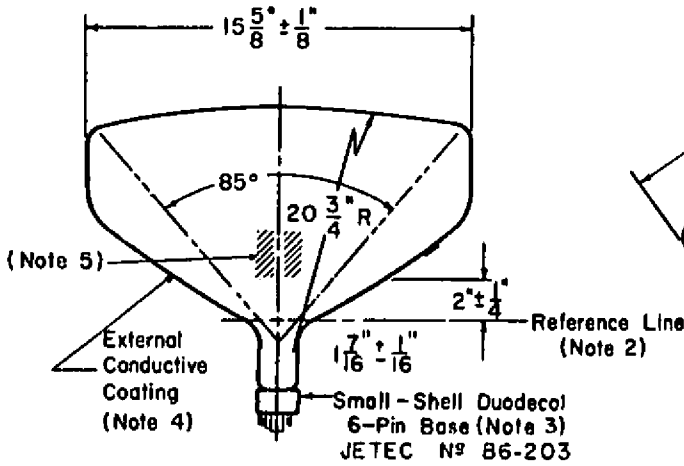
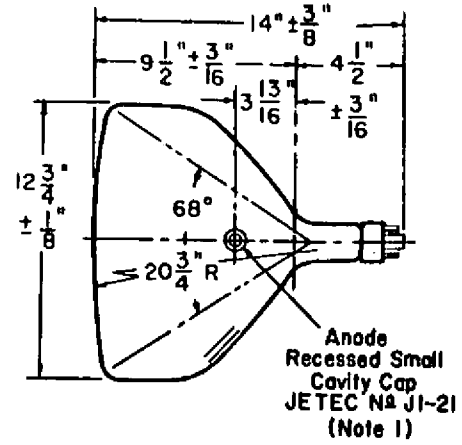
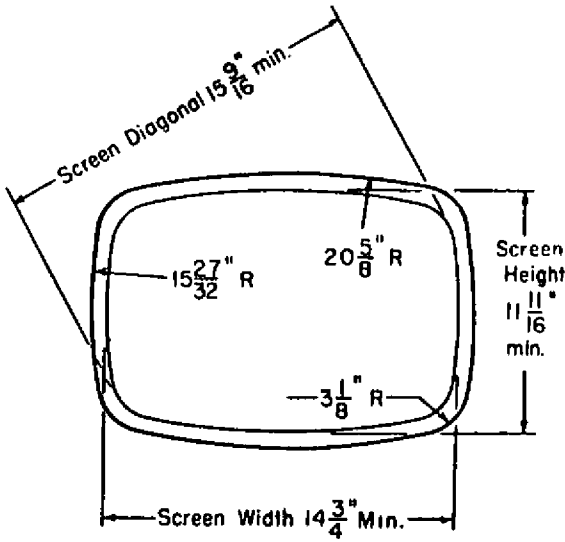
♣ Protective resistance in the Grid 2 and Grid 4 circuits is advisable to prevent damage to the tube.

▲ It is recommended that Grid 2 be operated at a voltage greater than 300 volts since resolution is affected below this level.

■ Raster size is 11-11/16" x 14-3/4".

Inasmuch as the tube rating permits operation at voltages as high as 17.6 kilovolts (absolute value), shielding of the tube for x-ray radiation may be needed whenever the operating conditions involve voltage in excess of 16 kilovolts.





CE-C1371

**NOTE 1:** The plane through the tube axis and the base pin No. 6 may vary from the plane through the tube axis and the bulb terminal by an angular tolerance of  $\pm 30^\circ$  measured about the tube axis. The bulb terminal is on the same side of the tube as pin No. 6.

**NOTE 2:** With the tube neck inserted through the flared end of REFERENCE-Line Gauge (JETEC No. 116) and with the tube seated in the gauge, the reference line is determined by the intersection of the plane  $cc'$  (face of the flared end) of the gauge with the glass funnel.

**NOTE 3:** The socket should not be mounted rigidly but it should be allowed to move freely and it should have flexible leads. The bottom circumference of the base shell will lie within a circle concentric with the bulb axis and having a diameter of  $2 \frac{3}{4}$ ".

**NOTE 4:** External conductive coating must be grounded.

**NOTE 5:** Contact area of external conductive coating  $2''$  min.  $\times 2''$  min. located  $2'' \pm \frac{1}{4}''$  from Reference Line  $90^\circ$  counterclockwise from anode button as viewed from base end of tube.