

TELEVISION PICTURE TUBE TYPE 17CXP4

90° Magnetic Deflection  
Rectangular Glass  
Aluminized  
Gray Filter Glass

Low  $G_2$  Voltage (50 Volts)  
6.3 Volt, 0.45 Amp. Heater  
Cathode Drive Design  
Electrostatic Focus

External Conductive Coating  
Spherical Faceplate  
No Ion Trap  
14-5/16" x 11-1/8" Picture

**ELECTRICAL:**

|                                       |                     |
|---------------------------------------|---------------------|
| Cathode .....                         | Coated Unipotential |
| Heater:                               |                     |
| Voltage (ac or dc) .....              | 6.3 Volts           |
| Current .....                         | 0.45 Ampere         |
| Direct Interelectrode Capacitances:   |                     |
| Grid 1 to all other Electrodes .....  | 6 uuf               |
| Cathode to all other Electrodes ..... | 5 uuf               |
| External Conductive Coating to Anode: |                     |
| 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°                 |
| Ne-Ion Trap Gun .....                 | No Magnet Required  |

**MECHANICAL:**

|                                |                                             |      |
|--------------------------------|---------------------------------------------|------|
| Mounting Position . . . . .    |                                             | Any  |
| Screen Dimensions:             |                                             |      |
| Height . . . . .               | 11-1/8"                                     | Min. |
| Width . . . . .                | 14-5/16"                                    | Min. |
| Diagonal . . . . .             | 15-9/16"                                    | Min. |
| Face Plate . . . . .           | Spherical Outer and Inner Surfaces          |      |
| Glass . . . . .                | Neutral Filter                              |      |
| Transmission . . . . .         | 74 per cent                                 |      |
| Bulb Dimensions:               |                                             |      |
| Height . . . . .               | 12-1/4" ± 1/8"                              |      |
| Width . . . . .                | 15-3/8" ± 1/8"                              |      |
| Diagonal . . . . .             | 16-5/8" ± 1/8"                              |      |
| Overall Length . . . . .       | 14-5/8" ± 3/8"                              |      |
| Net Weight (Approx.) . . . . . | 13 Pounds                                   |      |
| Anode Terminal . . . . .       | Recessed Small Cavity Cap<br>(JETEC J1-21)  |      |
| Base . . . . .                 | Small Shell Duodecal 6-Pin<br>(JETEC B6-63) |      |

**MAXIMUM RATINGS, Cathode Drive Service:**

### Design Center Values

|                                          |            |       |
|------------------------------------------|------------|-------|
| Anode Voltage* . . . . .                 | 16000 max. | Volts |
| Grid 4 to Grid 1 Voltage:                |            |       |
| Positive Value . . . . .                 | 1000 max.  | Volts |
| Negative Value . . . . .                 | 500 max.   | Volts |
| Grid 2 to Grid 1 Voltage . . . . .       | 68 max.    | Volts |
| Cathode to Grid 1 Voltage:               |            |       |
| Positive Bias Value . . . . .            | 140 max.   | Volts |
| Negative Peak Value . . . . .            | 0 max.     | Volts |
| Peak Heater-Cathode Voltage:             |            |       |
| 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 . . . . .                        | 180 max.   | Volts |

**TYPICAL OPERATING CONDITIONS, Cathode Drive Service:**

|                                                            |             |                   |
|------------------------------------------------------------|-------------|-------------------|
| Anode Voltage . . . . .                                    | 12000       | 14000 Volts       |
| Grid 4 to Grid 1 Voltage . . . . .                         | -75 to +325 | -50 to +350 Volts |
| Grid 2 to Grid 1 Voltage . . . . .                         | 50          | 50 Volts          |
| Cathode to Grid 1 Voltage for<br>Rester Cutoff ▲ . . . . . | 32 to 47    | 32 to 47 Volts    |

**LIMITING CIRCUIT VALUES:**

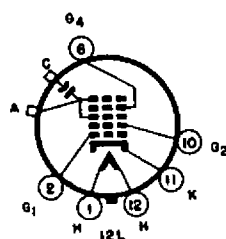
|                                       |                  |
|---------------------------------------|------------------|
| Grid 1 Circuit Resistance . . . . .   | 1.5 max. Megohms |
| Grid 2 Circuit Resistance** . . . . . | 0.1 min. Megohms |
| Grid 4 Circuit Resistance** . . . . . | 0.1 min. Megohms |

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

\*\*Protective resistance in the  $G_2$  and  $G_4$  circuits is advisable to prevent damage to the tube.

▲ Raster size 11-1/8" x 14-5/16"

Inasmuch as the tube rating permits operation at voltages as high as 17.5 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.

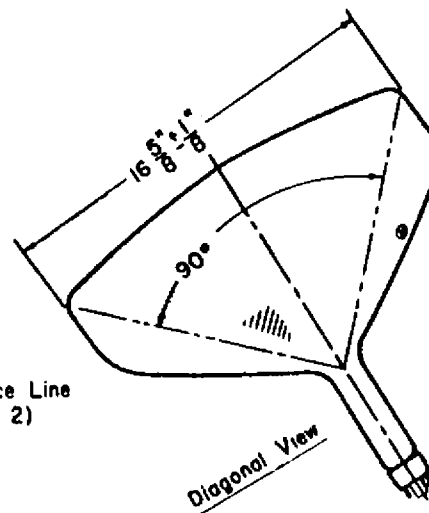
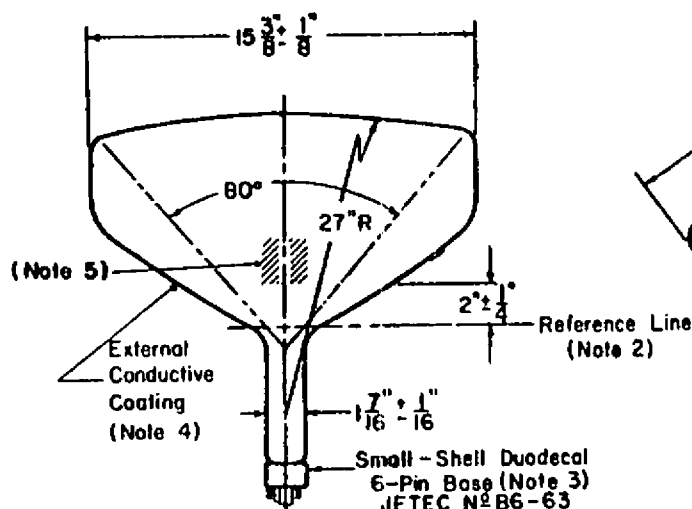
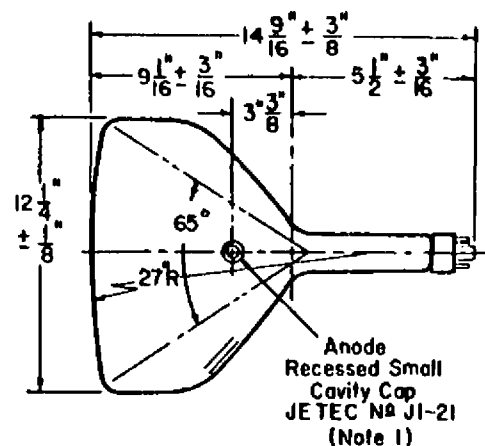
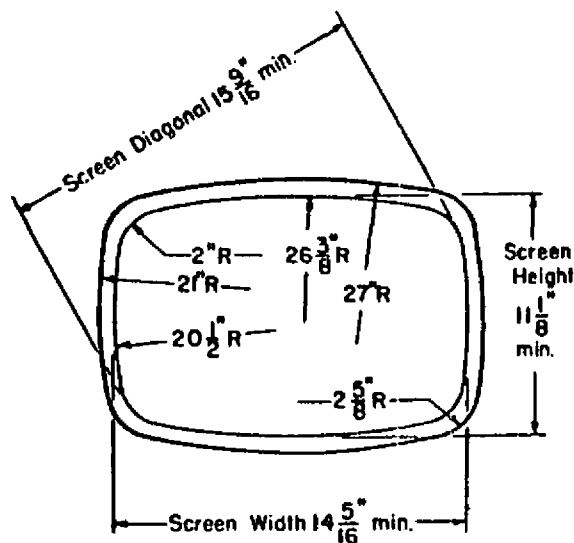


### Bottom View

**A - Grids 3 & 5. Collector.**

C - External Conductive Coating

### Cathode Ray Tube Section



CE-C1266

**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.