

May 1, 1959

TELEVISION PICTURE TUBE TYPE 17DHP4

110° Magnetic Deflection
Rectangular Glass Construction
Low-Voltage Electrostatic Focus
Straight Gun, No Ion Trap Required
450 Ma Controlled Warm-Up Heater

4-1/8" Neck Length

Aluminized Screen
14-3/4" x 11-11/16" Screen Size
Spherical Faceplate
External Conductive Coating
11-7/16" Max. Overall Length

ELECTRICAL:

Cathode	Coated Unipotential
Heater:	
Voltage (ac or dc)	6.3 Volts
Current	0.45 Ampere
Warm-Up Time (approx.) [†]	11 Seconds
Direct Interelectrode Capacitances:	
Grid 1 to all other Electrodes	6 $\mu\mu\text{f}$
Cathode to all other Electrodes	5 $\mu\mu\text{f}$
External Conductive Coating to Anode:	
Maximum	1500 $\mu\mu\text{f}$
Minimum	1000 $\mu\mu\text{f}$
Screen:	
Fluorescence	White
Phosphor	Aluminized P4
Persistence	Short
Focusing Method	Low-Voltage Electrostatic
Deflection Method	Magnetic
Deflection Angle:	
Horizontal	105°
Vertical	87°
Diagonal	110°
No-Ion-Trap Gun	No Magnet Required

MECHANICAL:

Mounting Position	Any
Screen Dimensions (min. at greatest part):	
Width	14-3/4"
Height	11-11/16"
Diagonal	15-3/4"
Area	155 Sq. Inches
Faceplate	Spherical
Glass	Neutral Gray
Transmission (approx.)	78%
Bulb Dimensions (at greatest part):	
Width	15-5/8" $\pm$ 1/8"
Height	12-3/4" $\pm$ 1/8"
Diagonal	16-9/16" $\pm$ 1/8"
Bulb Number	J132½A1 or equiv.
Neck Length	4-1/8" $\pm$ 1/8"
Overall Length	11-1/4" $\pm$ 3/16"
Anode Terminal, Recessed Small Cavity Cap	JEDEC No. J1-21
Base	Small Button, 7-Pin Style B JEDEC No. B7-20R
Basing	8HR
Net Weight (approx.)	10 lbs.

- † Heater warm-up time is defined as the time required for the voltage across the heater to reach 80% of its rated value after applying 4 times rated heater voltage to a circuit consisting of the tube heater in series with a resistance equal to 3 times rated heater voltage divided by rated heater current.

MAXIMUM RATINGS:

Design Center Values	
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
Negative Peak Value	200 max. Volts
Positive Bias Value	0 max. Volts
Positive Peak Value	2 max. Volts
Peak Heater-Cathode Voltage:	
Heater Negative with Respect to Cathode [§] ..	180 max. Volts
Heater Positive with Respect to Cathode ..	180 max. Volts

LIMITING CIRCUIT VALUES:

Grid 1 Circuit Resistance	1.5 max. Megohms
Grid 2 Circuit Resistance [‡]	10000 min. Ohms
Grid 4 Circuit Resistance [‡]	10000 min. Ohms

GRID DRIVE OPERATION

(Video Signal Applied to Grid 1)

TYPICAL OPERATING CONDITIONS:

Anode Voltage	14000 Volts
Grid 2 Voltage	500 Volts
Grid 4 Voltage for Focus	0 to +400 Volts
Grid 1 Cutoff Voltage ^Δ	-43 to -72 Volts

CATHODE DRIVE OPERATION

(Video Signal Applied to Cathode)

TYPICAL OPERATING CONDITIONS:

Anode to Grid 1 Voltage	14000 Volts
Grid 2 to Grid 1 Voltage	500 Volts
Grid 4 to Grid 1 Voltage for Focus ..	0 to 400 Volts
Cathode to Grid 1 Cutoff Voltage ^Δ ..	40 to 63 Volts

- † Brilliance and definition decrease with decreasing anode voltage. Operation with anode voltage less than 12000 volts is not recommended.

Δ For visual extinction of focused raster.

- ‡ Protective resistance in the grid 2 and grid 4 (focus electrode) circuit is advisable to prevent damage to the tube.

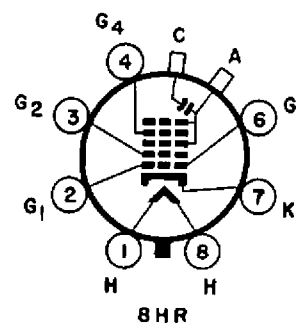
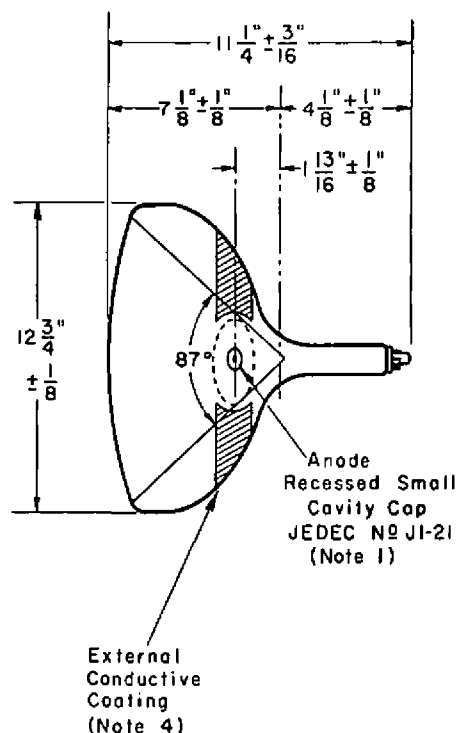
X-RAY WARNING: Inasmuch as the tube rating permits operation at voltages as high as 17.6 kilovolts (absolute value), shielding of the tube for x-ray radiation may be needed whenever the operating conditions involve voltages in excess of 16 kilovolts.

- § A peak value of 410 volts design center maximum may be applied for not more than 15 seconds during equipment warm-up periods.

Television Picture Tube Section

WESTINGHOUSE ELECTRIC CORPORATION, ELECTRONIC TUBE DIVISION, ELMIRA, NEW YORK

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