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HIGH-VACUUM CATHODE-RAY TUBE

Heater	Coated Unipotential Cathode		
Voltage	6.3		a-c or d-c volts
Current	0.6		amp.
Focus			Electrostatic
Deflection			Electrostatic
Electrodes DJ_1 and DJ_2 (upper): nearest to screen			
Electrodes DJ_3 and DJ_4 (lower): nearest to base			
DJ_1 is on the same side of tube as pins No.2 and No.4			
DJ_3 is on the same side of tube as pins No.2 and No.8			
Phosphor			No.1
Fluorescence			Green
Persistence			Medium
Direct Interelectrode Capacitances:			
Control Electrode (Grid) to All Other Electrodes			8 μμf
Deflecting Electrode DJ_1 to Deflecting Electrode DJ_2			2.5 μμf
Deflecting Electrode DJ_3 to Deflecting Electrode DJ_4			2.5 μμf
Maximum Overall Length			4-3/4"
Maximum Diameter			1-5/8"
Bulb			Metal Shell, MT-10
Base			Small Wafer Octal 8-Pin

MAXIMUM RATINGS and TYPICAL OPERATING CONDITIONS

Maximum Ratings Are Based on a Line-Voltage Design Center of 117 Volts

High-Voltage Electrode (Anode No.2) Volt.		500 max.	volts
Focusing Electrode (Anode No.1) Volt.		200 max.	volts
Control Electrode (Grid) Volt.		Never positive	
Peak Voltage Between Anode No.2 and Any Deflecting Electrode		250 max.	volts
Grid Circuit Resistance		1.5 max.	megohms
Impedance of Any Deflecting-Electrode Circuit at Heater-Supply Frequency		1.0 max.	megohm
Typical Operation:			
Anode No.2 Voltage	250	500	volts
Anode No.1 Voltage □	50	100 approx.	volts
Grid Voltage ○	Adjusted to give suitable luminous spot		
Deflection Sensitivity:			
Electrodes DJ_1 & DJ_2	0.15	0.07	mm/volt d.c.
Electrodes DJ_3 & DJ_4	0.21	0.10	mm/volt d.c.

NOTE 1: Brilliance and definition decrease with decreasing anode voltages. In general the anode No.2 voltage should not be less than 250 volts.

NOTE 2: The d-c potential of each deflecting electrode is maintained essentially equivalent to that of anode No.2 by connecting resistors having values not greater than 10 megohms between each deflecting electrode and anode No.2. This arrangement by suitable choice of resistor values minimizes pattern distortion and pattern drift resulting from unbalanced potentials on the deflecting electrodes. The smaller the resistor values, the less the distortion for a given beam current.

□, ○: See next page.

→ Indicates a change.

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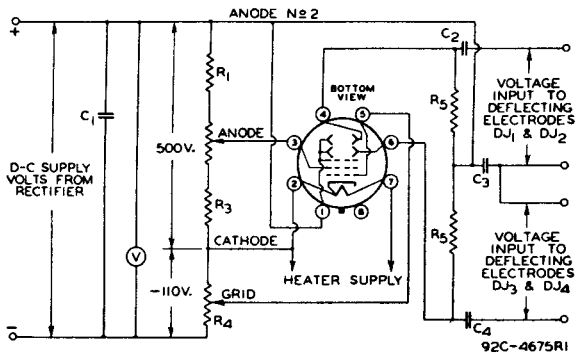
(continued from preceding page)

Supply should be adjustable to ± 30% of the value shown.
Approximately 80% of Anode No.1 voltage is required for current cut-off when, in some applications, it is necessary to use the maximum permissible grid-circuit resistance.

Characteristic Curves of phosphor No.1 are shown at the beginning of this section.

TYPICAL OSCILLOGRAPH CIRCUIT



C_1 = FILTER CONDENSER
C_2, C_3, C_4 = SEE NOTE 3
$R_1 + R_2 + R_3 + R_4$ = BLEEDER POTENTIOMETER
R_1 = 0.200 MEGOHM
R_2 = 0.050 MEGOHM
R_3 = 0.030 MEGOHM
R_4 = 0.050 MEGOHM
R_5 = SEE NOTE 2 AT END OF DATA
V = VOLTMETER

NOTE 3: When the cathode or the negative end of the cathode-ray high-voltage supply is grounded, blocking condensers C_2, C_3, and C_4 should have a high-voltage rating. When anode No.2 is grounded, C_3 may be omitted and C_2 and C_4 may be low-voltage condensers.

For d-c amplifier service, the deflecting electrodes should be coupled direct to the output of the amplifier by omitting the blocking condensers. In addition, it will usually be preferably to remove the associated deflecting electrode resistor in order to minimize the loading effect of the resistor on the d-c amplifier. With the resistor removed, it is essential, in order to minimize spot defocusing, that anode No.2 be returned to some point in the d-c amplifier circuit such that the potential difference between anode No.2 and the average voltage across the deflecting electrodes will be as low as possible.

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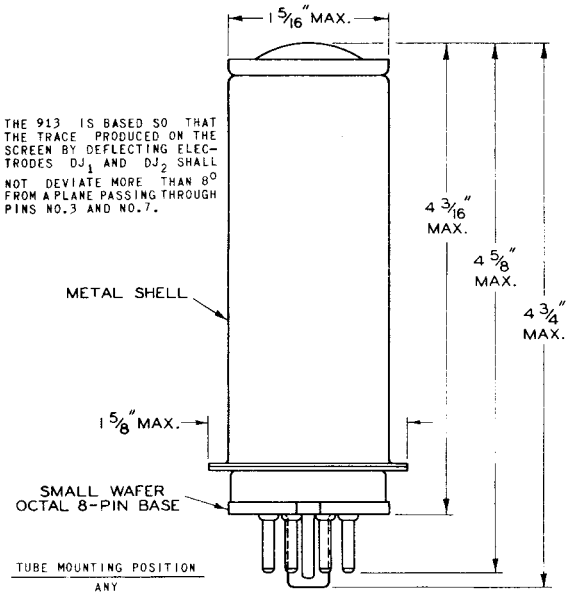
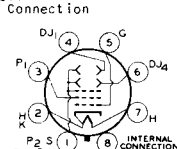


BOTTOM VIEW OF SOCKET CONNECTIONS

DJ_1 to DJ_4 = Deflecting Electrodes
P_2 = Anode No.2
P_1 = Anode No.1
G_1 = Grid No.2
G_2 = Control (Grid No.1) Electrodes
H_1 = Heater
K = Cathode
S = Shell
NC = No Connection



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AVERAGE CHARACTERISTICS