



912

912

HIGH-VACUUM CATHODE-RAY TUBEHIGH-INTENSITY ELECTROSTATIC-DEFLECTION TYPE
WITH 5" MEDIUM-PERSISTENCE SCREEN FOR OSCILLOGRAPHIC USE

Heater	Coated Unipotential Cathode	
Voltage	2.5	a-c or d-c volts
Current	2.1	amp.

Fluorescent Screen:

Material	Phosphor No.1
Pattern Color	Greenish

Direct Interelectrode Capacitances:

Grid to all other electrodes	14 max.	μf
DJ ₁ to DJ ₂	3 max.	μf
DJ ₃ to DJ ₄	1.5 max.	μf

Overall Length	16-1/2" $\pm$ 3/8"
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Maximum Diameter	5-1/4" + 1/16" - 3/32"
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Bulb	J-42
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Caps:

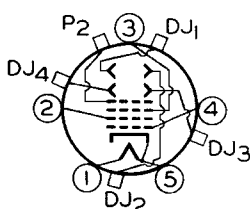
Anode No.2	Medium Metal
Deflecting Electrodes (Four)	Small Metal

Base

Medium 5-Pin Micanol ←

BOTTOM VIEW

Pin 1 - Heater
 Pin 2 - Grid No.2
 Pin 3 - Anode No.1
 Pin 4 - Grid No.1
 Pin 5 - Heater,
 Cathode
 Single Medium Cap -
 Anode No.2
 Cap } { Deflecting
 Over } { Electrode
 Pin 3 } { DJ₁



Cap	}	{ Deflecting
Over		
Pins	}	{ Electrode
1 & 5		
Cap	}	{ Deflecting
Over		
Pin 2	}	{ Electrode
Cap	}	{ Deflecting
Over		
Pin 4	}	{ Electrode

MAXIMUM RATINGS and TYPICAL OPERATING CONDITIONS*Maximum Ratings Are Based on a Line-Voltage Design Center of 117 Volts*

High-Voltage Electrode (Anode #2) Voltage	15000 max.	volts
Focusing Electrode (Anode #1) Voltage	4500 max.	volts
Accelerating Electrode (Grid #2) Voltage	250 max.	volts
Control Electrode (Grid #1) Voltage	Never positive	
Grid Voltage for Current Cut-off *	-125 approx.	volts
Peak Voltage Between Anode #2 and any deflecting electrode	7000 max.	volts

Typical Operation:

Heater Voltage	2.5	2.5	2.5	volts
Anode #2 Voltage	5000	10000	15000	volts
Anode #1 Voltage	1000	2000	3000	approx. volts
Grid #2 Voltage	250	250	250	volts
Grid #1 Voltage	Adjusted to give suitable luminous spot			

Deflection Sensitivity:

DJ ₁ to DJ ₂	0.083	0.041	0.028 mm/volt d.c.
DJ ₃ to DJ ₄	0.102	0.051	0.034 mm/volt d.c.

* With maximum voltages on Anode #1 and Grid #2.

← Indicates a change.

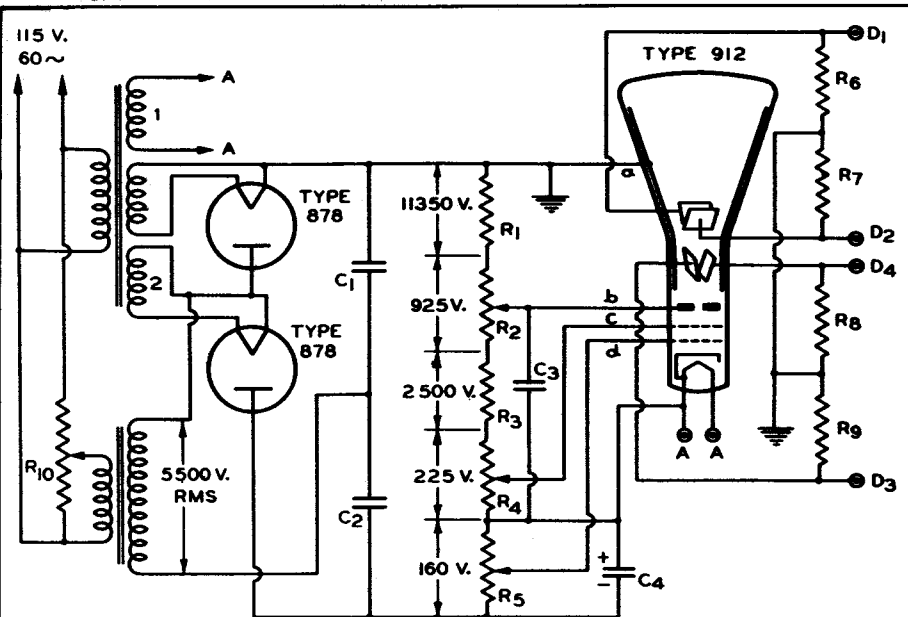
JUNE 20, 1947

TUBE DEPARTMENT

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

DATA

TYPICAL OSCILLOGRAPH CIRCUIT USING THE 912 WITH VOLTAGE-DOUBLING POWER SUPPLY



$C_1, C_2 = 0.5 \mu f, 10\,000\text{ v.}$

$C_3 = 1.0 \mu f, 5000 \text{ v.}$

$C_4 = 16 \mu f, 200 v.$

R₁ = 2.5 MEGOHMS, 75-WATT

$R_2 = 0.2$ MEGOHM, 10-WATT

R₃ = 0.55 MEGOHM, 20-WATT

R₄ = 50 000 OHMS, 2-WATT

R₅ = 35000 OHMS, 2-WATT

R₆, R₇, R₈, R₉ = 2 TO 5 MEGOHMS

$R_{10} = 100 \text{ OHMS, 600-WATT}$

α = ANODE № 2

b = ANODE No 1

C = GRID № 2

d = GRID № 1

NOTE: AS THE TOTAL VOLTAGE ACROSS THE BLEEDER IS REDUCED BY MEANS OF R_{10} , THE ELECTRODE VOLTAGES ARE REDUCED IN CORRECT PROPORTION, EXCEPT FOR GRID NO. 2 VOLTAGE; THIS MAY HAVE TO BE ADJUSTED BY THE USE OF DIFFERENT VALUES FOR R_3 AND R_4 , THEIR TOTAL RESISTANCE BEING KEPT THE SAME. CONDENSERS C_3 AND C_4 CAN BE OMITTED IF GRID-VOLTAGE SWITCHING (FOR HIGH-SPEED PHOTOGRAPHY) IS NOT CONTEMPLATED. FILAMENT WINDINGS NOS. 1 AND 2 SHOULD BE INSULATED FOR 20000 VOLTS.

The license extended to the purchaser of tubes appears in the License Notice accompanying them. Information contained herein is furnished without assuming any obligations.

92C-4621R1

FLUORESCENT-SCREEN CHARACTERISTICS

CURVES SHOWING THE AVERAGE CHARACTERISTICS, SPECTRAL ENERGY CHARACTERISTIC, AND PERSISTENCE CHARACTERISTIC OF PHOSPHOR No.1 ARE SHOWN AT THE BEGINNING OF THIS SECTION.

← Indicates a change.

AUG. 15, 1946

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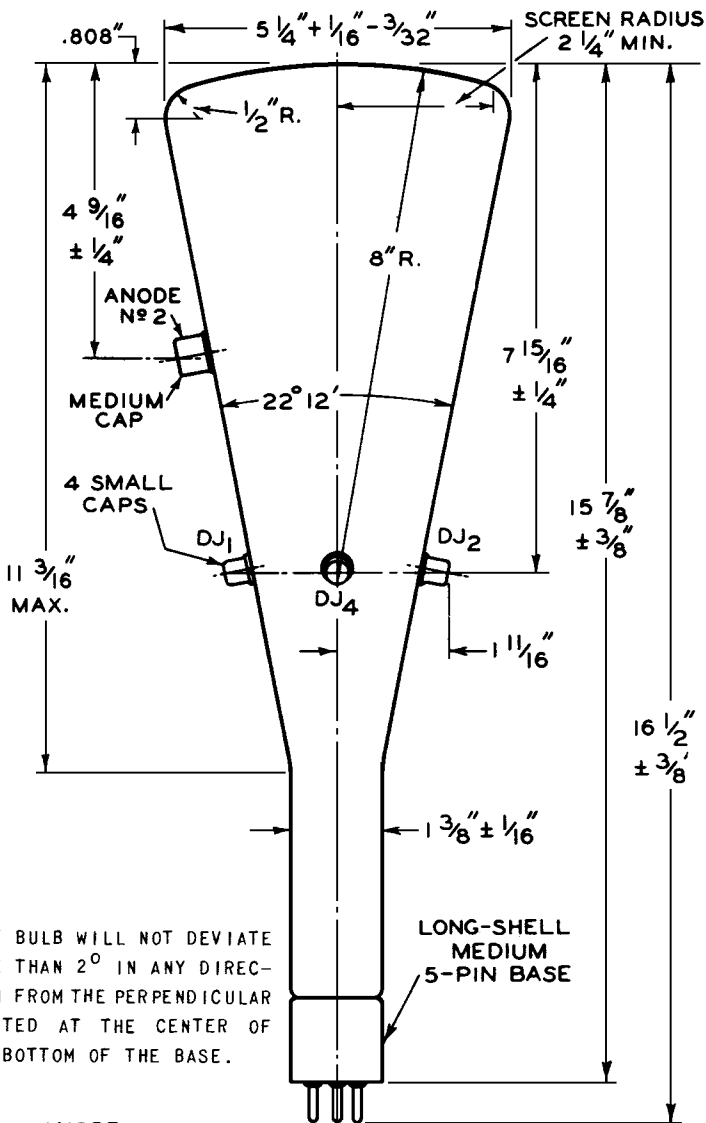
DATA



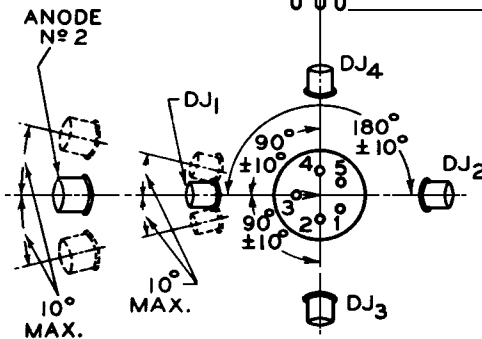
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☐ OF BULB WILL NOT DEVIATE MORE THAN 2° IN ANY DIRECTION FROM THE PERPENDICULAR ERECTED AT THE CENTER OF THE BOTTOM OF THE BASE.



92CM-4619R3

BOTTOM VIEW OF TUBE

DJ₁ AND DJ₂ ARE NEARER THE SCREEN; DJ₃ AND DJ₄ ARE NEARER THE BASE. ANGLE BETWEEN DJ₁ - DJ₂ TRACE AND DJ₃ - DJ₄ TRACE IS $90^\circ \pm 6^\circ$.

AUG. 15, 1946

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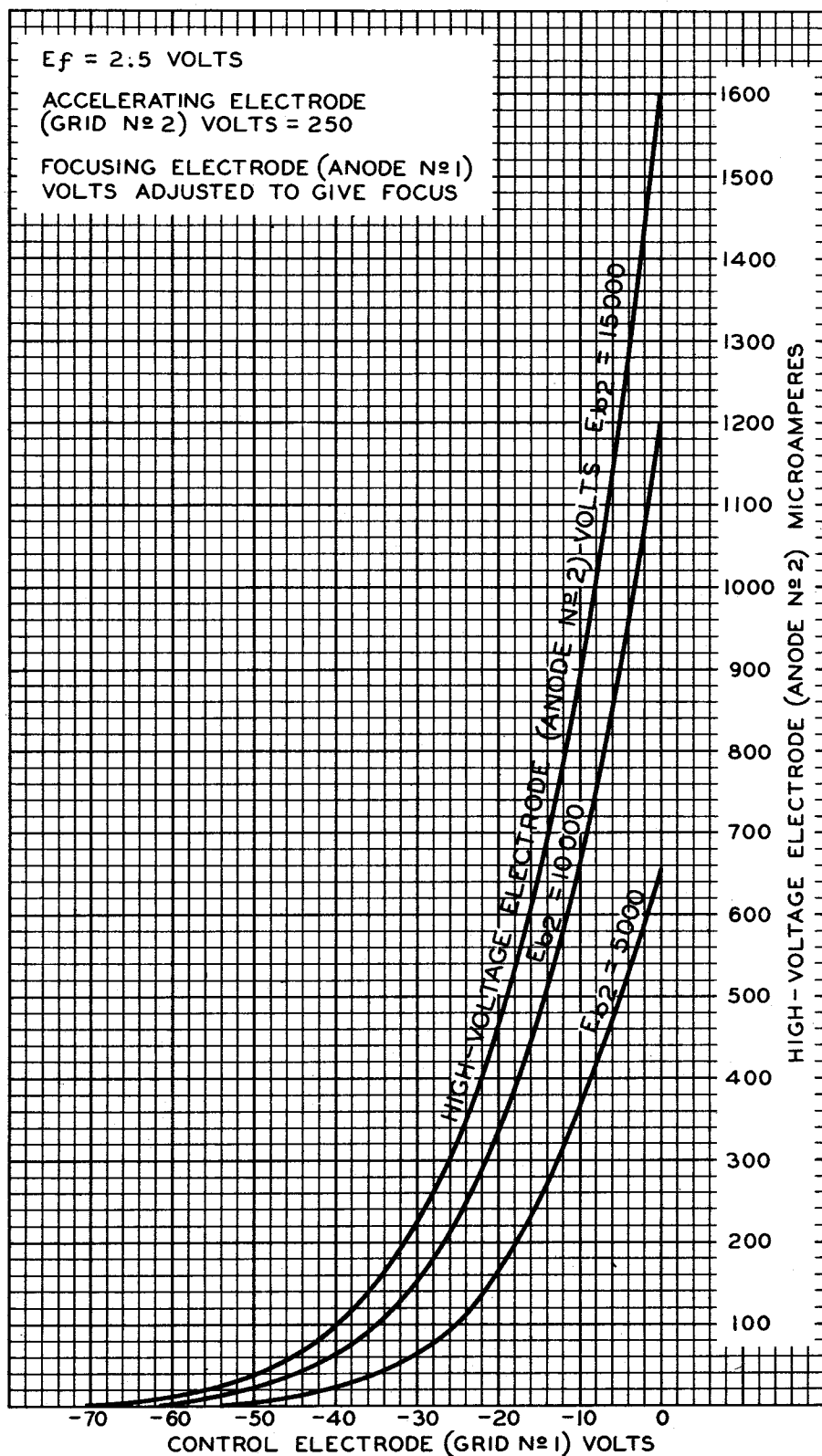
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AVERAGE CHARACTERISTICS



AUG. 23, 1946

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