HIGH-VACUUM CATHODE-RAY TUBE
HIGH-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 Inter-electrode Capacitances:
Grid to all other electrodes: 14 max. μf
DJ1 to DJ2: 3 max. μf
DJ3 to DJ4: 1.5 max. μf

Overall Length: 16-1/2" ± 3/8"
Maximum Diameter: 5-1/4" + 1/16" - 3/32"
Bulb: J-42
Caps:
Anode No.2: Medium Metal
Deflecting Electrodes (Four): Small Metal
Base: Medium 5-Pin Micanol

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:
DJ1 to DJ2: 0.083 0.041 0.028 mm/volt d.c.
DJ3 to DJ4: 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
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY
TYPICAL OSCILLOGRAPH CIRCUIT USING THE 912 WITH VOLTAGE-DOUBLING POWER SUPPLY

C1, C2 = 0.5 μF, 10000 V.
C3 = 1.0 μF, 5000 V.
C4 = 16 μF, 200 V.
R1 = 2.5 MEGOHMS, 75-WATT
R2 = 0.2 MEGOHM, 10-WATT
R3 = 0.55 MEGOHM, 20-WATT
R4 = 50000 OHMS, 2-WATT
R5 = 35000 OHMS, 2-WATT
R6, R7, R8, R9 = 2 TO 5 MEGOHMS
R10 = 100 OHMS, 600-WATT

NOTE: AS THE TOTAL VOLTAGE ACROSS THE BLEEDER IS REDUCED BY MEANS OF R9, THE ELECTRODE VOLTAGES ARE REDUCED IN CORRECT PROPORTION, EXCEPT FOR GRID NO. 2 VOLTAGE; THIS MAY HAVE TO BE READJUSTED BY THE USE OF DIFFERENT VALUES FOR R3 AND R4, THEIR TOTAL RESISTANCE BEING KEPT THE SAME. CONDENSERS C3 AND C4 CAN BE OMITTED IF GRID-VOLTAGE SWITCHING (FOR HIGH-SPEED PHOTOGRAPHY) IS NOT CONTEMPLATED. FILAMENT WINDINGS NO. 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

TUBE DEPARTMENT
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY
HIGH-VACUUM CATHODE-RAY TUBE

SCREEN RADIUS
2 1/4" MIN.

.808" 5 1/4" + 1/16" - 3/32" 1/2" R.

4 9/16" ± 1/4"
ANODE Nº 2

MEDIUM CAP

22° 12'

7 15/16" ± 1/4"

8" R.

15 7/8" ± 3/8"

16 1/2" ± 3/8"

1 3/8" ± 1/16"

LONG-SHELL MEDIUM 5-PIN BASE

11 3/16" MAX.

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

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° ± 6°.

AUG. 15, 1946

TUBE DEPARTMENT
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

CE-4619R3
AVERAGE CHARACTERISTICS

$E_f = 2.5$ VOLTS

ACCELERATING ELECTRODE
GRID No 2) VOLTS $= 250$

FOCUSING ELECTRODE (ANODE No1)
VOLTS ADJUSTED TO GIVE FOCUS

HIGH-VOLTAGE ELECTRODE (ANODE No2) VOLTS $= E_{f/2} = 1500$

HIGH-VOLTAGE ELECTRODE (ANODE No3) VOLTS $= E_{f/2} = 2500$

CONTROL ELECTRODE (GRID No1) VOLTS

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

AUG. 23, 1946

92C-4623