



14CP4

KINESCOPE

RECTANGULAR GLASS TYPE

MAGNETIC FOCUS

MAGNETIC DEFLECTION

DATA

General:

Heater, for Unipotential Cathode:

Voltage. 6.3 ac or dc volts

Current. 0.6 amp

Direct Interelectrode Capacitances:

Grid No.1 to All Other Electrodes. 6 μf Cathode to All Other Electrodes. 5 μf External Conductive Coating to Anode $\left\{ \begin{array}{l} 2000 \text{ max.} \\ 750 \text{ min.} \end{array} \right. \mu\text{f}$

Face Plate (With about 66% light transmission) Filterglass

Phosphor (For Curves, see front of this Section) P4—Sulfide Type

Fluorescence and Phosphorescence White

Persistence of Phosphorescence Short

Focusing Method. Magnetic

Deflection Method. Magnetic

Deflection Angles (Approx.):

Diagonal 70°

Horizontal 65°

Vertical 50°

Ion-Trap Gun Requires External, Single-Field Magnet

Overall Length 16-3/4" $\pm$ 3/8"Greatest Diagonal of Tube at Face. 13-11/16" $\pm$ 1/8"Greatest Width of Tube at Face 12-17/32" $\pm$ 1/8"Greatest Height of Tube at Face. 9-23/32" $\pm$ 1/8"

Screen Size. 11-3/8" x 8-1/2"

Mounting Position. Any

Cap. Recessed Small Cavity (JETEC No. J1-21)

Base Small-Shell Duodecal 5-Pin (JETEC No. B5-57)

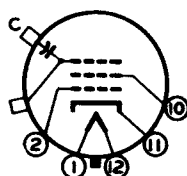
BOTTOM VIEW

Pin 1—Heater

Pin 2—Grid No.1

Pin 10—Grid No.2

Pin 11—Cathode



Pin 12—Heater

Cap—Anode

C—External
Conductive
Coating

Maximum Ratings, Design-Center Values:

ANODE VOLTAGE 14000 max. volts

GRID—No.2 VOLTAGE 410 max. volts

GRID—No.1 VOLTAGE:

Negative bias value 125 max. volts

Positive bias value 0 max. volts

Positive peak value 2 max. volts

PEAK HEATER—CATHODE VOLTAGE:

Heater negative with respect to cathode:

During equipment warm-up period

not exceeding 15 seconds 410 max. volts

After equipment warm-up period. 150 max. volts

Heater positive with respect to cathode 150 max. volts

AUG. 1, 1951

TUBE DEPARTMENT

TENTATIVE DATA

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

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Typical Operation:

Anode Voltage*	12000	volts
Grid-No.2 Voltage.	300	volts
Grid-No.1 Voltage for Visual		
Extinction of Undelected Focused Spot.	-33 to -77	volts
Focusing-Coil Current (DC, approx.) [•]	92	ma
Field Strength of Single-Field		
Ion-Trap Magnet (Approx.) [#]	35	gausses

Maximum Circuit Values:

Grid-No.1-Circuit Resistance	1.5 max.	megohms
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- * Brilliance and definition decrease with decreasing anode voltage. In general, the anode voltage should not be less than 10000 volts.
- For specimen focusing coil similar to JETEC Focusing Coil No.109 positioned with airgap toward kinescope screen and center line of air gap 3 inches from Reference Line (see Outline Drawing). The indicated current is for condition with combined grid-No.1 bias voltage and video-signal voltage adjusted to produce a highlight brightness of 35 foot-lamberts on an 11-3/8" x 8-1/2" picture area sharply focused at center of screen.
- # Measured at center of field with General Electric Gauss Meter, Cat. No.409X51.

OPERATING NOTES

X-Ray Warning. When operated at or below the maximum ratings shown in the tabulated data, the I4CP4 does not produce any harmful x-ray radiation. All types of picture tubes may be operated at voltages (if ratings permit) up to 16 kilovolts (absolute value) without personal injury on prolonged exposure at close range. Above 16 kilovolts, special shielding precautions for x-ray radiation may be necessary.

Direction of the field of the ion-trap magnet should be such that the north pole is adjacent to vacant pin position No.8 and the south pole to pin No.2.

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AVERAGE GRID-DRIVE CHARACTERISTICS

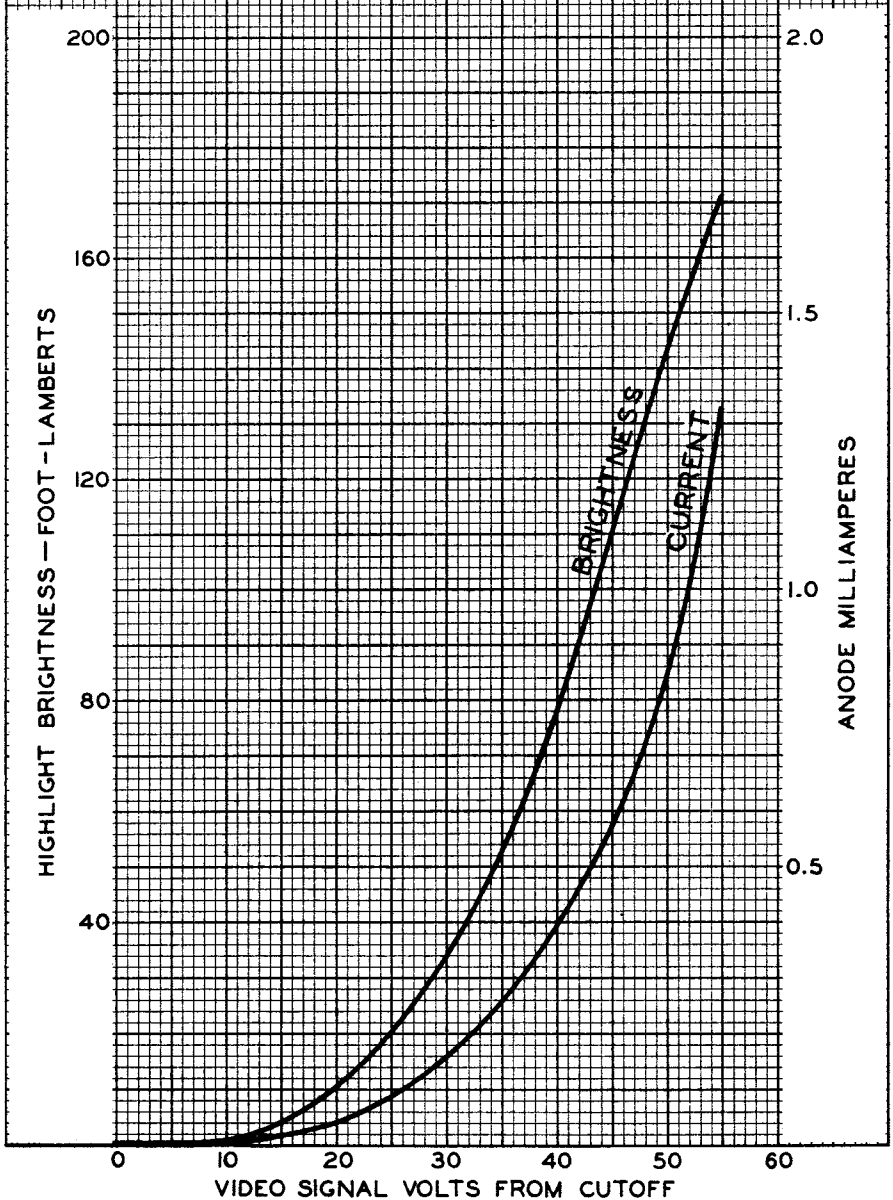
$E_f = 6.3$ VOLTS

ANODE VOLTS = 12000

GRID-№ 2 VOLTS = 300

GRID № 1 BIASED TO CUTOFF OF
UNDEFLECTED FOCUSED SPOT

RASTER SIZE = $11 \frac{3}{8}$ " $\times$ $8 \frac{1}{2}$ " (FOCUSED
FOR AVERAGE BRIGHTNESS)



APRIL 11, 1951

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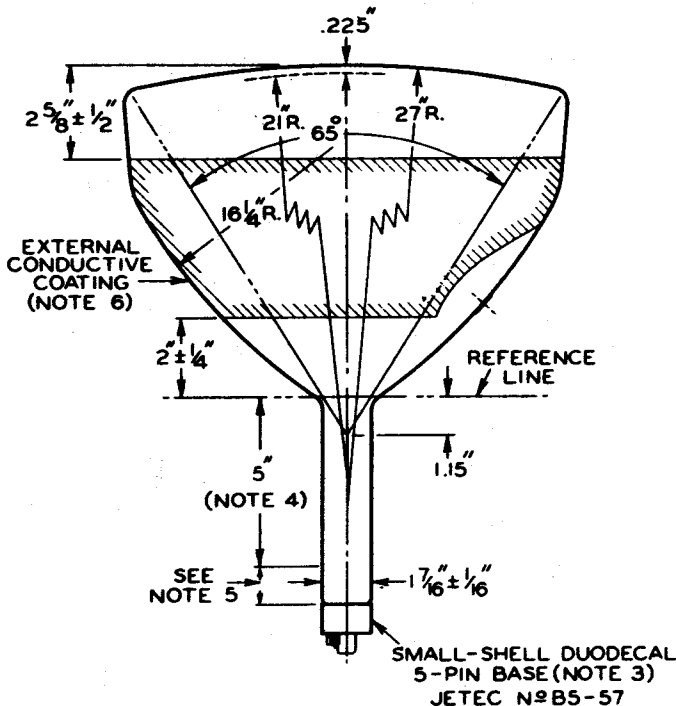
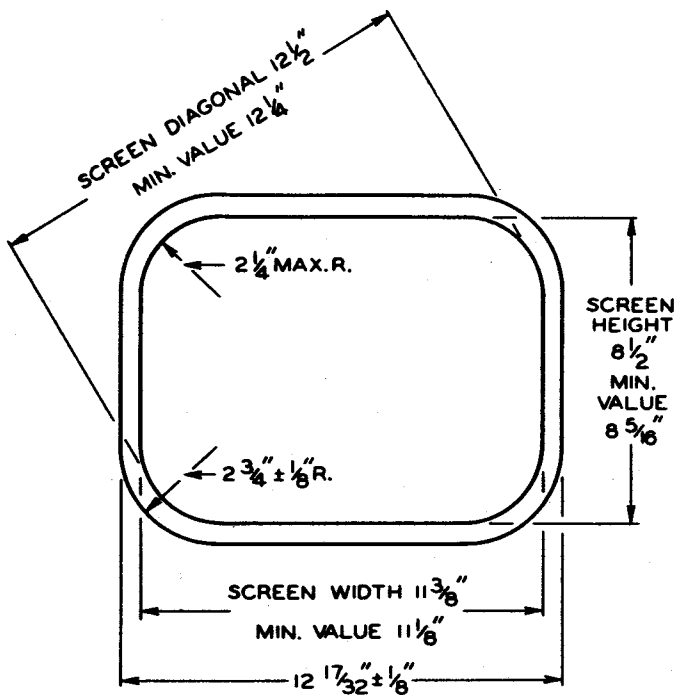
92CM-7625

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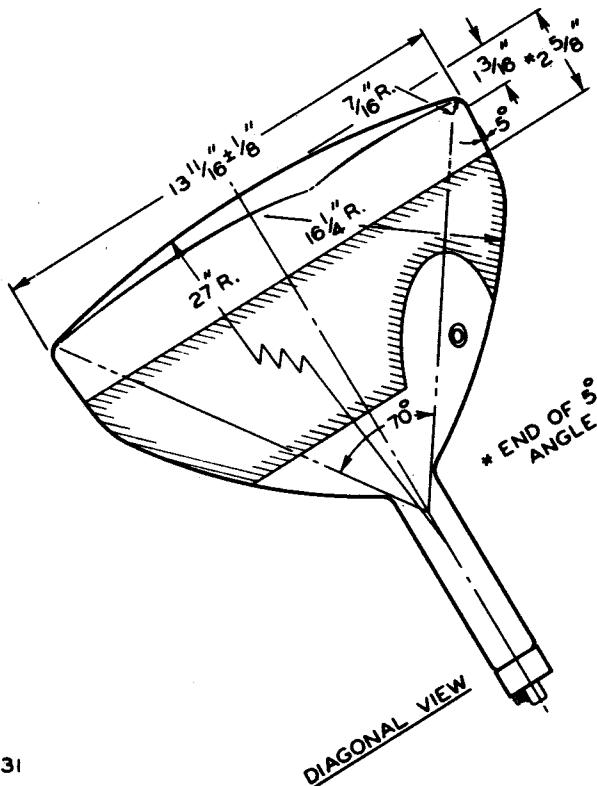
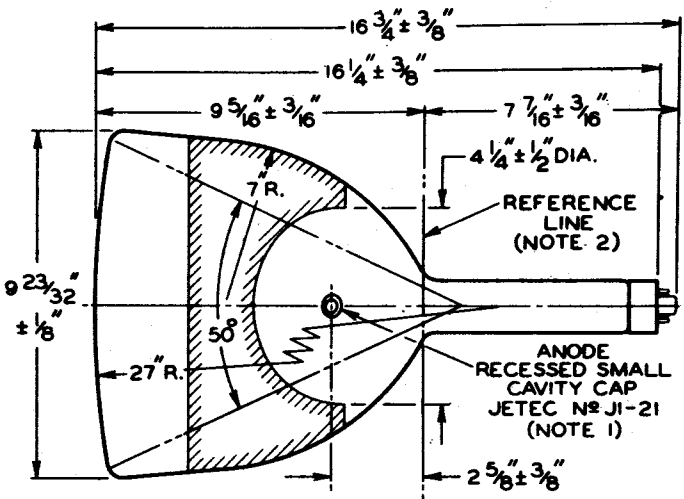
CE-7631A



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92CL-7631

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NOTE 1: THE PLANE THROUGH THE TUBE AXIS AND VACANT PIN POSITION No.6 MAY VARY FROM THE PLANE THROUGH THE TUBE AXIS AND ANODE TERMINAL BY ANGULAR TOLERANCE (MEASURED ABOUT THE TUBE AXIS) OF $\pm 30^{\circ}$. ANODE TERMINAL IS ON SAME SIDE AS VACANT PIN POSITION No.6.

NOTE 2: WITH TUBE NECK INSERTED THROUGH FLARED END OF REFERENCE-LINE GAUGE JETEC No.110 (SHOWN AT FRONT OF THIS SECTION) AND WITH TUBE SEATED IN GAUGE, THE REFERENCE LINE IS DETERMINED BY THE INTERSECTION OF THE PLANE CC' OF THE GAUGE WITH THE GLASS FUNNEL.

NOTE 3: SOCKET FOR THIS BASE SHOULD NOT BE RIGIDLY MOUNTED; IT SHOULD HAVE FLEXIBLE LEADS AND BE ALLOWED TO MOVE FREELY. BOTTOM CIRCUMFERENCE OF BASE SHELL WILL FALL WITHIN A CIRCLE CONCENTRIC WITH BULB AXIS AND HAVING A DIAMETER OF 2-1/2".

NOTE 4: LOCATION OF DEFLECTING YOKE AND FOCUSING DEVICE MUST BE WITHIN THIS SPACE.

NOTE 5: KEEP THIS SPACE CLEAR FOR SINGLE-FIELD, ION-TRAP MAGNET.

NOTE 6: EXTERNAL CONDUCTIVE COATING MUST BE GROUNDED.