



17BP4-A

KINESCOPE

RECTANGULAR GLASS TYPE

MAGNETIC FOCUS

MAGNETIC DEFLECTION

17BP4-A

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 $\begin{cases} 2000 \text{ max.} \\ 750 \text{ min.} \end{cases}$ μf

Face Plate (With about 66% light transmission) Filterglass

Phosphor (For Curves see front of this Section). No.4—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 $19\text{--}1/4" \pm 3/8"$ Greatest Diagonal of Tube. $16\text{--}5/8" \pm 1/8"$ Greatest Width of Tube $15\text{--}3/8" \pm 1/8"$ Greatest Height of Tube. $12\text{--}9/32" \pm 1/8"$ Screen Size. $14\text{--}3/8" \times 11\text{--}1/16"$

Mounting Position. Any

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

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

BOTTOM VIEW

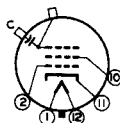
Pin 1—Heater

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. 16000 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

MAY 1, 1951

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TENTATIVE DATA

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY



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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

Typical Operation:

Anode Voltage*	12000	14000	volts
Grid-No.2 Voltage.	300	300	volts
Grid-No.1 Voltage for Visual Extinction of Undelected Focused Spot	-33 to -77	-33 to -77	volts
Focusing-Coil Current (DC)▲.	92 ± 10%	99 ± 10%	ma
Field Strength of Single— Field Ion-Trap Magnet#	45	50	gausses
Ion-Trap Magnet Current (DC, Approx.)°	70	—	ma

Maximum Circuit Values:

Grid-No.1-Circuit Resistance 1.5 max. megohms

* Brilliance and definition decrease with decreasing anode voltage. In general, the anode voltage should not be less than 12000 volts.

▲ For specimen focusing coil similar to JETEC Focusing Coil No.109 positioned with air gap 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 30 foot-lamberts on a 14-1/4" x 10-3/4" picture area sharply focused at center of screen.

Measured at center of field with General Electric Gauss Meter, Cat. No. 409X51.

° For specimen ion-trap magnet similar to JETEC Ion-Trap Magnet No.111 located in optimum position and rotated to give maximum brightness.

OPERATING NOTES

When operated at anode voltages up to 16 kilovolts, *the 17BP4-A does not produce any harmful x-ray radiation.* However, because the rating of the tube permits operation at anode voltages as high as 17.6 kilovolts (absolute value), shielding of the 17BP4-A for x-ray radiation may be needed to protect against possible injury from prolonged exposure at close range whenever the operating conditions involve voltages in excess of 16 kilovolts.

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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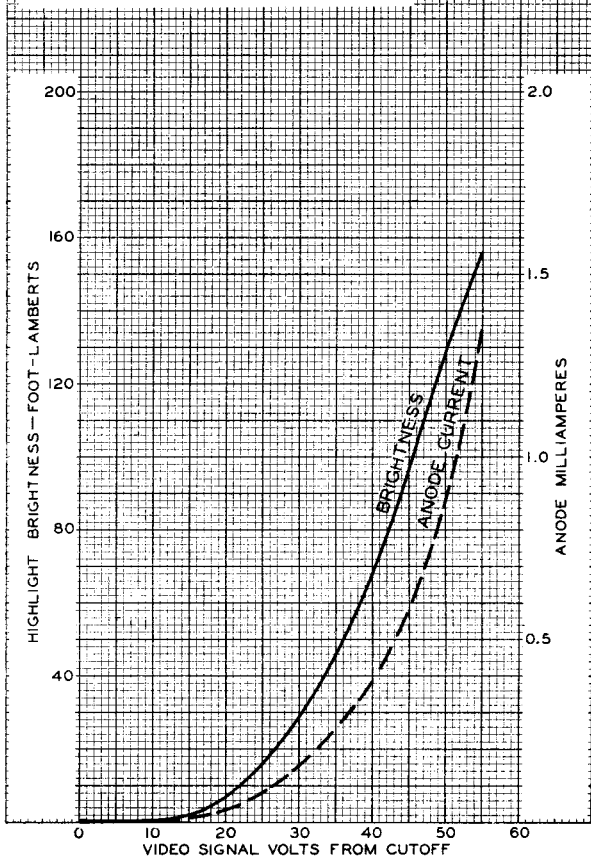
AVERAGE GRID-DRIVE CHARACTERISTICS

 $E_f = 6.3$ VOLTSGRID №1 BIASED TO CUTOFF OF
UNDEFLECTED FOCUSED SPOT

GRID-№2 VOLTS = 300

CURVE	ANODE VOLTS	RASTER SIZE *
—	14000	14 $\frac{3}{8}$ " X 11 $\frac{1}{16}$ "
- - -	12000 - 16000	

* FOCUSED FOR AVERAGE BRIGHTNESS



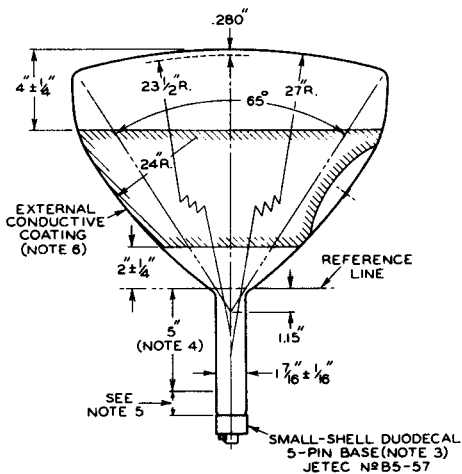


SCREEN DIAGONAL $15\frac{1}{2}"$
MIN. VALUE $15\frac{1}{4}"$

SCREEN HEIGHT $11\frac{1}{8}"$
MIN. VALUE $10\frac{3}{4}"$

SCREEN WIDTH $14\frac{3}{8}"$
MIN. VALUE $14\frac{1}{4}"$

Corner radii dimensions:
 $26\frac{1}{2}" R.$
 $27" R.$
 $20\frac{1}{2}" R.$
 $21" R.$
 $2\frac{5}{8} \pm \frac{1}{8}" R.$
 $2\frac{1}{8}"$

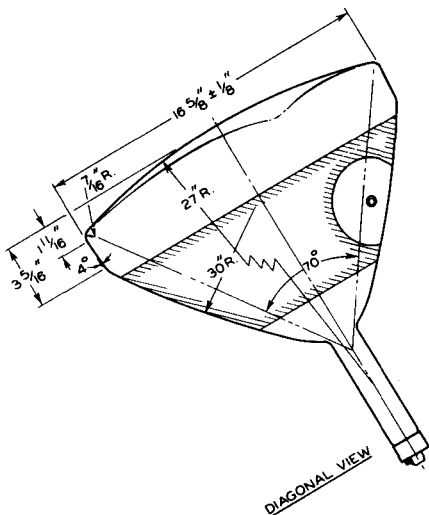
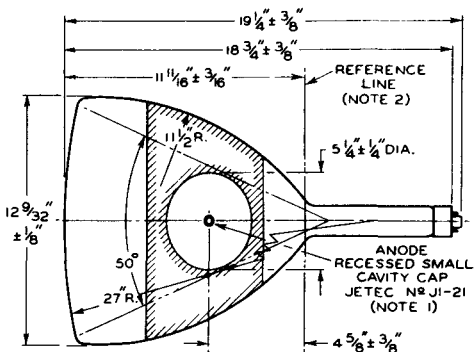


CE-7589A



17BP4-A KINESCOPE

17BP4-A



92CL - 7589

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CE-7589B

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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 2-3/4".

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.

MAY 1, 1951

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