2F21
MONOSCOPE

5-INCH MAGNETIC-DEFLECTION TYPE

Supersedes Type 1899

General:

Heater, for Unipotential Cathode:
- Voltage. . . . . 6.3 ± 10%. . . . . ac or dc volts
- Current. . . . . 0.6 . . . . . amp

Direct Interelectrode Capacitances:
- Grid No.1 to All Other Electrodes. . . . . 7 . . . . μμf
- Pattern Electrode to Grid No.4 . . . . . 5 . . . . μμf

Pattern:
- Type . . . . . See illustration on next page
- Dimensions (Approx.) . . . . . 2-5/16" x 3-1/16"
- Calibration. . . . . Up to 500 lines

Focusing Method. . . . . Electrostatic

Deflection Method . . . . . Magnetic

Maximum Solid Deflection Angle . . . . . 40°

Overall Length . . . . . 12-7/16" + 1/4" - 7/16"

Greatest Diameter of Bulb. . . . . 5-1/16" max.

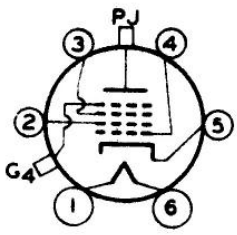
Caps (Two) . . . . . Recessed Small Ball

Mounting Position. . . . . Any

Base . . . . . Long-Shell Medium 6-Pin

Basing Designation for BOTTOM VIEW 6BV

Pin 1 - Heater
Pin 2 - Grid No.2
Pin 3 - Grid No.3
Pin 4 - Grid No.1
Pin 5 - Cathode



Pin 6 - Heater
End Cap - Pattern Electrode
Side Cap - Grid No.4

Maximum Ratings, ***Design-Center Values:***

PATTERN-ELECTRODE VOLTAGE.	1500 max.	volts
GRID-No.4 (COLLECTOR) VOLTAGE.	1500 max.	volts
GRID-No.3 (FOCUSING ELECTRODE) VOLTAGE .	600 max.	volts
GRID-No.2 (ACCELERATING ELECTRODE) VOLT.	1600 max.	volts
GRID-No.1 (CONTROL ELECTRODE) VOLTAGE:		
Negative Bias Value.	125 max.	volts
Positive Bias Value.	0 max.	volts
PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with respect to cathode	125 max.	volts
Heater positive with respect to cathode	125 max.	volts

Typical Operation: ♦

Pattern-Electrode Voltage.	1000 . . .	volts
Grid-No.4 Voltage.	1050 . . .	volts
Grid-No.3 Voltage for Focus at 0.5 μamp Grid-No.4 Current▲	300 approx.	volts
Grid-No.2 Voltage.	1000 . . .	volts
Grid-No.1 Voltage for Visual Cutoff on Monitor#	-50 approx.	volts
Internal Resistance between Grid No.4 and Pattern Electrode	Greater than 1 meg.	
Grid-No.4 Current.	0.5 . . .	μamp

♦,▲,#: See next page.

TUBE DIVISION
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

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Pattern-Electrode Signal Current (Peak-to-Peak)	0.5 approx. µamp
Resolution Capability▲▲	500 . . . lines
Maximum Circuit Value:	
Grid-No.1-Circuit Resistance	1.5 max. megohms

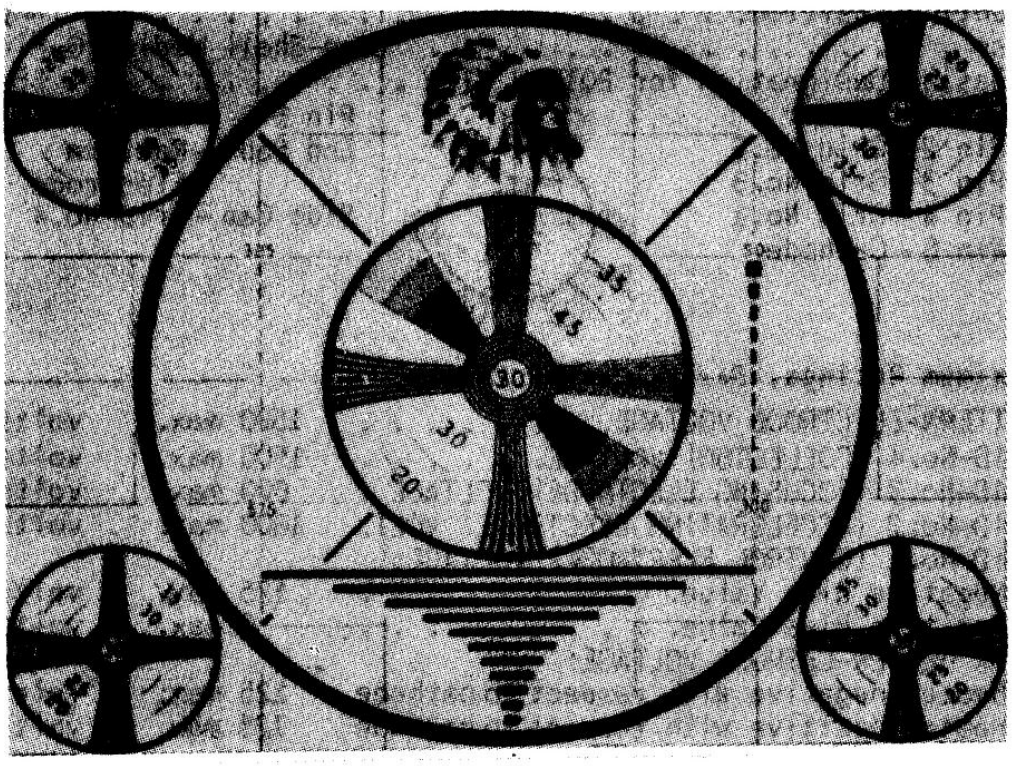
▲ Individual tubes may require between + 20% and - 20% of these values.

! Deflection must be maintained at all times. When scanned area does not cover entire pattern, the beam current should be reduced accordingly and time of operation limited to prevent damaging the pattern.

Supply should be adjustable between + 40% and - 80% of this value.

▲▲ With full scanning.

PATTERN



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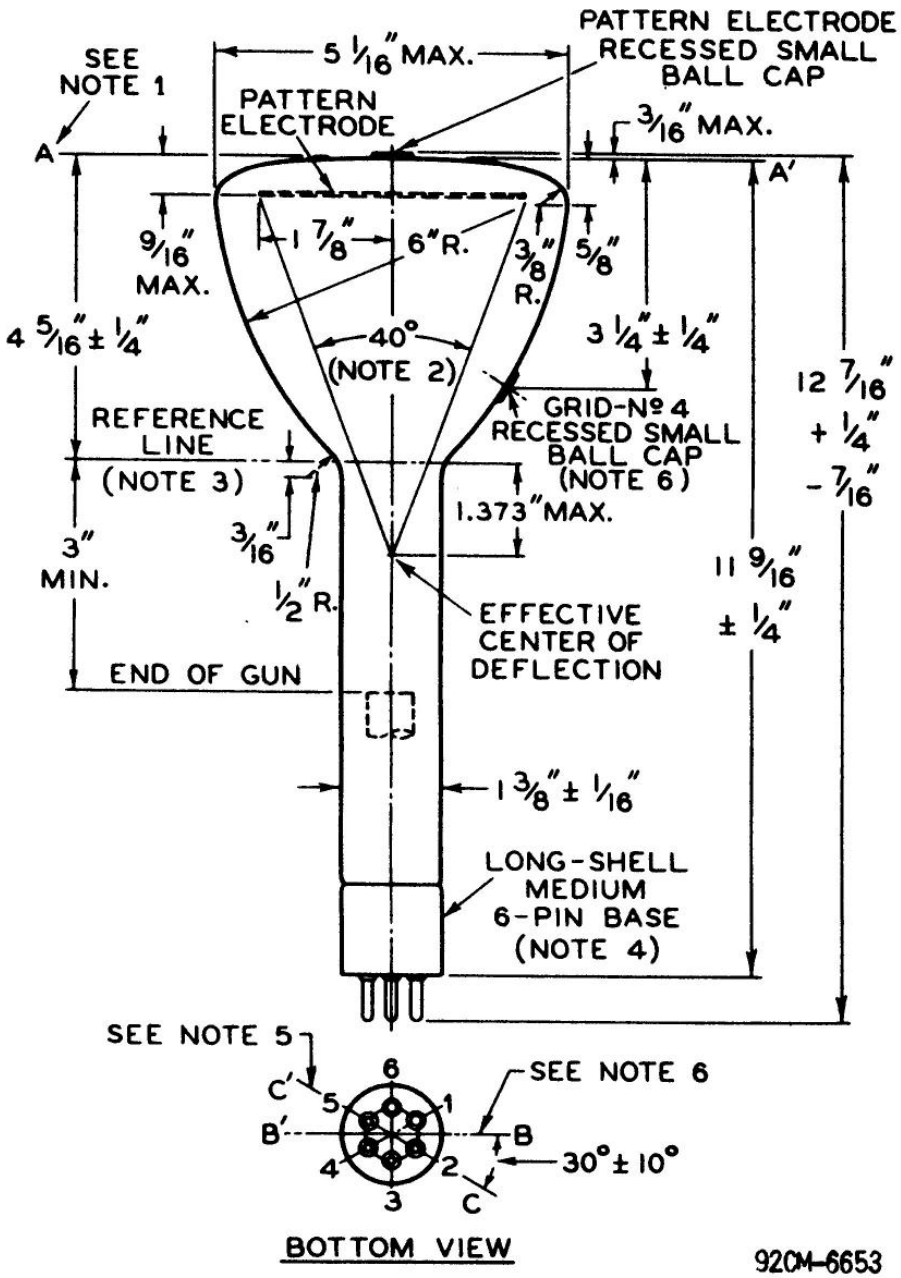
MONOSCOPE



NOTE 1: LINE AA' IS PERPENDICULAR TO THE AXIS OF THE TUBE AND INTERSECTS THE FACE CONTOUR 1/2" FROM THE AXIS OF THE TUBE.

NOTE 2: DEFLECTION ANGLE BETWEEN DIAGONALLY OPPOSITE CORNERS OF PATTERN.

NOTE 3: REFERENCE LINE IS DETERMINED BY POSITION WHERE GAUGE 1.438" ± .003 I.D. AND 2" LONG WILL REST ON BULB CONE.

NOTE 4: ℄ OF BULB WILL NOT DEVIATE MORE THAN 2° IN ANY DIRECTION FROM THE PERPENDICULAR ERECTED AT THE CENTER OF THE BOTTOM OF THE BASE.

NOTE 5: MINOR AXIS OF PATTERN ELECTRODE MAY VARY FROM PLANE CC' THROUGH PIN 2 AND TUBE AXIS BY 10°. TOP EDGE OF PATTERN IS ON SAME SIDE OF TUBE AS PIN 5.

NOTE 6: BB' INDICATES PLANE THROUGH TUBE AXIS AND GRID-No.4 TERMINAL.