



5WP11

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TRANSCRIBER KINESCOPE

ELECTROSTATIC 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. 7.5 μf Cathode to All Other Electrodes. 5 μf External Conductive Coating to Anode No.2 $\left\{ \begin{array}{l} 500 \text{ max.} \\ 100 \text{ min.} \end{array} \right. \mu\text{f}$

Phosphor (For Curves, see front of this Section). P11

Fluorescence Blue

Persistence. Short

Focusing Method. Electrostatic

Deflection Method. Magnetic

Deflection Angle (Approx.) 50° Overall Length $11-7/16" \pm 3/8"$ Greatest Diameter of Bulb. $5" \pm 1/8"$ Minimum Useful Screen Diameter $4-1/4"$ Raster Size (Approx.) $2-1/2" \times 3-3/8"$

Mounting Position. Any

Cap. Recessed Small Cavity

Base Small-Shell Duodecal 7-Pin

Basing Designation for BOTTOM VIEW 12C

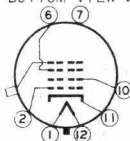
Pin 1—Heater

Pin 2—Grid No.1

Pin 6—Anode No.1

Pin 7—Internal Con.—

Do Not Use



Pin 10—Grid No.2

Pin 11—Cathode

Pin 12—Heater

Cap — Anode No.2

Maximum Ratings, Design-Center Values:

ANODE—No.2 VOLTAGE 27000 max. volts

ANODE—No.1 VOLTAGE 6000 max. volts

GRID—No.2 VOLTAGE. 350 max. volts

GRID—No.1 VOLTAGE:

Negative bias value. 150 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 125 max. volts

Heater positive with respect to cathode. 125 max. volts

Typical Operation:

Anode—No.2 Voltage*. 27000 volts

*: See next page.

FEB. 1, 1949

TUBE DEPARTMENT

TENTATIVE DATA 1

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY



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Anode-No.1 Voltage Range for

Anode-No.2 Current of 20 μ amp.	4200 to 5400	volts
Grid-No.2 Voltage**	200	volts
Grid-No.1 Voltage for Visual Cutoff . . .	-42 to -98	volts
Anode-No.2 Current	20	μ amp
Max. Anode-No.1 Current.	25	μ amp
Grid-No.2 Current Range.	-15 to +15	μ amp

Maximum Circuit Values:

Grid-No.1-Circuit Resistance	1.5 max.	megohms
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Minimum Circuit Values:

When the output capacitor of the power supply is capable of storing more than 250 microcoulombs, and when the inherent regulation of the power supply permits the instantaneous short-circuit current to exceed 1 ampere, the effective resistance in circuit between indicated electrode and the output capacitor should be as follows:

Grid-No.1-Circuit Resistance	180 min.	ohms
Grid-No.2-Circuit Resistance	390 min.	ohms
Anode-No.1-Circuit Resistance	6800 min.	ohms
Anode-No.2-Circuit Resistance.	30000 min.	ohms

The resistors used should be capable of withstanding the voltages involved.

Components:

Deflecting Yoke. RCA Type No. 201D11

Hor. Deflection Output Transformer:

For use with 6AS7-G booster scanning tube

and separate high-voltage supply . . . RCA Type No. 204T1

For use with single high-voltage tripler

supply employing 3 1B3-GT/8016's . . . RCA Type No. 211T2

Ver. Deflection Output Transformer . . . RCA Type No. 204T2

* Brilliance and definition decrease with decreasing anode voltages. In general, anode-No.2 voltage should not be less than 15000 volts.

** Subject variation of $\pm 40\%$ when grid-No.1 voltage cutoff is desired at -70 volts.

OPERATING NOTES

Soft x-rays are produced when the 5WP11 is operated with an anode-No.2 voltage above approximately 20000 volts. These rays can constitute a health hazard unless the tube is adequately shielded. Relatively simple shielding should prove adequate, but the need for this precaution should be considered in equipment design.

Resolution of better than 700 lines at the center of the reproduced picture can be produced by the 5WP11. To utilize such resolution capability in the horizontal direction with the standard scanning rate of 525 lines, it is necessary to use a video amplifier having a band-width of at least 10 megacycles.



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The screen of the 5WP11 has highly actinic blue radiation, and is particularly effective for photography. The persistence of the radiation is sufficiently short to prevent "carry over" from one frame to the next. The persistence is dependent to some extent on the current density in the focused spot, and decreases with current density.

Operation of the 5WP11 results in gradual browning of the face. The rate of browning increases markedly with increase in anode-No.2 voltage, is proportional to beam current, and is inversely proportional to the scanned area. The browning is most noticeable during initial operation; thereafter, a gradual increase in the amount of browning will be observed during the life of the tube.

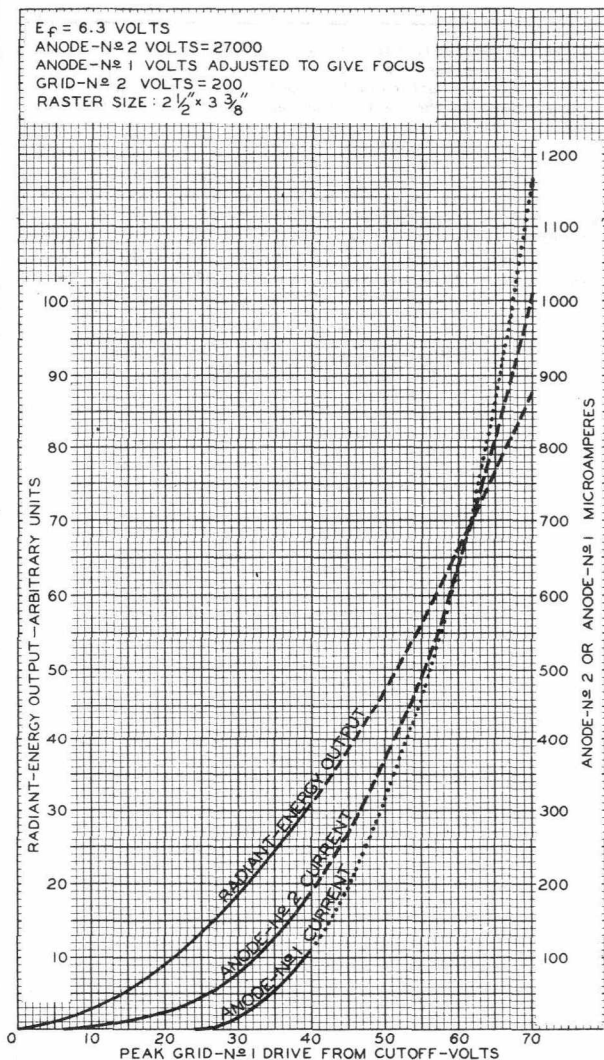
OUTLINE DIMENSIONS for the 5WP11 are the same
as those for the 5WP15

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AVERAGE CHARACTERISTICS



OCTOBER 28, 1948

TUBE DEPARTMENT

92CM-7105

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY