TRIODE-HEPTODE CONVERTER

<table>
<thead>
<tr>
<th><strong>Heater</strong></th>
<th>Coated Unipotential Cathode</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Voltage</strong></td>
<td>6.3 a-c or d-c volts</td>
</tr>
<tr>
<td><strong>Current</strong></td>
<td>0.3 amp.</td>
</tr>
</tbody>
</table>

**Direct Interelectrode Capacitances:**

- Heptode Grid #1 to Heptode Plate: 0.01 max. µf
- Heptode Grid #1 to Triode Plate: 0.015 max. µf
- Heptode Grid #1 to Triode Grid & Heptode Grid #3: 0.13 µf
- Triode Grid to Triode Plate: 2.2 µf
- Heptode Grid #1 to All Other Electrodes (R-F Input): 4.4 µf
- Triode Plate to All Other Electrodes (Osc. Output): 5.5 µf
- Triode Grid & Heptode Grid #3 to All Other Electrodes (Osc. Input): 11.7 µf
- Heptode Plate to All Other Electrodes (Mixer Output): 8.8 µf

**Overall Length:** 4-7/32" to 4-15/32"
**Seated Height:** 3-21/32" to 3-29/32"
**Maximum Diameter:** 1-9/16"
**Bulb:** ST-12
**Cap:** Skirted Miniature
**Base:** Small Shell Octal 8-Pin

**Mounting Position:** BOTTOM VIEW (G-8H) Any

**CONVERTER SERVICE**

- Heptode Plate Voltage: 250 max. volts
- Heptode Screen (Grids #2 & #4) Voltage: 100 max. volts
- Triode Plate Supply Voltage*: 250 max. volts

**Typical Operation and Characteristics:**

- Heptode Plate Voltage: 100, 250 volts
- Heptode Screen Voltage: 100, 100 volts
- Heptode Control-Grid Voltage (Grid #1): -3, -3 volts
- Triode Plate Voltage: 100, - volts
- Triode Plate Supply Voltage*: -250 volts
- Triode Grid Resistor: 500000
- Heptode Plate Resistance: 0.9, 4.0 approx. megohms
- Conversion Transconductance: 250, 290 µhos

- Heptode Control-Grid Bias for Conversion Transcond. of 2 µhos: -20 volts
- Heptode Plate Current: 1.4, 1.3 ma.
- Heptode Screen Current: 3.0, 2.9 ma.
- Triode Plate Current: 3.0, 5.0 ma.
- Triode Grid & Heptode Grid #3 Current: 0.3, 0.4 ma.

**NOTE:** The transconductance of the triode unit (not oscillating) is approximately 1600 µhos under the following conditions: triode plate volts, 150; triode grid volts, -5.

- In circuits where the cathode is not connected directly to the heater, the potential difference between heater and cathode should be kept as low as possible.
- With shield-can connected to cathode.
- Applied through 20000-ohm dropping resistor.

July 1, 1941
RCA RADIOTRON DIVISION
RCA MANUFACTURING COMPANY, INC.
TENTATIVE DATA
OPERATION CHARACTERISTIC

$E_f = 6.3$ VOLTS

- HEPTODE PLATE VOLTS: 250
- TRIODE PLATE VOLTS: 250*
- HEPTODE SCREEN (GRIDS N°2 & 4) VOLTS: 100
- HEPTODE CONTROL-GRID (GRID N°1) VOLTS: -3
- TRIODE GRID RESISTOR (OHMS): 50000

*SUPPLIED THROUGH 20000- OHM VOLTAGE- DROPPING RESISTOR

CONVERSION TRANSCONDUCTANCE (g_μ) MICROMHOS

0 0.2 0.4 0.6 0.8
TRIODE GRID & HEPTODE GRID N°3 D.C. MILLIAMPERES

MAY 13, 1941
RCA RADIotron DIVISION
RCA MANUFACTURING COMPANY, INC.