6AL7-GT
Description and Rating

ELECTRON-RAY INDICATOR

GENERAL DESCRIPTION
Principal Application: The 6AL7-GT is an electron-ray indicator designed especially for use in AM-FM receivers. Through its use, precise tuning of either FM or AM signals is easily accomplished without the use of additional tubes or circuit components.

Cathode: .......... Coated Unipotential
Heater Voltage (A-C or D-C) .... 6.3 Volts
Heater Current .......... 0.15 Ampere
Envelope: .......... T-9, Glass

Base: ........ BB-6, Intermediate Shell Octal B-Pin or BB-46, Short Intermediate Shell Octal B-Pin
Mounting Position: ................. Any

PHYSICAL DIMENSIONS

TERMINAL CONNECTIONS

Pin 1 - Grid
Pin 2 - Heater
Pin 3 - Target
Pin 4 - Deflection Electrode Number 2
Pin 5 - Deflection Electrode Number 3
Pin 6 - Deflection Electrode Number 1
Pin 7 - Heater
Pin 8 - Cathode

BASE Diagram

Pattern areas P1, P2, and P3 are produced and controlled by deflection electrodes number 1, 2, and 3 respectively.

DESIGN CENTER VALUES:

Target Voltage (Maximum) ........... 365 Volts
Target Voltage (Minimum) .......... 220 Volts
Heater-Cathode Voltage ............ 90 Volts

MAXIMUM RATINGS

CHARACTERISTICS AND TYPICAL OPERATION

Target Voltage ......... 315 Volts
Deflection Electrode Number 1 Voltage ........ 0 Volts
Deflection Electrode Number 2 Voltage ........ 0 Volts
Deflection Electrode Number 3 Voltage ........ 0 Volts
Grid Voltage * ........ 0 Volts
Cathode Bias Resistor ......... 3300 Ohms
Deflection Sensitivity (Approx) for 
First Millimeter Deflection # ........ 1.0 mm/Volt
Grid Voltage (Approx) for Fluorescence Cutoff .... -7.0 Volts

* The grid should be connected to the cathode when not used for fluorescence control.

# For deflection electrodes number 1 and 2

Supersedes ET-1270A dated 11-46
## Pattern Sequence During Tuning

<table>
<thead>
<tr>
<th>Control Voltage Source</th>
<th>Signal</th>
<th>Circuit (See Figure)</th>
<th>Off Channel (-)</th>
<th>On Channel Off Tune (-)</th>
<th>On Tune</th>
<th>On Channel Off Tune (+)</th>
<th>Off Channel (+)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discriminator</td>
<td>FM</td>
<td>I and 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discriminator and Squelch</td>
<td>FM</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discriminator and Limiter</td>
<td>FM</td>
<td>4</td>
<td></td>
<td></td>
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<tr>
<td>AVC</td>
<td>AM</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

**Figure 1**

\[ E_f = 6.5 \text{ Vols} \]
\[ R_A = 250 \text{ to } 550 \text{ Kols} \]
\[ R_K = 5500 \text{ Dhos} \]
\[ R_E2 = 1 \text{ K Mega} \]
\[ C = 0.05 \text{ Microfarad} \]

**Figure 2**

\[ E_f = 6.5 \text{ Vols} \]
\[ R_A = 250 \text{ to } 550 \text{ Kols} \]
\[ R_K = 5500 \text{ Dhos} \]
\[ R_E2 = 1 \text{ K Mega} \]
\[ C = 0.05 \text{ Microfarad} \]

**Figure 3**

\[ E_f = 6.5 \text{ Vols} \]
\[ R_A = 250 \text{ to } 550 \text{ Kols} \]
\[ R_K = 5500 \text{ Dhos} \]
\[ R_E2 = 1 \text{ K Mega} \]
\[ C = 0.05 \text{ Microfarad} \]

\( -6 \text{ Vols} \) (Approx.) = "Off Channel"

**Figure 4**

\[ E_f = 6.5 \text{ Vols} \]
\[ R_A = 250 \text{ to } 550 \text{ Kols} \]
\[ R_K = 5500 \text{ Dhos} \]
\[ R_E2 = 1 \text{ K Mega} \]
\[ C = 0.05 \text{ Microfarad} \]

**Figure 5**

\[ E_f = 6.5 \text{ Vols} \]
\[ R_A = 250 \text{ to } 550 \text{ Kols} \]
\[ R_K = 5500 \text{ Dhos} \]

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ET-T2708

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