The 12AX7EH is a dual high 
mu triode with a spiral filament 
and special construction to 
minimize microphonic 
behavior. Ideal for replace-
ment use in guitar amps and 
any place low noise and high 
gain is important.

<table>
<thead>
<tr>
<th>Pin #</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>plate 2</td>
</tr>
<tr>
<td>2</td>
<td>grid 2</td>
</tr>
<tr>
<td>3</td>
<td>cathode 2</td>
</tr>
<tr>
<td>4, 5, 9</td>
<td>heater</td>
</tr>
<tr>
<td>6</td>
<td>plate 1</td>
</tr>
<tr>
<td>7</td>
<td>grid 1</td>
</tr>
<tr>
<td>8</td>
<td>cathode 1</td>
</tr>
</tbody>
</table>

### Electrical Data

- **Heater Voltage, not less than**: 6.0 or 12.0 V
- **Heater Voltage, not more than**: 6.6 or 13.2 V
- **Plate Voltage, not more than**: 300 V
- **Heater to Cathode Voltage**: 100 V
  - positive, V not more than 100 V
  - negative, V not less than 200 V
- **Plate Current, not more than**: 9 mA
- **Plate Dissipation, each triode, not more than**: 1.0 watts
- **Maximum grid circuit resistance**: 1.0 Mohm
  - fixed bias, not more than 1.0 Mohm
  - self bias, not more than 2.2 Mohm
- **Inter-electrode Capacitances**:
  - C, grid to plate: 1.6 pF (triode 1 and 2)
  - C, grid to cathode and heater: 1.6 pF (triode 1 and 2)
  - C, plate to cathode and heater: 0.44 pF (1) and 0.36 (2)
  - C, cathode to heater: 5.0 nF (nominal)
  - C, plate to plate: 520 pF
- **Measured Electrical minima**:
  - Grid reverse current, not more than (see note below): 0.2 uA
  - Plate current, not less than (see note below): 0.75 mA
  - Plate current (E_b= 250V, E_c= -4V): 10 uA
  - Transconductance, not less than (see note below): 1.4 mA/V
  - Amplification Factor, not less than (see note below): 78
  - Amplification Factor (nominal): 92
  - Transconductance (nominal): 1.7 mA/V
  - Plate Resistance (nominal): 54.1 K OHM
  - Max Neg. Grid Voltage: 55 V
  - Max Pos. Grid Voltage: 0 V
  - Max Cold Voltage: 600 V

**NOTE:** heater V, 12.6 vac; plate V, 250v; grid bias, -2v; grid circuit resistance, 1K ohm