Audio Amplifier
ELK-800

APPLICATION:
A compact, low cost audio amplifier designed for paging (public address) applications. The ELK-800 can be centrally or remotely installed. It operates on low voltage, thus saving money by requiring only 22-24 gauge telco or alarm type wire. It can drive multiple speakers and features short circuit protection and built-in volume adjust.

Features or Specifications subject to change without notice.

Specs:
- Output Rating: 10 Watts**
- Speaker (Output) Load: 2 to 16 Ohms**
- Power Input: 12 to 18 Volts AC or DC**
- Current Draw: 50 to 800 mA
- Input Impedance: 1000 Ohms nominal
- Size: 4.5" x 3" x 1.2"

**NOTE: The ELK-800 is primarily designed for short duration (intermittent) paging applications. For long durations, such as playing music, you may need to reduce the volume output, lower the power input voltage, or lower the speaker loading in order to keep the ELK-800 from overloading and shutting down.

For more information contact your local Distributor or:
ELK PRODUCTS,INC 828-397-4200 FAX 828-397-4415 http://www.elkproducts.com Email: info@elkproducts.com

02/18
**ELK-800 Installation**

**Wiring Connections**

**POWER:** Connect to a good quality 12 to 18 volts A.C. or D.C.** Power Source. No Polarity. D.C. Power is recommended for a cleaner output.

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**INPUT:** Connect an audio input source. i.e.: microphone, telephone PBX or KEY system paging output, etc., even an ordinary single line phone set (see diagram below).

**SPEAKER:** Two (2) ohm maximum load. Speakers may be series/parallel wired for multiple speaker combinations up to 16 speakers.**

**Volume Control**

Turn the volume control clockwise (CW) to increase volume. Adjust to a comfortable level.

**Power Supply Wire Sizing**

<table>
<thead>
<tr>
<th>Number of Speakers</th>
<th>Wire Length (ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>24 AWG</td>
<td>22 AWG</td>
</tr>
<tr>
<td>4</td>
<td>100</td>
</tr>
<tr>
<td>2</td>
<td>200</td>
</tr>
<tr>
<td>1</td>
<td>400</td>
</tr>
</tbody>
</table>

**Input Wire Sizing**

When using a remote power supply and 24 AWG wire, the length of the audio wire should be limited to 3000 feet with a maximum of four (4) ELK-800 amplifiers connected. Standard telephone twisted pair wire is a good choice for the audio wire run.

**Recommended Speaker Spacing for Paging Applications**

<table>
<thead>
<tr>
<th>Ambient Sound Level</th>
<th>Location</th>
<th>Speaker Spacing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quiet 50 to 65 db</td>
<td>Offices</td>
<td>120 feet (14,400 sq. ft.)</td>
</tr>
<tr>
<td>Moderate 65 to 80 db</td>
<td>Light Manufacturing</td>
<td>90 feet (8,100 sq. ft.)</td>
</tr>
<tr>
<td>Noisy 80 to 90 db</td>
<td>Heavy Manufacturing</td>
<td>60 feet (3,600 sq. ft.)</td>
</tr>
<tr>
<td>Very Noisy +90 db</td>
<td></td>
<td>40 feet (1,600 sq. ft.)</td>
</tr>
</tbody>
</table>

**Example: Basic Public Address "PA" System**

Note: DO NOT connect to phone company lines

**Example: Three Speakers on an ELK-800**

Total Resistance = 6 OHMS

2 SPEAKERS in SERIES

THREE 8 OHM SPEAKERS