

Telecommunication Peripheral Products

## Technical Practice

**CPA-7B**  
General Purpose  
Telecom Paging System

April 29, 2004

### Add Paging, Loud Ringing and Background Music to Centrex, PABX's or Key Systems



The CPA-7B is a cost effective, multi- purpose, telecom paging system.

The CPA-7B features a low noise, high fidelity amplifier, providing 6 watts of power for a variety of telecom paging applications. It can also provide background music\* and night bell/common audible. In addition, multiple units may be daisy-chained for larger paging applications.

Compatible with ringing C.O. lines, Centrex lines and analog PABX/KSU station ports as well as unused trunk inputs, the CPA-7B will also interface directly with standard paging ports. For loud ringing, the CPA-7B generates an adjustable loud warble from a dry contact closure, a ringing C.O. or a ringing analog PABX/KSU station.

The CPA-7B is easy to install and can eliminate the installation of multiple bells, relays and paging cards.

<http://www.VikingElectronics.com>

### Features

- 6 watts of paging power (powers up to (8) 8 ohm horns/speakers)
- **Increased audio fidelity with low noise amplifier**
- Interfaces with ringing C.O. lines, Centrex lines, paging ports, unused phone system trunk inputs, or ringing analog station ports
- **600 ohm audio output to connect multiple CPA-7B's for larger paging applications**
- (1) 8 ohm 25AE paging horn included
- Day/night switchable for paging/loud ring
- Ringing/alert tone volume adjustment
- Paging volume adjustment
- **Selectable ring trip paging and night bell**
- Background music is muted during page\*
- **10 pin cage clamp terminal strip for easier wiring**
- Provides "Night Bell" warble tone via contact closure or ringing analog circuit
- Provides page "Alert" tone before paging (disable alert tone by removing JP1)
- Adjustable ring trip paging time out for auto disconnect
- **Audio patch cord provided**

\* **Note:** A dry contact closure is required to mute background music when paging from a 600 ohm paging port (see *Installation* section D).

### Applications

- Paging and loud ringing for Centrex systems
- Paging and loud ringing for phone systems with paging ports, unused analog station ports or unused trunk inputs

**Sales...(715) 386 - 8861**

**Made in the U.S.A.**

### Specifications

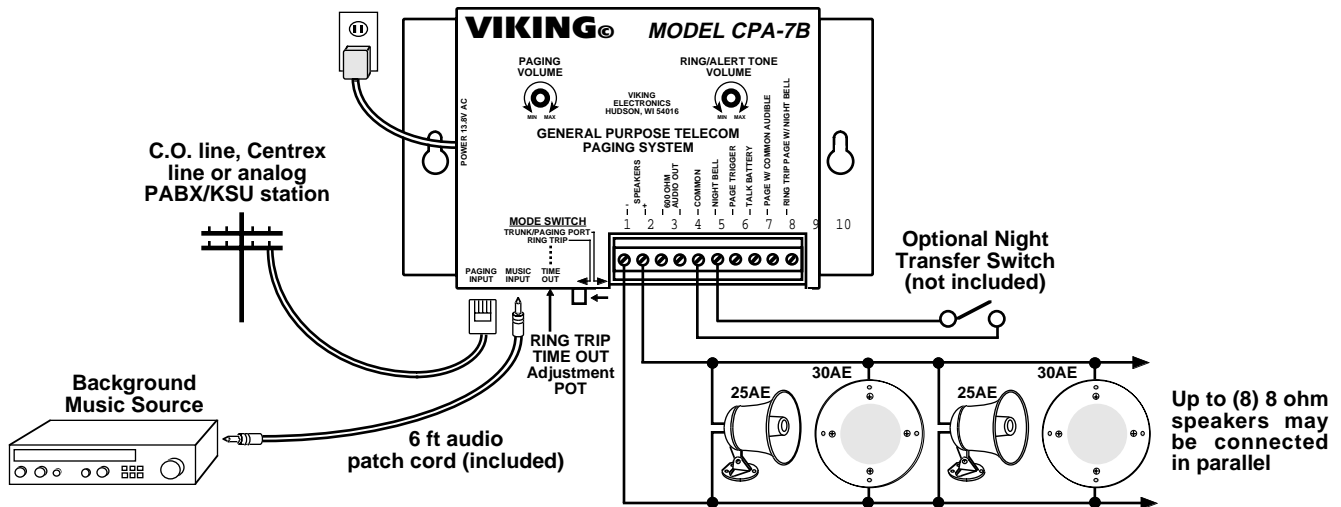
**Power:** 120V AC/13.8V AC 1.25 A, UL listed adapter provided  
**Amplifier:** 6 watts - to power up to (8) 8 ohm speakers (cascadable to drive additional speakers)  
**Dimensions:** 133 mm x 89 mm x 44 mm (5.25" x 3.5" x 1.75")  
**Shipping Weight:** 1.36 kg (3 lbs)  
**Environmental:** 0°C to 32°C (32°F to 90°F) with 5% to 95% non-condensing humidity  
**Speakers:** (1) 25AE paging horn provided  
**Sound Pressure Level:** 110dB, 1KHz @ 1m with (1) 25AE Paging Horn (included), each additional horn will drop the output level of all horns by 1dB  
**Maximum Speaker Cable Length:** 91 m (300 ft) 18 AWG  
**Connections:** (1) RJ11 jack, (1) 3.5mm (1/8") audio jack, (1) 2.1mm barrel jack  
**Talk Battery Output:** 19V DC (loop current 36mA nominal)

# Installation/Applications

## A. Ring Trip Paging with or without Night Bell

1. Set the **MODE SWITCH** to the **RING TRIP** position.
2. Adjust the **RING TRIP TIME OUT POT** as required (adjustable from approximately 10 - 25 seconds).
3. Plug a C.O. line, Centrex line or analog PABX/KSU station into the **PAGING INPUT PORT**.
4. Make a sample page adjusting paging and alert tone volume.
5. With the night transfer switch off (open), the **CPA-7B** will answer and page, then disconnect on CPC or time out.
6. With the night transfer switch on (closed), the **CPA-7B** will broadcast a night bell ring (electronic warble tone) during each incoming ring.

**Caution:** Do NOT connect speakers with a combined parallel impedance of less than 1 ohm. To power more speakers, see **Installation/Applications** section F.

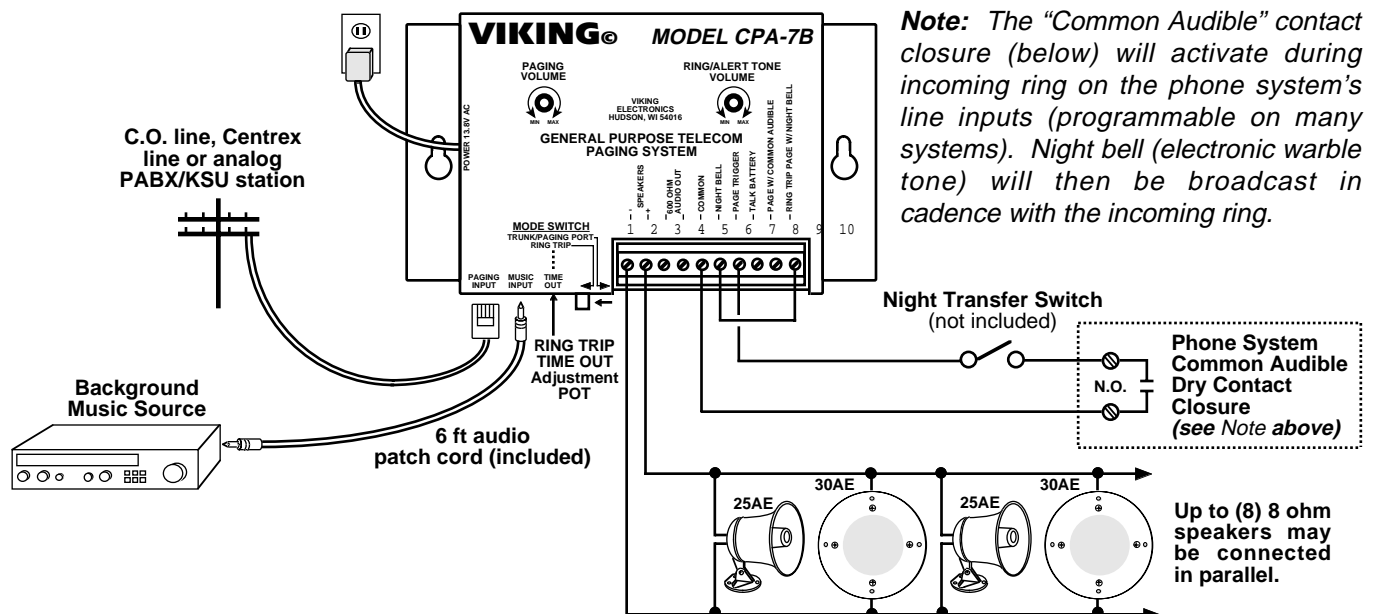


## B. Ring Trip Paging with Night Bell/Common Audible from Contact Closure

1. Set the **MODE** switch to the **RING TRIP** position.
2. Adjust the **RING TRIP TIME OUT POT** as required (adjustable from approximately 10 to 25 seconds).
3. Connect the phone system's dry contacts to pins 5 and 7 and jumper terminal 6 to 10 as shown below.

**Note:** Common audible (night bell) takes precedence over ring trip paging.

**Caution:** Do NOT connect speakers with a combined parallel impedance of less than 1 ohm. To power more speakers, see **Installation/Applications** section F.

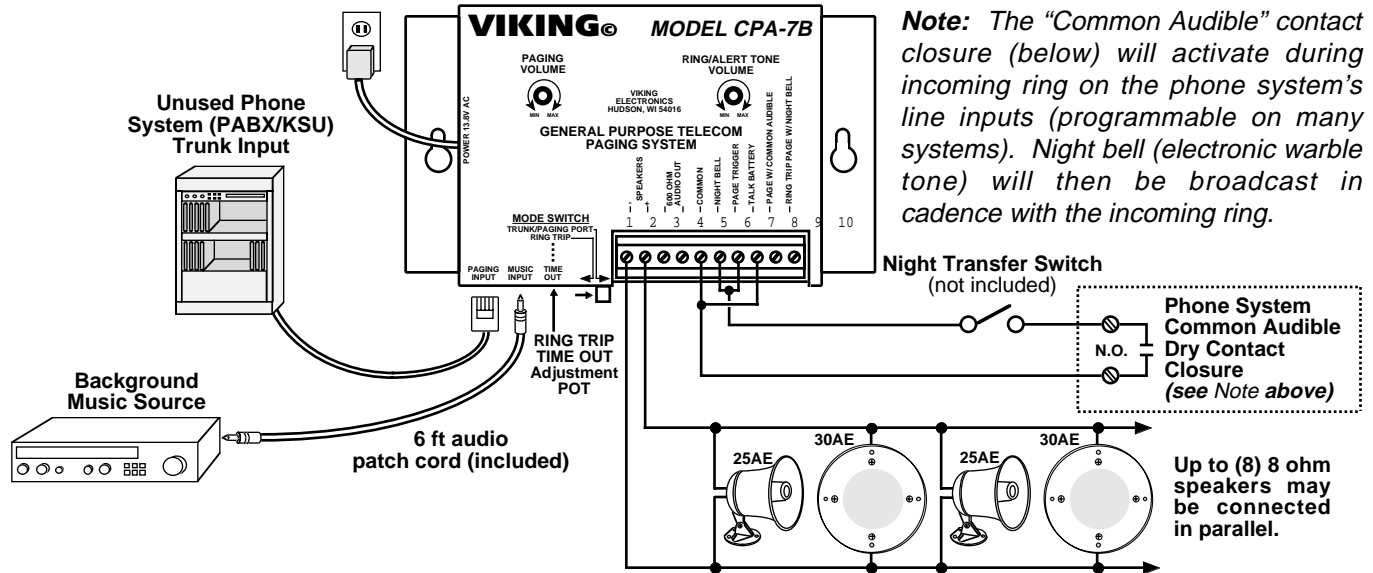


### C. Paging from an Unused Phone System Trunk Input

1. Set the **MODE SWITCH** to the **TRUNK/PAGING PORT** position.
2. Adjust the **RING TRIP TIME OUT POT** to its maximum (fully clockwise) position.
3. Connect terminal **8** to **5** to provide talk battery on the **PAGING INPUT PORT**.
4. Connect the unused trunk port to the **PAGING INPUT PORT**.

**Note:** If both paging and loud common audible are required, connect the night transfer switch (optional), the phone system common audible dry contacts and jumper terminal **6** to **7** as shown below.

**Caution:** Do NOT connect speakers with a combined parallel impedance of less than 1 ohm. To power more speakers, see *Installation/Applications* section F.

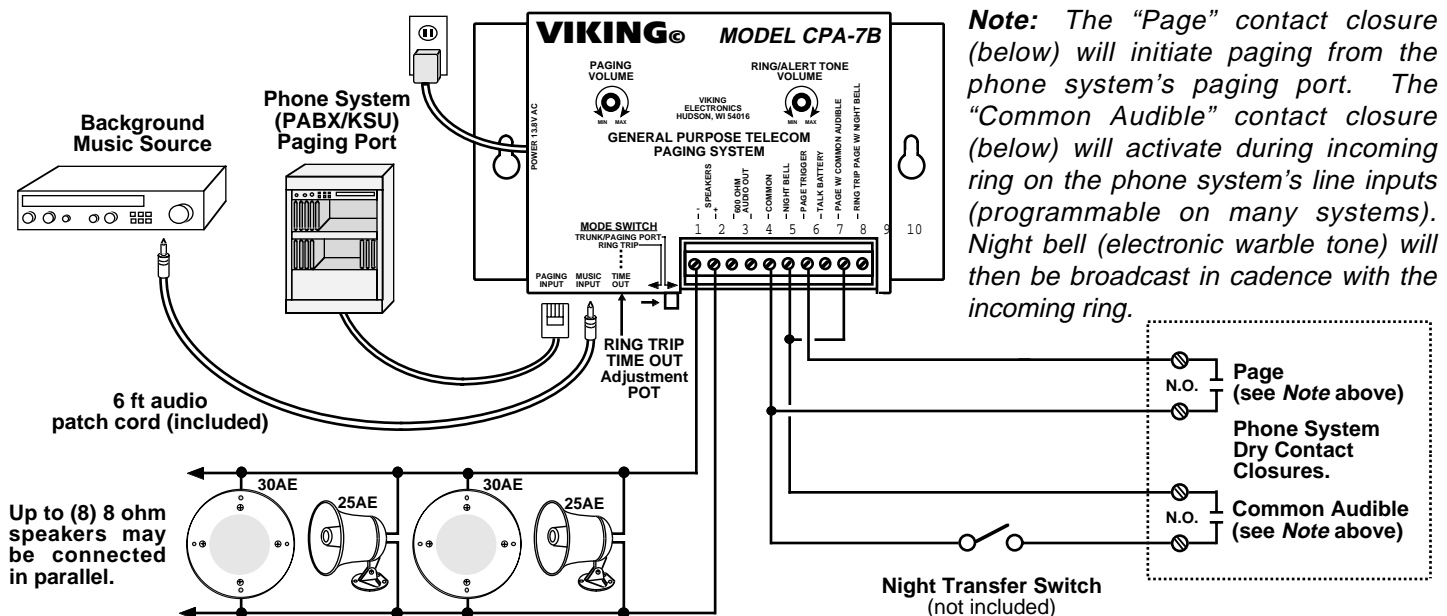


### D. Paging from a Phone System's 600 Ohm Paging Port (with page dry contact closure provided)

1. Set the **MODE SWITCH** to the **TRUNK/PAGING PORT** position.
2. Adjust the **RING TRIP TIME OUT POT** to its maximum (fully clockwise) position.
3. Connect the phone system's paging port to the **PAGING INPUT PORT**.
4. Connect the phone system's paging dry contacts to terminals **5** and **7**. The contact closure will activate the alert tone for paging and mute the background music.

**Note:** If both paging and loud common audible are required, wire the night transfer switch (optional) to the phone system's common audible dry contacts and jumper terminals **9** to **6** as shown below.

**Caution:** Do NOT connect speakers with a combined parallel impedance of less than 1 ohm. To power more speakers, see *Installation/Applications* section F.

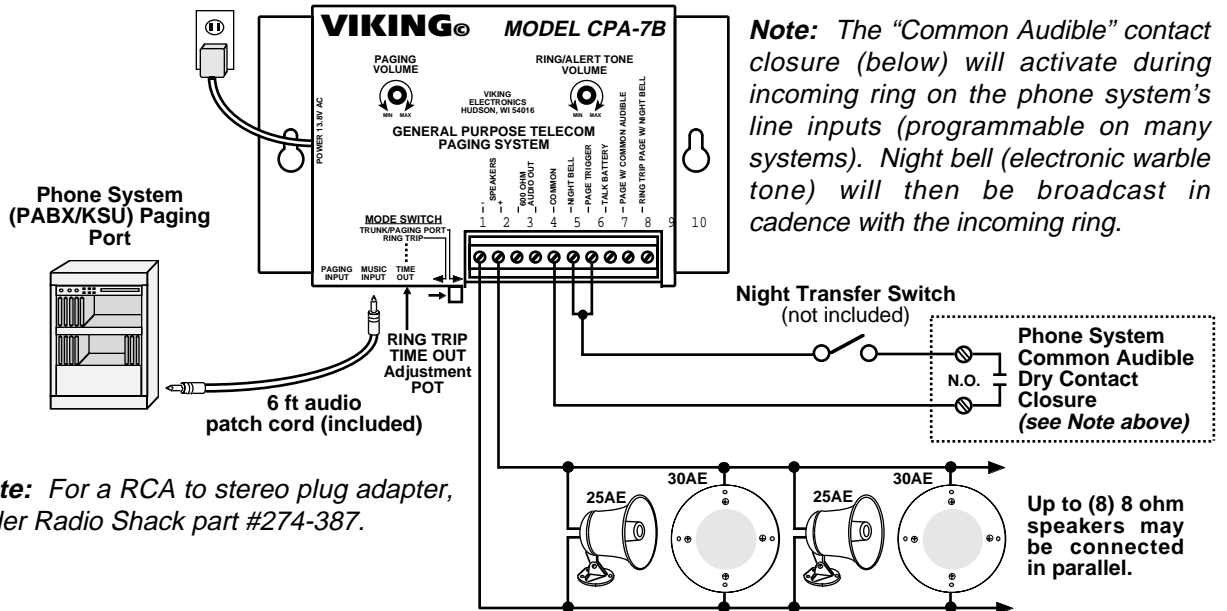


## E. Paging from a Phone System's 600 Ohm Paging Port

1. If the phone system does NOT provide a dry contact closure on "Page", connect the paging port to the 3.5mm (1/8") music input jack.
2. If loud common audible is required, connect the night transfer switch (optional), the phone system's common audible dry contacts and jumper terminals 6 to 7 as shown below.

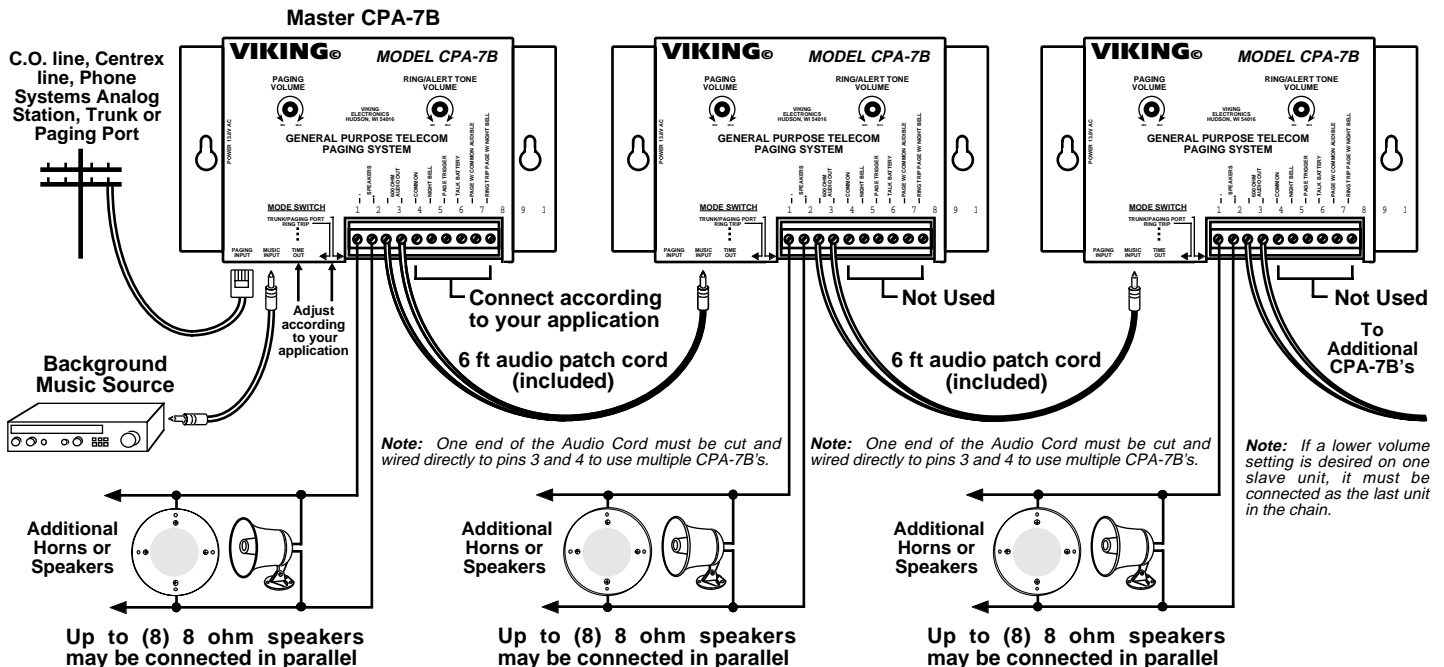
**Note:** The CPA-7B can NOT provide background music or alert tones in this application.

**Caution:** Do NOT connect speakers with a combined parallel impedance of less than 1 ohm. To power more speakers, see *Installation/Applications* section F.



## F. Cascading Multiple CPA-7B's to Drive Additional Speakers

An infinite number of CPA-7B's may be daisy-chained together to a master CPA-7B to drive additional speakers as required. Only the master CPA-7B should be connected to the paging source, background music, phone system's dry contact closures, etc. The master CPA-7B controls the paging and ring/alert tone volume for all units. Set paging control volume on all slave units to the maximum position. Connect as shown below.



**Product Support Line...(715) 386-8666**

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