

# VIKING

# TECHNICAL Practice

**TELECOM SOLUTIONS FOR THE 21ST CENTURY**

## CPA-7B

General Purpose  
Telecom Paging System

August 12, 2011

## 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 adjustable 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.

## 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
- Adjustable ring trip paging time out for auto disconnect (disable timeout by removing JP1)
- 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

Phone...715.386.8861

<http://www.vikingelectronics.com>

## 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 (cas-cadable 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  
**Talk Battery Output:** 19V DC (loop current 36mA nominal)  
**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

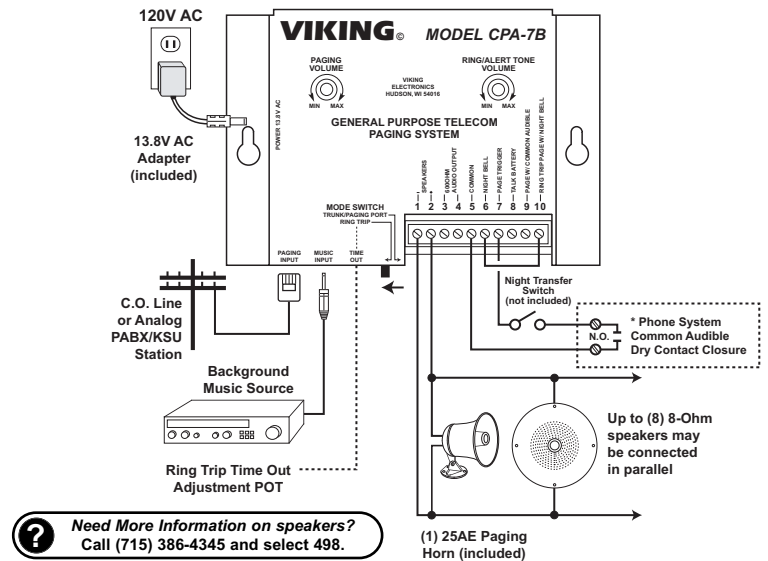


## B. Ring Trip Paging with Night Bell/Common Audible from Contact Closure

<b>Step 1.</b>	Set the <b>MODE SWITCH</b> to the <b>RING TRIP</b> position.
<b>Step 2.</b>	Adjust the <b>RING TRIP TIME OUT POT</b> as required (adjustable from approximately 12 - 80 seconds).
<b>Step 3.</b>	Connect the night transfer switch (optional), the phone system's common audible dry contacts to terminals <b>5</b> and <b>7</b> and jumper terminal <b>6</b> to <b>10</b> as shown in the diagram to the right.

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

\* **Note:** Some KSU/PABX's provide a "common audible" contact closure that activates during incoming ring on the phone system's line inputs. Night bell (electronic warble tone) will then be broadcast over the output. Night bell takes precedence over voice paging.



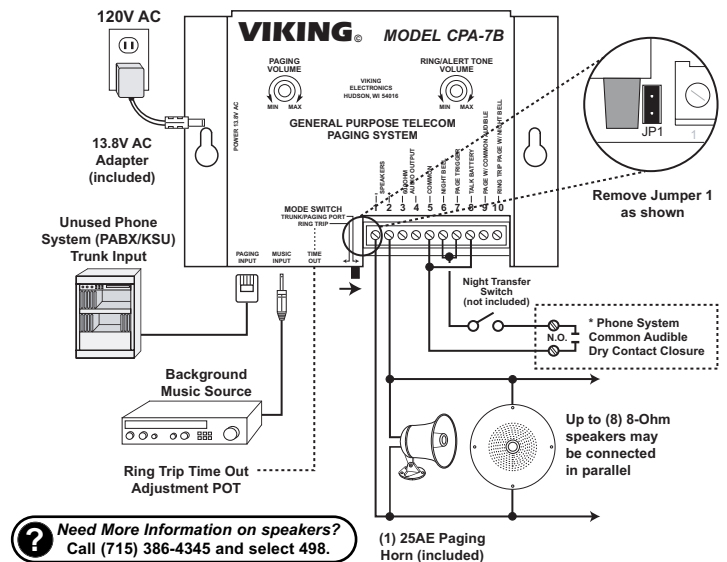
## C. Paging from an Unused Phone System Trunk Input

<b>Step 1.</b>	Set the <b>MODE SWITCH</b> to the <b>TRUNK/PAGING PORT</b> position.
<b>Step 2.</b>	Remove Jumper 1 (JP1).
<b>Step 3.</b>	Connect terminal 8 to 5 to provide talk battery on the <b>PAGING INPUT PORT</b> .
<b>Step 4.</b>	Connect the unused trunk port to the <b>PAGING INPUT PORT</b> .

**Note:** If both paging and loud ringing audible are required, connect the night transfer switch (optional), the phone system common audible dry contacts to terminals 5 and 6 and jumper terminal 6 to 7 as shown.

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

\* **Note:** Some KSU/PABX's provide a "common audible" contact closure that activates during incoming ring on the phone system's line inputs. Night bell (electronic warble tone) will then be broadcast over the output. Voice paging takes precedence over night bell.



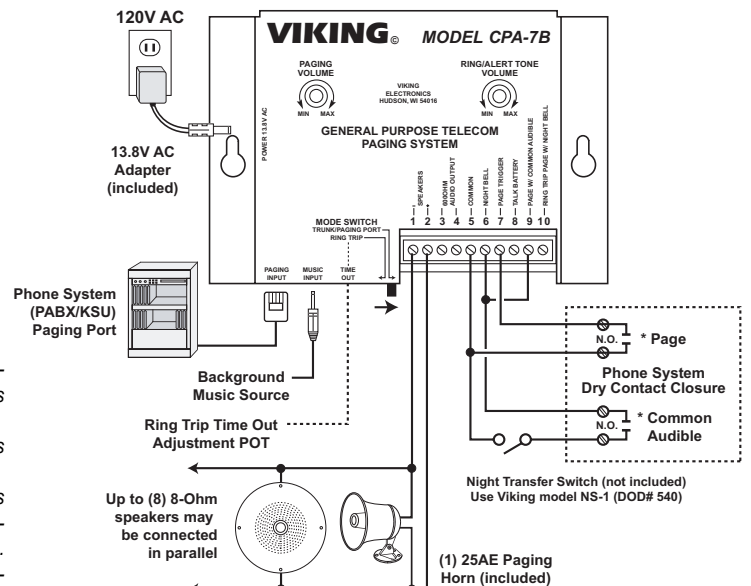
## D. Paging from a Paging System's 600 Ohm Paging Port (with page dry contact closure provided)

<b>Step 1.</b>	Set the <b>MODE SWITCH</b> to the <b>TRUNK/PAGING PORT</b> position.
<b>Step 2.</b>	Adjust the <b>RING TRIP TIME OUT POT</b> to the maximum (fully clockwise) position.
<b>Step 3.</b>	Connect the phone system's paging port to the <b>PAGING INPUT PORT</b> .
<b>Step 4.</b>	Connect the phone system's dry contacts to terminals <b>5</b> and <b>7</b> . 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, connect the night transfer switch (optional), the phone system's common audible dry contacts to terminals 5 and 6 and jumper terminal 6 to 9 as shown.

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

\* **Note:** Some KSU/PABX's provide a separate "page" contact closure that activates when a page is in progress. Some KSU/PABX's provide a "common audible" contact closure that activates during incoming ring on the phone system's line inputs. Night bell (electronic warble tone) will then be broadcast over the output. Voice paging takes precedence over night bell.



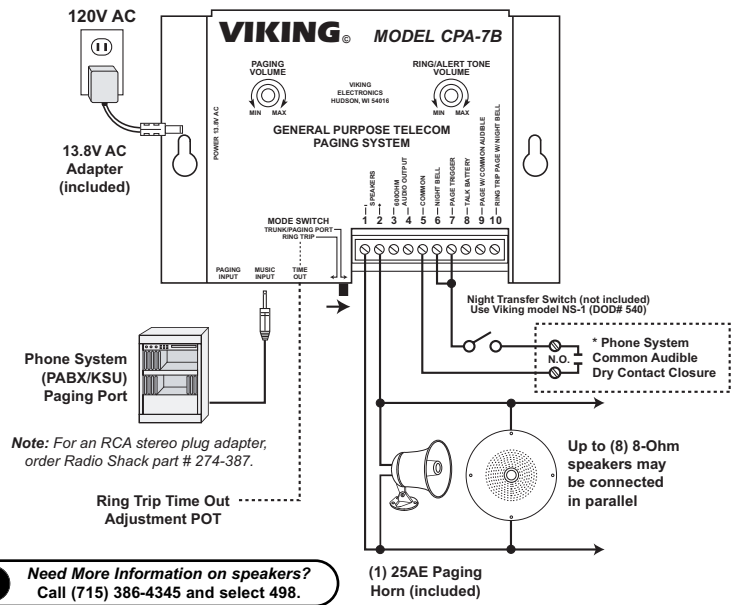
## E. Paging from a Phone System's 600 Ohm Paging Port

<b>Step 1.</b>	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.
<b>Step 2.</b>	If loud common audible is required, connect the night transfer switch (optional), the phone system's common audible dry contacts to terminals <b>5</b> and <b>6</b> and jumper terminal <b>6</b> to <b>7</b> as shown.

**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.

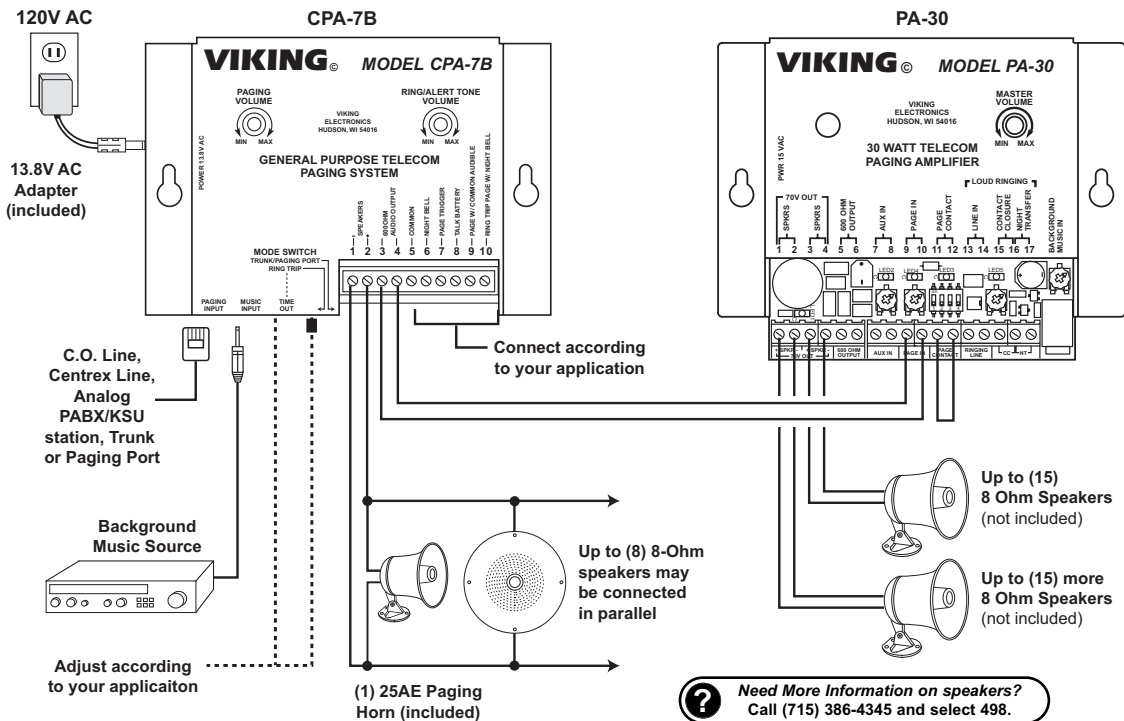
\* **Note:** Some KSU/PABX's provide a "common audible" contact closure that activates during incoming ring on the phone system's line inputs. Night bell (electronic warble tone) will then be broadcast over the output. Night bell takes precedence over voice paging.



## F. Additional Paging Power

When more paging power and/or additional speakers are required, a Viking model PA-30 can be used.

<b>Step 1.</b>	Connect the CPA-7B as described on previous pages.
<b>Step 2.</b>	Move the PA-30's talk battery DIP switch to the <b>OFF</b> position (DIP switch 1)
<b>Step 3.</b>	Connect the CPA-7B's 600 Ohm Output (pins 3 and 4) to a PA-30 Page In (pins 9 and 10).
<b>Step 4.</b>	Add a jumper wire across the Page Contact (pins 11 and 12) of the PA-30.



**Product Support Line...715.386.8666**

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