

**PA-24  
Paging/Chime  
Module  
Installation  
Instructions**

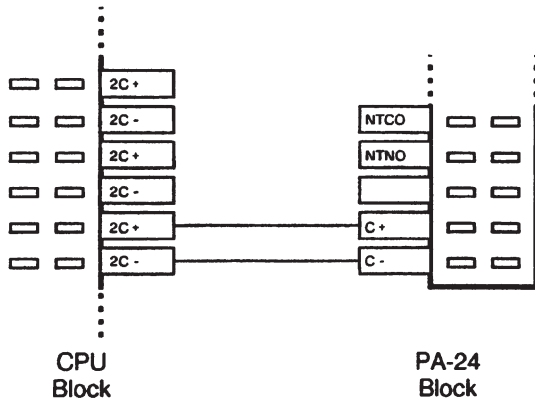
The Tone Commander PA-24 Paging Adapter/Chime Module interfaces a Tone Commander 524, 1030, 1560, or 30e120 console to a paging system. Paging can be accessed from any spare line key. Built-in chime circuitry announces ringing calls with a pleasant tone when night service is in effect. This compact wall-mounted module can be powered from the console's CPU. Two sets of relay contacts are provided for muting control or the activation of other devices during paging access.

## Installation

### Mounting

Mount the PA-24 to an equipment rack with the provided mounting screws, or mount to a plywood sheet or other wall surface using suitable fasteners. The terminal block, audio jack, and chime volume control should be easily accessible.

### Power

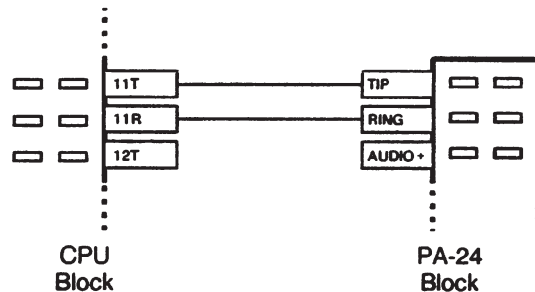


Cross connect the power terminals to any spare console power output on the CPU's console block. Connect *C+* to *xC+*, and *C-* to *xC-*.

An expanded 30e120 system can include a PSE-3 power supply for powering additional consoles; the PA-24 may be connected to this power supply instead of the console block.

If access to the CPU or PSE-3 power connections is not convenient, use any filtered 24 to 38 volt DC supply.

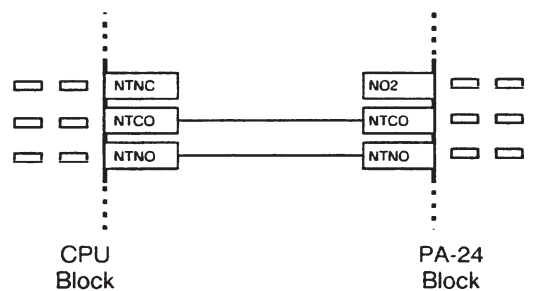
### Paging Access Line



Cross connect *xT* and *xR* from the console's paging line to *Tip* and *Ring* on the PA-24 terminal block.

The console line key must be programmed as a Page key.

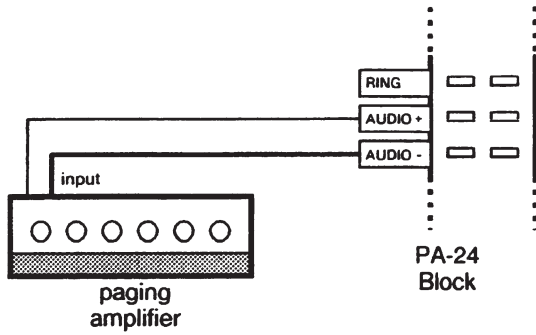
### Night Service Chime



Cross connect the console's night service *NTCO* and *NTNO* contacts to *NTCO* and *NTNO* on the PA-24. When the console is placed in night service mode, a chime tone will be heard over the paging system during incoming call ringing.

The console Night Service Mode must be set to "Night Ringing".

## Paging Audio Connection

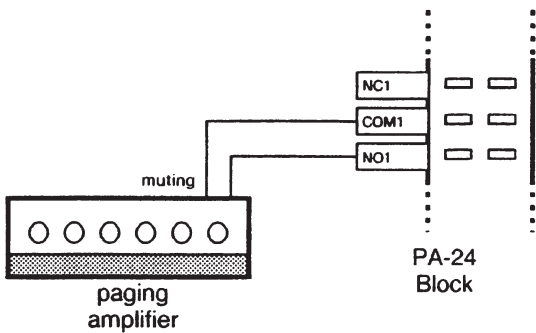


Connect the paging amplifier's input to *AUDIO+* and *AUDIO-* on the PA-24. If the amplifier has an unbalanced input (one side grounded), *AUDIO-* should connect to amplifier ground.

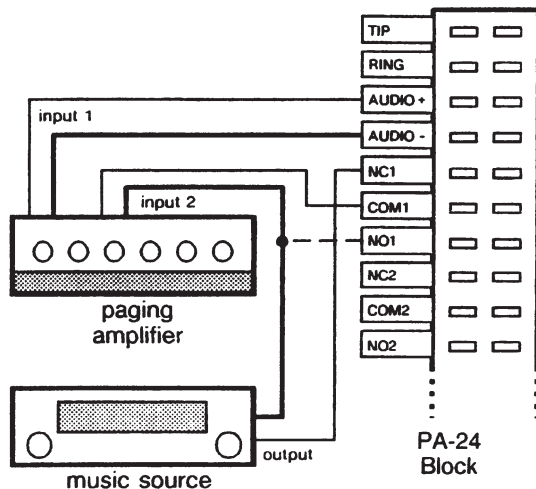
The audio jack on the PA-24 can be used in place of the block connections. Use a standard shielded audio cable with a phono (RCA-type) plug.

## Auxiliary Relay Contacts

The relay contacts provided on the PA-24 can be used to switch a paging amplifier from music to paging mode, or to control other equipment. *COMx* (common) is switched to *NOx* (normally open) during paging, and back to *NCx* (normally closed) when the PA-24 is idle.



Some paging amplifiers include external connections for muting background music during paging. Connect to either *COMx/NOx* pair on the PA-24 (use *COMx/NCx* if an open circuit is required when paging).



The relay contacts can be used to switch off the music source during paging.

The connection shown with the dashed line may be required to reduce noise and hum during paging in some installations.

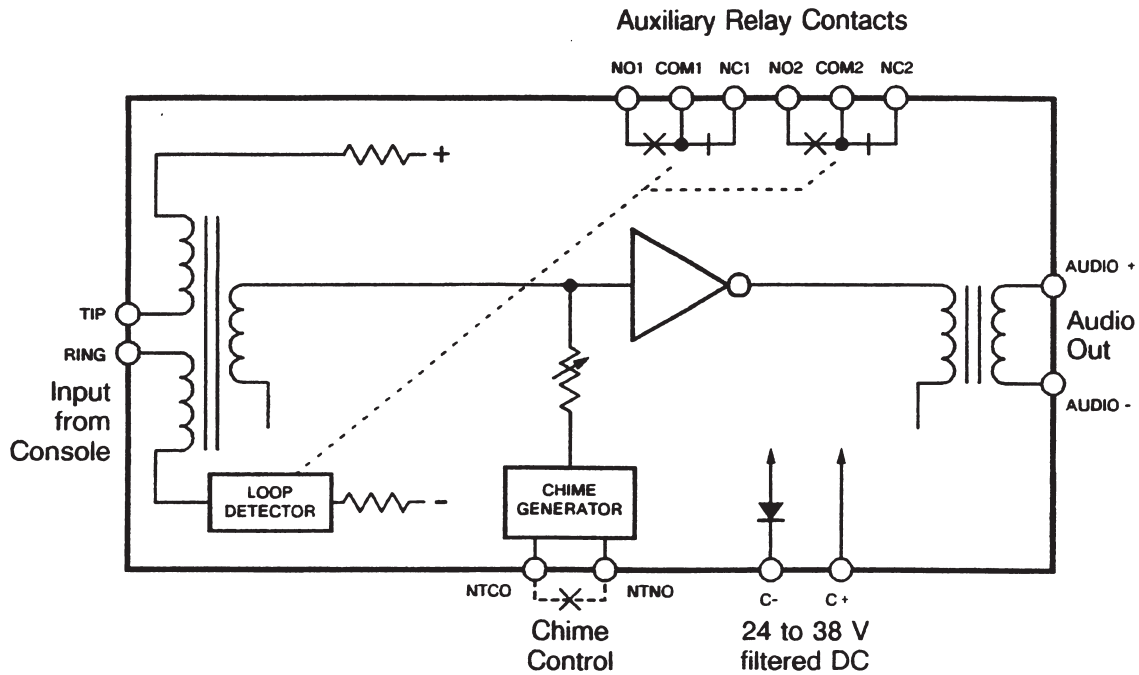
# Tone Commander PA-24 Installation Instructions

## Volume Adjustment

There is no voice volume adjustment on the PA-24. Set the voice paging volume with the paging amplifier's volume control.

After the amplifier volume has been set, the chime volume can be adjusted with the control on the PA-24. Turn the control clockwise to increase the volume.

## PA-24 Block Diagram



# Specifications

All values listed in this section are nominal, and may differ from the actual values.

## **Interface to Console/CPU**

Max. Distance to CPU . . . . . 500 feet, using 24 AWG wire

## **Audio Input and Output**

Impedance . . . . . 600 ohms, balanced

Output Level . . . . . line level

## **Auxiliary Relay Contacts**

Relay Contact Rating . . . . . 2 amps @30 VDC

## **Power Requirements**

Voltage . . . . . 24 to 38 VDC

Current . . . . . 100 mA max.

(power can be supplied by the console's CPU or PSE-3 power supply)

## **Physical**

Dimensions . . . . . 7" H, 4 7/8" W, 2 3/4" D

Weight . . . . . 1 lb. 2 oz.

## **Environmental**

Operating Temperature . . . . . 32° to 122° F (0° to 50° C)

Storage Temperature . . . . . -4° to 140° F (-20° to 60° C)

Humidity. . . . . 5% to 95%, noncondensing

## Tone Commander PA-24 Installation Instructions

### Service

Repair of the PA-24 Paging/Chime Module must be done by Tone Commander. Prior to equipment removal, call Tone Commander Customer Technical Support for assistance in determining the source of the problem. This critical action can often prevent needless removal of equipment and subsequent customer inconvenience.

Tone Commander  
Customer Technical Support Department  
11609 49th Place West  
Mukilteo, WA 98275-4255 USA

Phone: (800) 524-0024  
(425) 349-1000

Fax: (425) 349-1010

E-mail: [tech@tonecommander.com](mailto:tech@tonecommander.com)

Web: [www.tonecommander.com](http://www.tonecommander.com)

Tone Commander is committed to meeting the product needs of our customers. Please write or call us with any suggestions for improvement.

### Warranty

#### Tone Commander Product Warranty

For a period of one year from date of dealer purchase, but not to exceed 16 months from date of manufacture, Tone Commander Systems, Inc. (Tone Commander) warrants its products to be free from defects in material and workmanship under conditions of normal use and service. Tone Commander shall, at its option, repair or replace any defective product which, in its opinion, has not been misused, damaged, or improperly installed.

Repair or replacement under this warranty will be performed at Tone Commander's factory. Authorization must be obtained from Tone Commander prior to returning a product for repair. Freight must be prepaid for all units returned to Tone Commander. Units repaired under warranty will be shipped UPS Ground (or equivalent), freight prepaid by Tone Commander.

Products that are older than the warranty period, but less than 7 years old, or still manufactured by Tone Commander may be repaired at the factory for a flat rate charge. Repaired out-of-warranty units are warranted for 90 days from the date of repair.

The repair or replacement of a product under this warranty represents the entire obligation of Tone Commander; Tone Commander shall not be liable for any special or consequential damages resulting from or caused by any defect, failure, incapacity or malfunction of any of its products.

*The foregoing express warranty is in lieu of all other warranties, express or implied, including but not limited to any implied warranty of merchantability, fitness, or adequacy for any purpose or use, quality, productiveness or capacity; Tone Commander, to the extent permitted by law, hereby disclaims all such other warranties.*