

# Zetron® 4000 Series Console

*The Zetron 4000 Series Console provides sophisticated dispatch access to trunked communications systems at minimal cost. Zetron's Model 4217NT CRT Touchscreen console is shown at right.*



## Product Overview

The Zetron 4000 Series Console allows dispatch capability with M/A-COM trunked communications systems without the cost of dedicated wireline links or the Console Electronics Controller (CEC™). This allows the console to be used in a mobile dispatch center and as a backup to primary console equipment. The 4000 Series Console uses trunked radios as links into the trunked communications system. An Orion™ trunked radio is used for each monitored talkgroup, with additional trunked radios dedicated to individual calls.

### Console Controls

The Series 4000 console equipment, manufactured by Zetron, Inc., is the basis of the console. Special dual channel interface cards allow the Series 4000 to control the trunked

radios for access to the trunked communications system. The controls found on the front panel of the trunked radio are represented by controls at each dispatch operator position. The essential functions of each trunked radio connected to the console can then be controlled from every operator position.

### Information Display

The information typically displayed on the front panel of the trunked radio is visible at the operator's position. This setup allows each operator to see important radio and call information such as Unit ID, Group ID, and Emergency Call.

### Supports a Variety of Networks

The Zetron 4000 Series Console system supports up to 16 CRT console positions and up to 48

trunked radios. It also supports a mix of conventional and trunked channels. This simple interconnection needs no CEC or Integrated Multisite and Console Controller (IMC™) at the site. As a result, a broader range of trunked systems can support dispatch console applications.

### For More Information

For more information about this or any other M/A-COM Wireless Systems product, call toll free in the U.S. 1-800-368-3277. From outside the U.S. call 1-434-455-9223 (Asia Pacific), 1-434-455-9229 (Latin America and Middle East), and 1-434-455-9219 (Europe).

## General Specifications

### Computer Type:

Pentium®-class PC:  
Min: 32 MB RAM, 3 GB Hard Drive,  
3-1/2-inch Floppy Drive

### CRT Display:

High resolution color VGA  
17, 19, or 21 inches and LCD  
Optional Touchscreen

### Pointing Devices:

3-button mouse or 3-button trackball

### Audio Enclosure:

Integrated Speakers (Select and Unselect)  
Microphone (Gooseneck or Desktop) or  
Headset  
Integrated Paging Encoder  
Select and Unselect volume control  
16-button numeric keypad  
Auxiliary LCD with clock and VU meter  
Auxiliary system control button panel  
Auxiliary call recorder  
Auxiliary external speaker interfaces

## Physical Specifications

### Dimensions (H x W x D)

#### Computer:

6.25 x 15.5 x 16.75 in.  
5.88 x 39.37 x 42.55 cm

#### 15-inch CRT Case:

12.5 x 14.25 x 14.25 in.  
31.75 x 36.2 x 36.2 cm

#### 17-inch CRT Case:

15.5 x 16.5 x 16.5 in.  
39.37 x 41.91 x 41.91 cm

#### CRT Pedestal (15- and 17-inch):

1.75 in. H (removable) (4.45 cm)

#### Audio Panel:

5.25 x 19 x 4.5 in.  
13.34 x 48.26 x 11.43 cm

#### CRT Base:

7 x 20 x 15.25 in.  
17.78 x 50.8 x 38.74 cm

#### Model 4024 CCE:

22.75 x 19 x 10 in.  
57.79 x 48.26 x 25.4 cm

#### Radio Interface Module:

1.25 x 3.75 x 5.75 in.  
3.18 x 9.53 x 14.61 cm

## Environmental Specifications

### Operating Temperature:

+32 to +149°F  
0 to +65°C

### Operating Humidity:

To 90% non-condensing

## Audio Specifications

### Audio Output

#### Dual Radio Control Card:

+10 dBm max. into 600-ohm line  
Output Impedance:  
Transmit: 600 ohm balanced  
Idle: 600 or 3500 ohm

### Distortion:

<2% at full output. Hum, Crosstalk  
all 50 dB at full output

### Frequency Response:

-3 to +1 dB from 250-5000 Hz except  
for guard tone notch

### Compression:

Input level increase of 30 dB above  
knee of compression causes <3 dB  
output increase

### Microphone Input:

-65 dBm for full output

### Auxiliary Microphone Input:

-20 dBm for full output

### Audio Input

#### Dual Radio Control Card:

Input Impedance:  
600 or 10k ohm (4-wire)  
3500 ohm (2-wire)

#### Line Balance:

66 dB at 1000 Hz

#### Rx Sensitivity:

-30 dBm max. at knee of  
compression; adjustable

#### Frequency Response:

-3 to 1 dB from 250-5000 Hz except  
guard tone notch

#### Compression:

Input level increase of 30 dB above  
knee of compression causes <3 dB  
output increase.

#### Distortion: <2%

### Audio Panel:

#### Speaker Audio Outputs:

5W into 4 ohm

#### Mute:

Programmable from 0 to -50 dB  
"All-mute" time programmable

#### Gooseneck Microphone Input:

-27 to -15 dBm

#### Desktop Microphone Input:

-27 to -15 dBm

#### Headset Microphone Input:

-18 to -6 dBm

### Electrical

#### Dual Radio Control Card:

Radio Control Types:  
EDACS®, Local, E&M, Tone  
Remote, DC Remote

#### Radio Channels:

2-wire simplex/half-duplex or 4-wire  
half-/full-duplex

### Trunked System:

Remote Control Head protocol, RS422  
9600-baud data for display in/keyboard  
out, 600-ohm balanced audio for speaker  
in/mic out

#### Local Control:

PTT normally open relay contact rated  
1.0 A at 24 VAC/DC

#### E&M Control:

Tx control via PTT relay, external 48V  
required

#### Tone Control:

15 standard tones supported,  
programmable (no trimmer  
adjustment) 650-2050 Hz. High Level  
Guard Tone duration 120-600 msec.  
Function Tone Duration 40 msec.  
Guard Tone Freq. 2175 Hz, alterable.  
Tone freq. accuracy ±0.2%;  
timing accuracy ±1.0%.

#### DC Control:

Programmable for ±2.5, 5.5, 6.0, 11,  
12.5, and 15.5 mA. Operable up to 8k  
ohm loop resistance. Accuracy  
±0.25 mA.

#### Busy Channel Detect:

Local Cross-Busy detection, Guard  
Tone or DC Control detection  
(LOTL)

### Common Control Equipment:

#### Recorder Outputs:

1 per channel (Tx/Rx audio  
summation), plus 1 output per console  
0 dBm level, 600 ohm single ended

### Power Input:

#### Common Control Equipment:

120/240 VAC ±10%, 50/60 Hz, 180W  
or 11-16 VDC, 0.5-8.0 A

#### Console Positions:

120/240VAC ±10%, 50/60 Hz,  
60W or 11-16 VDC, 1.2A per panel

#### Computer:

110/220 VAC, 50/60 Hz

### Maximum Interface Cable Lengths:

#### Common Control Equipment to Radio

#### Interface Module:

50 ft (15.24 m)

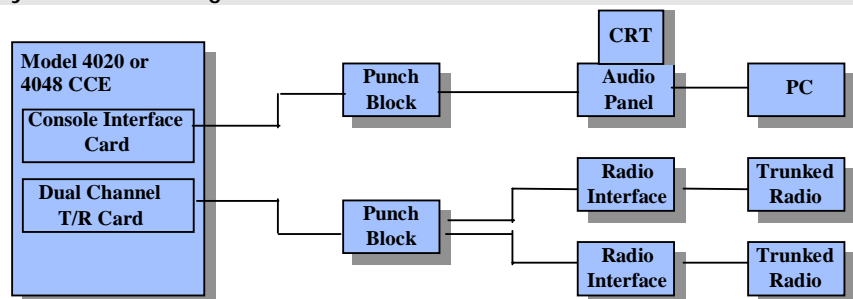
#### Radio Interface Module to Trunked

#### Radio:

15 ft (4.57 m)

Approved FCC Part 15

## System Block Diagram



## M/A-COM Wireless Systems

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