TX3 Series

Emergency Phone

Installation and Operation Manual

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Mircom TX3 Emergency Phone Installation Manual Version 2.1

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1 Introduction

This manual provides information about the installation and operation of the Emergency Phone, and must be read in its entirety before beginning any installation work.

Installation must be performed by a qualified technician and must adhere to the standards and special notices set by the local regulatory bodies.

Note: **Mircom periodically updates panel firmware and Configurator Software to add features and correct any minor inconsistencies. For information about the latest firmware or software visit the Mircom website at www.mircom.com.**

For warranty and special notices information see the Warranty and Special Notices chapter on page 54.

Warning: **The Telephone Access System assembly must be grounded by a qualified electrician. An improperly grounded unit can result in equipment malfunction and electrical shock.**

This manual explains

- TX3 Emergency Phone
- Features
- Accessories

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1.1 TX3 Emergency Phone

Mircom's TX3 Emergency Phone provides high quality two-way communication between residents or visitors and the concierge or guard in a multi-unit dwelling establishment.

The are two configurable buttons on the front of the Emergency Phone. The Emergency Call Button can be programmed to call an emergency hotline. The Operator Call Button can be programmed to call a concierge or operator. The buttons can be correlated with outputs, so that when the red button is pressed, a strobe illuminates, for instance.

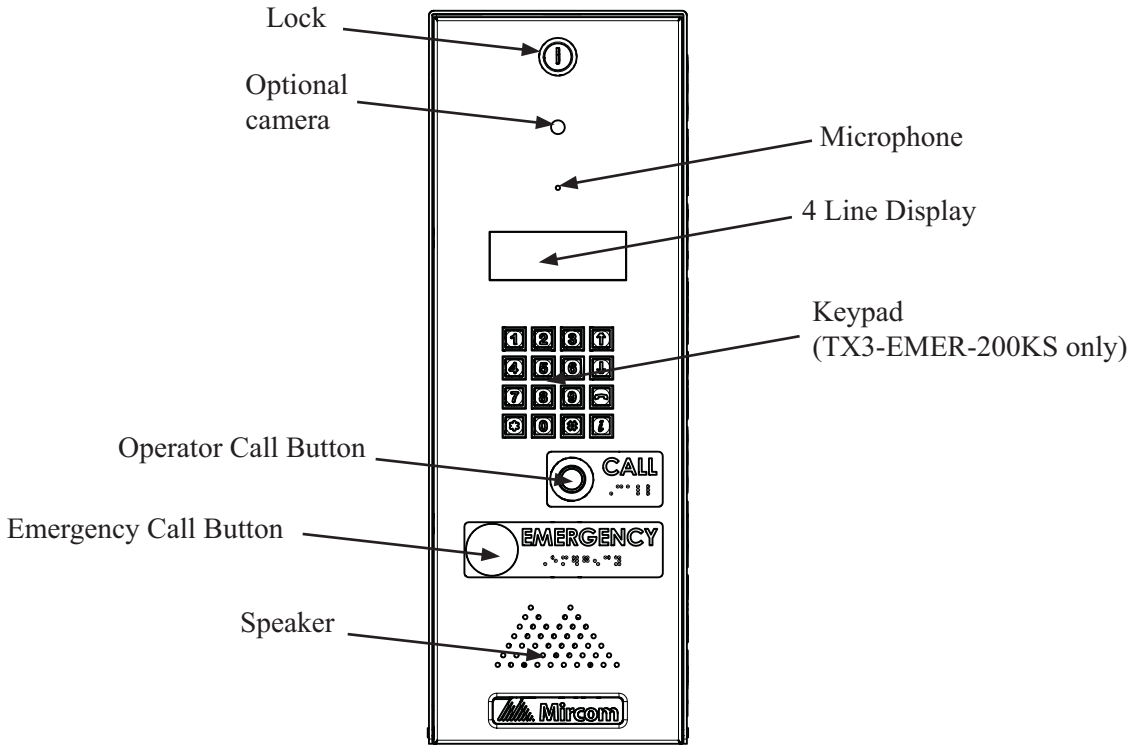

Figure 1. Front of the Emergency Phone

1.2 Features

Features of the Emergency Phone include:

- Vandal-resistant, high quality intercom and paging device
- Stainless steel front panel with vandal-resistant microphone and speaker openings
- 4 line OLED display
- Provision for a camera
- Storage of up to 200 names (TX3-EMER-200KS version only)
- Back-lit 16 digit keypad with dedicated buttons for Page Up, Page Down, Call and Info (keypad version only)
- Concierge/Security Desk/Guard Phone capability
- Ability to network panels together (peer-to-peer)
- Hands-free full duplex communication
- Flexible one to four digit resident dial codes
- Dials up to 10 digit telephone numbers
- System can be configured locally using the keypad or a computer with the TX3 configuration software
- Upload/download configuration files without taking the whole system off-line
- Programming from one location
- Records a maximum of 5000 event logs
- Industry Canada and F.C.C. approved

1.3 Accessories

- LP1-012 Strobe
- HT701 Grandstream Analog Telephone Adapter (VoIP modem)
- TX3-EMER-FTB flush trim ring
- CAM-3 TX3 Camera
- TH-102 Thermostat Heater with one PS-24P Transformer Plug
- TX3-GPM Guard Phone Module
- TX3-IP IP Module

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1.4 Warranty and Special Notices

Mircom values your business and always attempts to provide you with the very best service.

Please see the Warranty and Special Notices chapter on page 54 for information about the warranty and special notices about equipment use.

1.5 About This Manual

This manual applies to the following models:

- TX3-EMER-1S
- TX3-EMER-200KS
- TX3-EMER-1S-C
- TX3-EMER-200KS-C

1.5.1 Additional Documentation

For additional documentation, see the following Mircom literature:

- LT-979 TX3 Telephone Access Systems Programming Manual
- LT-969 TX3 Installation and Operation Manual
- LT-995 TX3 Configuration and Administration Manual
- LT-968 TX3 Telephone Access System User's Guide
- LT-1161 MD-921 IP Module Installation Instructions
- LT-972 Guard Phone Manual Installation Instructions

1.6 Contact Us

1.6.1 Canada and USA

Toll Free: 1-888-660-4655
Local: 905-660-4655
Fax: 905-660-4113

1.6.2 Website

http://www.mircom.com

2 Installation

This chapter provides information on how to install and wire the Emergency Phone.

This chapter explains

- Dimensions
- Mounting
- Mounting the Emergency Phone with the optional trim ring
- Wiring the Controller Board
- Controller Board Connectors - Bottom
- Controller Board Connectors - Top
- RS-485
- Setting the RS-485 Address
- Connect the Optional Strobe
- Grounding
- Connect the Power
- Installing the Heater
- Installing the Heater
- Installing the Optional MD-921 IP Module
- Installing the Optional Guard Phone Module
- Using the Guard Phone
- Updating Firmware

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2.1 Dimensions

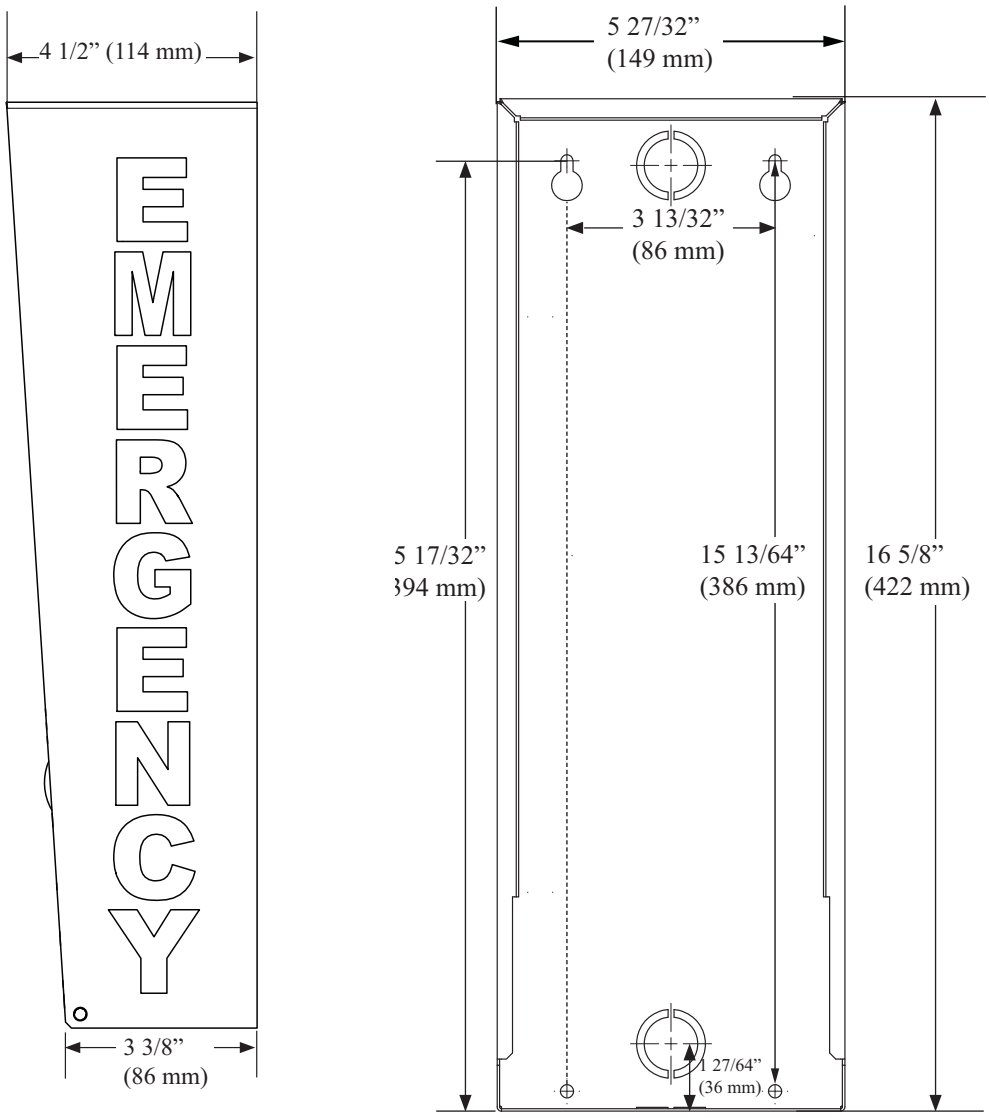

Figure 2. Dimensions of the Emergency Phone

2.2 Mounting

Attention: To comply with ADA regulations, the call button on TX3-EMER-1S and the keyboard on TX3-EMER-200KS must be no more than 48” (1219 mm) from the ground (forward reach) and 54” (1372 mm) from the ground (side reach). See the ADA Accessibility Guidelines for more information: http://www.ada.gov/2010ADAstandards_index.htm

- Weight: 10.60 lb (4.8081 kg)
- Overall dimensions: Height: 16 5/8” (422 mm) Width: 5 29/32” (150 mm) Depth: 4 1/2” (114 mm)
- Mounting hole diameter: 13/64” (5 mm)
- Knockout diameter: 7/8” (22 mm) and 1 1/8” (29 mm)

The emergency phone mounts on the wall. Mount the enclosure right-side up (the Mircom logo on the door is on the bottom).

You need:

- 4 fasteners appropriate for the wall that you are mounting the enclosure on.

1. Find a suitable location for the enclosure.
2. Using the enclosure as a template, mark the back mounting locations of the two keyholes. Ensure that at least one side is over a wall stud.
3. Remove the enclosure and place the fasteners halfway into the wall into the marked hole locations.
4. Place the enclosure onto the fasteners and lower it so that the fasteners fit in the narrow part of the keyholes.
5. Screw the other two fasteners into the two remaining holes.

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2.3 Mounting the Emergency Phone with the optional trim ring

1. Mount the semi-flush trim into the wall cut out, attach to the wall stud, left or right using the two slot holes on the side of the semi-flush trim ring.
2. Place the Emergency Phone inside the trim ring.
3. Secure the entry panel enclosure and the semi-flush trim using the four screws provided.

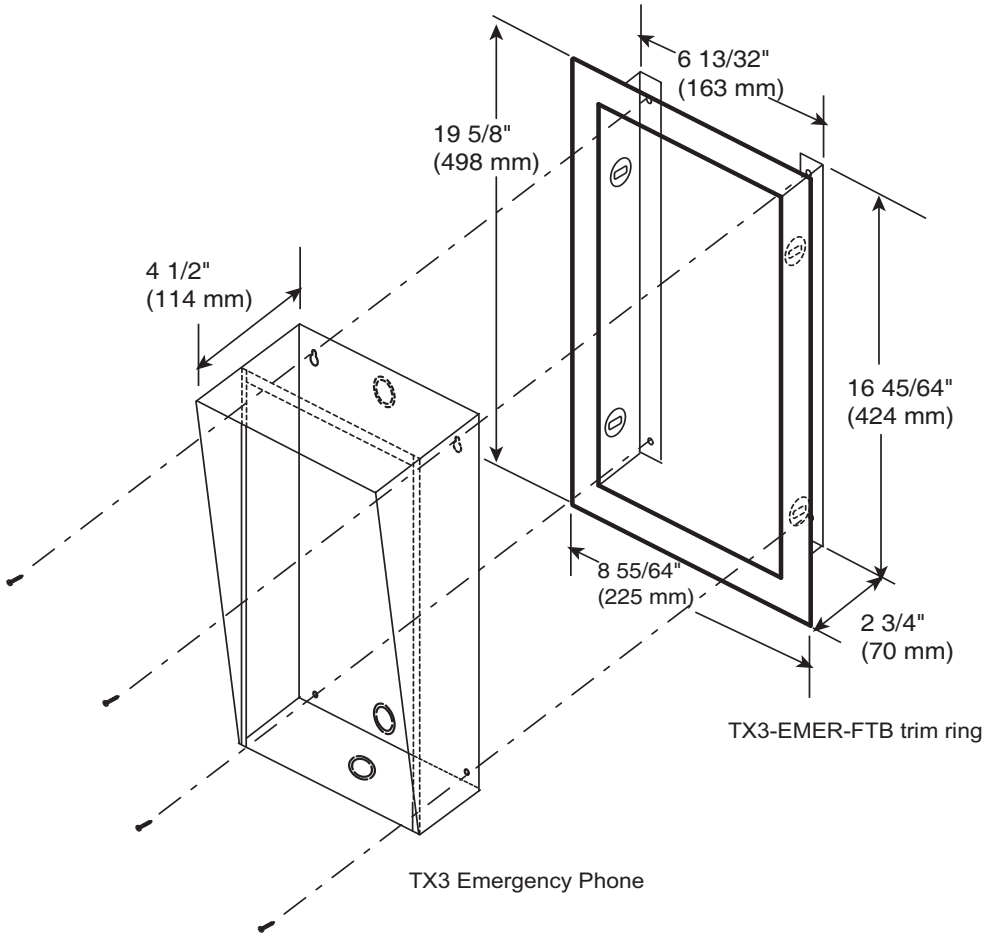

Figure 3. Mounting the Emergency Phone with the trim ring

2.4 Wiring the Controller Board

All wiring is a maximum length of 1000 ft (304.8 m). The RS-485 wiring total maximum length is 4000 ft (1219.2 m).

Figure 4 shows the general layout of the Emergency Phone main controller board.

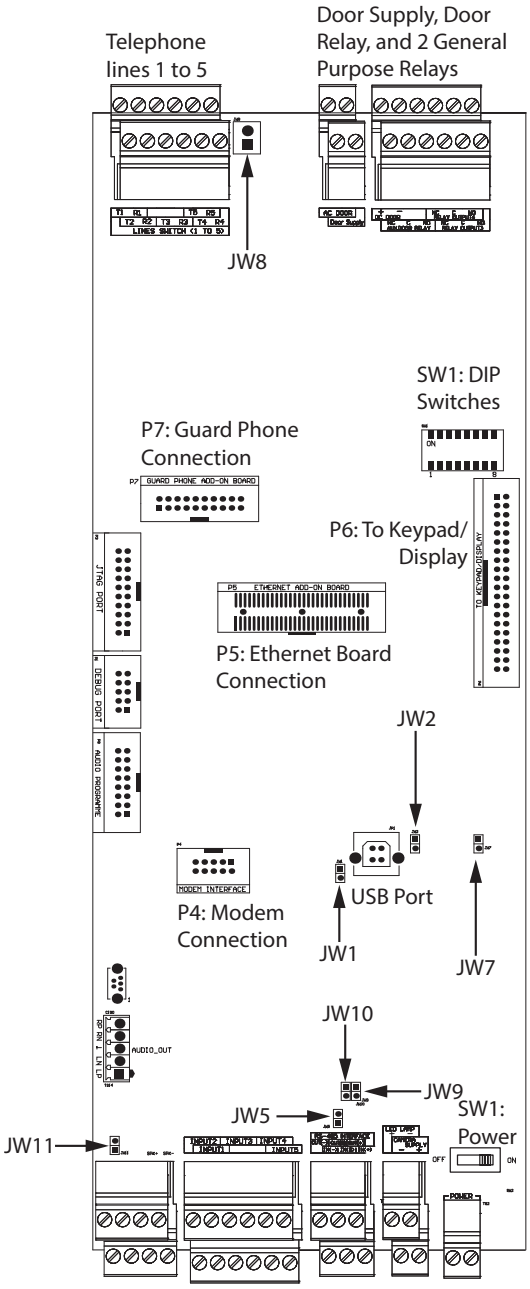

Figure 4. Emergency Phone Main Controller Board

2.4.1 Connectors

USB. Computer connection for firmware download and configuration.

P4. TX3-MDM Modem Board connector.

P5. MD-921 IP Module Board connector.

P6. Key pad and front door LCD display.

P7. Guard Phone Board connector.

2.4.2 Potentiometer

PT1 (if present). Pulse phone potentiometer. This potentiometer is normally factory set and does not require adjustment.

2.4.3 Switches

SW1. SW1 sets the unit's RS-485 ID (node address) and the IP addressing mode.

SW2. SW2 turns the unit's power ON and OFF for servicing, or to re-start the unit.

2.4.4 Jumpers

JW1. JW1 is used for updating firmware and is normally open.

JW2. JW2 is used for updating firmware and is normally open.

JW3. JW3 is not used and is left open.

JW4. JW4 is not used and is left open.

JW5. If end-of-line 120 Ω resistors for RS-485 are not available, close JW5 on the first and last controller connected by RS-485. By default this jumper is open.

JW6 (if present). JW6 is left closed.

JW7. JW7 is not used and is left open.

JW8. JW8 defines the operating state of the AC or DC Door relays as normally open or normally closed. A jumper wire connects to either the normally open (position 2 - top) or normally closed pin (position 1 - bottom). The default setting is normally open (position 2 - top).

JW9 and JW10. If there are problems with RS-485 communication, close both JW9 and JW10 on either the first **or** last controller connected by RS-485. By default these jumpers are open.

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JW11:

- If the panel has the MC-001 microphone, close JW11.
- If the panel has the MC-012 or MD-1243 microphone, open JW11 (this is the default setting).

MC-001 microphone
JW11 on or closed

MC-012 microphone
JW11 off or open

MD-1243 microphone
JW11 off or open

Figure 5 Microphones and JW11

2.5 Controller Board Connectors - Bottom

Figure 6 shows the connectors at the bottom of MD-1245, the lobby controller board that has a 4-pin terminal block for the microphone. This board is present in TX3-EMER-1S-C and TX3-EMER-200KS-C.

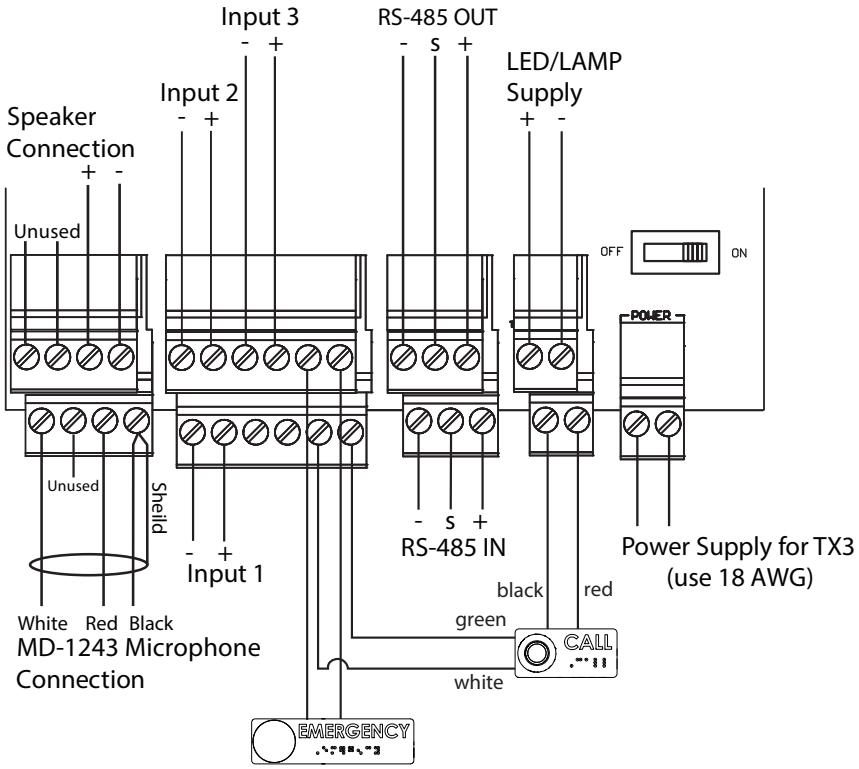

Figure 6. Controller Board Connectors on MD-1245 - Bottom

Figure 7 shows the connectors at the bottom of MD-1086, the lobby controller board that has a 3-pin terminal block for the microphone. This board is present in TX3-EMER-1S and TX3-EMER-200KS.

Note: Both models of microphone are shown in Figure 7. Connect only one microphone at a time, and set JW11 correctly depending on the microphone. See section 2.4.4 on page 15.

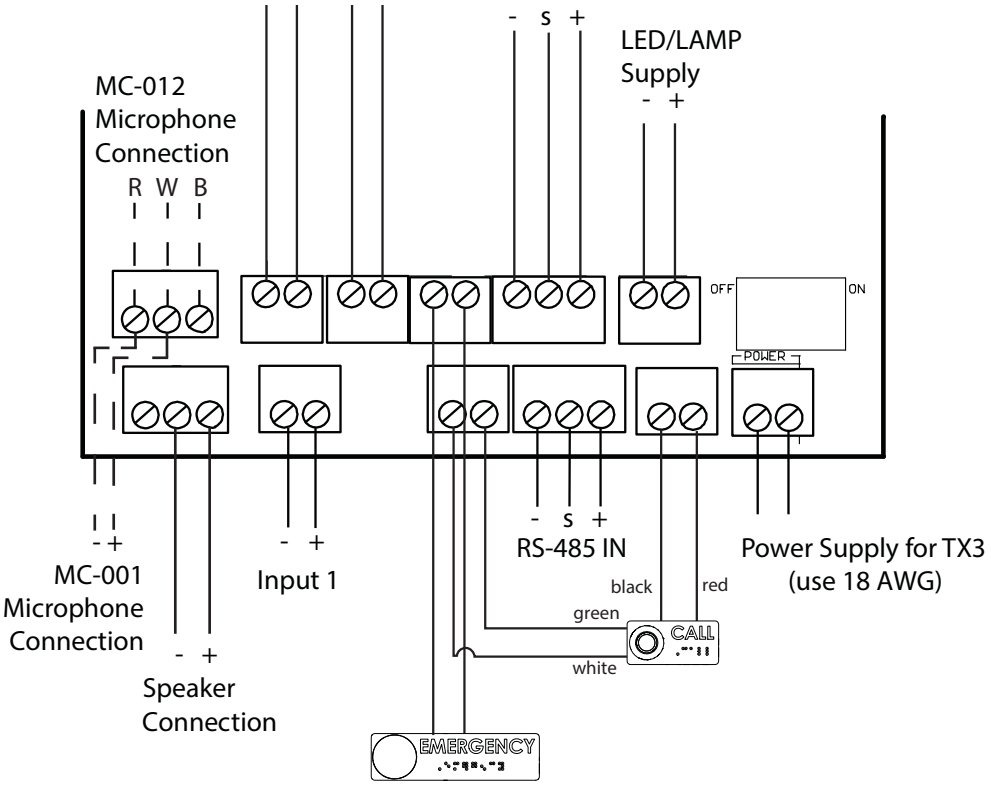

Figure 7. Controller Board Connectors on MD-1086 - Bottom

2.6 Controller Board Connectors - Top

Figure 8 shows the connectors at the top of the controller board.

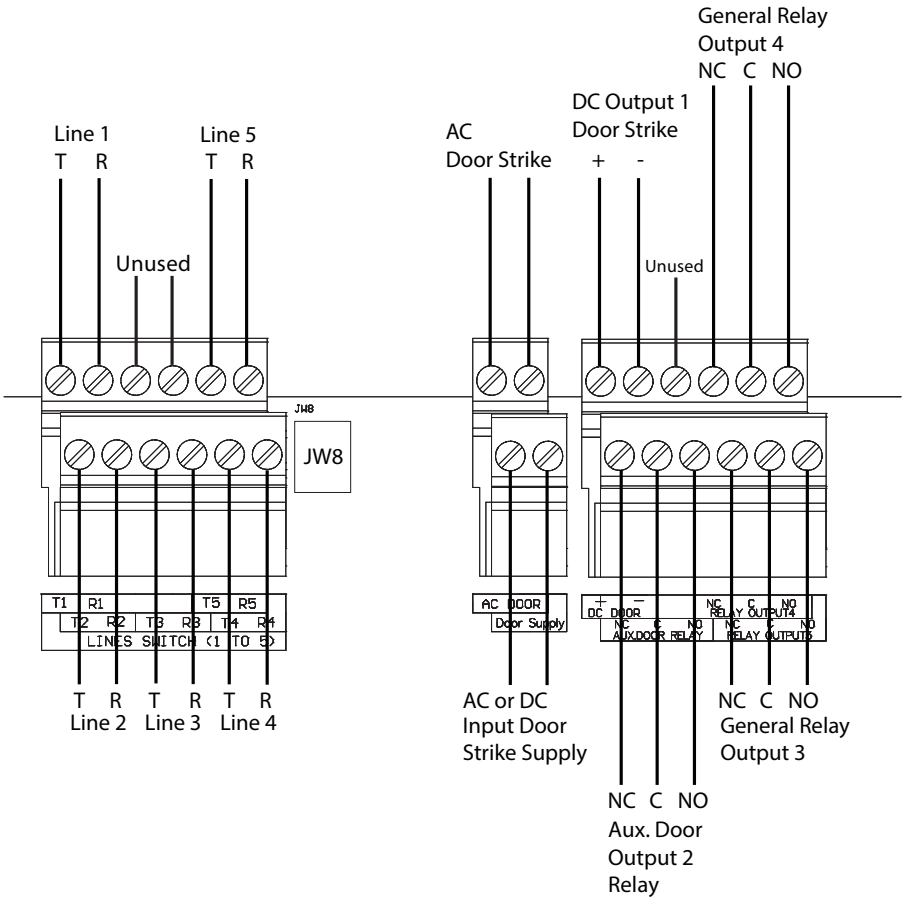

Figure 8. Controller Board Connectors - Top

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2.6.1 Telephone Lines 1 to 5

Each T/R line is polarity insensitive and can be reversed.

Note: Non-configurable PBX systems are not supported. For more information, contact technical support at Mircom.

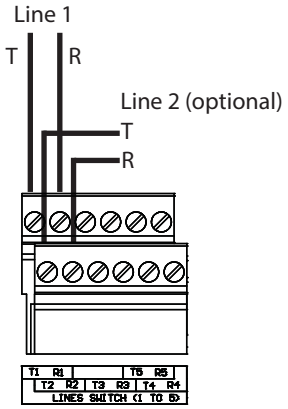

Figure 9. Telephone Line

2.6.2 AC and DC Door (Output 1)

These are general purpose relays that are activated by a DTMF tone (9 by default).

2.6.3 Aux. Door Relay (Output 2)

This relay is activated by a DTMF tone (6 by default).

2.6.4 General Relay Outputs 3 and 4

Outputs 3 and 4 are relay contact programmable outputs.

See LT-995 on the USB disk or Mircom website for details on programming these relays.

Output 4 controls the optional strobe. See section 2.9 on page 24.

2.6.5 Inputs 1 to 5

Input 4 is connected to the Emergency Call Button, and Input 5 is connected to the Operator Call Button. See Chapter 4 on page 38 for details on how the buttons are programmed.

2.6.6 Camera Supply

The camera supply connection provides + 12 VDC, 600 mA. The camera is controlled by one of the general outputs. The camera's positive terminal connects to the normally open (NO) general output relay contact. The common (C) contact of the general output relay connects to the + 12 VDC supply terminal. The camera is typically configured to operate when the main door is open.

2.7 RS-485

An RS-485 terminal lets you easily connect multiple telephone, card access and elevator restriction controllers across a network. The RS-485 connection is situated at the bottom middle of the main controller board and consists of two separate terminals, each for an input and output. See figure 10.

Connect the RS-485 input terminal to the RS-485 output terminal of another controller. See figure 10.

On boards with the model number MD-10xx, you can close JW5 on the first and last controllers instead of using end-of-line 120 Ω resistors. See section 2.4.4 on page 15.

If there are problems with RS-485 communication, close both JW9 and JW10 on either the first **or** last controller connected by RS-485.

Note: Use twisted shielded pair.

Recommended cables:

- RS485 cables
  - Belden 3109A RS-485, (4 pr) 22 AWG (7x30) or equivalent
  - Belden 9842 RS-485, (2 pr) 24 AWG (7x32) or equivalent
  - Belden 9841 RS-485, (1 pr) 24 AWG (7x32) or equivalent
- CAT5 Cables
  - Belden 72001E ETHERNET Cat 5e 2 Pair, 24 AWG or equivalent
  - Belden 70006E Cat 5e, 100Mb/s, Quad, AWG 22 (1) or equivalent

Maximum total length:

- 4000 feet (1244 m) for 22 AWG
- 2500 feet (762.5 m) for 24 AWG

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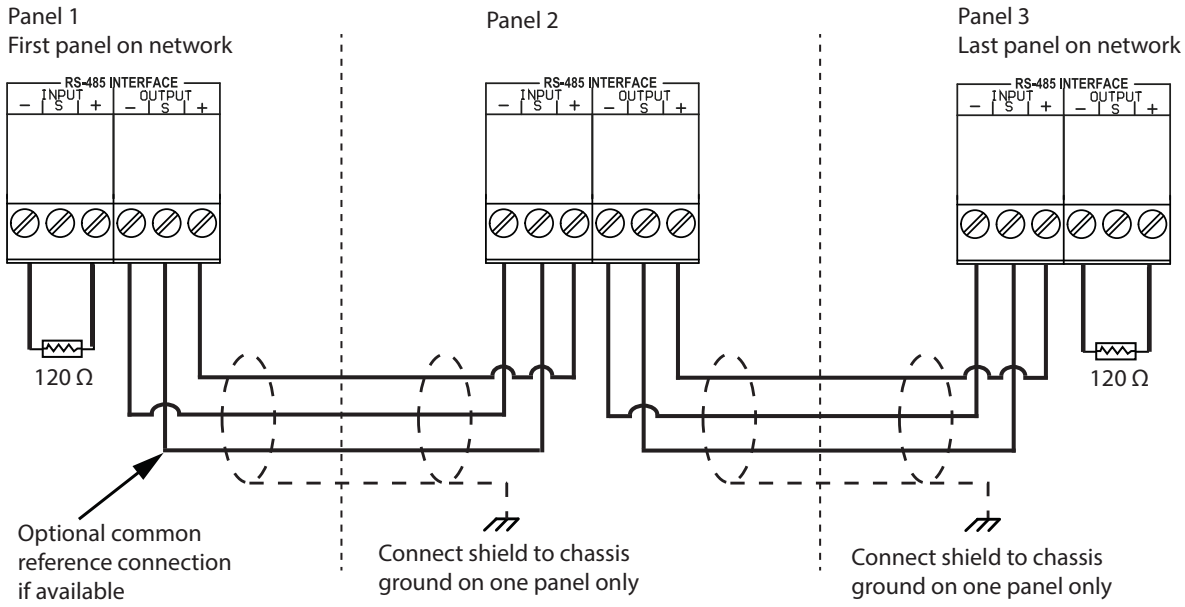

Figure 10. RS-485 Wiring

2.8 Setting the RS-485 Address

Use DIP switches 1-6 to set the RS-485 network address. The individual switches are numbered 1 to 8 from left to right, and are marked as either ON or OFF. The first six switches (1, 2, 3, 4, 5 and 6) set the address.

Every TX3 Emergency Phone requires a unique address. The address settings do not need to be in sequence but it is recommended to assign addresses starting from 1, using increments of one (for example, 1, 2, 3, 4, and so on). Do not duplicate addresses.

Note: You must set the address even if you are not using RS-485.

One of the networked units with a real time clock, such as Touch Screen, Emergency Phone or Card Access must have their network address set to 1.

DIP switch SW1 is located at the top central portion of the controller board. See Figure 4 on page 14.

Table 1 shows the SW1 DIP switch settings for each Emergency Phone.

Note: DIP switch 7 is not used and must be left OFF.

Note: For units with and IP Module installed, DIP Switch 8 determines how the IP address is assigned to the IP Module.

- **DIP Switch 8 OFF:** The IP address is assigned using a DHCP server. This is the default factory setting.
- **DIP switch 8 ON:** The IP address is assigned using the TX3 Configurator software.

Table 1: Emergency Phone SW1 DIP Switch Settings

Emergency Phone Unit ID #	Switch 1	Switch 2	Switch 3	Switch 4	Switch 5	Switch 6
0 (not allowed as ID 0 is used for PC ID)	OFF	OFF	OFF	OFF	OFF	OFF
1	ON	OFF	OFF	OFF	OFF	OFF
2	OFF	ON	OFF	OFF	OFF	OFF
3	ON	ON	OFF	OFF	OFF	OFF
4	OFF	OFF	ON	OFF	OFF	OFF
5	ON	OFF	ON	OFF	OFF	OFF
6	OFF	ON	ON	OFF	OFF	OFF
7	ON	ON	ON	OFF	OFF	OFF
8	OFF	OFF	OFF	ON	OFF	OFF
9	ON	OFF	OFF	ON	OFF	OFF
10	OFF	ON	OFF	ON	OFF	OFF
11	ON	ON	OFF	ON	OFF	OFF
12	OFF	OFF	ON	ON	OFF	OFF
13	ON	OFF	ON	ON	OFF	OFF
14	OFF	ON	ON	ON	OFF	OFF
15	ON	ON	ON	ON	OFF	OFF
16	OFF	OFF	OFF	OFF	ON	OFF
17	ON	OFF	OFF	OFF	ON	OFF
18	OFF	ON	OFF	OFF	ON	OFF
19	ON	ON	OFF	OFF	ON	OFF
20	OFF	OFF	ON	OFF	ON	OFF
21	ON	OFF	ON	OFF	ON	OFF
22	OFF	ON	ON	OFF	ON	OFF
23	ON	ON	ON	OFF	ON	OFF
24	OFF	OFF	OFF	ON	ON	OFF
25	ON	OFF	OFF	ON	ON	OFF
26	OFF	ON	OFF	ON	ON	OFF
27	ON	ON	OFF	ON	ON	OFF

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Table 1: Emergency Phone SW1 DIP Switch Settings

Emergency Phone Unit ID #	Switch 1	Switch 2	Switch 3	Switch 4	Switch 5	Switch 6
28	OFF	OFF	ON	ON	ON	OFF
29	ON	OFF	ON	ON	ON	OFF
30	OFF	ON	ON	ON	ON	OFF
31	ON	ON	ON	ON	ON	OFF
32	OFF	OFF	OFF	OFF	OFF	ON
33	ON	OFF	OFF	OFF	OFF	ON
34	OFF	ON	OFF	OFF	OFF	ON
35	ON	ON	OFF	OFF	OFF	ON
36	OFF	OFF	ON	OFF	OFF	ON
37	ON	OFF	ON	OFF	OFF	ON
38	OFF	ON	ON	OFF	OFF	ON
39	ON	ON	ON	OFF	OFF	ON
40	OFF	OFF	OFF	ON	OFF	ON
41	ON	OFF	OFF	ON	OFF	ON
42	OFF	ON	OFF	ON	OFF	ON
43	ON	ON	OFF	ON	OFF	ON
44	OFF	OFF	ON	ON	OFF	ON
45	ON	OFF	ON	ON	OFF	ON
46	OFF	ON	ON	ON	OFF	ON
47	ON	ON	ON	ON	OFF	ON
48	OFF	OFF	OFF	OFF	ON	ON
49	ON	OFF	OFF	OFF	ON	ON
50	OFF	ON	OFF	OFF	ON	ON
51	ON	ON	OFF	OFF	ON	ON
52	OFF	OFF	ON	OFF	ON	ON
53	ON	OFF	ON	OFF	ON	ON
54	OFF	ON	ON	OFF	ON	ON
55	ON	ON	ON	OFF	ON	ON
56	OFF	OFF	OFF	ON	ON	ON
57	ON	OFF	OFF	ON	ON	ON
58	OFF	ON	OFF	ON	ON	ON
59	ON	ON	OFF	ON	ON	ON
60	OFF	OFF	ON	ON	ON	ON
61	ON	OFF	ON	ON	ON	ON
62	OFF	ON	ON	ON	ON	ON
63	ON	ON	ON	ON	ON	ON

2.9 Connect the Optional Strobe

See Chapter 4 on page 38 for information on how the strobe is programmed.

1. Connect the strobe's + wire to the + terminal of the Camera Supply.
2. Connect the strobe's - wire to the NO terminal of Output 4 at the top of the board.
3. Connect the C terminal of Output 4 to the - terminal of the Camera Supply with 22 AWG wire.

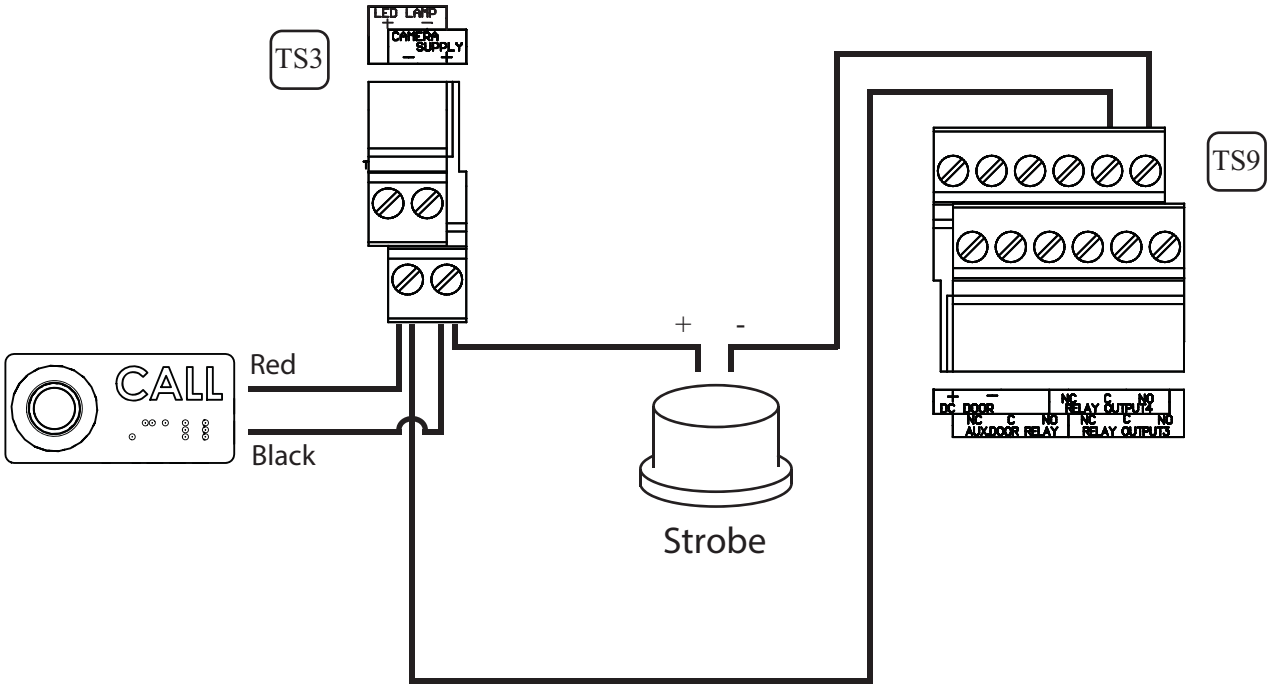

Figure 11. Connecting the optional strobe

2.10 Grounding

Grounding reduces the risk of electrical shock by providing an alternate escape route for the electrical current. A missing ground can also affect audio quality. The Emergency Phone is equipped with a 16 gauge electrical wire attached to the panel chassis ground post as shown in Figure 12.

To ground the Emergency Phone, attach one end of the supplied cable to a suitable grounding wire and connect it to the site ground.

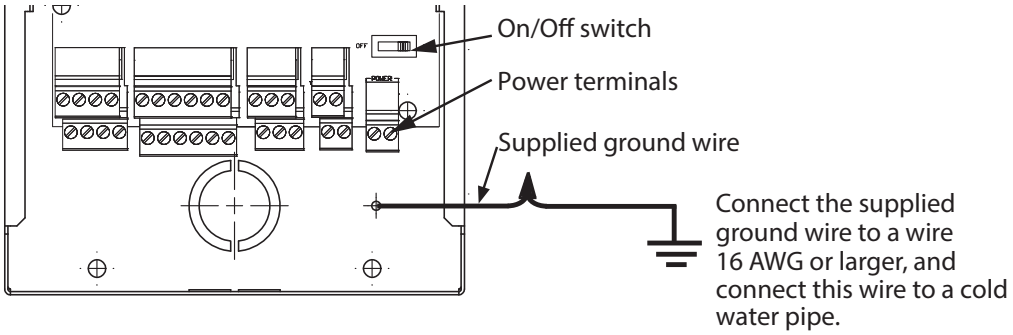

Figure 12. Grounding

2.11 Connect the Power

Note: Install all transformers outside the Emergency Phone enclosure.

The power supply connection is situated at the bottom right of the main controller board and receives 16 VAC, 40 VA. An external PS-4 or PS-4P plug-in transformer connects to the power terminals.

1. Make sure that the On/Off Switch is set to Off.
2. Connect the PS-4P power supply wires to the power terminals as shown in Figure 13.
3. Plug the PS-4P power supply into the AC power.
4. Switch the On/Off Switch to On.

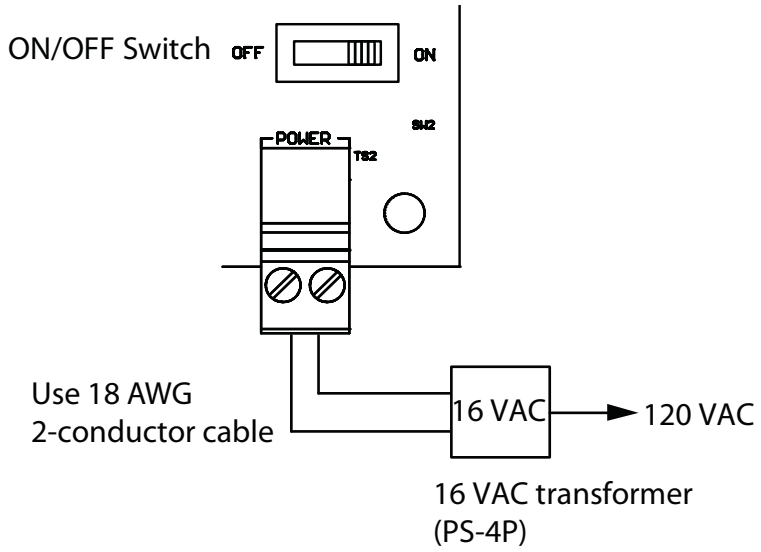

Figure 13. Connecting the PS-4P power supply

2.12 Installing the Heater

For temperatures where the Emergency Phone operates below 0°C (32°F) at any time, a heater must be installed inside the enclosure as shown in Figure 14.

For additional information refer to LT-653 TH-102 Heater Installation Instructions.

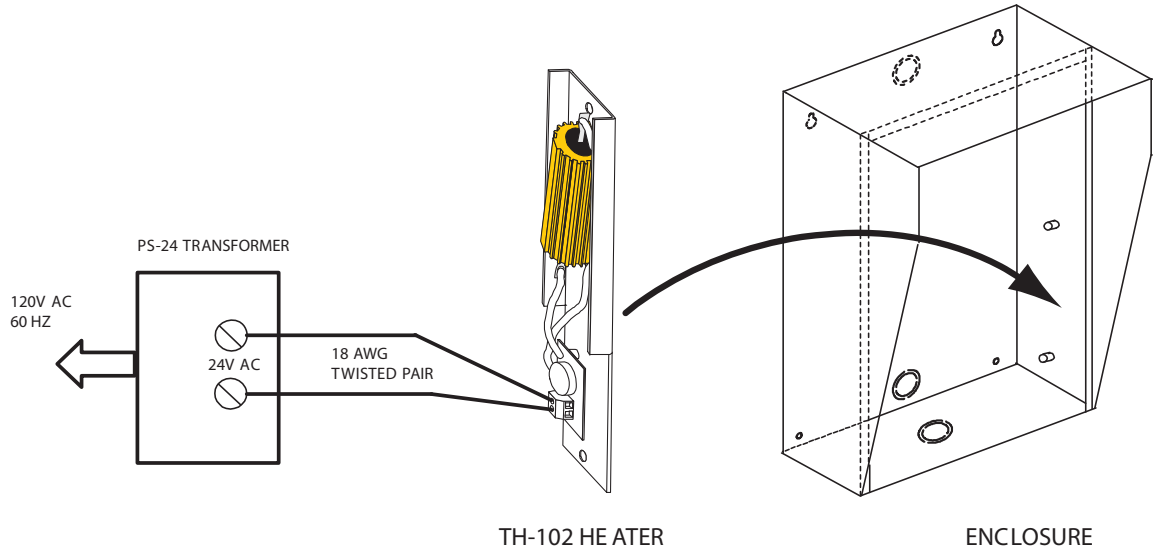

Figure 14. Heater TH-102 Installation Location

To install the heater

1. Place the TH-102 Heater into the bottom right-hand corner of the enclosure and secure using the two supplied spacers and two hex nuts.

2. Connect the TH-102 heater to the PS-24 Transformer 24 VAC terminal screws using a pair of #18 AWG wires.

Note: The transformer must be installed outside the enclosure.

2.13 Installing the Optional MD-921 IP Module

The MD-921 IP Module connects the Emergency Phone to an Ethernet TCP/IP network. The MD-921 IP Module ribbon cable connects to the P5 connector on the controller board (see Figure 4 on page 14). This allows you to configure and monitor the TX3 devices on your system using a computer and an Ethernet connection.

The IP Module has an RJ-45 connector that connects to the Ethernet network using a standard Ethernet cable as shown in Figure 15.

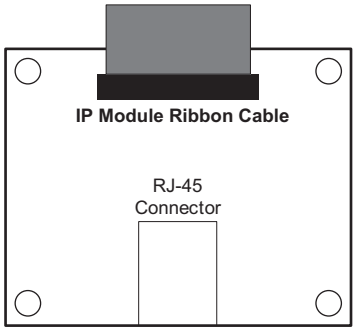

Figure 15. IP Module Data and Ethernet Connectors

For a description on how to install the IP Module, see LT-1161 MD-921 IP Module Installation Instructions.

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2.14 Installing the Optional Guard Phone Module

The TX3-GPM Guard Phone Module mounts above the Emergency Phone main board on the top left hand side. See Figure 4 on page 14.

The module has two connectors, an RJ-11 connector and a ribbon cable as shown in Figure 16.

The TX3-GPM ribbon cable connects to the P7 connector on the Emergency Phone main board. The guard phone uses a telephone cable to connect to the RJ-11 connector.

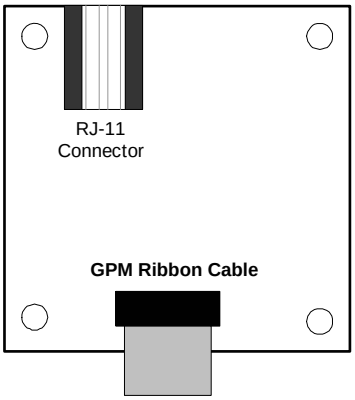

Figure 16. Guard Phone Module

For a description on how to install the modem board see LT-972 Guard Phone Manual Installation Instructions.

2.15 Using the Guard Phone

The Guard phone is an auxiliary phone that plugs into the RJ-11 connector on the Guard Phone Module on the Emergency Phone. This phone provides most of the same features as a normal telephone and lets you do the following:

- Place calls to the Emergency Phone.
- Receive calls from the Emergency Phone.
- Place calls to residents.

To call the Emergency Phone

1. Pick up the guard phone, wait for the dial tone and dial `*9997`. The guard phone connects to the Emergency Phone.

2. Press the # key on the guard phone. The main door unlocks.

To receive a call from the Emergency Phone

1. When a visitor dials `9997` on the Emergency Phone the guard phone rings. Pick up the phone. The Emergency Phone is now connected to the guard phone.

2. Press the # key on the guard phone. The main door unlocks.

To call a resident from the guard phone

1. Pick up the guard phone and wait for the dial tone.

2. Dial `*DDDD` (where DDDD is the resident's four digit dial code). The resident phone rings. When the resident picks up the phone, the connection is established.

3. Press the # key on the guard phone. The main door unlocks.

2.16 Updating Firmware

You can update the firmware on your panel with the TX3 Configurator software by using one of the following methods.

- Firmware Upgrade Wizard
- Network Firmware Upgrade

The Firmware Upgrade Wizard can be used to update only one panel at a time. It will work on any panel. This method does not work on 64-bit versions of Windows.

The Network Firmware Upgrade procedure can update more than one panel at the same time. In order to use the Network Firmware Upgrade, all of the panels must already have firmware that supports this feature installed on them.

Refer to LT-995, TX3 Configuration and Administrator Manual, for instructions on how to perform both of these firmware upgrade methods. LT-995 can be found on the TX3 Configurator Software installation CD, USB flash drive, or on the Mircom website.

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3 Connecting

This chapter provides instructions on connecting a computer to the Emergency Phone in order to program it. For detailed instructions on using the Configurator, see LT-995.

This chapter explains

- PC System Requirements
- Install the Configurator
- Connect to the Emergency Phone

3.1 PC System Requirements

For the PC based Configurator the minimum system requirements are:

- Windows 8
- Windows 7 (32 bit)
- Windows XP SP2
- 512 MB RAM
- 1 GHZ CPU
- 600M disk space
- 1 USB port

Note: Firmware upgrade is not supported on 64-bit systems.

3.2 Install the Configurator

The TX3 Configurator lets you program the Emergency Phone.

To install the Configurator

From the USB disk, run `TX3-Config`, and follow the instructions.

3.3 Connect to the Emergency Phone

To connect the computer to the Emergency Phone

1. Connect the computer to the TX3 network, or to the Emergency Phone directly with:

- a USB cable from the computer to P4 on the controller board (see Figure 4 on page 14).
- an Ethernet TCP/IP connection (the Emergency Phone must have the TX3-IP module).

2. If you have an existing TX3 network, go to section 3.3.1 on page 33. If you have one or more Emergency Phones, go to section 3.3.2 on page 34.

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3.3.1 Connect to an existing TX3 network

1. Open the TX3 Configurator.
2. Open the job for your network.
3. Click `Edit` > `Add Panel`.

   The Add Panel window appears.

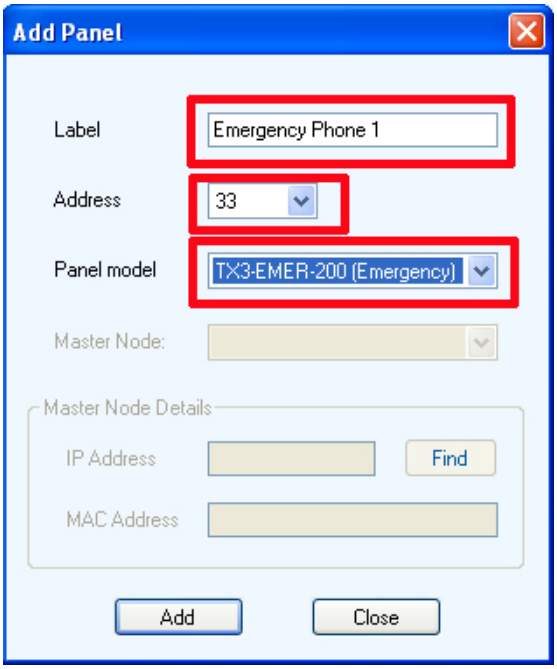

Figure 17. Add Panel

4. In the `Label` field, type a name for the Emergency Phone.
5. In the Address menu, select the RS-485 address of the Emergency Phone. See Section 2.8 on page 21 for instructions on setting the RS-485 address.
6. In the Panel Model menu, select the model of the Emergency Phone.
7. Click `Add`, and then click `Close`.

   The Emergency Phone appears in the Job tree on the left.
8. Send the job to the TX3 network.
9. Go to Chapter 4 on page 38 for instructions on programming the Emergency Phone.

3.3.2 Connect to one or more Emergency Phones

If you do not have an existing TX3 network and you are connecting to one or more networked Emergency Phone, follow these instructions.

You must:

1. Create a new job
2. Delete the panel
3. Add the Emergency Phone
4. Connect to the Emergency Phone

Follow the instructions below to complete these steps.

To create a new job

1. Open the TX3 Configurator.
2. Click `File > New Job`.

   The Create New Job window appears.

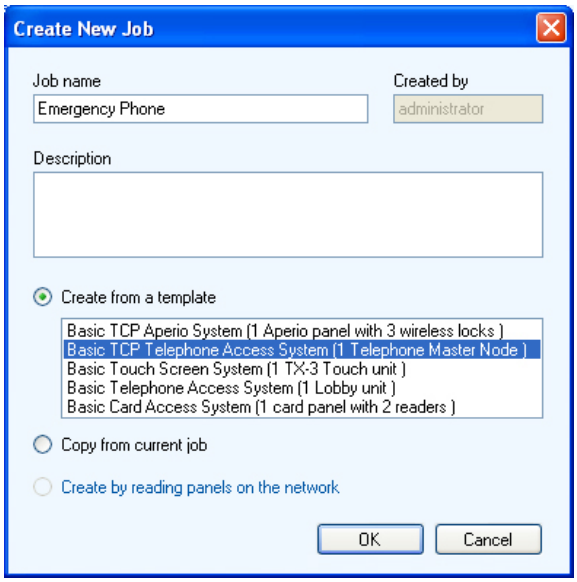

Figure 18. Create New Job

3. Type a name and description for your job. The description is optional.
4. Under `Create from a template`, select `Basic TCP Telephone Access System`.

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5. Click OK.

The Job tree on the left shows the job that you just created.

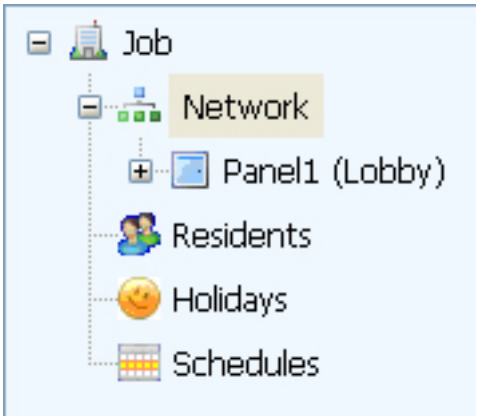

Figure 19. New Job

Delete the panel

Right-click the panel in the Job tree, and then click Delete. Click Yes to confirm.

Note: When you create a job, a panel is automatically added. The panels in your job must match the panels that you are connecting to. Since you are connecting to one Emergency Phone, you must delete the current panel, and then add an Emergency Phone.

Add the Emergency Phone

1. Click Edit, and then click Add Panel.

The Add Panel window appears.

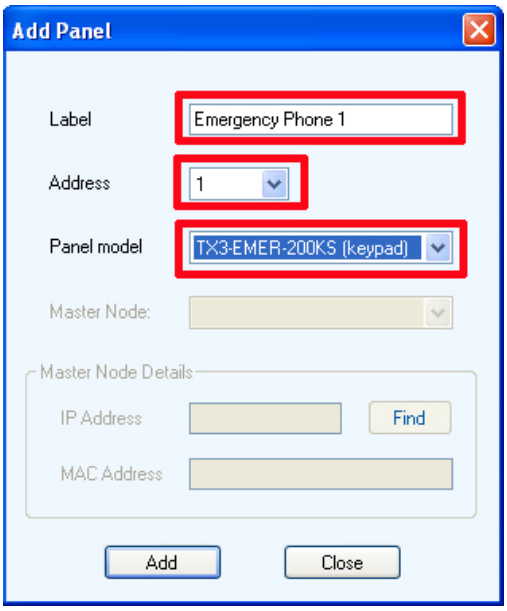

Figure 20. Add Panel

2. In the `Label` field, type the name of the panel, for instance `Emergency Phone 1`.

3. In the `Address` menu, select the RS-485 address of the Emergency Phone that you are connecting to. See Section 2.8 on page 21 for instructions on setting the RS-485 address.

4. In the `Panel Model` menu, select the model of Emergency Phone that you are connecting to.

5. Click `Add` in the Add Panel window, then click `Close` in the Add Panel window.

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The Job tree on the left shows the Emergency Phone that you just added.

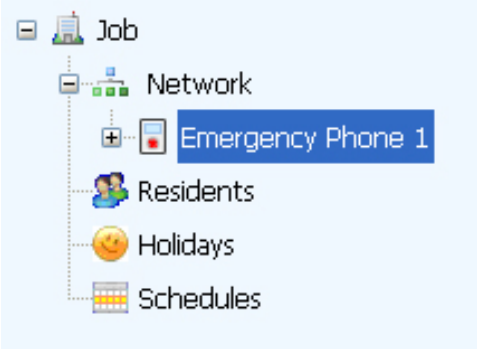

Figure 21. New Job with Emergency Phone

6. Repeat steps 1-5 for each Emergency Phone on the network.

Connect to the Emergency Phone

1. Select `Network` in the job tree.
2. In the Network Configuration window, select the method that you are using to connect the computer to the Emergency Phone.
3. Click the `Connect` button.
4. Look for the message that the panel or panels are online in the `Online Events` pane at the bottom of the window.

Figure 22. Online Events

5. Go to Chapter 4 on page 38 for instructions on programming the Emergency Phone.

4 Programming

The Emergency Phone functions like a lobby control unit in the Configurator. See LT-995 on the USB disk or Mircom website for instructions on configuring a lobby control unit.

This chapter discusses the inputs, outputs, and correlations that are specific to the Emergency Phone.

This chapter explains

- Inputs and Outputs
- Correlations
- Program the Buttons
- Program the Emergency Phone from the Keypad
- Dial from the Keypad

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4.1 Inputs and Outputs

The Emergency Phone has 5 inputs and 4 outputs. Inputs 4 and 5, and Output 1, are wired to the following components:

- Input 4: Emergency Call Button
- Input 5: Operator Call Button
- Output 4: Strobe (optional)

4.2 Correlations

The Configurator has four default correlations.

- Input 4 (the Emergency Call Button) calls dial code 9991.
- Input 5 (the Operator Call Button) calls dial code 9992.
- Output 4 (the strobe) flashes when the Emergency Call Button is in use.
- Output 4 (the strobe) stops flashing when the call is finished.

4.3 Program the Buttons

Dial codes 9991 and 9992 are codes used by the Emergency Phone. You must link these codes with real telephone numbers (or SIP IDs if you are using a VoIP modem).

To program the Emergency Call Button

1. Connect to the Emergency Phone. See Chapter 3 on page 31.
2. In the Job tree, click `Residents`.
3. Double-click `Emer Red Buttn`.

The details for the Emergency Call Button appear.

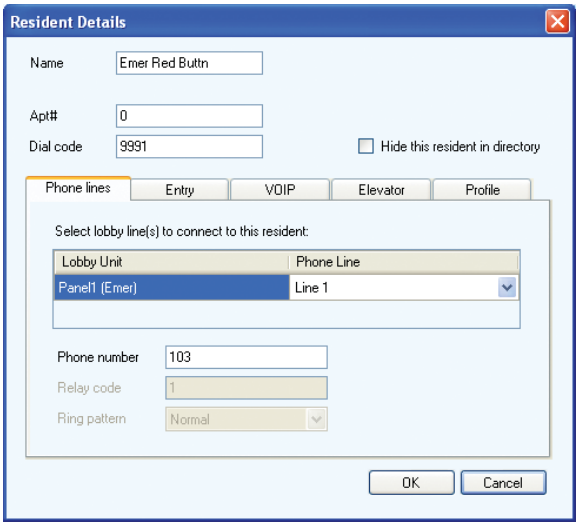

Figure 23. Emergency Call Button

4. In the `Phone number` field, type the phone number that the Emergency Call Button should dial (or SIP ID if you are using a VoIP modem).
5. Click `OK`.
6. Click the `Send` button 

to send the job to the Emergency Phone.

To program the Operator Call Button

1. Connect to the Emergency Phone. See Chapter 3 on page 31.
2. In the Job tree, click `Residents`.
3. Double-click `Emer Call Buttn`.

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4. The details for the Operator Call Button appear.

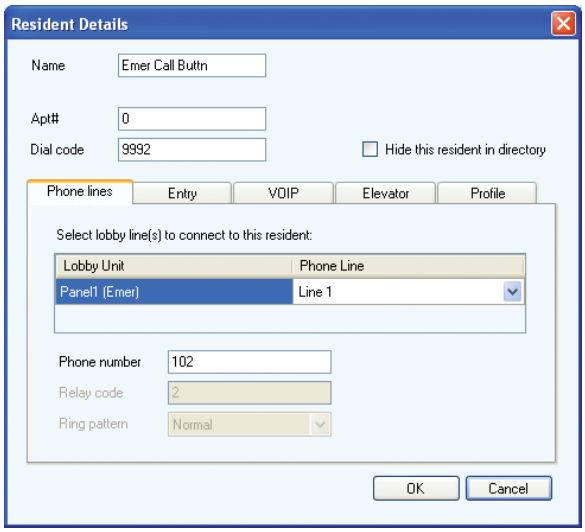

Figure 24. Operator Call Button

5. In the `Phone number` field, type the phone number that the Operator Call Button should dial (or SIP ID if you are using a VoIP modem).

6. Click `OK`.

7. Click the `Send` button 

to send the job to the Emergency Phone.

4.4 Program the Emergency Phone from the Keypad

You can program the Emergency Phone model TX3-EMER-200KS from the keypad. See LT-979 on the USB disk or Mircom website for details.

4.5 Dial from the Keypad

You can dial the numbers from the keypad instead of pressing the Emergency Call Button or the Operator Call Button.

To dial the Emergency Call Button from the keypad

1. Dial `9 9 9 1` on the keypad, and then press the telephone key. 

2. Press the star key to hang up. 

To dial the Operator Call Button from the keypad

1. Dial `9 9 9 2` on the keypad, and then press the telephone key. 
2. Press the star key to hang up. 

5 TX3 System

This chapter provides information about the TX3 System and its use.

This chapter explains

- TX3 System
- Single Emergency Phone
- Dual Emergency Phones
- Multiple Emergency Phones
- Networking TX3 Panels

5.1 TX3 System

The TX3 Emergency Phone can be networked with a combination of card access units and lobby control units through a peer-to-peer RS-485 connection.

The TX3 system is capable of providing ADC telephone access from a single panel or from a networked system. The Auto Dialler Controller (ADC) uses the existing outside telephone lines to call residents. Each outside telephone line requires a separate line to the entry control panel.

The following figures depict various TX3 network scenarios.

Note: Install all transformers outside the Emergency Phone enclosure.

All wiring is a maximum length of 1000 ft (304.8 m). The RS-485 wiring maximum length is 4000 ft (1219.2 m).

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5.2 Single Emergency Phone

Figure 25 shows the simplest configuration.

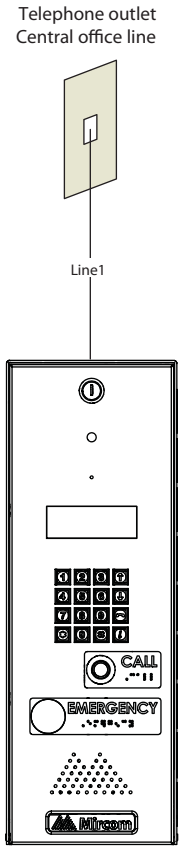

Figure 25. Single Emergency Phone

Figure 26 shows the various inputs to and outputs from the panel.

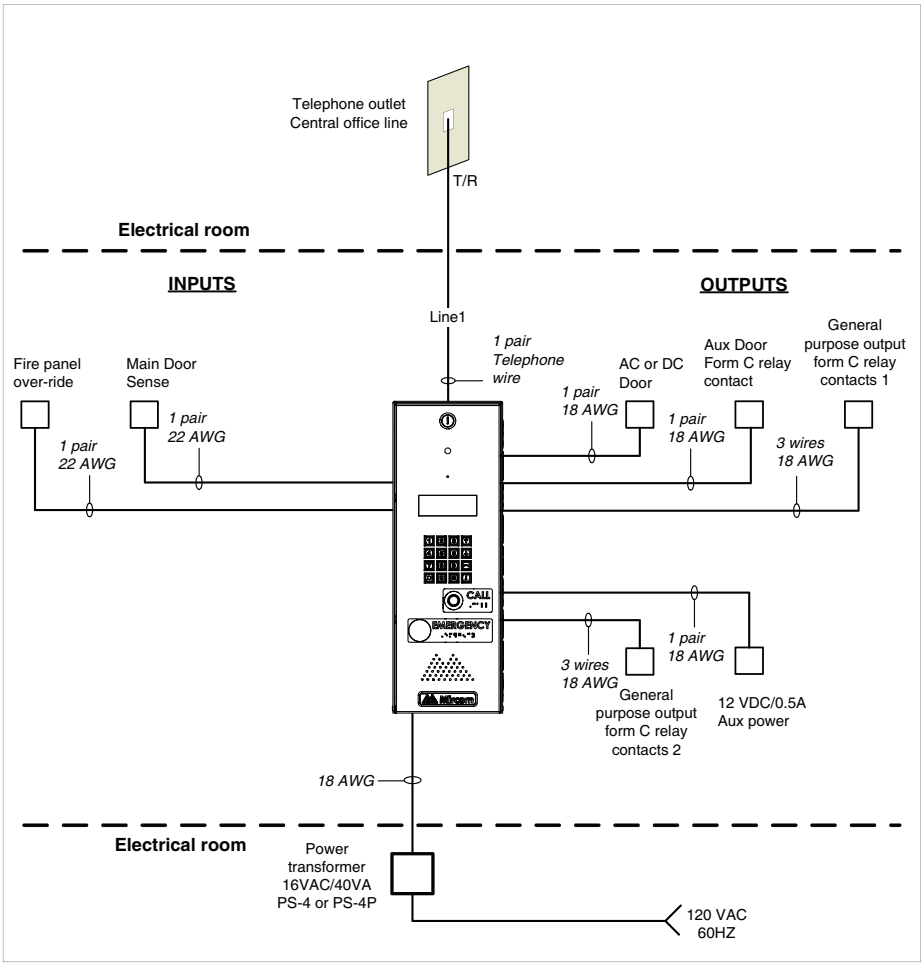

Figure 26. Single Entrance System Wiring

5.3 Dual Emergency Phones

Figure 27 shows a dual entry application. The phone line is shared by both Emergency Phones.

The Emergency Phone senses whether the line in use. If one of the Emergency Phones is in use and the user tries to make a call, the other Emergency Phone indicates that the line is in use.

The RS-485 network connection is optional and is only required if the user decides to connect a PC Configurator on one of the panels to configure and/or monitor both systems.

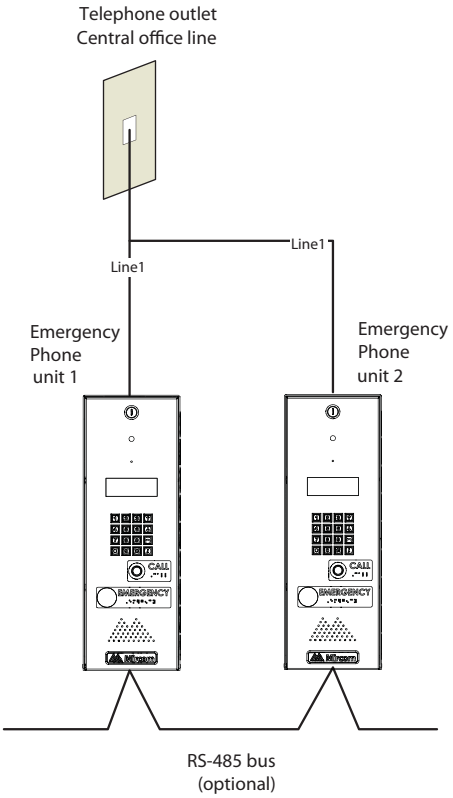

Figure 27. Dual Emergency Phones

5.4 Multiple Emergency Phones

Figure 28 shows a configuration of many Emergency Phones to one phone line.

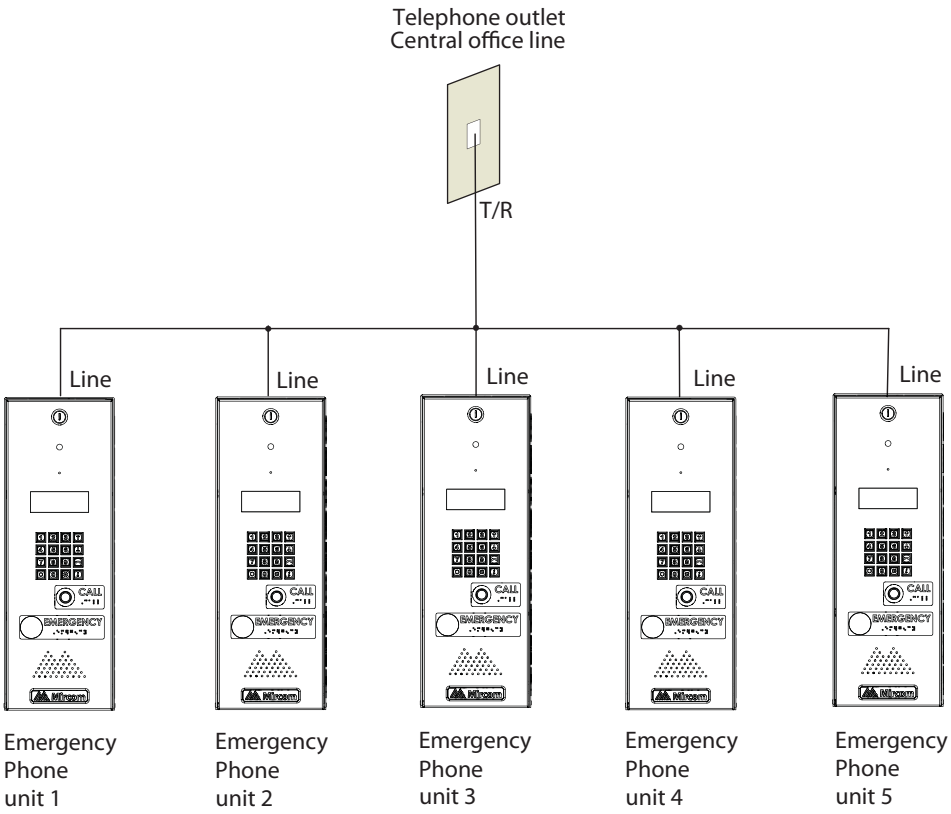

Figure 28. Many Emergency Phones to One Line

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5.5 Networking TX3 Panels

Mircom devices such as the Emergency Phone, lobby control unit, the card access unit, and the Touch Screen can be networked with the TX3 system through a peer-to-peer RS-485 network, an Ethernet TCP/IP network, or a combination of Ethernet and RS-485 networks.

The TX3 Configurator software can connect to any of these network configurations. How you connect to the network (that is, through TCP/IP, USB, a modem, or the COM port) determines what devices you can configure on the network using the TX3 Configurator. The different network configurations are explained in the rest of this section.

Figure 29 shows a configuration with TX3 controllers connected on an RS-485 network. Each controller has to have a unique network address on the RS-485 network. Up to 63 unique network addresses can be assigned. If you connect to any device on the RS-485 network (using USB, a modem, or the COM port), you can also connect to and configure any other device on the RS-485 network using the TX3 Configurator.

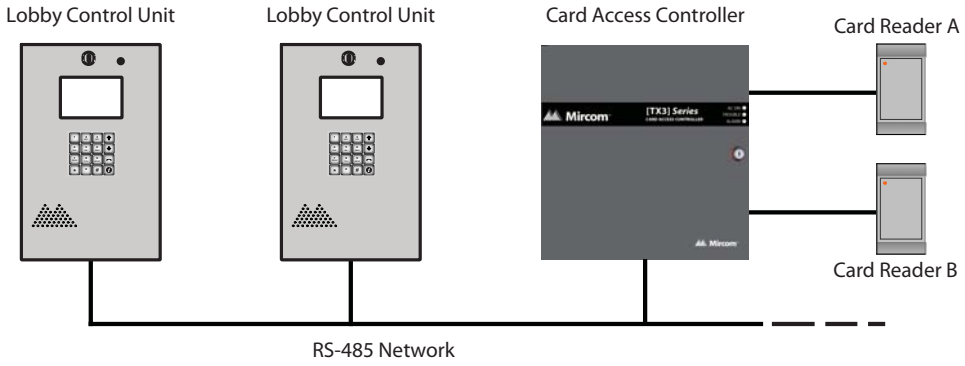

Figure 29. TX3 devices on an RS-485 network.

Figure 30 shows a configuration with TX3 devices connected to an Ethernet TCP/IP network. This configuration removes the 63 device limitation that you have on an RS-485 network. The devices connected to an Ethernet TCP/IP network are called Master Nodes. If you connect to the TCP/IP network with the TX3 Configurator, you can connect to and configure any of the Master Nodes on

the Ethernet TCP/IP network. If you connect directly to one of the Master Nodes using USB, a modem, or a COM port, you will be able to configure that device but not any other device.

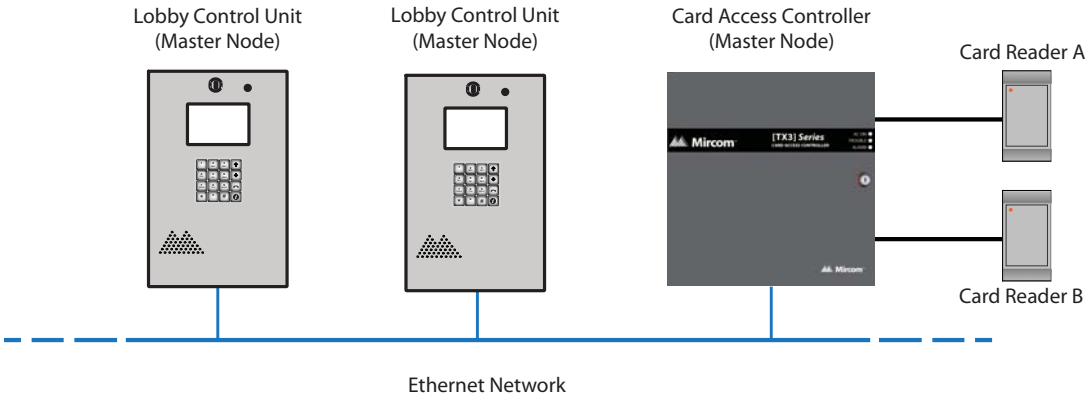

Figure 30. TX3 devices on an Ethernet TCP/IP network.

Notes: In order for a panel to be a Master Node, it must:

- be IP capable. Panels that are IP capable are usually denoted by a "-A" at the end of their model names.
- have a TX3-IP IP Module installed if it is not a Touch Screen.

Figure 31 shows a configuration with TX3 devices connected on both an Ethernet TCP/IP network and on RS-485 subnetworks. Devices connected to a Master Node's RS-485 subnetwork are Slave Nodes to the Master Node. Each RS-485 subnetwork can have up to 63 devices connected to it; you can still have more than 63 Master Nodes connected to the Ethernet network.

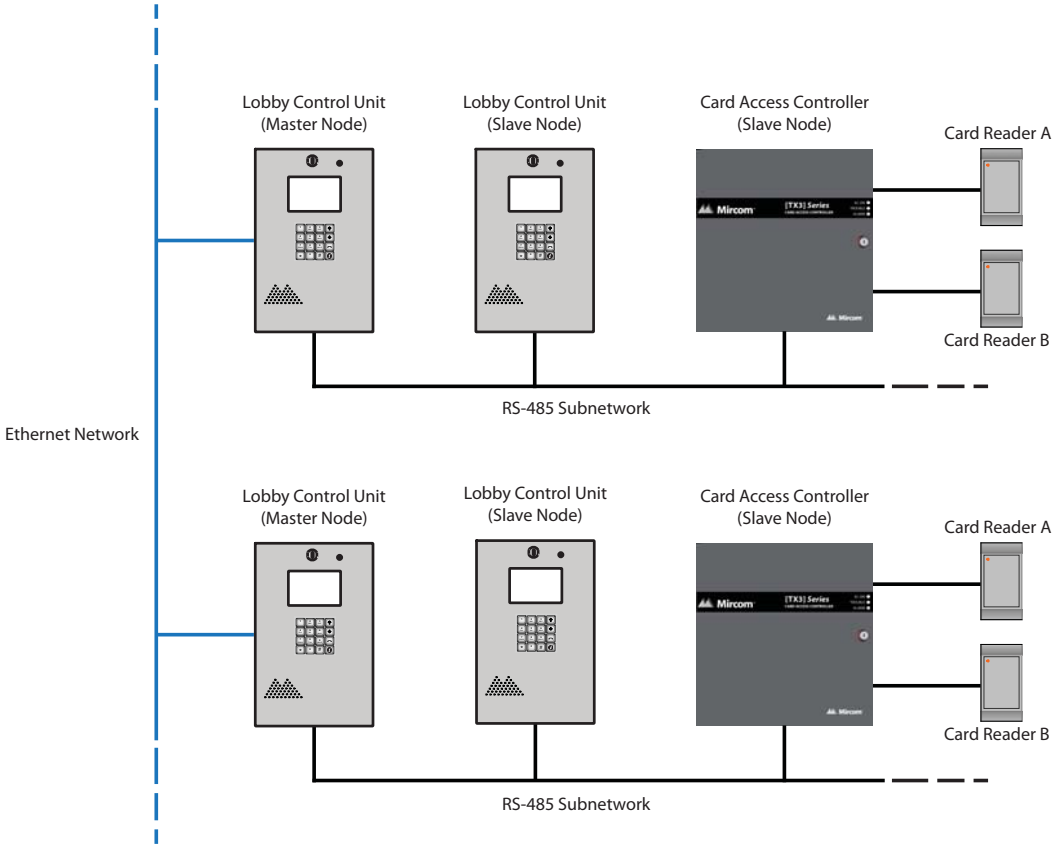

Figure 31. Lobby control units using both Ethernet and RS-485 networks

If you connect to the Ethernet TCP/IP network with the TX3 Configurator, you can configure any of the nodes in this configuration. If you connect directly to a device using USB, a modem, or a COM port, you will only be able to configure devices that are on the same RS-485 subnetwork as that device.

Note: There can only be **one** Master Node on an RS-485 subnetwork. That is, you cannot connect one RS-485 subnetwork to another RS-485 subnetwork.

6 Specifications

6.1 Operating Temperature

50°C (122°F) to -20°C(-4°F).

For temperatures where the Emergency Phone will operate below 0°C (32°F) at any time, install the TH-102K Thermostat Heater within the enclosure.

6.2 Telephone Lines

Use only Loop Start telephones (not ground start), check with your local telephone company.

6.3 AC Power Supply

105 VAC to 128 VAC.

6.4 Power Transformer

Mircom Model PS-4. 16 VAC/ 40 VA, CSA approved Class 2 Power Transformer.

Mircom Model PS-4P. 16 VAC/ 40 VA, CSA approved Class 2 Power Transformer, plug-in.

6.5 Door Strikes

Select the appropriate door strike as required by your system applications. We recommend using the following Mircom door strikes below and its compatible power transformer.

- **Mircom Model M-10**. DC (silent) or AC (buzzing) Door Strike. (Use PS-3B transformer)

Note: The door strike must have its own separate power transformer. Do not tap or use the system power transformers.

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The maximum supply for the AC or DC Input Door Strike must not exceed:

- 28 VAC / 1 A max
- 30 VDC / 1 A max

6.6 Outputs 2-4

Form C relays with these contact ratings:

- 125 VAC / 2 A
- 30 VDC / 1 A

6.7 Modem

Compatible modems are listed below:

- TFM-560U High Speed USB 2.0 Fax Modem
- TFM-561U High Speed USB 2.0 Fax Modem
- Hiro H50113 56K V.92 USB Fax Modem
- StarTech USB56KEM2 56k V.92 USB Fax Modem
- Zoom 56K V.92 56K USB Mini External Fax Modem
- USRobotics USR5639 56K USB Softmodem

6.8 Size

Height: 16 5/8” (422 mm) Width: 5 29/32” (150 mm) Depth: 4 1/2” (114 mm)

6.9 Weight

10.60 lb (4.8081 kg)

Warranty & Warning Information

WARNING!

Please read this document CAREFULLY, as it contains important warnings, life-safety, and practical information about all products manufactured by the Mircom Group of Companies, including Mircom and Secutron branded products, which shall include without limitation all fire alarm, nurse call, building automation and access control and card access products (hereinafter individually or collectively, as applicable, referred to as "Mircom System").

NOTE TO ALL READERS:

1. **Nature of Warnings.** The within warnings are communicated to the reader out of an abundance of caution and create no legal obligation for Mircom Group of Companies, whatsoever. Without limiting the generality of the foregoing, this document shall NOT be construed as in any way altering the rights and obligations of the parties, governed by the legal documents that apply in any given circumstance.

2. **Application.** The warnings contained in this document apply to all Mircom System and shall be read in conjunction with:

   a. the product manual for the specific Mircom System that applies in given circumstances;

   b. legal documents that apply to the purchase and sale of a Mircom System, which may include the company's standard terms and conditions and warranty statements;

   c. other information about the Mircom System or the parties' rights and obligations as may be application to a given circumstance.

3. **Security and Insurance.** Regardless of its capabilities, no Mircom System is a substitute for property or life insurance. Nor is the system a substitute for property owners, renters, or other occupants to act prudently to prevent or minimize the harmful effects of an emergency situation. Building automation systems produced by the Mircom Group of Companies are not to be used as a fire, alarm, or life-safety system.

NOTE TO INSTALLERS:

All Mircom Systems have been carefully designed to be as effective as possible. However, there are circumstances where they may not provide protection. Some reasons for system failure include the following. As the only individual in contact with system users, please bring each item in this warning to the attention

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of the users of this Mircom System. Failure to properly inform system end-users of the circumstances in which the system might fail may result in over-reliance upon the system. As a result, it is imperative that you properly inform each customer for whom you install the system of the possible forms of failure:

4. **Inadequate Installation.** All Mircom Systems must be installed in accordance with all the applicable codes and standards in order to provide adequate protection. National standards require an inspection and approval to be conducted by the local authority having jurisdiction following the initial installation of the system and following any changes to the system. Such inspections ensure installation has been carried out properly.

5. **Inadequate Testing.** Most problems that would prevent an alarm a Mircom System from operating as intended can be discovered by regular testing and maintenance. The complete system should be tested by the local authority having jurisdiction immediately after a fire, storm, earthquake, accident, or any kind of construction activity inside or outside the premises. The testing should include all sensing devices, keypads, consoles, alarm indicating devices and any other operational devices that are part of the system.

NOTE TO USERS:

All Mircom Systems have been carefully designed to be as effective as possible. However, there are circumstances where they may not provide protection. Some reasons for system failure include the following. The end user can minimize the occurrence of any of the following by proper training, testing and maintenance of the Mircom Systems:

6. **Inadequate Testing and Maintenance.** It is imperative that the systems be periodically tested and subjected to preventative maintenance. Best practices and local authority having jurisdiction determine the frequency and type of testing that is required at a minimum. Mircom System may not function properly, and the occurrence of other system failures identified below may not be minimized, if the periodic testing and maintenance of Mircom Systems is not completed with diligence and as required.

7. **Improper Operation.** It is important that all system users be trained in the correct operation of the alarm system and that they know how to respond when the system indicates an alarm. A Mircom System may not function as intended during an emergency situation where the user is unable to operate a panic or emergency switch by reason of permanent or temporary physical disability, inability to reach the device in time, unfamiliarity with the correct operation, or related circumstances.

8. **Insufficient Time.** There may be circumstances when a Mircom System will operate as intended, yet the occupants will not be protected from the emergency due to their inability to respond to the warnings in a timely manner. If the system is monitored, the response may not occur in time enough to protect the occupants or their belongings.

9. **Carelessness or Safety Hazards.** Moreover, smoke detectors may not provide timely warning of fires caused by carelessness or safety hazards such as smoking in bed, violent explosions, escaping gas, improper storage of flammable materials, overloaded electrical circuits or children playing with matches or arson.

10. **Power Failure.** Some Mircom System components require adequate electrical power supply to operate. Examples include: smoke detectors, beacons, HVAC, and lighting controllers. If a device operates only by AC power, any interruption, however brief, will render that device inoperative while it does not have power. Power interruptions of any length are often accompanied by voltage fluctuations which may damage Mircom Systems or other electronic equipment. After a power interruption has occurred, immediately conduct a complete system test to ensure that the system operates as intended.

11. **Battery Failure.** If the Mircom System or any device connected to the system operates from batteries it is possible for the batteries to fail. Even if the batteries have not failed, they must be fully charged, in good condition, and installed correctly. Some Mircom Systems use replaceable batteries, which have a limited life-span. The expected battery life is variable and in part dependent on the device environment, usage and type. Ambient conditions such as high humidity, high or low temperatures, or large temperature fluctuations may reduce the expected battery life. Moreover, some Mircom Systems do not have a battery monitor that would alert the user in the event that the battery is nearing its end of life. Regular testing and replacements are vital for ensuring that the batteries function as expected, whether or not a device has a low-battery monitor.

12. **Physical Obstructions.** Motion sensors that are part of a Mircom System must be kept clear of any obstacles which impede the sensors' ability to detect movement. Signals being communicated by a Mircom System may not reach the receiver if an item (such as metal, water, or concrete) is placed on or near the radio path. Deliberate jamming or other inadvertent radio signal interference can also negatively affect system operation.

13. **Wireless Devices Placement Proximity.** Moreover all wireless devices must be a minimum and maximum distance away from large metal objects, such as refrigerators. You are required to consult the specific Mircom System manual and application guide for any maximum distances required between devices and suggested placement of wireless devices for optimal functioning.

14. **Failure to Trigger Sensors.** Moreover, Mircom Systems may fail to operate as intended if motion, heat, or smoke sensors are not triggered.

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a. Sensors in a fire system may fail to be triggered when the fire is in a chimney, walls, roof, or on the other side of closed doors. Smoke and heat detectors may not detect smoke or heat from fires on another level of the residence or building. In this situation the control panel may not alert occupants of a fire.

b. Sensors in a nurse call system may fail to be triggered when movement is occurring outside of the motion sensors' range. For example, if movement is occurring on the other side of closed doors or on another level of the residence or building the motion detector may not be triggered. In this situation the central controller may not register an alarm signal.

15. **Interference with Audible Notification Appliances.** Audible notification appliances may be interfered with by other noise sources such as stereos, radios, televisions, air conditioners, appliances, or passing traffic. Audible notification appliances, however loud, may not be heard by a hearing-impaired person.

16. **Other Impairments.** Alarm notification appliances such as sirens, bells, horns, or strobes may not warn or waken a sleeping occupant if there is an intervening wall or door. It is less likely that the occupants will be alerted or awakened when notification appliances are located on a different level of the residence or premise.

17. **Software Malfunction.** Most Mircom Systems contain software. No warranties are provided as to the software components of any products or stand-alone software products within a Mircom System. For a full statement of the warranties and exclusions and limitations of liability please refer to the company's standard Terms and Conditions and Warranties.

18. **Telephone Lines Malfunction.** Telephone service can cause system failure where telephone lines are relied upon by a Mircom System. Alarms and information coming from a Mircom System may not be transmitted if a phone line is out of service or busy for a certain period of time. Alarms and information may not be transmitted where telephone lines have been compromised by criminal tampering, local construction, storms or earthquakes.

19. **Component Failure.** Although every effort has been made to make this Mircom System as reliable as possible, the system may fail to function as intended due to the failure of a component.

20. **Integrated Products.** Mircom System might not function as intended if it is connected to a non-Mircom product or to a Mircom product that is deemed non-compatible with a particular Mircom System. A list of compatible products can be requested and obtained.

Warranty

Purchase of all Mircom products is governed by:

https://www.mircom.com/product-warranty

https://www.mircom.com/purchase-terms-and-conditions

https://www.mircom.com/software-license-terms-and-conditions

Special Notices

Product Model Number: TX3

AC REN (U.S.): 0.0B

AC REN (CANADA): 0.0

Complies With

Federal Communications Commission (FCC):

- TIA-968-A Technical requirement for connection of equipment tot he telephone network.
- CFR 47, Part 15, Subpart B, Class B
- Unintentional Radiators

Industry Canada (IC):

- Terminal attachment programme
- CS-03, Issue 8 - Certification Specifications
- ICES-003, ISSUE 4, CLASS B
- Verification Authorization - Digital Apparatus

Registration Numbers

FCC (U.S.): 1M8TE00BTX3

IC (Canada): 1156A-TX3

Industry Canada Notice for all TX3 Products Sold in Canada

The Industry Canada label identifies certified equipment. This certification means that the equipment meets certain telecommunications network protective, operational, and safety requirements. Industry Canada does not guarantee the equipment will operate to the user's satisfaction. Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunication company. The equipment must also be installed using an acceptable method of connection. The customer should be aware that compliance with the above conditions may not prevent degradations of service in some situations.

Repairs to certified equipment should be made by an authorized Canadian maintenance facility designated by the supplier. Any repairs or alteration made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment. Users should ensure for their own protection that the earth ground connections of the power utility, telephone lines and internal metallic water pipe system, if present, are connected together. This is necessary both for proper operation and for protection.

Caution: Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority, or electrician, as appropriate.

Note: The Ringer Equivalence Number (REN) assigned to each terminal device provides an indication of the maximum number of terminals allowed to be connected to a telephone interface. The termination on an interface may consist of any combination of devices subject only to the requirement that the sum of the RENs of all the devices does not exceed five.

FCC Notice for all TX3 Products Sold in the U.S.A.

Type of Service

The TX3 is designed to be used on standard device telephone lines. It connects to the telephone line by means of a standard jack called the USOC RJ-11C (or USOC FJ45S). Connection to telephone company-provided coin service (central office implemented systems) is prohibited. Connection to party lines service is subject to state tariffs.

Telephone Company Procedures

The goal of the telephone company is to provide you with the best service it can. In order to do this, it may occasionally be necessary for them to make changes in their equipment, operations or procedures. If these changes might affect your service or the operation of your equipment, the telephone company will give you notice, in writing, to allow you to make any changes necessary to maintain uninterrupted service.

In certain circumstances, it may be necessary for the telephone company to request information from you concerning the equipment which you have connected to your telephone line. Upon request of the telephone company, provide the FCC registration number and the ringer equivalence number (REN); both of these items are listed on the equipment label. The sum of all of the RENs

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on your telephone lines should be less than five in order to assure proper service from the telephone company. In some cases, a sum of five may not be useable on a given line.

Changes to Telephone Service

The telephone company may make changes in its facilities, equipment, operations or procedures that could affect the operation of the equipment. If this happens the telephone company will provide advance notice in order for you to make necessary modifications to maintain uninterrupted service.

Ringer Equivalence Number

The REN is used to determine the number of devices that may be connected to a telephone line. Excessive RENs on a telephone line may result in the devices not ringing in response to an incoming call. In most but not all areas, the sum of RENs should not exceed five (5.0). To be certain of the number of devices that may be connected to a line, as determined by the total RENs, contact the local telephone company. For products approved after July 23, 2001, the REN for this product is Customer Information 3 July 2003 part of the product identifier that has the format US:AAAEQ##TXXXX. The digits represented by ## are the REN without a decimal point (e.g., 03 is a REN of 0.3). For earlier products, the REN is separately shown on the label.

If Problems Arise

If any of your telephone equipment is not operating properly, you should immediately remove it from your telephone line, as it may cause harm to the telephone network. If the telephone company notes a problem, they may temporarily discontinue service. When practical, they will notify you in advance of this disconnection. If advance notice is not feasible, you will be notified as soon as possible. When you are notified, you will be given the opportunity to correct the problem and informed of your right to file a complaint with the FCC. Contact your telephone company if you have any questions about your telephone line. In the event repairs are ever needed on the Communicator, they should be performed by Mircom or an authorized representative of Mircom. For information contact Mircom at the address and telephone numbers in paragraph 1.6.

If this equipment, TX3 Telephone System, causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. But if advance notice isn't practical, the telephone company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

Product Identifier

This equipment complies with Part 68 of the FCC rules and the requirements adopted by the ACTA. On the back of the front panel cover of this equipment is a label that contains, among other information, a product identifier in the format US:AAAEQ##TXXXX. If requested, this number must be provided to the telephone company.

Telephone Connection

A plug and jack used to connect this equipment to the premises wiring and telephone network must comply with the applicable FCC Part 68 rules and requirements adopted by the ACTA. You are responsible for installing a compliant telephone cord and modular plug into this product as described in this manual. It is designed to be connected to a compatible modular jack that is also compliant. See installation instructions for details.

Equipment Failure

If trouble is experienced with the TX3 Telephone/Card Access System, for repair or warranty information, please contact Mircom using the numbers paragraph 1.6. If the equipment is causing harm to the telephone network, the telephone company may request that you disconnect the equipment until the problem is resolved.

Use With Alarm Auto Dialers

If your institution has specially wired alarm equipment connected to the telephone line, ensure the installation of the TX3 Telephone/Card Access System does not disable your alarm equipment. If you have questions about what will disable alarm equipment, consult your telephone company or a qualified installer.

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