Pub. 42004-438M

GAI-TRONICS®
A HUBBELL COMPANY
RED ALERT®

300 Series Emergency Telephone Manual

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GAI-Tronics Corporation 3030 Kutztown Road Reading, PA 19605 USA
610-777-1374 ■ 800-492-1212 ■ Fax: 610-796-5954

Pub. 42004-438M

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RED ALERT®

300 Series Emergency Telephone Manual

Confidentiality Notice

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Product Overview

Features

RED ALERT® 300 Series emergency telephones have been designed for maximum environmental sustainability, high audio quality, and unparalleled monitoring capability. RED ALERT® telephones can report their location, report call activity, activate up to two peripheral devices, and provide notification when problems occur. The TMA (Telephone Management Application) software for RED ALERT® telephones reduces system test and maintenance time while greatly decreasing liability issues associated with undetected, faulty equipment. All models are weatherproof rated Type 3R.

All RED ALERT® emergency telephone models incorporate SMART (Self-Monitoring and Reporting Telephone) Technology. This leading-edge technology becomes active only when connected to GAI-Tronics TMA software running on a Windows PC for system monitoring. The operation of RED ALERT® emergency telephones is the same with or without TMA is installed. Telephones are polled and report their health status with TMA installed. No polling (or data collection) occurs without TMA installed.

RED ALERT® emergency telephones comply with the ADA (Americans with Disabilities Act) in both physical and operational characteristics. Each emergency telephone includes a Braille label for vision-impaired individuals for identifying the *emergency* functions of the telephone and a visual CALL RECEIVED WHEN LIT LED for hearing-impaired individuals. The LED will flash when either the HELP or CALL button (if equipped) is depressed. The LED illumination becomes steady when the call has been answered. The LED remains illuminated until the call is terminated.

The HELP push button on each emergency telephone can be programmed to dial three different telephone numbers. These include a primary telephone number and two *rollover* telephone numbers. The emergency telephone automatically dials the first rollover number if an emergency call cannot connect to the primary telephone number (i.e., a busy signal or no answer). The telephone automatically dials the second rollover telephone number if the first rollover number is busy or is not answered.

Each RED ALERT® telephone can provide two isolated control outputs in the form of a dry (volt-free) contact closure rated at 125 mA. One output is controlled by the telephone's emergency call activation and the other is remotely controlled by a called party DTMF activation code.

All RED ALERT® emergency telephones are line-powered and require a minimum line current of 24 mA for proper operation. These telephones can be connected to any of the following networks:

- CO (Central Office) line to the PSTN (Public Switched Telephone Network)
- 24 V dc or 48 V dc analog station port of a PBX (Private Branch Exchange), PABX (Private Automatic Branch Exchange), or KSU (Key Service Unit).

NOTE: Connection to pay telephone extensions or shared service (party) lines should be avoided.

GAI-Tronics offers an extreme cold weather option for operation below −4 °F (−20 °C) that includes a plug-in power supply (120 V ac required). This option allows operation to −40 °C.

RED ALERT® emergency telephones provide the flexibility to address a diverse range of applications. A wide variety of functions can be achieved by altering the configuration data stored in the telephone's non-volatile memory. These configuration options include:

- pre-programmed auto-dial telephone numbers
- call termination method (automatic or manual)
- maximum call duration
- answering options

Values for these functions are initially programmed during factory testing. The settings can be changed remotely from a touch-tone telephone, locally (with an integral or portable keypad), or via TMA. Emergency auto-dial telephone numbers are typically programmed in accordance with existing security plans. Most applications will require very little additional programming because the factory defaults should be applicable to most installations.

Models

The following RED ALERT® 300 Series Telephone models are detailed in this manual:

Table 1. Model Chart

Model	Description
392-001	**Flush-Mount Telephone** with a heavy-gauge, brushed stainless steel front panel; includes a CALL (off-hook) push button and a 12-button Braille keypad. **This telephone is simply a rugged, hands-free telephone and is not intended for emergency use.** It can, however, still be used in a TMA controlled system.
392-001FS	**Flush-Mount Compact Telephone** with a heavy-gauge, brushed stainless steel front panel; includes a CALL (off-hook) push button and a 12-button Braille keypad. **This telephone is functionally identical to Model 392-001.**
393-00*x*	**Surface-Mount Emergency Telephone** housed in a glass-reinforced polyester enclosure; includes a HELP autodial push button.
393AL-00*x*	**Surface-Mount Emergency Telephone** housed in a cast-aluminum enclosure painted safety yellow; includes a HELP autodial push button.

Model	Description
394AL-00*x*	**Surface-Mount Emergency Telephone** housed in a cast-aluminum enclosure painted safety yellow; includes a HELP autodial push button, a CALL (off-hook) button and a 12-button Braille keypad.
396-00*x*	**Flush-Mount Emergency Telephone** with a heavy-gauge brushed stainless steel front panel; includes a HELP autodial push button and an ASSISTANCE autodial push button.
396-001FS	**Flush-Mount Compact Emergency Telephone** with a heavy-gauge brushed stainless steel front panel; includes a HELP autodial push button and an ASSISTANCE autodial push button. **This telephone is functionally identical to Model 396-001.**
397-00*x*	**Flush-Mount Emergency Telephone** with a heavy-gauge brushed stainless steel front panel; includes a HELP autodial push button.
397-00*x*CB	**Flush-Mount Emergency Telephone** with a heavy-gauge brushed stainless steel front panel designed to retrofit a Code Blue flush-mount telephone (six-hole); includes a HELP autodial push button.
397-001FS	**Flush-Mount Compact Emergency Telephone** with a heavy-gauge brushed stainless steel front panel; includes a HELP autodial push button. **This telephone is functionally identical to Model 397-001.**
397-00*x*RT	**Flush-Mount Emergency Telephone** with a heavy-gauge brushed stainless steel front panel designed to retrofit a Ramtel flush-mount telephone (six-hole); includes a HELP autodial push button.
397-00*x*TP	**Flush-Mount Emergency Telephone** with a heavy-gauge brushed stainless steel front panel designed to retrofit a Talk-A-Phone flush-mount telephone (six-hole); includes a HELP autodial push button.
398-00*x*	**Flush-Mount Emergency Telephone** with a heavy-gauge brushed stainless steel front panel; includes a HELP autodial push button, a CALL (off-hook) button and a 12-button Braille keypad.
398-00*x*CB	**Flush-Mount Emergency Telephone** with a heavy-gauge brushed stainless steel front panel designed to retrofit a Code Blue flush-mount telephone (six-hole); includes a HELP autodial push button, a CALL (off-hook) button and a 12-button Braille keypad.
398-00*x*RT	**Flush-Mount Emergency Telephone** with a heavy-gauge brushed stainless steel front panel designed to retrofit a Ramtel flush-mount telephone (six-hole); includes a HELP autodial push button, a CALL (off-hook) button and a 12-button Braille keypad.
398-00*x*TP	**Flush-Mount Emergency Telephone** with a heavy-gauge brushed stainless steel front panel designed to retrofit a Talk-A-Phone flush-mount telephone (six-hole); includes a HELP autodial push button, a CALL (off-hook) button and a 12-button Braille keypad.

Options

RED ALERT® telephones are available with two different factory-installed options (or both options installed). These options are:

- **Voice Annunciation Option**—allows local or remote speech programming for location identification purposes, instructions, or any other desired messaging requirement. The message can be programmed locally at the telephone or remotely via dial-up. The recorded message will be activated when the called party transmits a DTMF command.
- **Extreme Cold Weather Option**—allows the telephone to operate in temperatures as low as −40 °C (standard operating temperature is −20 °C). This option includes a plug-in power supply and non-tactile (non-moveable) HELP and/or CALL (if equipped) push buttons.

All RED ALERT® telephones are ordered for standard operation (no options) by using a *-001* suffix (example: 393-001 or 397-001CB). Telephones with factory-installed options are ordered based on the following chart.

Table 2. Option Model Chart (Not applicable to "FS" series models)

Option Suffix	Description
-002 or -002*xx*	**Voice Annunciation Option**, factory-installed (examples: 393-**002** or 397-**002CB**)
-003 or -003*xx*	**Extreme Cold Temperature Option**, factory-installed (examples: 393-**003** or 397-**003CB**
-004 or -004*xx*	**Voice Annunciation and Extreme Cold Temperature Options**, factory-installed (examples: 393-**004** or 397-**004CB**)

TMA (Telephone Management Application)

GAI-Tronics' TMA software is a maintenance data collection and reporting tool that enables viewing and reporting the health of RED ALERT® emergency telephones. RED ALERT® telephones can function with or without the TMA software application installed. The decision to use TMA can be made at any time and is not needed for telephone operation. Installation of TMA is not required until system monitoring is desired.

When used with TMA, each telephone is typically polled to determine the health of the unit and to report the following:

- stuck push buttons
- microphone failure
- speaker failure
- microprocessor health
- line interrupt (power)
- low battery life (voice annunciation option only)

The basic TMA package (Model 12509-042) includes a single line transceiver for polling a single telephone at a time. Each telephone requires approximately 90 seconds to relay its health status to TMA. Use multiple transceivers to poll multiple telephones simultaneously in larger systems. The Model 12509-043 TMA Expansion Kit is available and is required for each additional connected telephone line, with a maximum of eight lines allowed. This allows a maximum of eight telephones to be polled simultaneously. A dedicated PC is strongly recommended for TMA operation.

A dedicated telephone line per RED ALERT® telephone is required when using TMA in its typical *polling* operation. RED ALERT® telephones can share a telephone line; however, if two or more telephones are put into use simultaneously, the line current could drop sufficiently to disconnect the telephone call. This will depend on the line current, the length of the cable run, and the condition of the telephone cable. Telephones must be scheduled to *call-in* instead of being polled by TMA when sharing a telephone line. A shared telephone line between RED ALERT® telephones is not recommended.

Auto-dial maintenance calls should be scheduled in TMA to alert maintenance personnel of any unusual sensor or fault conditions that exist. RED ALERT® telephones can also be programmed to generate an auto-dial maintenance call when certain sensor events occur. Access to the RED ALERT® telephone's settings is restricted using a maintenance access PIN that should only be disclosed to trained maintenance personnel.

Operation

Four types of telephones are described in this manual:

- single emergency push-button operation (autodial)
- emergency push button and call push button with keypad
- emergency push button and assistance push button (both autodial)
- call push button with keypad (hands-free standard telephone operation)

This section describes the general operation of each telephone type.

Emergency Call Operation

Applicable to telephones equipped with a HELP push button.

1. Press the HELP push button to place an immediate call to a pre-programmed emergency telephone number; typically, a security office, campus police, or 911.

   The CALL RECEIVED WHEN LIT indicator (LED) operates as follows:

   The indicator will begin to flash when the HELP push button is pressed and will light (steadily) when the telephone detects audio after the call is answered.

   or:

   The indicator will begin to flash when the HELP push button is pressed and will light (steadily) when the called party acknowledges receiving the call by transmitting a DTMF **#** or ***** after answering the call.

2. Two-way, hands-free conversation can now occur.

Non-Emergency Call Operation

Applicable to telephones equipped with a CALL push button and keypad, with or without a HELP push button.

Make non-emergency calls on telephone models equipped with keypads as follows:

1. Press the CALL push button (dial tone can be heard over the speaker).
2. Dial the desired number using the keypad.

   The CALL RECEIVED WHEN LIT indicator (LED) operates as follows:

   The indicator will begin to flash when the CALL push button is pressed and will light (steadily) when the telephone detects audio after the call is answered.

   or

   The indicator will begin to flash when the CALL push button is pressed and will light (steadily) when the called party acknowledges receiving the call by transmitting a DTMF # or * after answering the call.
3. Two-way, hands-free conversation can now occur.
4. Press the CALL push button upon completion of the call (hang up).

   NOTE: The CALL push button can be configured to auto-dial, overriding the keypad dialing feature. This operation can be used to call a central telephone number and use the keypad to make feature selections.

Non-Emergency Assistance Operation—Models 396-00x and 396-001FS

1. Press the ASSISTANCE push button to place an immediate call to a pre-programmed assistance telephone number; typically, a dormitory, garage, or general assistance/information office).

   The CALL RECEIVED WHEN LIT indicator (LED) operates as follows:

   The indicator will begin to flash when the CALL push button is pressed and will light (steadily) when the telephone detects audio after the call is answered.

   or

   The indicator will begin to flash when the CALL push button is pressed and will light (steadily) when the called party acknowledges receiving the call by transmitting a DTMF # or * after answering the call.
2. Two-way hands-free conversation can now occur.

Receiving a Call

RED ALERT® telephones can be programmed to auto-answer incoming calls. The telephone will automatically answer when the emergency telephone extension is dialed. It will then generate a pair of triple *beep* tones and two-way, hands-free conversation can occur.

Disconnecting a Call

There are several methods that a RED ALERT® emergency telephone can both manually and automatically disconnect calls. The disconnect methods include the following:

- **Remote disconnect of an emergency call**—Called party transmits either a ## or ***99** DTMF control command.
- **Manual disconnect of an emergency call**—Press the HELP push button approximately 15 seconds after the initial activation.

  NOTE: Pressing the HELP push button a second time within 10 seconds of initially activating the call will have no effect on the telephone's operation. This prevents an anxious or hurried user from disconnecting the call prematurely (this feature can be disabled).
- **Manual disconnect of a non-emergency call**—Press the CALL or ASSISTANCE button a second time.
- **Automatic disconnect:**
  - all calls; loop current-drop disconnect
  - all calls; maximum call duration timeout (configurable from 1 minute to 4.5 hours)
  - all voice calls; call progress tones (i.e., busy signal/fast busy, or reorder tone) and, when enabled, dial tone

Refer to the Disconnect Options section of this manual for factory defaults and available options.

Location Identification

The location identification feature allows the called party to quickly and easily locate the source of the emergency call. The called party (typically the security operator) dials two zeros **00** when the calling individual has pressed the HELP push button to obtain the telephone location. The RED ALERT® telephone detects the two zero-digit signals and transmits a three-digit DTMF location identification code. This location code is displayed on a customer-provided DTMF decoder/display (see the ADA (Americans with Disabilities Act) Programming section).

Voice Annunciation Activation

RED ALERT® emergency telephones equipped with the voice annunciation option board can play back a pre-recorded message at the emergency telephone when the appropriate DTMF code is transmitted by the called party. To activate the voice annunciation message:

1. Press **00** on the called telephone's keypad upon answering or any time during the two-way conversation to activate the voice annunciation message.

   The voice annunciation message is transmitted over the telephone line to be heard by the called party and is broadcasted from the RED ALERT® telephone's speaker. Two-way communications can continue after completion of the recorded message.
2. Press **00** again to replay the voice annunciation message.

Installation

⚠ **WARNING** ⚠—This product can contain hazardous voltages. Always remove power to this station and any associated equipment before beginning any installation.

⚠ **CAUTION** ⚠ —Do not install this equipment in areas other than those indicated on the approval standards listing in the Approvals section of this manual. Such installation may cause a safety hazard and consequent injury or property damage.

Install equipment without modification and according to all applicable local and national electrical codes. Consult the National Electrical Code (NFPA 70), Canadian Standards Association (CSA 22.1), and local codes for specific requirements regarding your installation. Class 2 circuit wiring must be performed in accordance with NEC 725.55.

Safety Guidelines

When installing any GAI-Tronics telephone equipment, please adhere to the following guidelines to ensure the safety of all personnel:

- Do not install telephone wiring during a lightning storm.
- **Electrostatic Discharge (ESD) Protection:** The telephone may have an earth ground terminal provision. If so, ensure that it is connected to ground in accordance with all local safety regulations and the National Electrical Code (NEC). Grounding must be ensured for safe and stable communications. Do not use long and coiled ground wires. Trim ground wires to the required length. Use a star configuration whenever possible. Please note proper grounding does not eliminate the need for lightning protection for the telephone or the telephone system.
- **Install a UL Listed lightning arrestor** on any telephone installed where the telephone or telephone cable is at risk of being exposed to lightning strikes. The lightning arrestor must be installed as close to the telephone as possible to maximize the protection. It must not be installed within the enclosure supplied with the phone.
- Do not install telephone jacks in wet locations unless the jack is specifically designed for wet locations.
- Do not touch uninsulated telephone wires or terminals unless the telephone line has been disconnected at the network interface.

General Installation Guidelines

The preferred system configuration is a dedicated telephone line per RED ALERT® Telephone. This is **required** when using TMA in its typical *polling* operation.

NOTE: Never install A RED ALERT® emergency telephone on the same telephone line as any other (non-RED ALERT®) telephone.

Telephones must be scheduled to *call-in* instead of being polled by TMA when sharing a telephone line using TMA.

Security Hardware

The telephones described in this manual are vandal resistant. The front panel of each telephone covered in this manual is attached to its enclosure with security screws. A GAI-Tronics Model 233-001 Security Screwdriver or Torx T-25 security head tip (sold separately) is required to install the telephone.

Conduit Installation Details

GAI-Tronics recommends installing telephone lines in conduit to protect against accidental damage and vandalism. To prevent moisture from entering the enclosure:

- Conduit should enter the enclosure from the bottom whenever possible.
- Sealed fittings should be installed at all cable entry points.
- Silicone sealant or equivalent should be applied around and inside all conduit entries to prevent moisture ingress.

Refer to the examples below for the recommended conduit installation details:

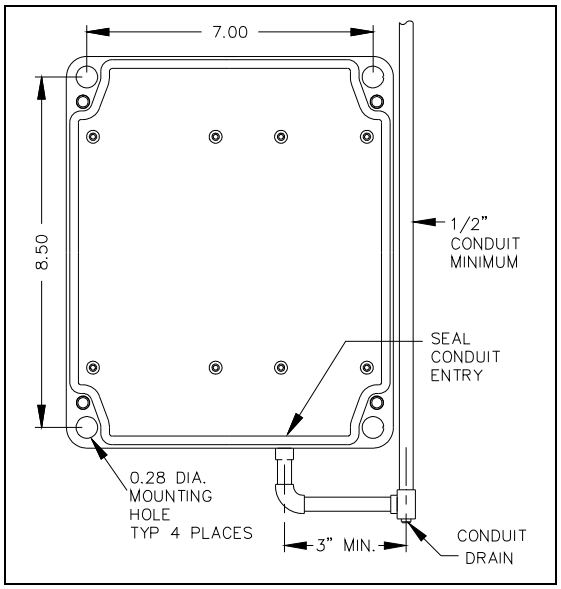

Figure 1. Bottom entry conduit recommended for non-metallic enclosures

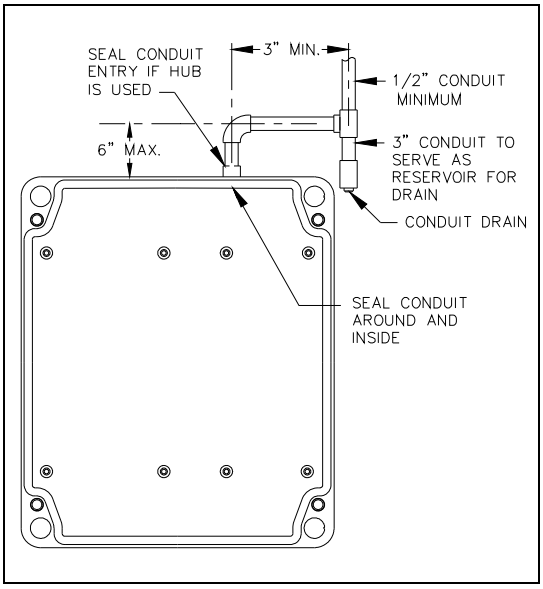

Figure 2. Top entry conduit installation for non-metallic enclosures (NOT recommended)

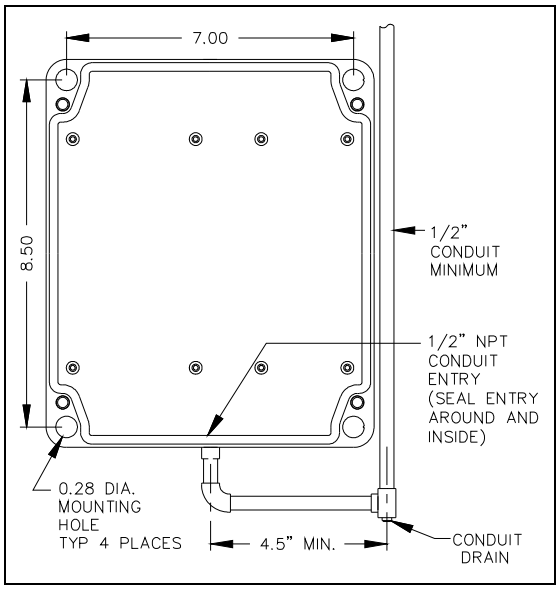

Figure 3. Bottom entry conduit installation details for metallic enclosures

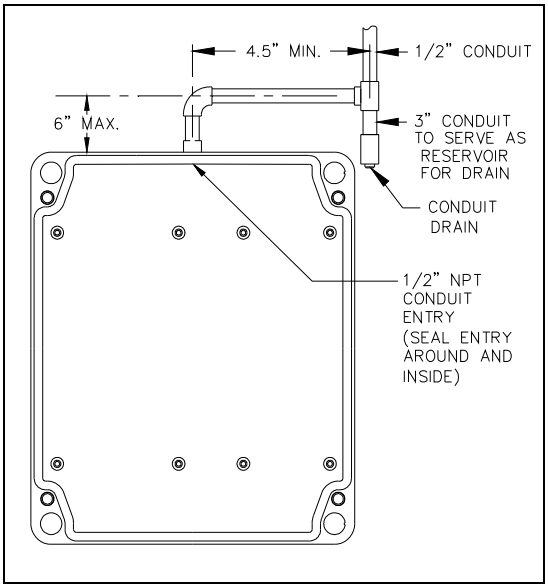

Figure 4. Top entry conduit installation details for metallic enclosures (NOT recommended)

Models 393-00x, 393AL-00x, and 394AL-00x—Surface Mount Installations

The mounting and wiring instructions are as follows:

1. Remove the four security screws from the front panel and set the panel assembly aside.
2. Position the enclosure on the mounting surface.

   The enclosure provides four 0.28-inch mounting holes in a 7.0 × 8.5-inch hole pattern.
3. Secure the enclosure to the mounting surface with four ¼-inch diameter bolts of the appropriate length for the surface.

   NOTE: When using a GAI-Tronics Model 231-001 Pole Mounting Kit, follow the mounting instructions provided in the kit.

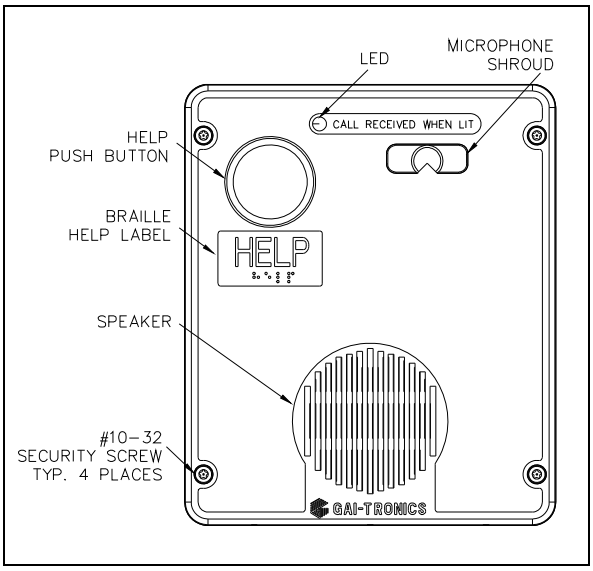

Figure 5. Model 393-00*x* Emergency Telephone in a Non-Metallic Enclosure

4. *For Model 393-00x only*:
   1. Create a conduit access hole using a Greenlee-type punch sized for the conduit diameter.

      Bottom entry is strongly recommended.
   2. Install a conduit fitting in the access hole.
5. Install conduit as required (see the Conduit Installation Details section).

   NOTE: Use silicone sealant or equivalent around and inside all conduit entries.
6. Pull the telephone line through the conduit and into the enclosure.
7. Connect the telephone line to the customer-supplied telephone line surge suppressor (if applicable) and modular jack (USOC RJ11 or CA11A) provided with the unit.

   NOTE: The modular jack may be mounted inside the telephone. Telephone line connections directly terminal block to TB1 are acceptable.
8. Allow the telephone a minimum of 35 seconds to initialize.
9. Configure the telephone:
   1. Configure the hardware as required (see the Configuration section).
   2. Adjust the audio levels if necessary (see Figure 33 for the speaker volume and microphone sensitivity potentiometer locations).
   3. Perform the initial programming (see the Programming section).
10. Verify operation by calling to and from another telephone.
11. Complete the installation by attaching the front panel assembly to the rear enclosure using the four security screws.
12. Torque the screws to 10–12 in·lb.

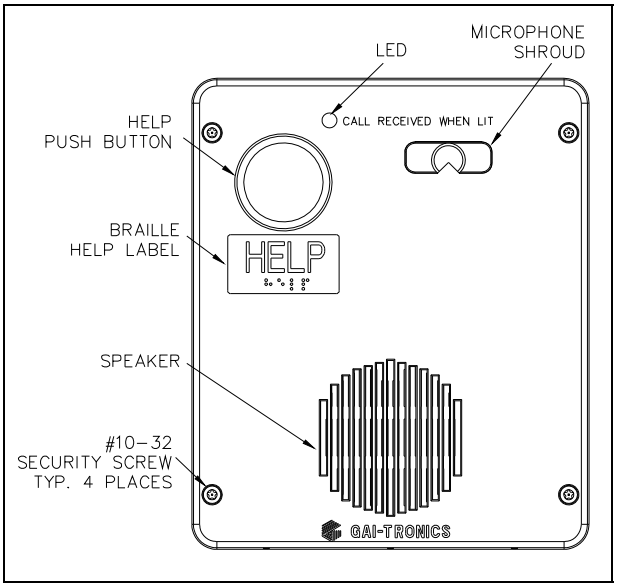

Figure 6. Model 393AL-00*x*

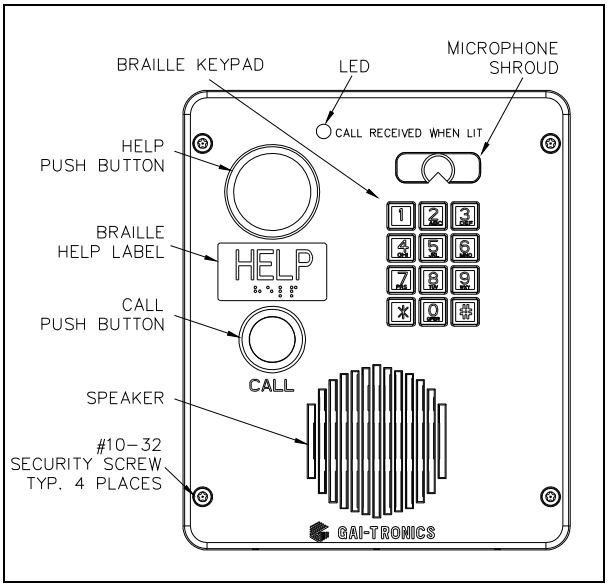

Figure 7. Model 394AL-00*x*

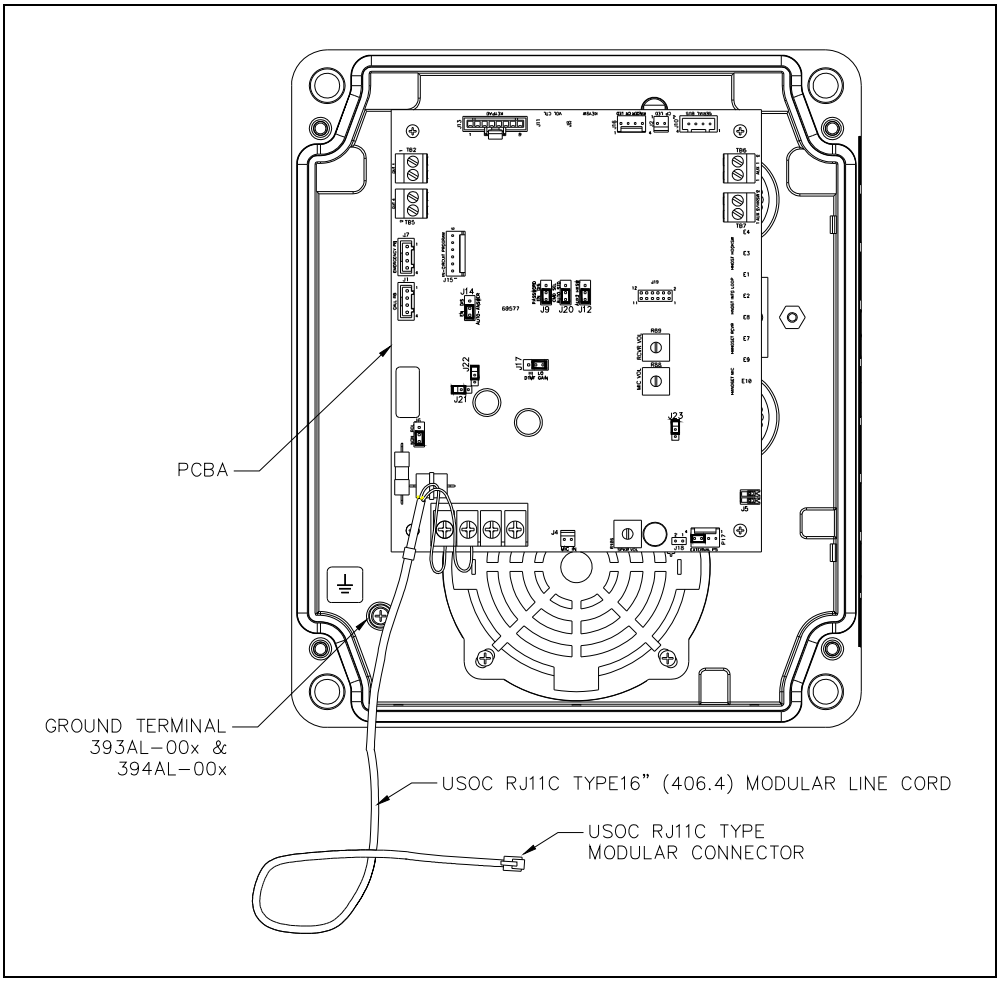

Figure 8. Model 393-00*x*, 393AL-00*x*, and 394AL-00*x* Component Locations

Models 392-001, 396-00x, 397-00x, and 398-00x—Tower or Flush-Mount Installations

The supplied back box must be used to mount the Model 397-00*x*, 396-00*x*, 398-00*x*, or 392-001 telephones for flush-mount installations or when mounting in a GAI-Tronics Model 234 Series Tower.

1. Mount the back box to the structure using appropriate hardware (see Figure 13 for the cutout dimensions).

NOTE: The installation of a (customer-supplied) telephone line suppressor is recommended if the telephone is mounted outdoors.

2. Remove a tapered plug from either cable entry hole in the back box
3. Install the telephone line and cable fitting.

   NOTE: Telephone line connections directly to terminal block TB1 are acceptable.

4. *If using the modular jack*:

   1. Remove the cover.
   2. Connect the telephone line's tip (+) wire to the green wire on the modular jack.
   3. Connect the telephone line's ring (−) wire to the red wire on the modular jack.
   4. Replace the modular jack cover.

5. Connect the telephone's modular plug to a USOC RJ11 or CA11A (Canada) modular connector or (if applicable) the telephone line suppressor (see Figure 8).

   An inline coupler is provided for use, if necessary

6. Allow the telephone a minimum of 35 seconds to initialize.
7. Configure the telephone:

   1. Configure the hardware as required (see the Configuration section).
   2. Adjust the audio levels, if necessary (see Figure 33 for the Speaker Volume and Microphone Sensitivity potentiometer locations).
   3. Perform the initial programming (see the Programming section).

8. Verify operation by calling to and from another phone.
9. Attach the front panel assembly to the rear enclosure mounting flanges using the six supplied #10-32 security screws and washers.
10. Torque the screws to 10–12 in·lb.

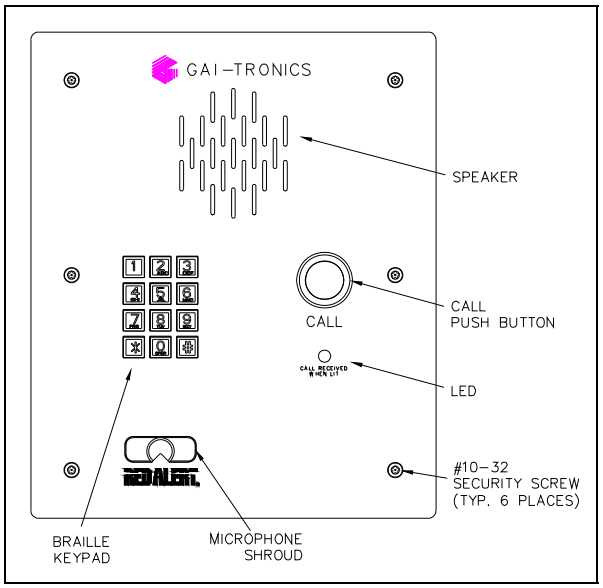

Figure 9. Model 392-001

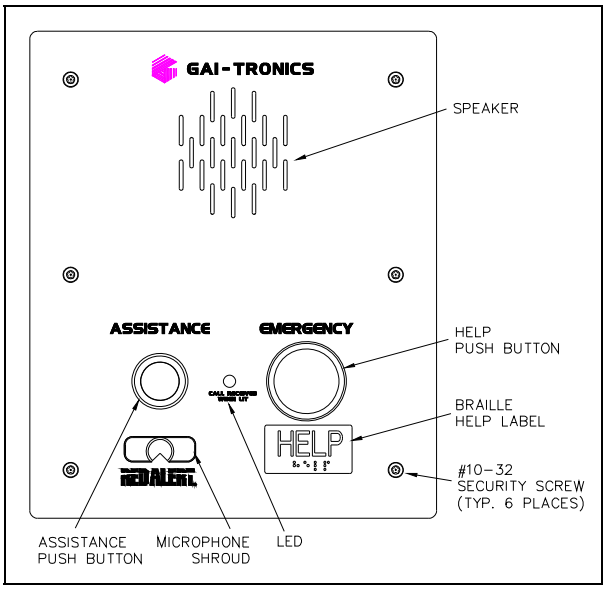

Figure 10. Model 396-00*x*

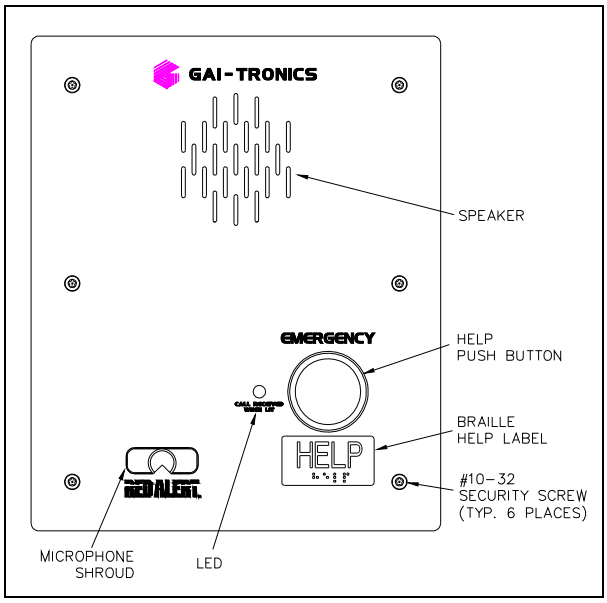

Figure 11. Model 397-00*x*

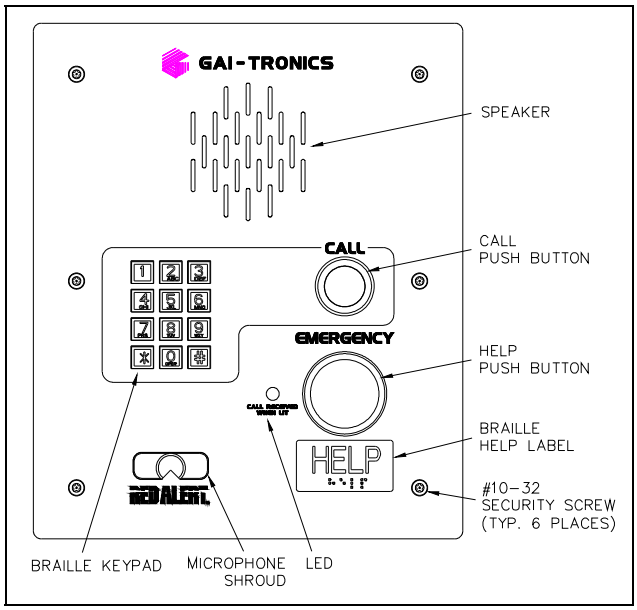

Figure 12. Model 398-00*x*

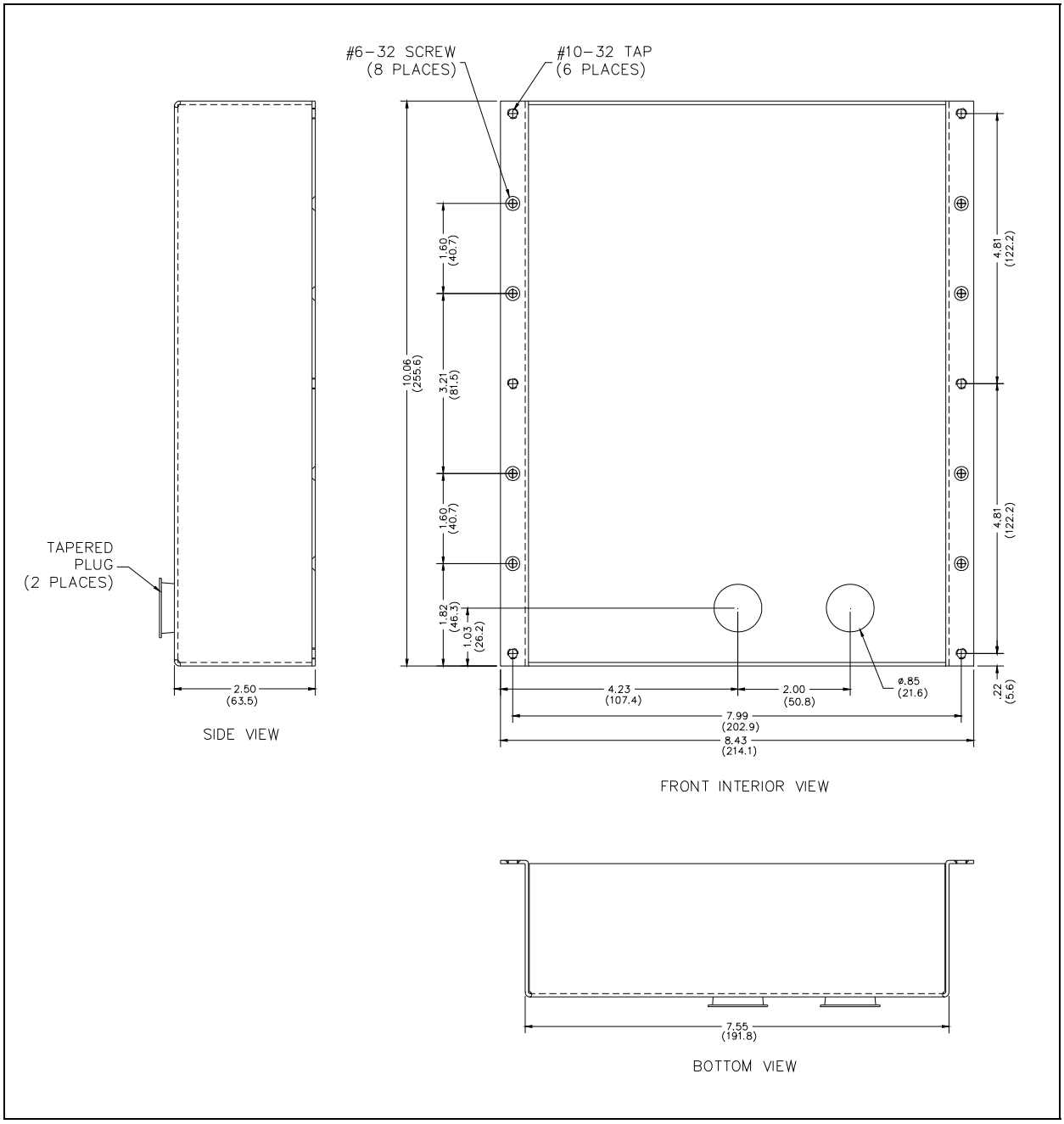

Figure 13. Model 392-001 396-00*x*, 397-00*x*, and 398-00*x* Mounting Details

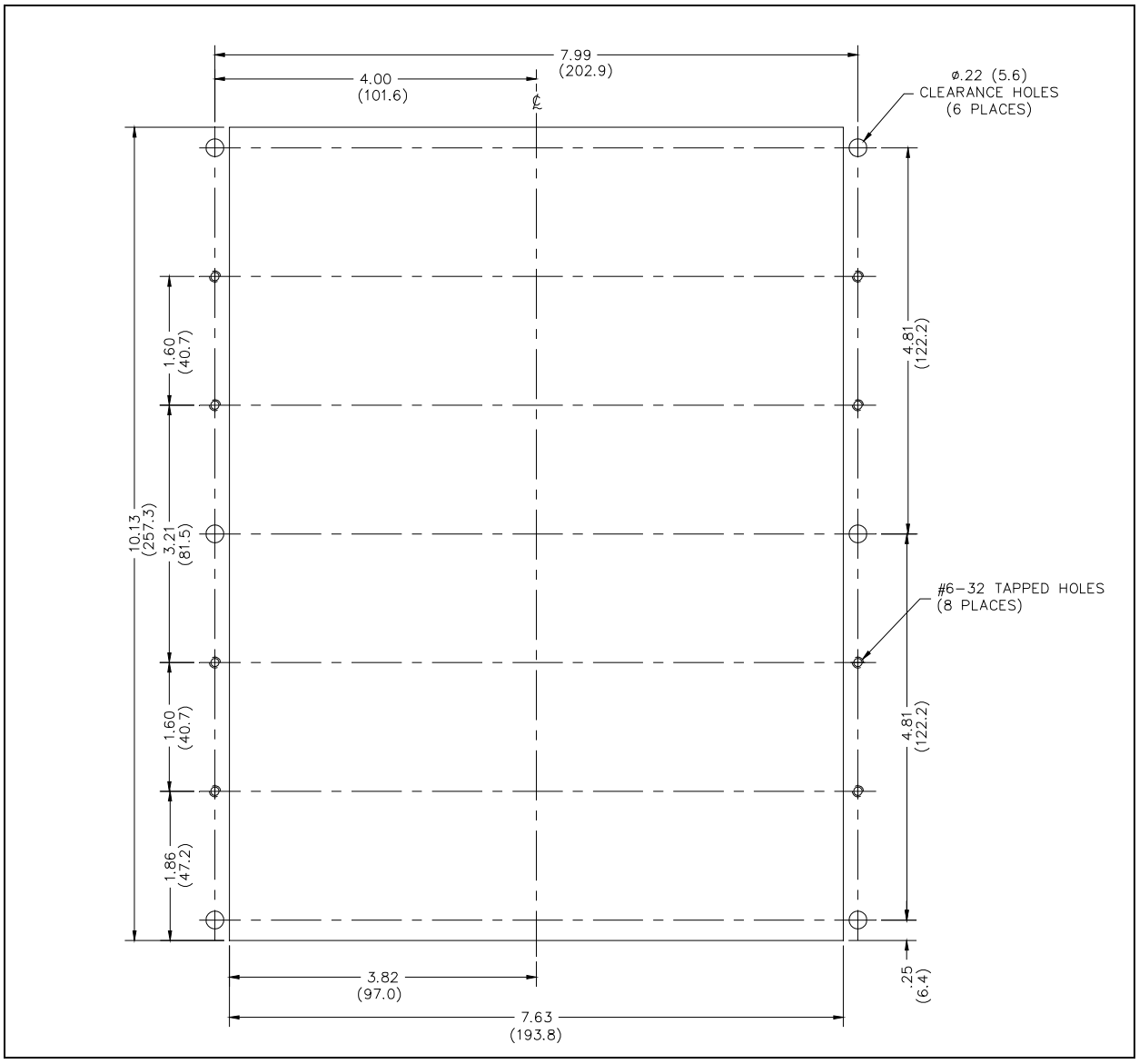

Figure 14. Cutout for Model 392-001, 396-00x, 397-00x, and 398-00x

Models 392-001FS, 396-001FS, and 397-001FS—Flush-Mount Installations

These compact models are designed for installation in flush mount openings measuring 7.75 H ×5.75 W inches.

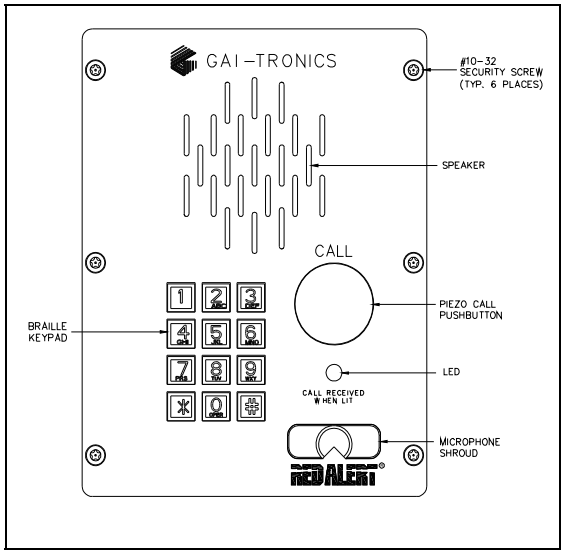

Figure 15. Model 392-001FS

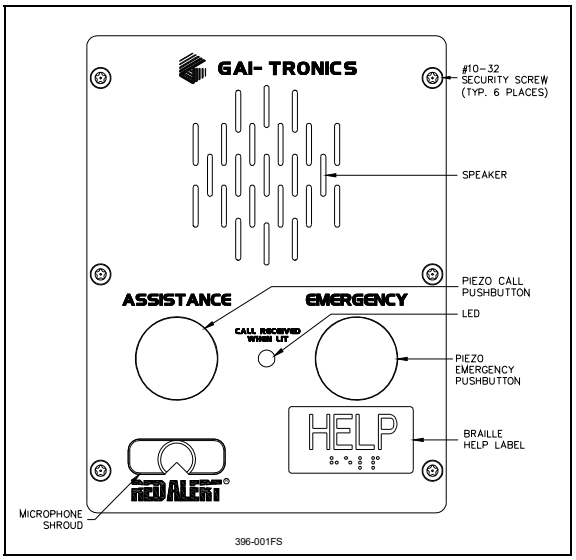

Figure 16. Model 396-001FS

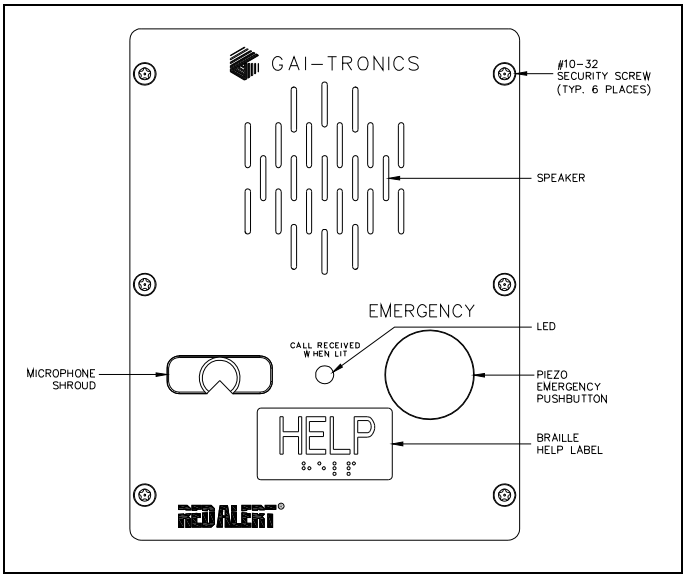

Figure 17. Model 397-001FS

1. Remove the back box from the front cover.

   NOTE: The installation of a (customer-supplied) telephone line suppressor on the telephone line is recommended if mounted outdoors.

2. Feed the telephone line through either of the cable entry holes in the back box.

   NOTE: Telephone line connections directly to terminal block TB1 are acceptable.

3. The telephone line is equipped with a USOC RJ11C-type modular connector. Plug the connector into the mating connector inside the enclosure.

   An inline coupler is provided for use, if necessary.

4. Re-install the back box.
5. Allow the telephone a minimum of 35 seconds to initialize.
6. Configure the telephone:
   1. Configure the hardware as required (see the Configuration section).
   2. Adjust the audio levels if necessary (see Figure 33 for the Speaker Volume and Microphone Sensitivity potentiometer locations).
   3. Perform the initial programming (see the Programming section).
7. Verify operation by calling to and from another phone.
8. Complete the installation by attaching the front panel assembly to the mounting surface using the six supplied #10-32 security screws. Torque the screws to 10–12 in·lb.

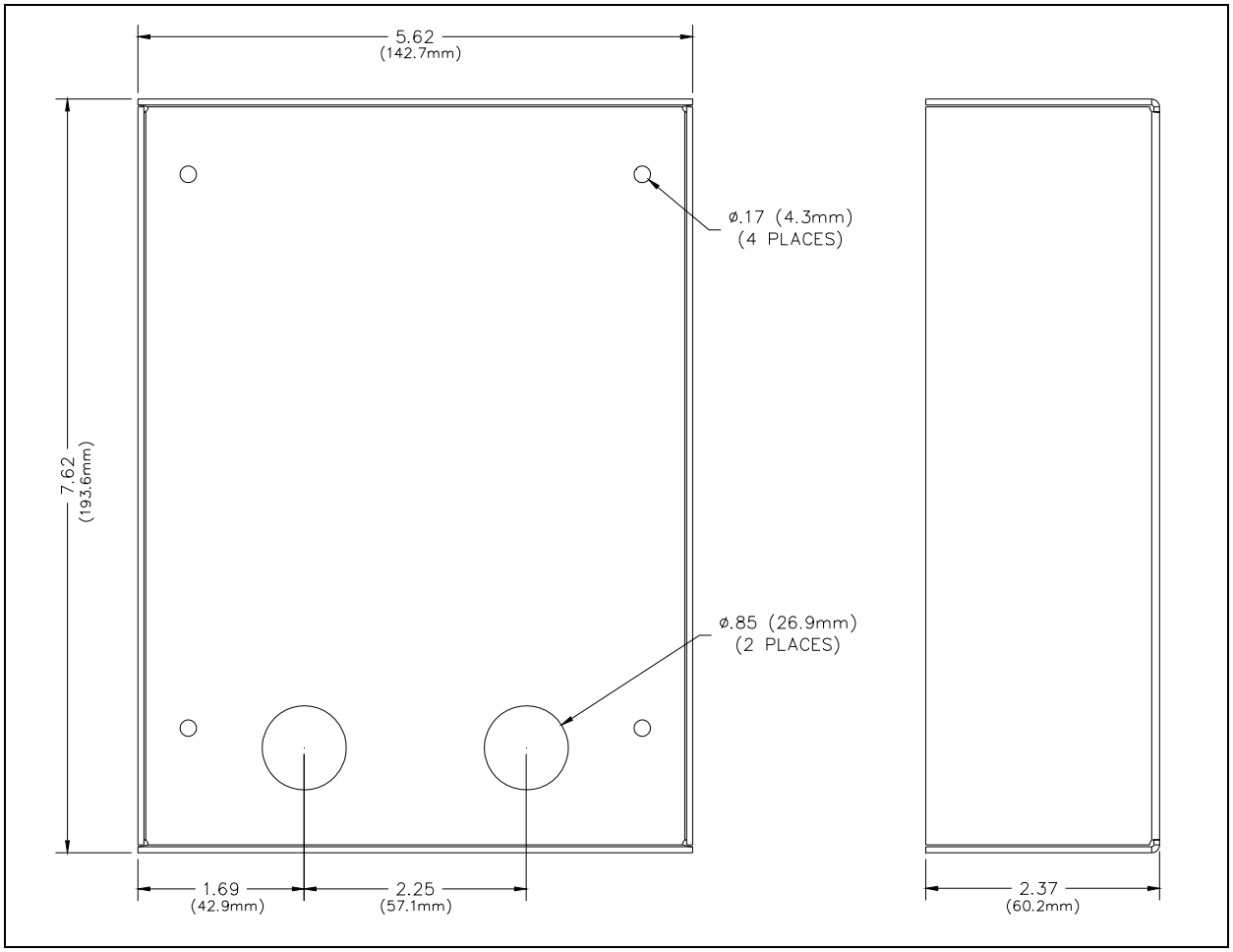

Figure 18. Model 392-001FS, 396-001FS, and 397-001FS Back Box

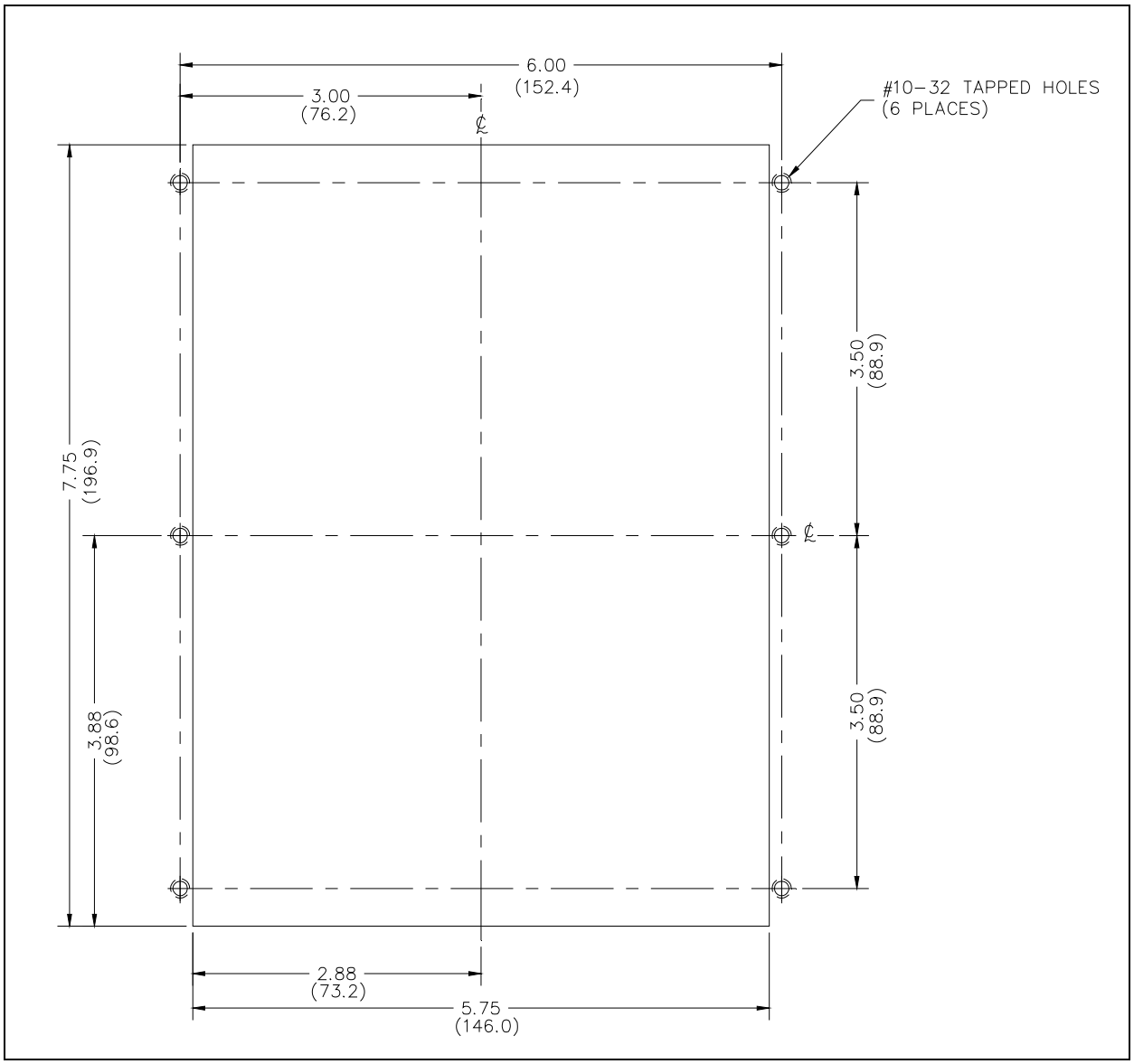

Figure 19. Cutout for Model 392-001FS, 396-001FS, and 397-001FS

Retro-fit Models

The appropriate RED ALERT® retrofit models can be installed in Code Blue, Ramtel, or Talk-A-Phone enclosures utilizing a six-hole mounting pattern. Complete the installation as follows:

1. Remove the back box from the front cover.
2. Feed the telephone line through either of the cable entry holes in the back box.
3. Re-install the back box.
4. The telephone line is equipped with a USOC RJ11C-type modular connector. (An inline coupler is provided for use, if necessary.) Plug the connector into the mating connector inside the enclosure.
5. Allow the telephone a minimum of 35 seconds to initialize.
6. Configure the telephone:
    1. Configure the hardware as required (see the Configuration section).
    2. Adjust the audio levels if necessary (see Figure 33 for the Speaker Volume and Microphone Sensitivity potentiometer locations).
    3. Perform the initial programming (see the Programming section).
7. Verify operation by calling to and from another phone.
8. Complete the installation by attaching the front panel assembly to the rear enclosure using the security screws.
9. Torque the screws to 10–12 in·lb.

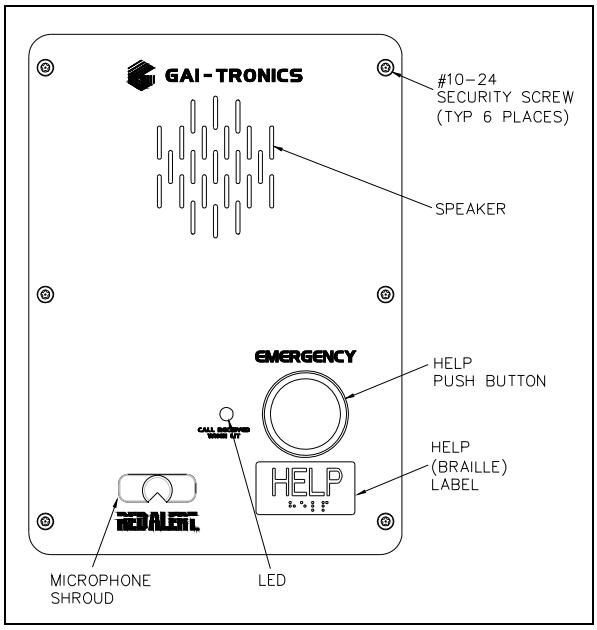

Figure 20. Model 397-00*x*CB

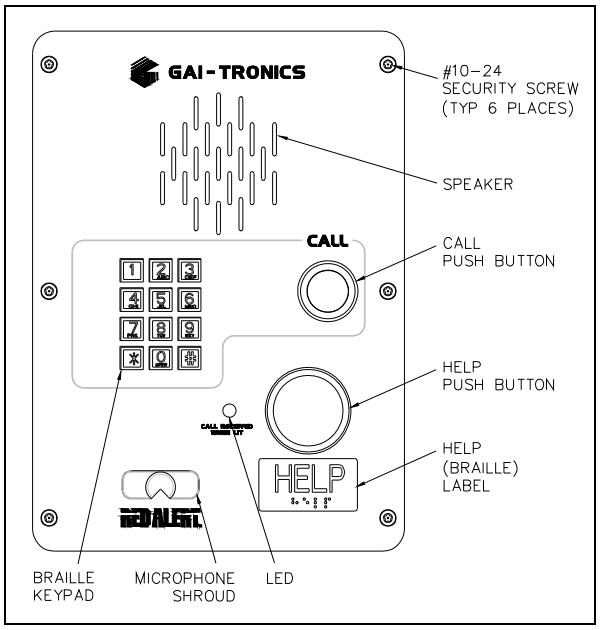

Figure 21. Model 398-00*x*CB

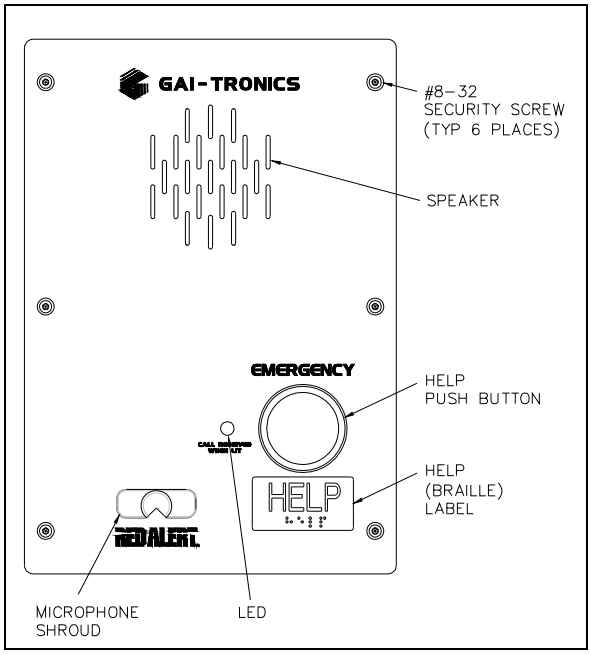

Figure 22. Model 397-00*x*RT

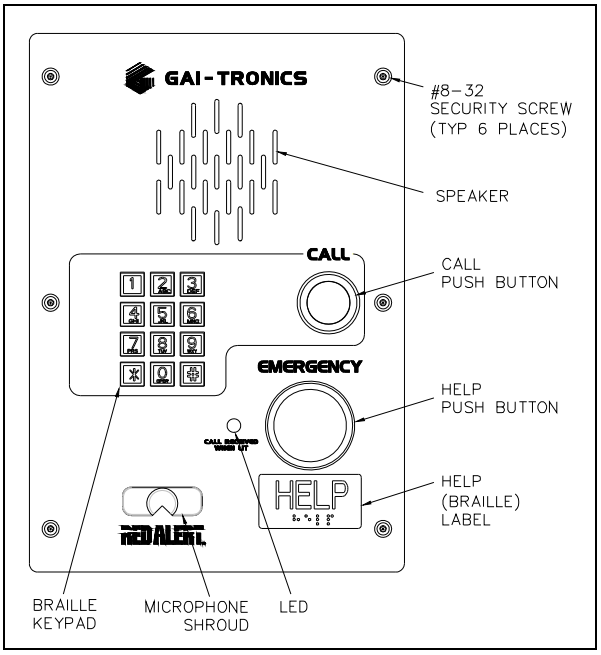

Figure 23. Model 398-00*x*RT

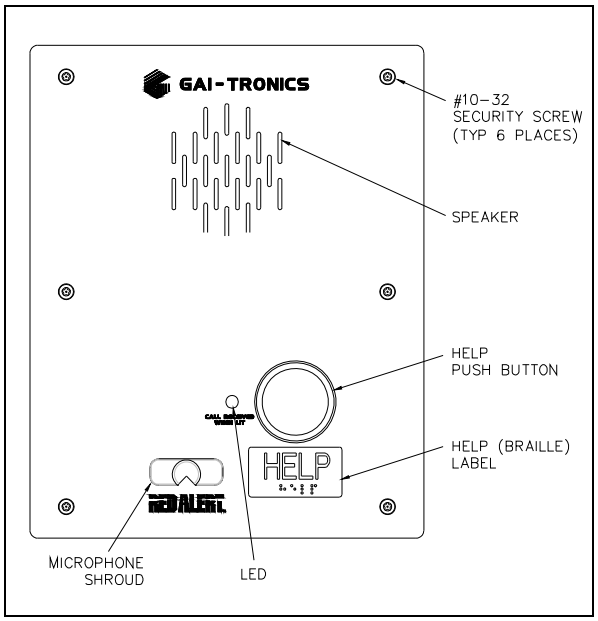

Figure 24. Model 397-00*x*TP

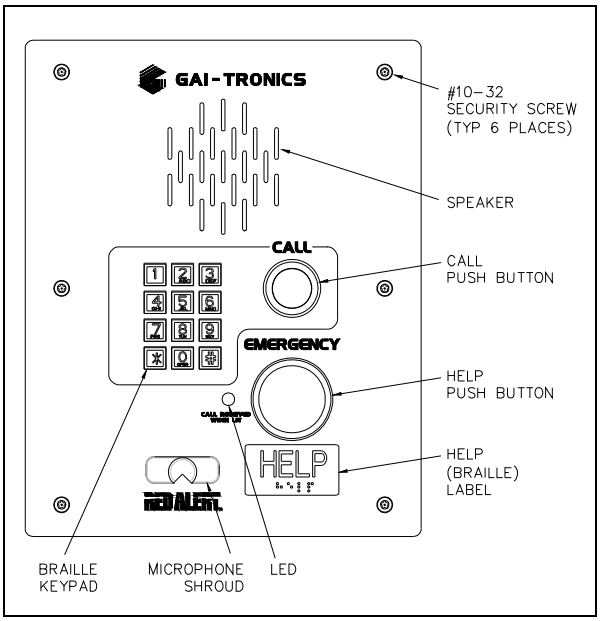

Figure 25. Model 398-00*x*TP

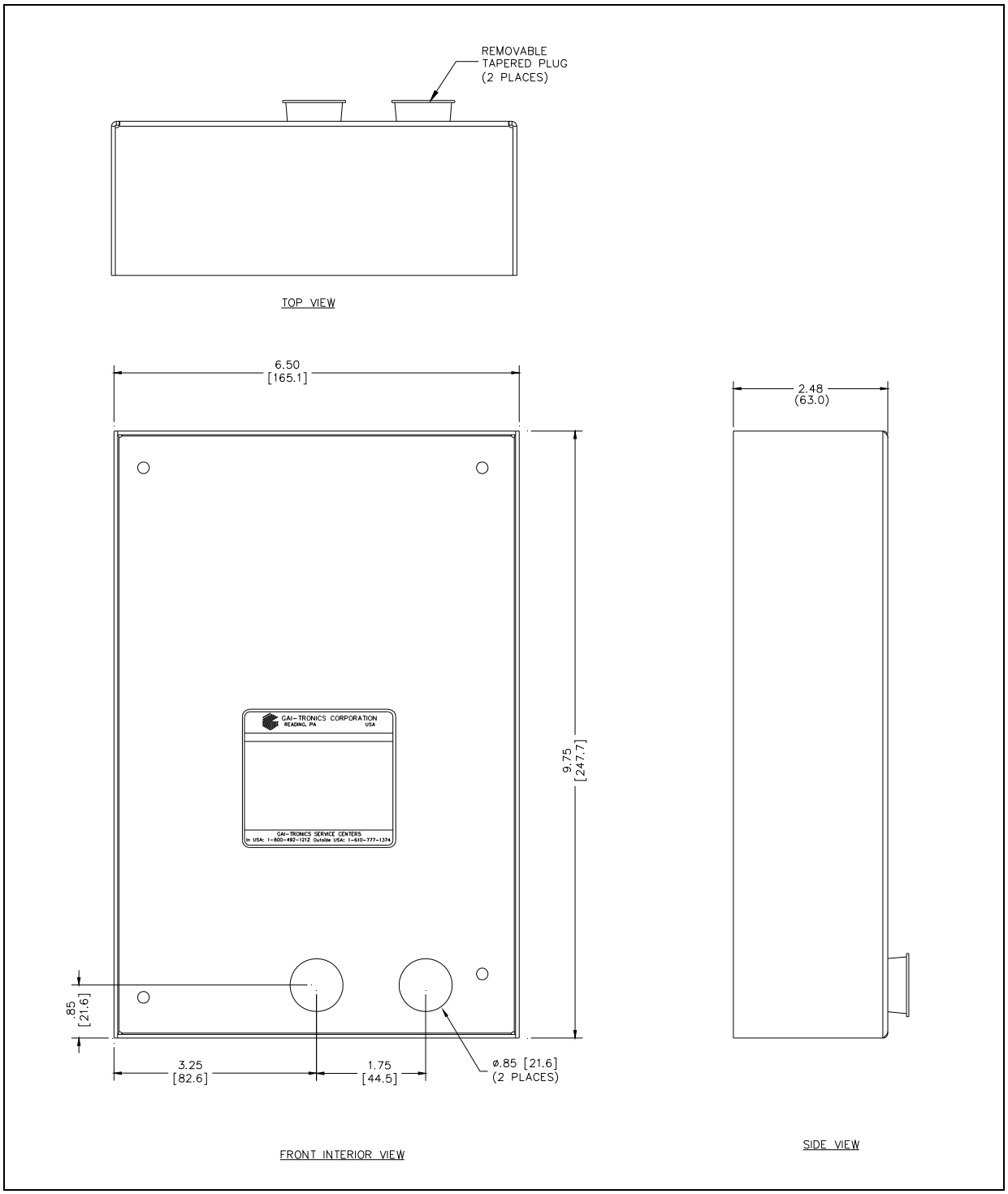

Figure 26. Back Box for Ramtel (RT) and Code Blue (CB)

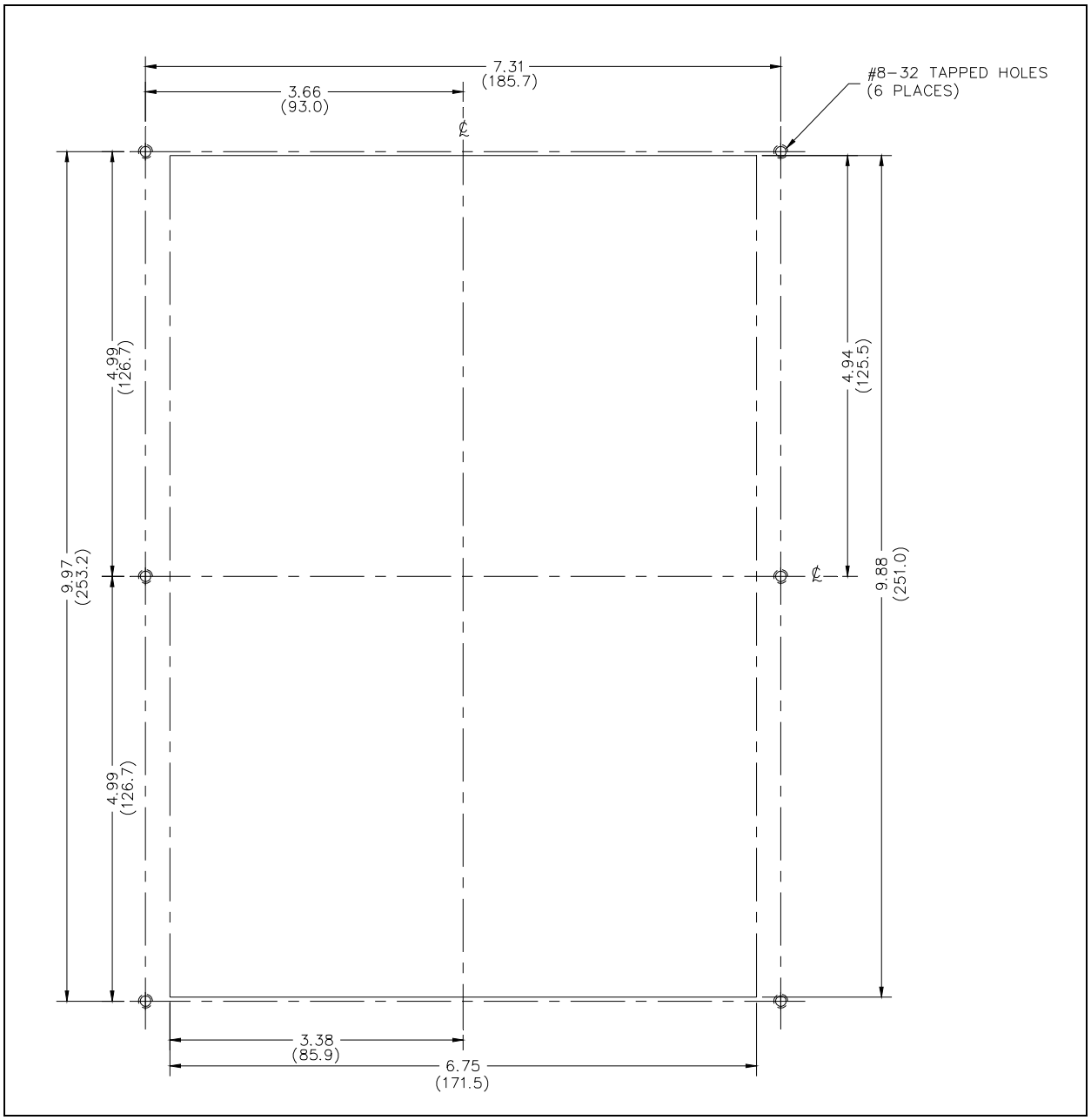

Figure 27. Cutout for Ramtel (RT) Telephones

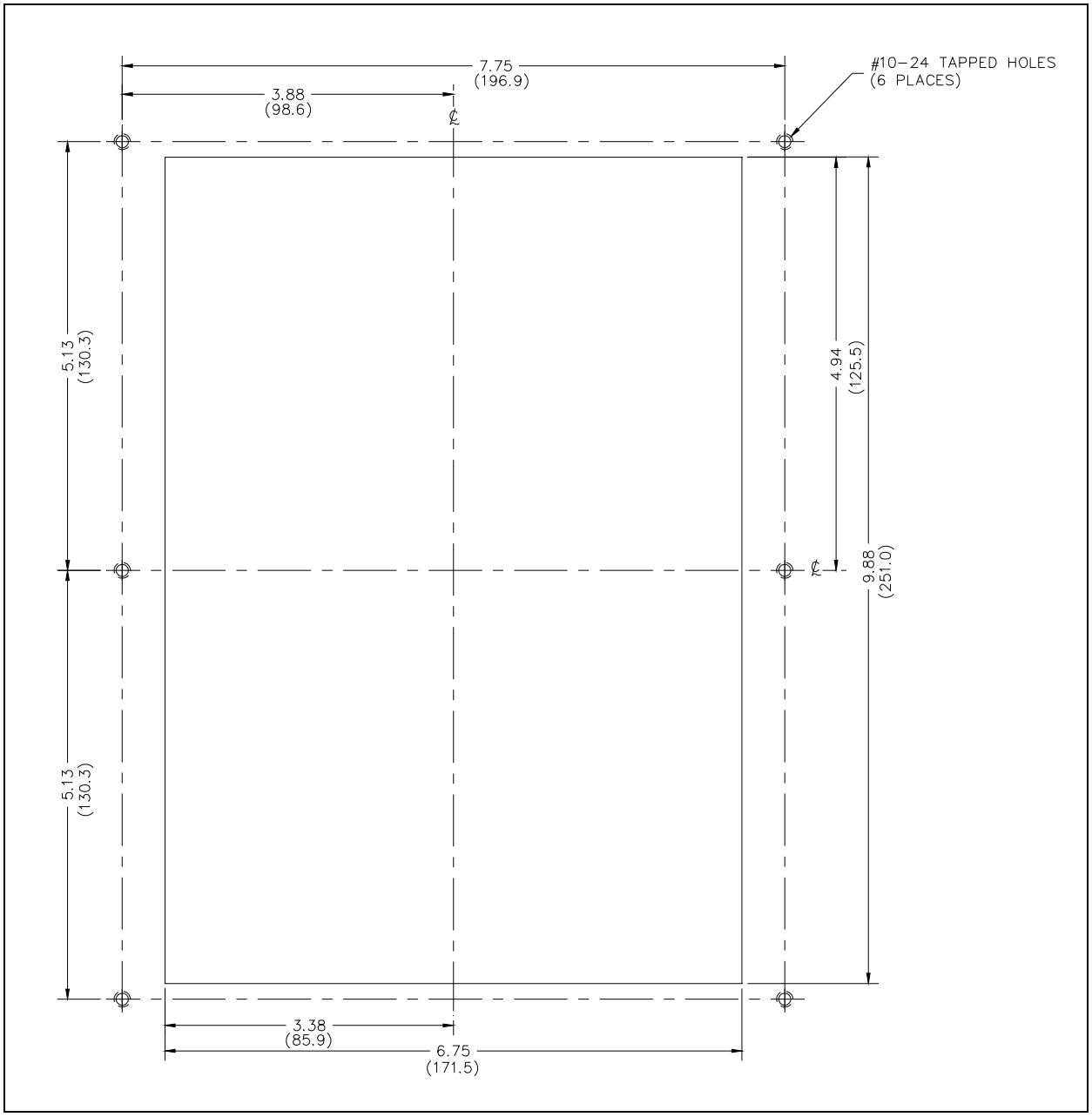

Figure 28. Cutout for Code Blue (CB) Telephones

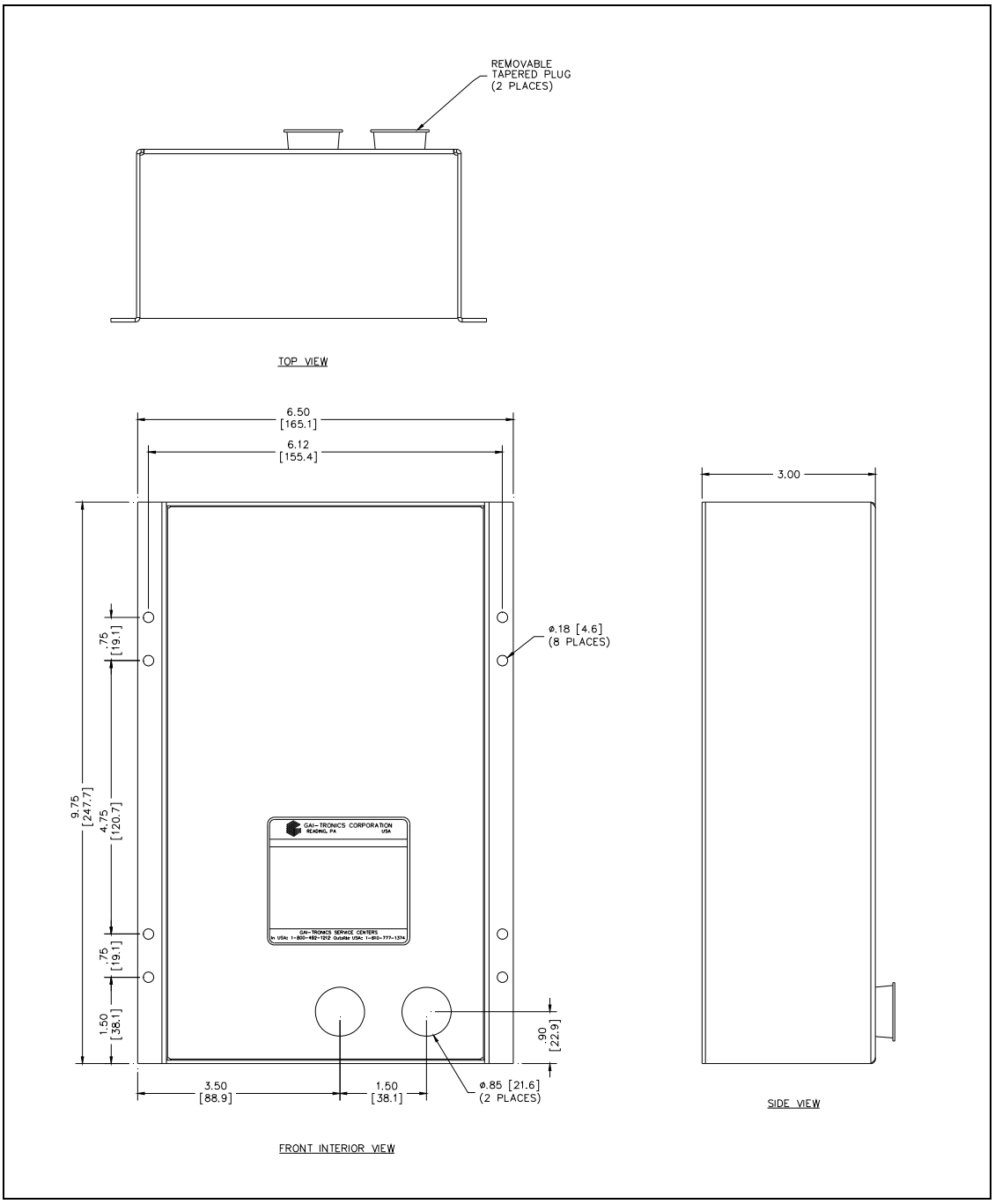

Figure 29. Back Box for Talk-A-Phone (TP)

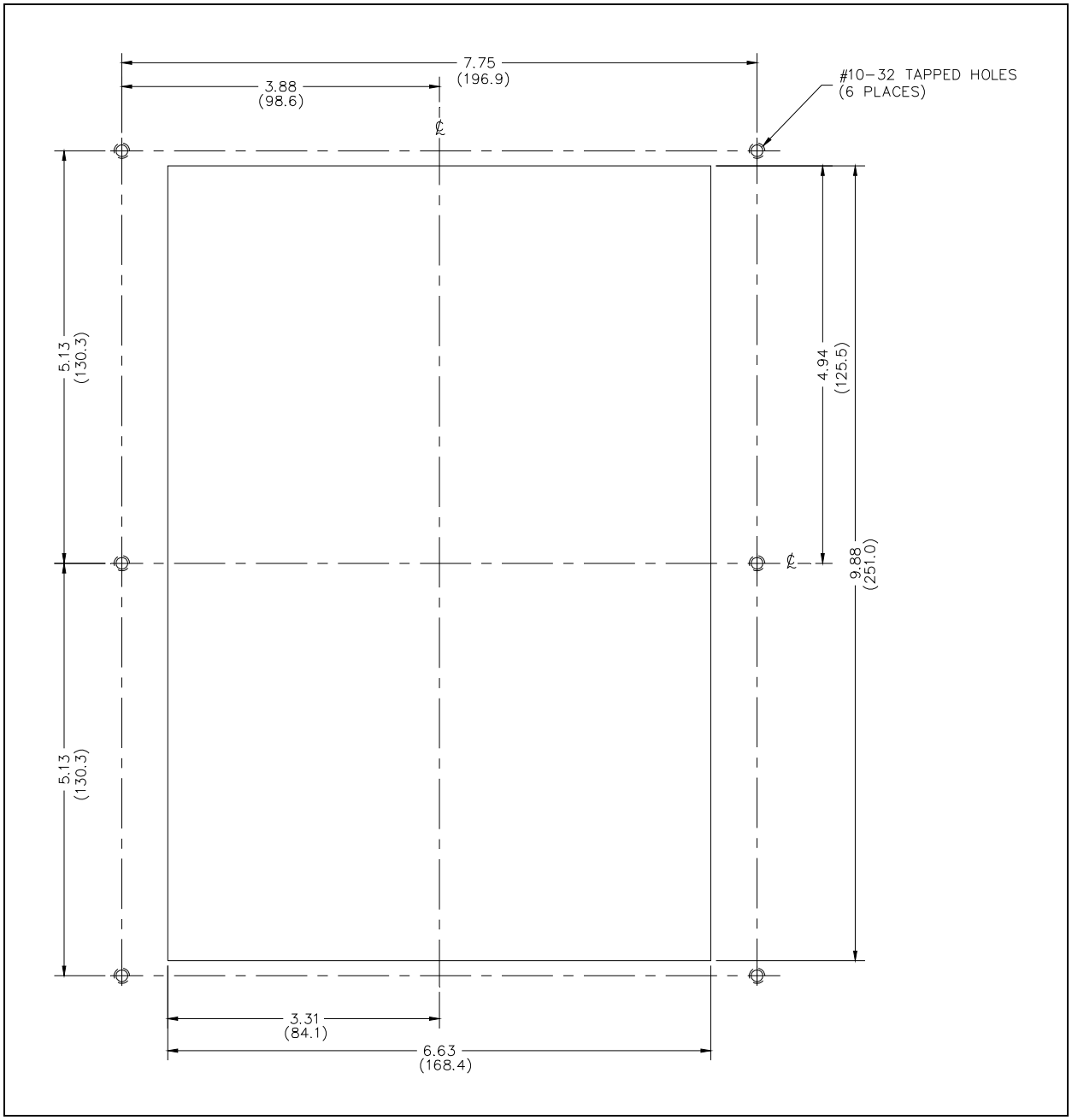

Figure 30. Cutout for Talk-A-Phone (TP) Telephones

Extreme Cold Temperature Option

RED ALERT® emergency telephones equipped with the extreme cold temperature option (-003 and -004 models) can operate to −40 °C (non-option models are rated to −20 °C). This option includes two identifying features; a plug-in power supply and non-tactile push buttons.

Each telephone is shipped with a plug-in power supply that requires a 120 V ac input to provide a 5 V dc output to the unit. The power supply is equipped with a 4-foot power cable with integral connector that plugs into P17 on the telephone PCBA. Jumper P17 must be removed prior to plugging in the power supply.

1. Remove the jumper from P17 pins 3 and 4.
2. Plug the jumper into the adjacent J18 header (see Figure 33 for the connector locations).
3. Plug the power supply connector into header P17.

NOTE: The external power supply provided with these models does not provide telephone line power for communications. It simply activates a heater circuit to allow operation to −40 ºC.

The -003 and -004 models also have non-tactile (non-moveable) push buttons (HELP and/or CALL) installed in place of the standard tactile (moveable) push buttons. Use of non-moveable switches eliminates the possibility of water or melting snow from collecting and freezing behind the push button, ultimately preventing the movement necessary for activation.

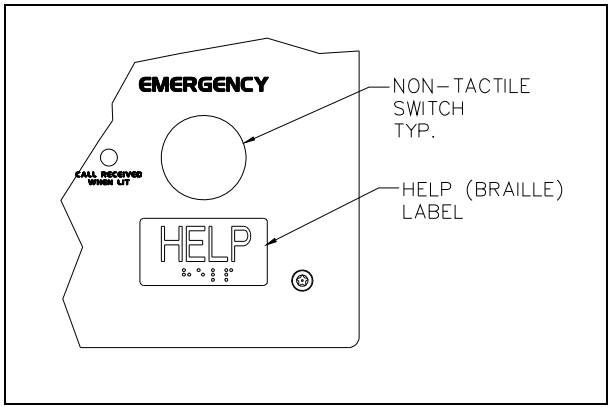

Figure 31. Extreme Cold Temperature
Piezo Button (Typical)

NOTE: RED ALERT telephone models ending with the **FS** suffix are equipped with non-tactile pushbutton(s) making them extreme cold weather capable. Operation to −40 °F (−40 °C) can be accomplished by adding a No. 40404-045 Power Supply (120 V ac required).

Connecting a GAI-Tronics Strobe

A typical connection detail of a GAI-Tronics 540-001/541-001/531A Strobe (sold separately) is shown below:

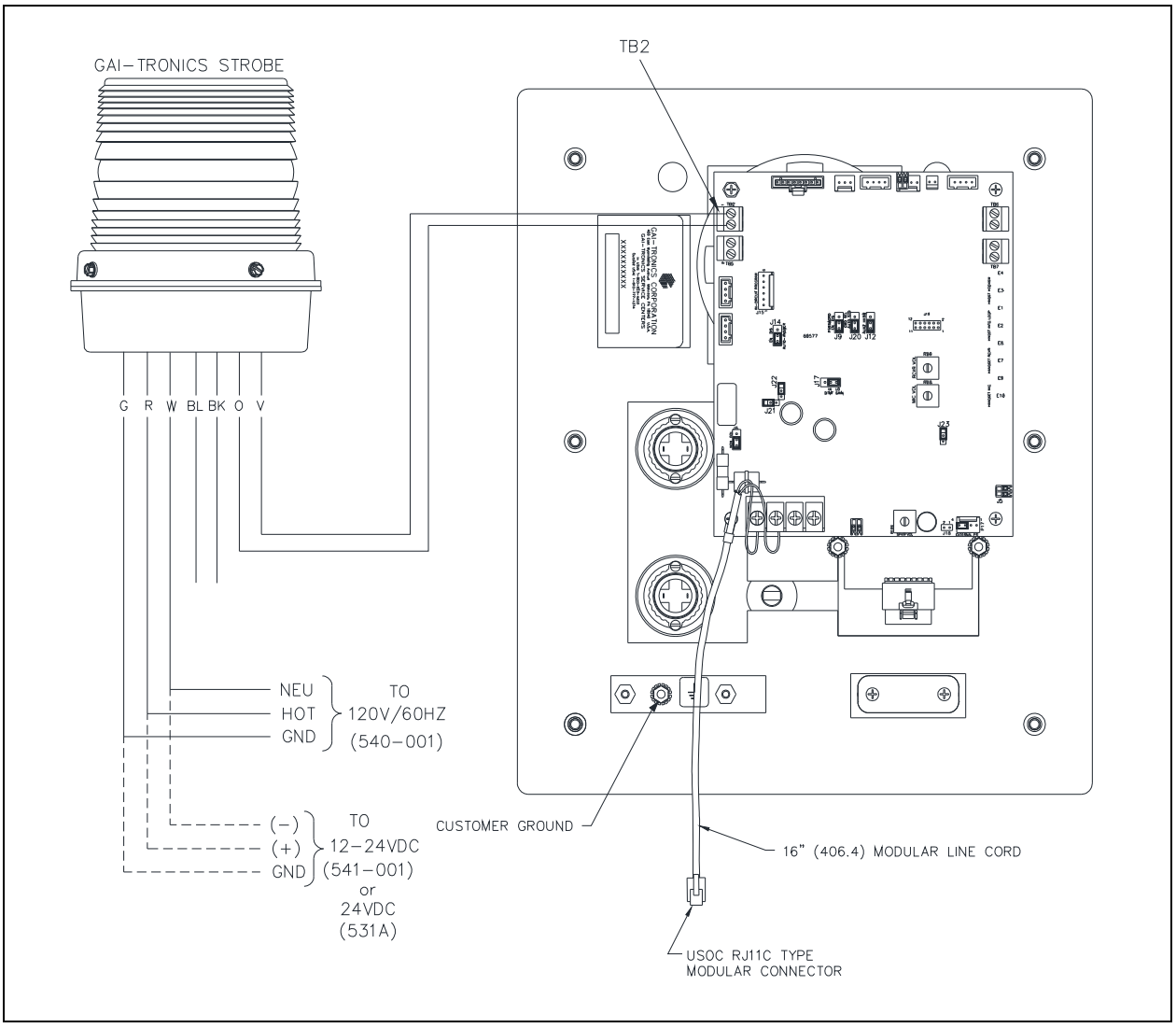

Figure 32. (Model 398-00*x* is shown as an example)
Connection to Optional GAI-Tronics 540-001/541-001/531A Strobe

Configuration

The hardware configuration options are explained in the following sections and the necessary jumper settings are identified to enable or disable each option. Read each section and record the selected options (see Table 3) prior to making the necessary changes (see Figure 33 for the jumper locations).

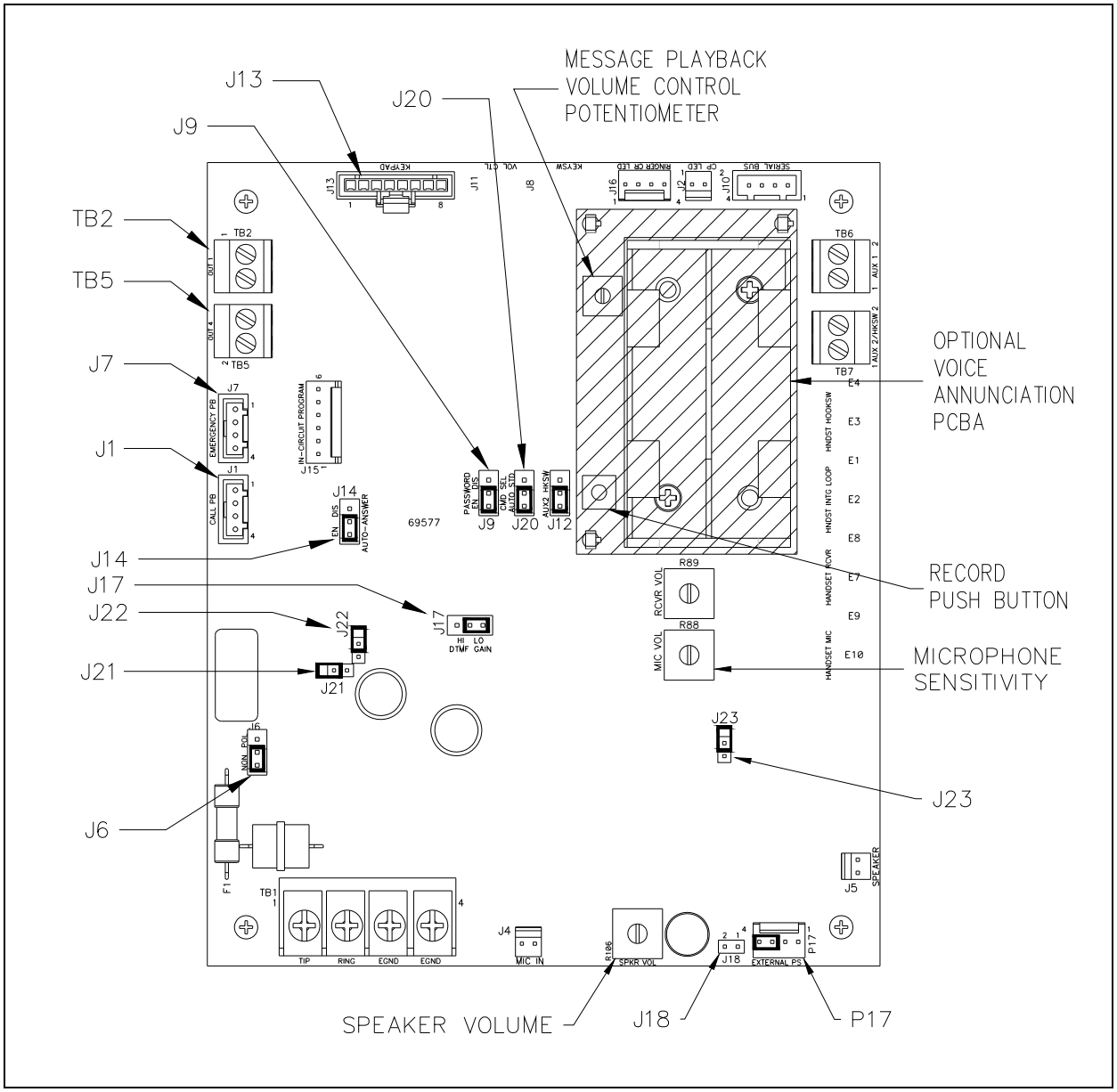

Figure 33. No. 69577-101 Emergency Telephone PCBA (Top View)

Auto-Answer

Factory Setting: Auto-answer feature enabled

The auto-answer feature enables or disables the automatic answering of incoming calls. This allows TMA to monitor the health of the telephone via polling with SMART operation enabled. The telephone automatically answers the call and attempts to communicate with TMA when the auto-answer feature is enabled. The telephone automatically transitions to a standard two-way communication if the caller is not TMA.

- *Enable*: jumper J14 in position **EN**
- *Disable*: jumper J14 in position DIS (Do not use this setting except under the direction of GAI-Tronics personnel.)

NOTE: The auto-answer feature must be enabled to allow the GAI-Tronics TMA PC to contact the telephone or to allow remote touch tone programming.

Polarity

Factory Setting: Non-polarity sensitive

The telephone can be configured as polarity or non-polarity sensitive. The telephone operates regardless of tip and ring polarity when configured for non-polarity. The telephone will only operate when the telephone line's positive terminal is connected to the tip terminal when configured for polarity. Use the polarity sensitive setting to allow a line voltage reversal disconnect signal to disconnect the call.

- *Non-polarity Sensitive*: jumper J6 in position **NON**
- *Polarity Sensitive*: jumper J6 in position POL

DTMF Gain Select

Factory Setting: Low gain selected.

Two gain selections are available in the DTMF detection circuit. The low gain setting is recommended for most installations. The high gain setting may be necessary if the telephone is not responding to manual or TMA-generated DTMF commands.

- *Low Gain Selected*: jumper J17 in position **LO**
- High Gain Selected: jumper J17 in position HI

Password Enable/Disable

Factory Setting: Password enabled

This telephone can be configured to enable or disable the password protection for programming (Standard Mode only). This can be useful when initially programming the telephones.

- *In most installations*: jumper J9 in position **EN**
- *Password Disabled*: jumper J9 in position DIS

Command Select

Factory Setting: Auto

Jumper J20 enables or disables the automatic transition to SMART operation. SMART operation is disabled when the jumper in the STD position.

- *SMART Operation Enabled (Auto)*: jumper J20 in position **AUTO**
- *SMART Operation Disabled (Standard)*: jumper J20 in position STD

Low-Power Mode

Factory Setting: Low-power mode disabled

The performance of the telephone may be improved for installations with minimal loop current available by enabling this feature. Symptoms of minimal loop current may include low speaker volume and/or momentary muting of audio. The low-power mode should be disabled in most applications. The low-power mode is enabled by installing the following three jumpers: J21, J22, and J23.

- *Low-Power Mode Enabled*: Jumpers installed at J21, J22, and J23
- *Low-Power Mode Disabled*: Jumpers **NOT installed** at J21, J22, and J23

Auxiliary Outputs

Each telephone includes two isolated solid-state switches capable of switching a maximum of 125 mA at 48 V dc or 80 mA at 28 V ac. TB2 (OUT1) and TB5 (OUT4) on the emergency telephone PCBA provide the connections for the auxiliary outputs (see Figure 33).

Refer to the Auxiliary Output Control section for additional information.

Auxiliary Output Control

Output one connects to terminal block TB2 on the telephone's PCBA (refer to Figure 33). This output closes when an emergency call begins (HELP push button activation only) and remains in that state for the duration of the telephone call. The typical use of this output is to activate the flashing sequence on a GAI-Tronics strobe.

Output one can be programmed to remain closed for up to 255 minutes (in one-minute increments) after the emergency call ends. The strobe can be deactivated before disconnecting via an external switch or by pressing ***921** on the keypad of the called telephone. The RED ALERT® telephone will acknowledge acceptance of this deactivation command with a short beep. Retry the command if the beep is not initially received. A contact closure on Aux. 1 (TB6) deactivates the strobe after the call is terminated.

NOTE: This feature requires the use of GAI-Tronics No. 40404-045 plug-in power supply (120 V ac source required).

Output four connects to terminal block TB5 on the telephone's PCBA (adjacent to TB2). This output is remotely controlled by a DTMF command issued from the called telephone. This remote-control output can be used to activate or control a door latch, gate relay solenoid, alarm, etc. from the called party location.

Auxiliary control example: Output four used for gate entry

A Model 396-001 RED ALERT® emergency telephone is installed at the entrance to a gated/secure community. A visitor or delivery person approaches the gate and presses the ASSISTANCE push button that automatically calls the security office. The security guard presses the pre-programmed, DTMF open gate command after verifying entry approval. This command causes the RED ALERT® telephone's output four relay contact to close for a pre-programmed amount of time then release. The RED ALERT® telephone acknowledges acceptance of this deactivation command with a short beep. Retry the command if the beep is not initially received.

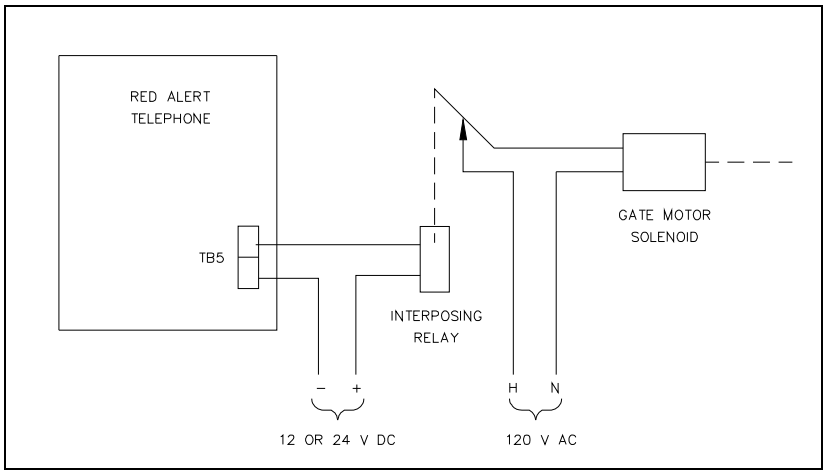

Figure 34. Example of RED ALERT® Telephone Installed for Gate Operation

Because the contact is only rated for 125 mA, an interposing relay is required to switch a higher voltage to the gate solenoid when energized, causing the gate to open (see Figure 34).

The output pulse duration (closure) and the DTMF code used as the *open gate* command are user programmable (see the Output Four Control Setup section).

Use TMA to change the contact closure settings if the RED ALERT® telephone is operating in SMART mode.

Voice Annunciation Option

The voice annunciation option is primarily intended for use during emergency calls placed from a RED ALERT® telephone. The voice annunciation option allows local or remote speech programming for location identification purposes, instructions, or any other desired messaging requirement. The message can be programmed locally at the telephone or remotely via dial-up. The following section provides instructions to record the voice annunciation message

Initial Message Recording

The easiest method to initially program the voice annunciation recording is to perform the task at a test bench. This allows control of the audio environment (background noise) and immediate adjustment of the voice annunciation volume. The set up requires a test telephone line connection for the RED ALERT® telephone during programming. The message can also be recorded locally using standard mode programming or remotely using either standard or SMART mode programming (see Changing the Voice Annunciation Recorded Message section). Complete the following steps to record the initial voice message:

1. Remove the front cover to expose the main PCBA and the piggy backed voice annunciation PCBA.
2. Insert two AA lithium batteries (provided with the telephone) into the battery holder of the voice annunciation PCBA, observing proper polarity (see Figure 33).

3. Connect the RED ALERT® telephone to the telephone line and wait 35 seconds for the telephone to initialize.
4. Locate the RECORD push button on the voice annunciation PCBA.
5. Momentarily press the record push button to begin recording.

   The telephone emits a short beep to indicate it is in recording mode.
6. Record the message in a conversation-level voice approximately 12 inches from the microphone located in the front cover.

   Maximum message duration is two minutes.
7. Momentarily press the record push button again after the recording is complete.

   A short beep is emitted to indicate the recording has ended. The recording will automatically play back when the record push button is pressed the second time, allowing verification of the message.
8. repeat steps six and seven if the message is unsatisfactory.

Volume Adjustment

The voice annunciation volume control is located on the voice annunciation PCBA and is separate from the telephone audio volume control. To adjust the voice annunciation message output volume:

1. Put the voice annunciation PCBA in *playback* mode by pressing and holding the record push button until the playback message is heard over the unit's speaker (typically one to two seconds).
2. Release the record push button.

   The recorded message will continue to play back (repeating the message) for a maximum period of one minute.
3. Adjust the volume using the volume control potentiometer located on the voice annunciation PCBA.
4. Momentarily press the record push button to remove the unit from playback mode.

Hardware Settings

Table 3. Hardware Settings Table

Function	Default Settings		User Settings	
	Setting	Jumper/Position	Setting	Jumper/Position
Auto-answer	Enabled	J14/EN		
Password Protection	Enabled	J9/EN		
Line Polarity	Non-polarized	J6/NON		
Command Select	Auto	J20/AUTO		
DTMF Gain Select	Low Gain	J17/LO		
Low-Power Mode	Disabled	J21, J22, J23 not installed		

Programming

Read this entire section and record the desired key sequences in Table 13 before programming the RED ALERT® emergency telephone.

There are two methods to program RED ALERT® emergency telephones; *Standard Mode* and *SMART Mode*. Standard mode programming is used if the telephone system installation does not include TMA PC software. SMART mode programming should be used with TMA installed and the telephones should be configured for monitoring. Normal telephone operation is identical in both modes of operation.

Each RED ALERT® telephone is factory-programmed to receive standard mode commands (see Table 13 for the factory-default settings).

Password Disabled Programming

The programmable features of the RED ALERT® emergency telephones are protected by a factory default or user specified password. A telephone may need to be configured for password disabled programming if the password has been changed from the default and has been forgotten or is unknown.

To configure a RED ALERT® emergency telephone for password disabled programming:

1. Access the telephone's PCBA and disable the password protection feature by moving jumper J9 to the **DIS** position.
2. Confirm the auto-answer feature is enabled (jumper J14 must be in the **EN** position).
3. Call the RED ALERT® telephone using a touch-tone telephone.

   The telephone automatically answers the call and generates a splash tone (low to high sequence) followed by a success tone (single beep).
4. Begin entering the desired key sequences following steps 2 and 3 in the Standard Mode Programming section.

Standard Mode Programming

Set up each RED ALERT® emergency telephone locally using *local* access programming (keypad required) or remotely by calling the telephone from another telephone using *remote* access programming.

Local Access Programming

RED ALERT® telephones not equipped with an integral keypad require a No. 51035-011 Keypad and No. 61504-048 Keypad Cable Assembly (purchased separately) to program these units locally (see Figure 33).

1. *Telephones without an integral keypad*: Connect the keypad cable assembly to the keypad and to J13 on the telephone PCBA.

   The CALL push button connector J1 is used exclusively for local programming.
2. *RED ALERT® Telephones that include only the HELP push button*: Move the switch harness plug from the HELP connector J7 to the CALL push-button connector J1 on the telephone PCBA.
3. Press the CALL or HELP push button (whichever is connected to J1).
4. Simultaneously press the **1** and **#** keypad buttons when the dial tone is heard from the speaker.

The emergency telephone automatically answers the call and generates a splash tone (low to high sequence), followed approximately by a 1.5-second delay, followed by a success tone (short beep). The timing sequence to connect to the telephone, authenticate, and enter a programming sequence is shown below (see Figure 35).

5. Continue programming the telephone (see the Programming Sequences section).

Remote Access Programming

1. Enable the auto-answer feature (see the Auto-Answer section.)
2. Call the RED ALERT® emergency telephone using a touch-tone telephone.

   The emergency telephone automatically answers the call and generates a splash tone (low to high sequence), followed approximately by a 1.5-second delay, followed by a success tone (short beep). The timing sequence to connect to the telephone, authenticate, and enter a programming sequence is shown below (see Figure 35).
3. Continue programming the telephone (see the Programming Sequences section).

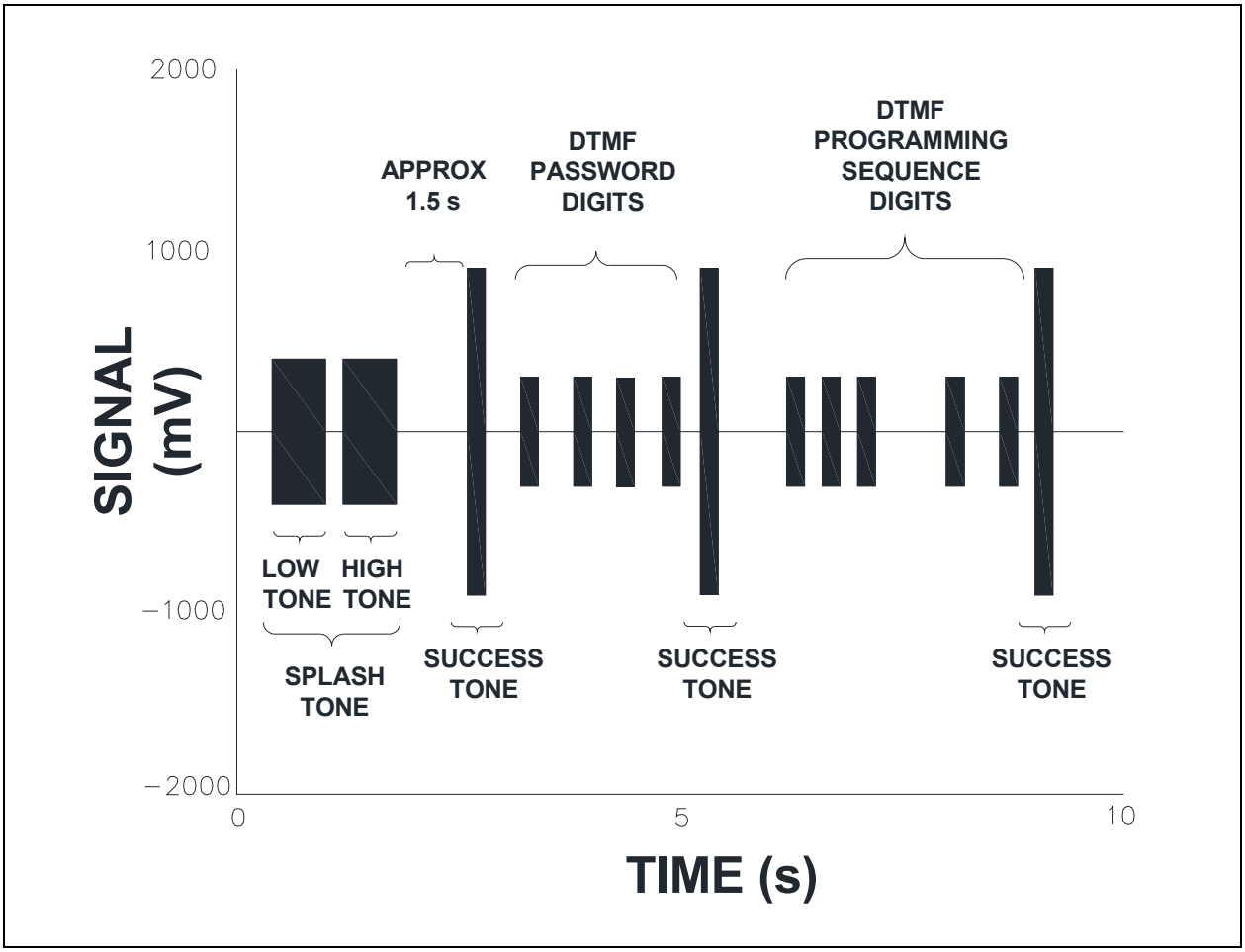

Figure 35. Telephone Programming Timing Diagram

Programming Sequences

The information on the following pages explains the programming options. The telephone is shipped from the factory with default parameters configured (see Table 13). A column is included in the table to record the modified programming parameters.

Programming Legend
D = digit 0–9, *, or #
N = digit 0–9
L = 0—Disable; 1—Enable

The following instructions are common to both local and remote access programming. Follow these directions to configure the telephone with the desired operating parameters.

1. Connect to the telephone locally (see Local Access Programming) or remotely (see Remote Access Programming).
2. Dial the factory-default password **2468** (or appropriate customer-selected password). A success tone (short beep) is generated to indicate that *standard* programming mode has been accessed.
3. After hearing the password success tone, begin entering each desired programming key sequences (see the subsections under this section for the programmable options).

   A success tone (short beep) is generated each time a new key sequence is accepted. An error tone (two low tones) is generated to indicate errors.
4. Verify the key sequence and reenter the sequence if an error tone is generated.
5. To terminate the programming call:
   - Local—Press the CALL or HELP push button (whichever is connected to J1) to end the call. Restore any moved push-button harness connectors to their original position (if necessary).
   - Remote—Place the programming telephone on hook. The RED ALERT® Telephone will automatically end the programming call within 20 seconds.

NOTES:

- RED ALERT® Telephones automatically time out and disconnect after 20 seconds elapses between digit entries or if an invalid password is entered.
- RED ALERT® telephones exit programming mode and revert to a standard voice call if DTMF digits are not dialed within 3 seconds of the first success tone.
- The telephone failed to recognize the password if the password success tone is not generated. The telephone must then be programmed with the password disabled if the correct password is not known (see the Password Disabled Programming section).

Dialing Methods

The emergency telephones can be configured for either auto-dialing or ring-down operation. Select the dialing method that fits the application. The dialing methods are explained in detail below.

Auto Dialing

The HELP push button can be programmed to call up to three unique telephone numbers. The unique telephone numbers include a primary telephone number and two rollover numbers. The emergency telephone will automatically dial the first rollover number (if configured) if the emergency call cannot connect to the primary telephone number (i.e., a busy signal or no answer). The emergency telephone automatically dials the second rollover number (if configured) if the emergency call cannot connect to the first rollover telephone number. This sequence will continue until the emergency call is answered or all numbers have been attempted (one attempt each).

The number of attempts to call each programmed number can be increased when operating in SMART mode (two attempts each, three attempts each, etc.). All three auto-dial memories must be programmed with valid telephone numbers for the rollover feature to function properly. The three auto-dial numbers can all be the same or any combination of telephone numbers. The numbers will only be dialed one time if the telephone has only one or two auto-dial numbers programmed.

The telephones can be programmed to access outside CO lines if connected to a PBX, PABX, KSU, etc. telephone system. Access to a CO line typically requires adding a digit (e.g. 9) to the auto-dial number. A *pause* may also be required in the auto-dial number. The pause is normally required to wait for the secondary (CO line) dial tone (see Table 4, HELP button AUTO-DIAL Number 1 for examples).

The telephones also have a programmable *Primary Dial Tone Delay* and *Secondary Dial Tone Delay* in addition to the pause capability. Both delays determine the amount of time the telephone will wait before dialing the stored telephone number.

NOTE: The secondary dial tone delay can only be used if a 9 must be entered to gain access to the CO line.

The AUTO-DIAL2 push button can only be programmed for a single telephone number when operating in standard mode. Configure the telephone for SMART mode with TMA to program the AUTO-DIAL 2 button for three-number rollover.

Table 4. Auto-Dialing Key Sequences

Feature	Key Sequence	Description	Default
HELP Button Auto-dial Number 1	*DD* ... *1	Assigns a telephone number to the auto-dial memory 1. *DD* ... represents the telephone number, which can be up to 24 digits in length. For access to an outside line, a pause may be required in the telephone number to wait for secondary dial tone. The *# represents a pause in the telephone number. *Examples*: To assign the police emergency number 911 to the auto-dial button, enter **911*1**. To assign 911 when a 9 is required to gain access to a CO line, enter **9*#911*1**. To store * or # as part of the auto-dial number, (such as for speed dialing), enter these digits twice in succession.	None
HELP Button Auto-dial Number 2	*DD* ... *2	Same as HELP Button Auto-dial Number 1 except the sequence ends in *2 instead of *1.	None
HELP Button Auto-dial Number 3	*DD* ... *3	Same as HELP Button Auto-dial Number 1 except the sequence ends in *3 instead of *1.	None
CALL or ASSISTANCE Button Auto-dial	*DD* ... *4 *DD* ... *5 *DD* ... *6	Same as HELP Button Auto-dial Number 1 except the sequence end digits.	None
Primary Dial Tone Delay	# 1 0 *N N*	The dial tone delay is the amount of time the unit waits for a dial tone before auto-dialing the telephone number. (00* [20 seconds]; 01–15 seconds). *Example*: To wait up to 5 seconds for a dial tone, enter **# 1 0 0 5**. ***NOTE:** If dial tone is not detected then autodialing does not occur.	03 (3 seconds)

Feature	Key Sequence	Description	Default
Secondary Dial Tone Delay	# 1 1 *N N*	This feature is only used if you must dial 9 to access an outside line. It determines the amount of time (00–15 seconds) the telephone waits for a second dial tone. The first programming step indicated you must program 9*# and the number you want the auto-dial to access. This programming parameter allows you to choose the amount of time the telephone waits after sending the 9 and pausing before dialing the auto-dial number. *Example*: To wait 10 seconds for the second dial tone, enter **# 1 1 1 0**.	02 (2 seconds)
Ring-down Operation	*1	This option clears the telephone number to prevent auto-dialing when the button is pressed. After the button is pressed, the ring-down system must detect loop current and ring-down to the appropriate telephone.	None

Ring-down Operation

Ring-down operation enables the telephone to go off-hook when the HELP push button is pressed. The ring-down system must detect loop current and ring-down to the appropriate telephone.

Password Protection

The password protection feature allows changing the four-digit password required to program the emergency telephone. Each telephone is password protected to maintain the integrity of programmed information and should not be disabled.

The password is required to enter the programming mode when programming the telephone locally or from a remote location. Jumper J9 must be in the **EN** position to enable the password protection feature. Complete the key sequence to change the four-digit password.

Table 5. Password Configuration

Feature	Key Sequence	Description	Default
Password Protection	# 1 4 *N N N N*	A four-digit password must be supplied to remotely program the telephone. If you change the password and cannot enter programming mode, see the Password Disabled Programming section. *Example*: To program the password 1234, enter **# 1 4 1 2 3 4**.	2468

Auto-Answer Alert

When auto-answering an incoming call, the RED ALERT® telephone will generate a splash tone on the telephone line. This tone is always heard by the calling party. This tone can be pre-programmed to also be heard over the telephone's integral speaker using this key sequence.

Table 6. Auto-Answer Alert Configuration

Feature	Key Sequence	Description	Default
Auto-answer Alert	# 1 6 *L*	The auto-answer alert feature allows a person to call the emergency telephone and monitor the area around the telephone with or without sounding a splash tone over the unit's integral speaker. (Disable alert tone), *L*=0. (Enable alert tone), *L*=**1**.	1 (Enabled)

Off-Hook Ringing

The emergency telephone can generate a ringing signal from the speaker when the telephone is called. The factory default setting for this feature is *disabled*.

NOTE: In addition to enabling this feature, the auto-answer feature must also be enabled for proper operation.

Table 7. Off-Hook Ringing

Feature	Key Sequence	Description	Default
Off-Hook Ringing	# 2 2 *L*	Enabling the Off-Hook Ringing feature allows a person to call the telephone and have the telephone function as a normal telephone. The telephone will ring after the splash tone is heard in the receiver if remote programming is not commenced within 7 seconds of the splash tone. To enable the ringing feature (enable splash tone and ringing), *L*=1. To disable the ringing feature (only splash tone on the phone), *L*=0. **NOTE:** Only RED ALERT® Telephones equipped with a CALL push button can be answered when they are ringing by pressing the push button.	0 (Disabled)

Disconnect Options

Several options are available for disconnecting a call. Any combination of disconnect options may be used. Select the method that best suits the application.

Table 8. Disconnect Options

Feature	Key Sequence	Description	Default
HELP Push-button Disconnect Option	# 1 7 *L*	The HELP push button cannot be used to disconnect a call for 10 seconds after initially pressing the push button. However, the HELP push button can be used to disconnect calls after the 10-second push button lockout period elapses when *L* = 1. To prevent the HELP push button from disconnecting the call, set *L* = 0. *Example*: To enable the HELP push button disconnect, enter **# 1 7 1**. To disable the HELP push button disconnect, enter **# 1 7 0**.	1 (Enabled)
Call Time-out Disconnect Option	# 1 2 *N N*	This feature programs the maximum length of a call if no other disconnect features are used. The valid entries are 1–99, representing 1-minute increments and 0 representing 4.5 hours. The call duration timer begins when the emergency telephone goes off-hook. The emergency telephone automatically disconnects after the programmed time-out period elapses. The user can immediately press the HELP button to reconnect the autodial number. This feature helps prevent non-emergency calls from tying up emergency lines for long lengths of time. *Example*: To make the maximum call length 2 minutes, enter **# 1 2 0 2**.	10 (10 minutes)
Dial Tone Disconnect Option	# 1 9 *L*	**NOTE:** Use this option only if no other disconnect options are available. If this option is enabled, the telephone automatically terminates a call if it detects a dial tone continuously for 10 seconds, such as if the called party hangs up. To enable the dial tone disconnect, *L*=1. To disable the dial tone disconnect, *L* = 0. *Example*: To enable the dial tone disconnect, enter **# 1 9 1**. To disable the dial tone disconnect, enter **# 1 9 0**.	0 (Disabled)

ADA (Americans with Disabilities Act) Programming

The ADA features provide the following benefits:

- CALL RECEIVED WHEN LIT indication - This lamp provides indication to hearing-impaired individuals that the emergency call has been answered.
- The Location Identification Code - This feature enables security personnel to quickly and easily locate an individual in trouble.
- DTMF Call Disconnect - Enables the security operator to disconnect the call by pressing ##.

NOTE: These features do not apply to Models 392-001 and 392-001FS.

Table 9. Americans with Disabilities Act (ADA) Configuration

Feature	Key Sequence	Description	Default
DTMF Disconnect Option	# 1 8 *L*	This option controls the DTMF "##" disconnect feature. To enable, set *L*=1. To disable, set *L*=0.	1 (Enabled)
Location Identification ID Setup	# 1 3 *L N N N*	This option enables and stores the three-digit location identification ID number. To enable the ID feature, set *L*=1. To disable the ID feature, *L*=0. Enter the three-digit location identification code in the sequence *N N N*. *Example*: To enable the location ID feature and store the three-digit ID code 357, enter **# 1 3 1 3 5 7**. To disable the location ID feature, enter **# 1 3 0 0 0 0**. **NOTE:** The ADA options must also be enabled.	No default setting. The user must complete this step to have the identification code transmitted.

Extended Strobe Operation (Requires External Power Supply)

Output one can be programmed for extended operation (remain closed) for up to 255 minutes (in 1-minute increments) after the emergency call ends.

Table 10. Extended Strobe Operation

Feature	Key Sequence	Description	Default
Extended Strobe Operation	# 2 5 *N N N*	Sets the duration of the activation of the Output 1 contact starting at the end of a call. Use entries 001–255, representing 1 minute to 255 minutes in 1-minute increments. Use 000 to disable this feature. To set a duration of 7 minutes, enter **# 2 5 0 0 7**.	0 0 0 (Disabled)

Output Four Control Setup

The command (DTMF key sequence) that triggers the timed activation of output four contact closure (TB5) is configurable. The sequence can contain up to eight DTMF digits in the range 0–9. The first digit must not be 0 (zero). Some examples of valid control sequences are: 87654321, 832, and even a single digit such as 7. The duration of the activation (closure) of output four can be set in the range of 0.1 to 12.7 seconds in 0.1-second increments.

Table 11. Output 4 Control Options

Feature	Key Sequence	Description	Default
Control Sequence	*N N..* 8	Assigns the digits NN... as the command key sequence that triggers the timed activation of output four. NN is a sequence of 1–8 digits, with the first digit not zero. To assign 726 as the control sequence, enter **7 2 6 * 8**.	90125
Duration of Timed Activation	# 2 6 *N N N*	Sets the duration of the activation of the Output 4 contact when triggered by the control sequence. Use entries 001–127, representing 0.1 second to 12.7 seconds in 0.1-second increments. Use 000 to disable this feature. To set a duration of 7 seconds, enter **# 2 6 0 7 0**.	5 seconds

Early Microphone Option

The microphone in each telephone activates only after the unit determines connection to the called party. This will occur in one of two ways based on factory-default programming; when the telephone receives a DTMF ***** from the called party, or when the telephone detects that no more ring-backs from the called number are occurring. This ring-back determination may take 4–6 seconds to detect, rendering the microphone non-active during that time.

Enabling early microphone activates the microphone when the telephone begins checking for ring-back tones, typically within less than 1 second after the unit completes the dialing sequence Early microphone operation will occur for both emergency and non-emergency call operation for all RED ALERT® emergency telephones when enabled.

Use of the early microphone feature includes an operational risk that ring-back tones can be missed, or audio received by the microphone can be recognized by the telephone, causing it to operate as if the call had been answered. This could prevent call *rollover* from occurring.

NOTE: The early microphone feature should only be used if the telephone number being called by the emergency telephone is attended 24 hours per day. If call rollover is desired, the appropriate feature setting is *early microphone option* disabled.

Table 12. Early Microphone Option

Feature	Key Sequence	Description	Default
Early Microphone Option Enable	# 7 1 1	Provide microphone activation within 1 second of dial sequence completion.	No
Early Microphone Option Disable	# 7 1 0	Returns telephone to default operation of microphone.	Yes

SMART Mode Programming

TMA software is designed to remotely program RED ALERT® emergency telephones for SMART mode operation. The telephones can be locally programmed for SMART operation but there is no advantage to having a RED ALERT® emergency telephone set up for SMART mode without having TMA installed.

RED ALERT® emergency telephones should be programmed for standard mode operation when installed in systems that do not have TMA installed but will have TMA operational in the future. The installed telephones can be reprogrammed from the TMA PC upon installation of TMA.

Table 13. Programming Documentation Table

Function	Key Sequence	Default Setting	User Settings
Auto-dial or Ring-Down Programming (see Table 4)			
HELP Button Auto-dial Number 1	*DD**1	None	
HELP Button Auto-dial Number 2	*DD**2	None	
HELP Button Auto-dial Number 3	*DD**3	None	
CALL Button Auto-dial Number	*DD**4	None	
Primary Dial Tone Delay	#10*NN*	3 seconds	
Secondary Line Dial Tone Delay	#11*NN*	2 seconds	
Ring-down Operation	*1	None	
Password Protection Feature Programming (see Table 5)			
Password Protection	#14*NNNN*	2468	
Disconnect Options Programming (see Table 8)			
Emergency Push-button Disconnect	#17*L*	1 (enabled)	
Call Time-out Disconnect	#12*NN*	10 minutes	
Dial Tone Disconnect	#19*L*	0 (disabled)	
ADA Programming (see Table 9)			
DTMF Disconnect Option	#18*L*	#181	
Identification Code Entry	#13*LNNN*	None	
Other Programming Features			
Auto-Answer Alert Feature (see Table 6)	#16*L*	0 (disabled)	
Off-Hook Ringing Feature (see Table 7)	#22*L*	0 (disabled)	
Extended Strobe Operation (see Table 10)	#25*NNN*	0 0 0 (disabled)	
Output Four Control Setup (see Table 11)	*NN*…*8 #26*NNN*	90125 #26050 (5 sec.)	
Early Microphone Option (see Table 12)	#71*L*	0 (disabled)	

Table Legend: D = DTMF digit 0–9, *, or # N = Numeric digit 0–9 L = 0—Disable, 1—Enable

Changing the Voice Annunciation Recorded Message

Change the currently stored voice message either locally or remotely following the instructions in the applicable subsection below. The recorded voice annunciation message can also be changed by following the initial message recording steps (see the Initial Message Recording section):

Local Recording (Integral Keypad Only)

1. Obtain a local access connection to the telephone (see the Local Access Programming section).

   The RED ALERT® telephone generates a splash tone (low to high sequence), followed by a success tone (short beep). The timing sequence to connect to the telephone, authenticate, and enter a programming sequence is shown above (see Figure 35).

2. Dial the factory-default password **2468** (or appropriate customer-selected password).

   A success tone (short beep) is generated to indicate that standard programming mode has been accessed. The timing sequence to connect to the telephone, authenticate, and enter a programming sequence is shown above (see Figure 35).

3. Enter **#75** on the keypad.

   The telephone emits a short beep to indicate it is in recording mode.

4. Record the message in a conversation-level voice approximately 12 inches from the microphone located in the front cover.

   Maximum message duration is two minutes.

   NOTE: An error tone (two low tones) is generated to indicate an error. Verify the key sequence and repeat steps 3 and 4 if an error tone is generated.

5. Press ***** when the recording is complete.

   The recording will automatically play back when the ***** DTMF code is pressed.

Remote Recording

Remote recording the voice annunciation message can be accomplished in standard or SMART operating mode and is typically used to change the voice recording for a RED ALERT® telephone that is already installed and operational. This method is recommended to modify the recording as it does not require access to the telephone's internal electronics.

Standard Mode

1. Obtain a remote access connection to the telephone (see the Remote Access Programming section).

   The emergency telephone will automatically answer the call and generate a splash tone (low to high sequence), followed by a success tone (short beep). The timing sequence to connect to the telephone, authenticate, and enter a programming sequence is shown above (see Figure 35).

2. Dial the factory-default password **2468** (or the customer-selected password).

   A success tone (short beep) is generated to indicate that standard programming mode has been accessed.

3. Enter **#75** on the keypad.

   A short beep is emitted to indicate that the telephone is in recording mode.

4. Record the message in a conversation-level voice.

5. Press ***** when the recording is complete.

   The recording will automatically play back when the ***** DTMF code is pressed.

SMART Mode

1. Call the emergency telephone using a touch-tone telephone.

2. Listen for a confirmation tone during ringing that indicates the telephone has answered.

3. Press ******* to enter programming mode.
4. Wait two seconds.
5. Enter ****0000** (0000 is the factory default maintenance PIN number).
6. Enter ***20**.

   The telephone will respond with six DTMF tones if it successfully enters maintenance mode. Two DTMF tones are emitted if access is denied. Repeat steps three through six if access is denied.
7. Press ***8321**.

   A short beep is emitted to indicate that the telephone is in recording mode.
8. Record the message in a conversation-level voice.
9. Press ***** when the recording is complete.

   The recording automatically plays back when the ***** DTMF code is pressed.

Maintenance

⚠**WARNING**⚠—Always remove power to this station prior to servicing.

Battery Replacement (Voice Annunciation Option Only)

⚠ **CAUTION** ⚠—Risk of explosion if battery is replaced by an incorrect type or is incorrectly replaced. Dispose of used batteries according to the instructions.

Replace with lithium AA batteries to ensure proper cold weather operation and maximum battery life.

General Information

1. Inspect and replace frayed or cracked wiring.
2. Secure/replace loose wires and terminal lugs.
3. Remove corrosion from terminals.

Service

Contact GAI-Tronics regional service center for a return authorization number (RA#) if a RED ALERT® telephone requires depot repair service. Equipment must be shipped prepaid to GAI-Tronics with a return authorization number and a purchase order number. Repairs will be made without charge if the equipment is under warranty. Please include a written explanation of all defects to assist our technicians in their troubleshooting efforts.

Call 800-492-1212 inside the USA or 610-777-1374 outside the USA for help identifying the regional service center closest to you.

Preventive Maintenance for Model 392-001, 392-001FS, 396-00X, 396-001FS, 397-00x, 397-001FS, and 398-00x Telephones

Stainless steel does not normally require maintenance to prevent corrosion from occurring. Different installation locations may require more regular maintenance than others, depending on the environment and exposure to airborne contaminants. The following maintenance steps should be performed on a regular basis or when corrosion is first noticed on your telephone.

Cleaning

- For general cleaning, wipe the surface with a cleanser or a cleanser and water mixture. Any cleanser that is safe for glass is usually safe for stainless steel. Wipe dry.
- If corrosion or rusting is noticed, remove with a non-abrasive commercial cleanser and water. Rub stained areas in the same direction as the existing grain. Stubborn stains may be removed with a magnesium oxide, ammonia, and water paste. Wipe clean, rinse with water, and dry.

Corrosion Prevention

Automotive wax provides the best results in preventing corrosion on stainless steel. Simply apply wax, let dry to a haze, and buff to a shine with a clean dry cloth. This application should protect the telephone surface for many months as it will allow natural reformation of the chromium oxide layer.

Do NOT use steel wool, sandpaper, mineral acids, bleaches, or chlorine cleansers on the stainless surface.

Replacement Parts

Part No.	Description	392-001	392-001FS	393-00x	393AL-00x	394AL-00x	396-00x	396-001FS	397-00x	397-001FS	398-00x
233-001	Model 233-001 Security Screwdriver	■	■	■	■	■	■	■	■	■	■
12562-108	PCBA, Replacement	■	■	■	■	■	■	■	■	■	■
12562-109	PCBA, Voice Annunciation Kit			■	■	■	■		■		■
51035-005A	PCBA, Keypad Assembly	■									■
51035-019	PCBA, Keypad Assembly		■			■					
12542-002	Security Screws, (Torx T-25), ½ inch, Pack of 15	■	■				■	■	■	■	■
12516-003	Security Screws, (Torx T-25), 1-½ inches, Pack of 10			■	■	■					
12520-009*	Push Button Replacement Kit (HELP)			■	■	■	■		■		■
12520-010*	Push Button Replacement Kit (CALL/ASSISTANCE)	■				■	■				■
12520-011 †	Piezo Button, Red (HELP)			■	■	■	■	■	■	■	■
12520-012 †	Piezo Button, Black (CALL, ASSISTANCE)		■			■	■	■			■
40404-045	Replacement Plug-in Power Supply (provided with Extreme Cold Temperature Option)			■	■	■	■		■		■
12521-004	Microphone Replacement Kit	■	■	■	■	■	■	■	■	■	■
12522-007	Piezo Speaker Replacement Kit	■	■	■	■	■	■	■	■	■	■

*Used on the -001 or -002 models.

†Used on the -003, -004, and FS models.

Specifications

TMA compatibility profile type ..... Type A hands-free (RED ALERT)
Auto-dial digit limit ..... 24 digits

Electrical

Audio output ..... 1 kHz tone—87 ±3 dB SPL @ 1 m with 40 mA loop current
Battery voltage (tip and ring) ..... 24 V dc or 48 V dc
Phone line requirements ..... loop start, central office (CO), or analog station port (PBX, PABX, or KSU)
Minimum loop current ..... 24 mA (35 mA recommended)
Auxiliary output (Isolated solid-state switch) ..... 125 mA at 48 V dc
80 mA at 28 V ac
Signaling ..... DTMF 100 ms tone
Memory ..... non-volatile EEPROM

Mechanical

Operating temperature range
- -003 and -004 Models ..... −40 ºF to +140 ºF (−40 ºC to +60 ºC)
- -001 and -002 Models ..... −4 ºF to +140 ºF (−20 ºC to +60 ºC)

Relative humidity ..... to 95%, non-condensing

Model 393-00x

Enclosure construction ..... Valox® (high impact, glass-reinforced polyester) painted safety yellow
Dimensions ..... 9.5 H × 8.0 W × 4.0 D in (241.3 × 203.2 × 101.6 mm)
Weight ..... 4.0 lb (1.8 kg)

Models 393AL-00x and 394AL-00x

Enclosure construction ..... cast aluminum painted safety yellow
- Key Pad (Model 394AL-00*x* only) ..... chrome-plated zinc

Dimensions ..... 9.5 H × 8.0 W × 4.0 D in (241.3 × 203.2 × 101.6 mm)
Weight
- Model 393AL-00*x* ..... 7.8 lb (3.5 kg)
- Model 394AL-00*x* ..... 8.5 lb (3.8 kg)

Models 392-001, 396-00x, 397-00x, 397-00xxx, 398-00x, and 398-00xxx

Construction
- Panel ..... 14-gauge, type 304 brushed stainless steel
- Back box ..... 16-gauge cold-rolled steel with black polyurethane finish
- Key Pad (Models 398-00*x* and 392-001 only) ..... chrome-plated zinc

Dimensions
- Front panel ..... 12.00 H × 10.00 W in (305 × 254 mm)
- Back box (overall) ..... 10.06 H × 8.43 W × 2.50 D in (256 × 214 × 63.5 mm)
- Cutout for mounting back box ..... 10.13 H × 7.63 W in (257 × 194 mm)

Weight
- Model 392-001 ..... 7.2 lb (3.3 kg)
- Model 396-00*x* ..... 6.5 lb (2.9 kg)
- Model 397-00*x* ..... 6.5 lb (2.9 kg)

Model 398-00*x* ..... 7.2 lb (3.3 kg)

Models 392-001FS, 396-001FS, and 397-001FS

Construction

Panel ..... 14-gauge, type 304 brushed stainless steel

Back box ..... 16-gauge cold-rolled steel with black polyurethane finish

Key Pad (Model 392-001FS only) ..... chrome-plated zinc

Dimensions

Front panel ..... 8.5 H × 6.5 W in (215 × 165.1 mm)

Back box (overall) ..... 7.62 H × 5.62 W × 2.37 D in (193.6 × 142.7 × 60.2 mm)

Cutout for flush mounting ..... 7.75 H × 5.75 W in (196.9 × 146.1 mm)

Weight ..... 5 lb (2.3 kg)

Code Blue Retrofit Phones

Dimensions ..... 11.75 × 8.50 × 2.68 in (298.5 × 215.9 × 68.1 mm)

Weight

Model 397-00*x*CB ..... 6.0 lb (2.7 kg)

Model 398-00*x*CB ..... 6.7 lb (3.0 kg)

Ramtel Retrofit Phones

Dimensions ..... 11.88 × 8.25 × 2.68 in (301.6 × 209.6 × 68.1 mm)

Weight

Model 397-00*x*RT ..... 6.0 lb (2.7 kg)

Model 398-00*x*RT ..... 6.7 lb (3.0 kg)

Talk-A-Phone Retrofit Phones

Dimensions ..... 11.75 × 9.5 × 3.20 in (298.5 × 241.3 × 81.3 mm)

Weight

Model 397-00*x*TP ..... 6.0 lb (2.7 kg)

Model 398-00*x*TP ..... 6.7 lb (3.0 kg)

Approvals

Safety of Information Technology Equipment ..... UL/CSA 60950

Enclosures for Electrical Equipment ..... Type 3R

47 CFR Part 68

Certification Number ..... US: ADGTE05BGTC2010

Ringer Equivalence Number 5B

Network connection (USOC) RJ11

IC Information (Canada)

IC Certification Number 822B-GTC2010

Ringer Equivalence Number 5B

Connection Method CA11A

User Instructions (USA)

This equipment complies with Part 68 of the FCC rules and the requirements adopted by the ACTA. On 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.

User Instructions (Canada) CP-01, Issue 8, Part I: Section 14.1

NOTICE: The Industry Canada label identifies certified equipment. This certification means that the equipment meets certain telecommunications network protective, operational and safety requirements as prescribed in the appropriate Terminal Equipment Technical Requirements document (s). The Department 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 telecommunications 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 degradation of service in some situations. Repairs to certified equipment should be coordinated by a representative designated by the supplier. Any repairs or alterations 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 electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

CP-01, Issue 8, Part I: Section 14.2

NOTICE: 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 Ringer Equivalence Numbers of all the devices does not exceed 5.

Warranty

Equipment. GAI-Tronics warrants for a period of one (1) year from the date of shipment, that any GAI-Tronics equipment supplied hereunder shall be free of defects in material and workmanship, shall comply with the then-current product specifications and product literature, and if applicable, shall be fit for the purpose specified in the agreed-upon quotation or proposal document. If (a) Seller's goods prove to be defective in workmanship and/or material under normal and proper usage, or unfit for the purpose specified and agreed upon, and (b) Buyer's claim is made within the warranty period set forth above, Buyer may return such goods to GAI-Tronics' nearest depot repair facility, freight prepaid, at which time they will be repaired or replaced, at Seller's option, without charge to Buyer. Repair or replacement shall be Buyer's sole and exclusive remedy. The warranty period on any repaired or replacement equipment shall be the greater of the ninety (90) day repair warranty or one (1) year from the date the original equipment was shipped. In no event shall GAI-Tronics warranty obligations with respect to equipment exceed 100% of the total cost of the equipment supplied hereunder. Buyer may also be entitled to the manufacturer's warranty on any third-party goods supplied by GAI-Tronics hereunder. The applicability of any such third-party warranty will be determined by GAI-Tronics.

Services. Any services GAI-Tronics provides hereunder, whether directly or through subcontractors, shall be performed in accordance with the standard of care with which such services are normally provided in the industry. If the services fail to meet the applicable industry standard, GAI-Tronics will re-perform such services at no cost to buyer to correct said deficiency to Company's satisfaction provided any and all issues are identified prior to the demobilization of the Contractor's personnel from the work site. Re-performance of services shall be Buyer's sole and exclusive remedy, and in no event shall GAI-Tronics warranty obligations with respect to services exceed 100% of the total cost of the services provided hereunder.

Warranty Periods. Every claim by Buyer alleging a defect in the goods and/or services provided hereunder shall be deemed waived unless such claim is made in writing within the applicable warranty periods as set forth above. Provided, however, that if the defect complained of is latent and not discoverable within the above warranty periods, every claim arising on account of such latent defect shall be deemed waived unless it is made in writing within a reasonable time after such latent defect is or should have been discovered by Buyer.

Limitations / Exclusions. The warranties herein shall not apply to, and GAI-Tronics shall not be responsible for, any damage to the goods or failure of the services supplied hereunder, to the extent caused by Buyer's neglect, failure to follow operational and maintenance procedures provided with the equipment, or the use of technicians not specifically authorized by GAI-Tronics to maintain or service the equipment. THE WARRANTIES AND REMEDIES CONTAINED HEREIN ARE IN LIEU OF AND EXCLUDE ALL OTHER WARRANTIES AND REMEDIES, WHETHER EXPRESS OR IMPLIED BY OPERATION OF LAW OR OTHERWISE, INCLUDING ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Return Policy

If the equipment requires service, contact your Regional Service Center for a return authorization number (RA#). Equipment should be shipped prepaid to GAI-Tronics with a return authorization number and a purchase order number. If the equipment is under warranty, repairs or a replacement will be made in accordance with the warranty policy set forth above. Please include a written explanation of all defects to assist our technicians in their troubleshooting efforts.

Call 800-492-1212 (inside the USA) or 610-777-1374 (outside the USA) for help identifying the Regional Service Center closest to you.