Pub. 42004-445A

GAI-TRONICS® CORPORATION
A HUBBELL COMPANY

Handset VoIP Telephones

TABLE OF CONTENTS

GAI-TRONICS® CORPORATION
A HUBBELL COMPANY

VoIP Telephones with Keypads

Confidentiality Notice

This manual is provided solely as an installation, operation, and maintenance guide and contains sensitive business and technical information that is confidential and proprietary to GAI-Tronics. GAI-Tronics retains all intellectual property and other rights in or to the information contained herein, and such information may only be used in connection with the operation of your GAI-Tronics product or system. This manual may not be disclosed in any form, in whole or in part, directly or indirectly, to any third party.

Product Overview

GAI-Tronics' Handset VoIP Telephones are designed for connection to a 10/100 baseT Ethernet. These telephones will operate from Power-over-Ethernet or an external power source. The VoIP Telephones provide direct point-to-point communications between personnel throughout the facility over the existing LAN.

In addition to providing standard telephone operation, the VoIP telephones feature real-time alarm reporting that enables system supervisors to monitor the telephones' activity and address caller needs or maintenance issues immediately. Also, four user-configurable inputs and two outputs have been provided for peripheral control.

The following VoIP Telephones are detailed in this manual:

Table 1. Model Chart

Model	Description
226-700	**Tough Telephone with Keypad,** weather and vandal-resistant, sand-cast aluminum enclosure with a spring-loaded door, and handset with an armored cord.
246-700	**Rugged Indoor Telephone with Keypad**, high-impact glass-reinforced polyester enclosure and handset with Hytrel® coiled cord.
256-700	**Rugged Weatherproof Telephone with Keypad**, weatherproof, high-impact glass-reinforced polyester enclosure with door, and handset with Hytrel® coiled cord.
276-700	**Flush-panel Telephone with Keypad**, heavy-gauge brushed stainless steel front panel and handset with armored cord.

System Requirements and Limitations

The VoIP Telephones require Power-over-Ethernet or a local 48 V dc power source for operation. Two VoIP telephones can be connected in a peer-to-peer configuration without the need for a LAN. However, a 10/100 baseT Ethernet with SIP Server is required for systems containing three or more VoIP Telephones. Conferences are limited by the customer's LAN media capabilities and the services available at each end point.

Tips for VoIP Subscribers

If you have or are thinking of subscribing to an interconnected VoIP service, you should:

- Provide your accurate physical address to your interconnected VoIP service provider to ensure that emergency services can quickly be dispatched to your location.
- Be familiar with your VoIP service provider's procedures for updating your address, and promptly update address information in the event of a change.
- If your power is out or your internet connection is down, be aware that your VoIP service may not work. Consider installing a backup power supply, maintaining a traditional telephone line, or having a wireless telephone as a backup.
- If you have questions about VoIP in general, see http://www.fcc.gov/cgb/consumerfacts/voip.html.

Features and Functions

The VoIP Telephones include the following features:

- SIP compatible (RFC3261)
- Weather and/or vandal-resistant
- Real-time alarm reporting via email or Syslog
- Power-over-Ethernet compatible
- Configurable via web page, serial link or download
- Four configurable auxiliary inputs, two configurable voltage-free contact outputs

Operation

Placing a Call

To place a call:

1. Lift the handset from the cradle to take the telephone off-hook.
2. Wait for dial tone.
3. Use the keypad to dial the desired number.
4. At the end of the conversation, place the handset back in the cradle to terminate the call.

Receiving a Call

When the VoIP Telephone is called, the telephone's ringer will sound until the handset is removed from the cradle (taken off-hook) and a conversation can take place.

Disconnecting Calls

The VoIP Telephones include both manual and automatic methods to disconnect calls. They are as follows:

- To manually disconnect a call, place the handset back in the cradle.
- To automatically disconnect; wait for the maximum call duration timeout to elapse.

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 listing in the "Specifications" 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 equipment, please adhere to the following guidelines to ensure the safety of all personnel:

- Do not install wiring during a lightning storm.
- A Cat5 data line lightning surge protector is recommended for telephones subject to any electrostatic discharge (e.g. lightning)
- Do not install jacks in wet locations unless the jack is specifically designed for wet locations.

Tamper-Resistant Hardware

Models 226-700 and 276-700 are vandal-resistant, with the front panel for each telephone attached to its enclosure with security screws (Torx T-25 head). A GAI-Tronics Model 233-001 Tamper-Resistant Screwdriver (sold separately) is recommended for installing the security screws. Models 246-700 and 256-700 Telephones' front panels are attached with standard Phillips head screws.

Conduit Installation Details (applicable to Models 246-700 & 256-700)

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

- Conduit should enter the enclosure from the bottom.
- Sealed fittings should be installed at all cable entry points.
- **Silicone sealant or equivalent must be applied around and inside all conduit entries.**

Please refer to Figure 1 and Figure 2.

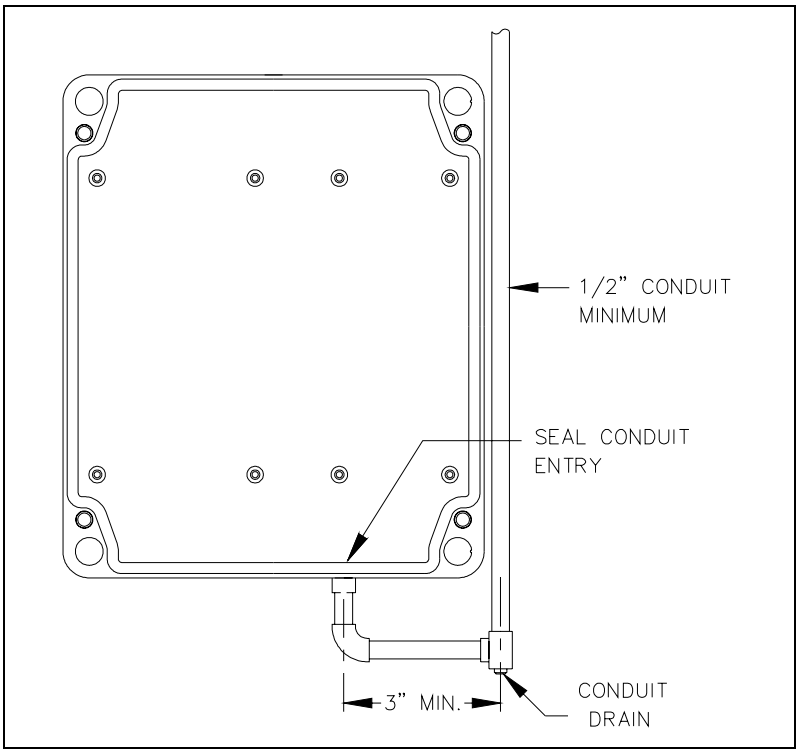

Figure 1. Bottom entry conduit installation details (RECOMMENDED for non-metallic enclosures)

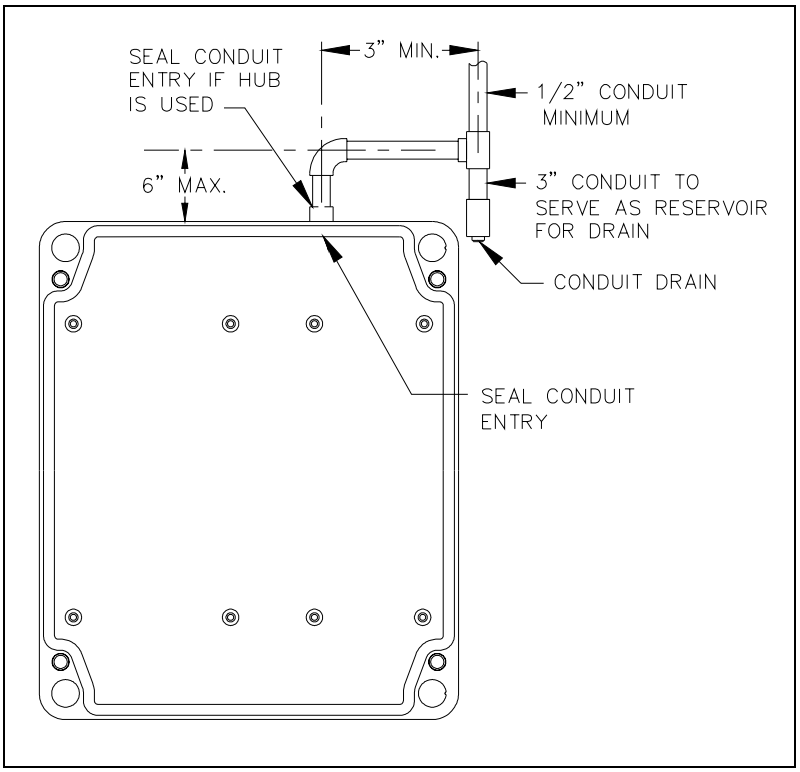

Figure 2. Top entry conduit installation details (NOT RECOMMENDED)

Model 226-700

The mounting and wiring instructions are as follows:

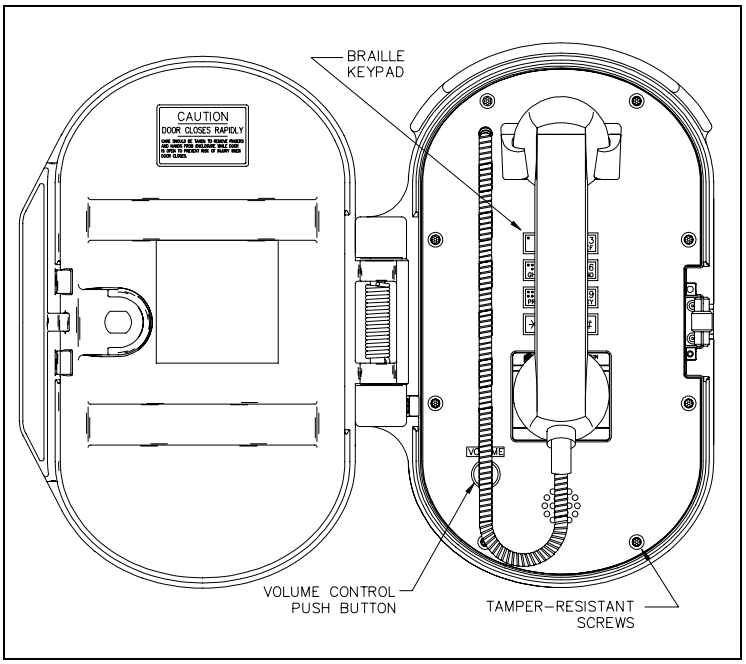

Figure 3. Model 226-700 VoIP Telephone with spring loaded door in the open position

1. Remove the eight tamper-resistant screws from the front panel. Remove the front panel and set aside.

2. There are eight mounting holes in the back of the enclosure in two 4-hole patterns. Determine which hole pattern will be used for mounting. See Figure 5.
   - For best results, use the 7.875 × 4.0-inch hole pattern for mounting to a wall (outside pattern).
   - Use the 5.25 × 4.0-inch hole pattern when using the Model 232-001 Pole Mounting Kit (inside pattern).

3. Insert four hole plugs (provided) in the unused holes.

4. Position the enclosure on the mounting surface and secure it with four fasteners.
   - The holes in the telephone enclosure accept 3/8-inch screws or bolts.
   - The Model 232-001 Pole Mounting Kit includes four 3/8-16 × 1-inch shoulder bolts with Teflon seal washers.

   ⚠ **NOTE** ⚠ Use only the round head, hexagon head, or pan head screws that are provided. **Do not** use screws designed to be countersunk for mounting the enclosure.

5. Install a conduit fitting in one of the 1/2-inch NPT conduit entrances provided at both the top and bottom of the unit, and insert the conduit into the fitting. (The bottom location is preferred. See Figure 4.) Plug the unused access hole using the 3/8-inch Allen drive plug provided.

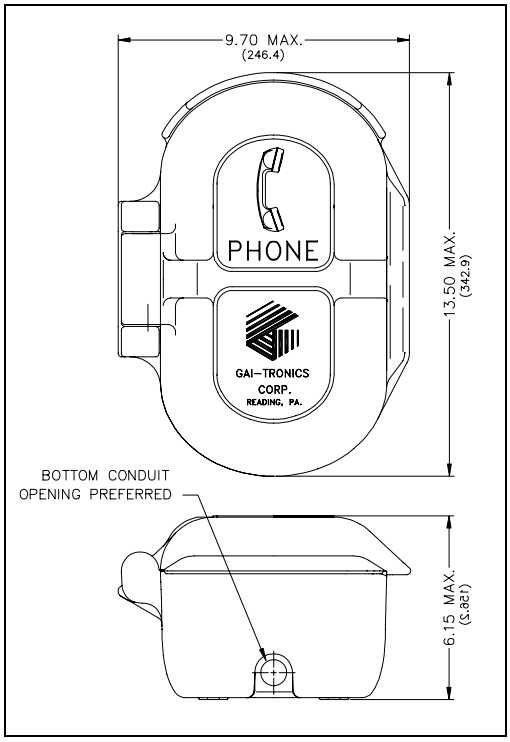

Figure 4. Model 226-700 Outline

6. Pull the Ethernet cable through the conduit and install the cable as shown in the "Field Wiring Installation" section on page 14. Seal the conduit entry point.

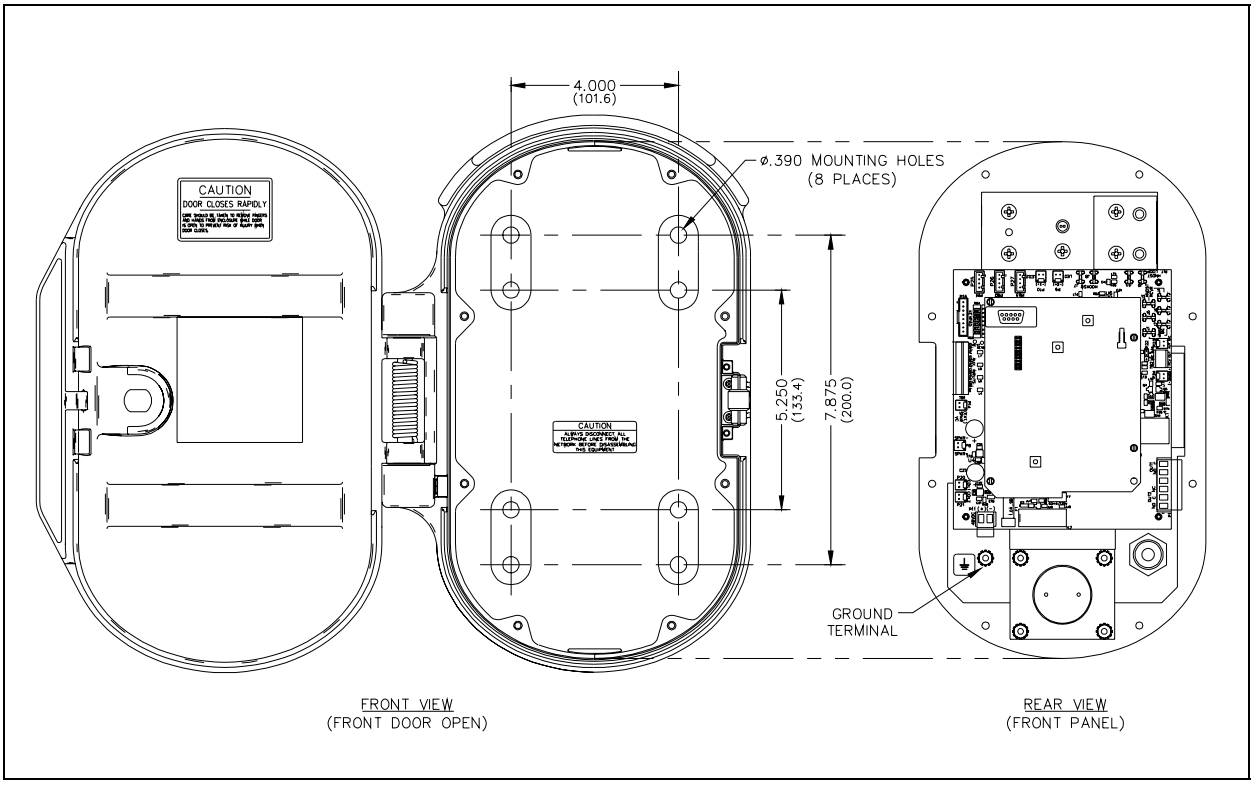

Figure 5. Model 226-700 Mounting Details

7. Perform necessary hardware configuration changes. Refer to page 16 for more information.

8. Verify operation by calling to and from another telephone.

9. Replace the front panel assembly, and secure using the eight front panel security screws (10–12 in-lbs. of torque recommended).

Model 246-700

1. Remove the four screws from the front panel. Remove the front panel and set aside.

2. There are four mounting holes in rear enclosure. Mount the enclosure to the wall using either four ¼-20 machine screws with washers and nuts or four #14 wood screws of the appropriate length, depending on the mounting surface.

3. Drill a 0.688-diameter hole at either drill spot on the top or bottom (bottom recommended) of the rear enclosure, and attach the gland bushing.

4. Pull the Ethernet cable through the conduit and install the cable as shown in the "Field Wiring" section on page 14. Seal the conduit entry point.

5. Perform necessary hardware configuration changes. Refer to page 16 for more information.

6. Verify operation by calling to and from another telephone.

7. Replace the front panel assembly, and secure using the four front panel security screws (10–12 in-lbs. of torque recommended).

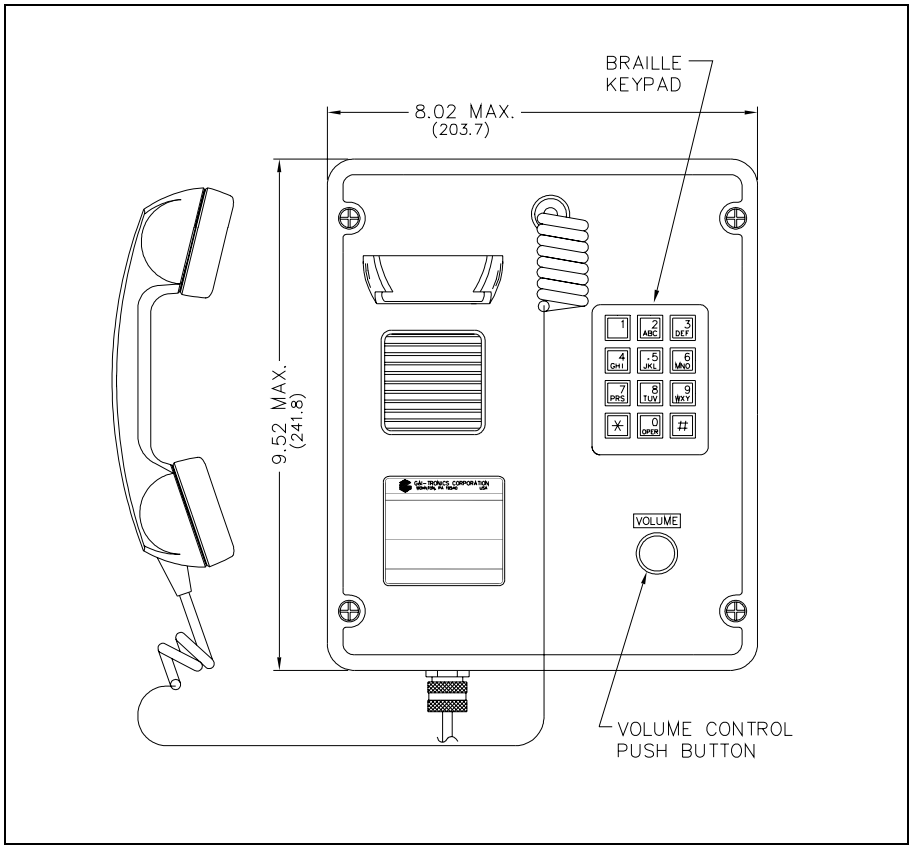

Figure 6. Model 246-700 VoIP Telephone

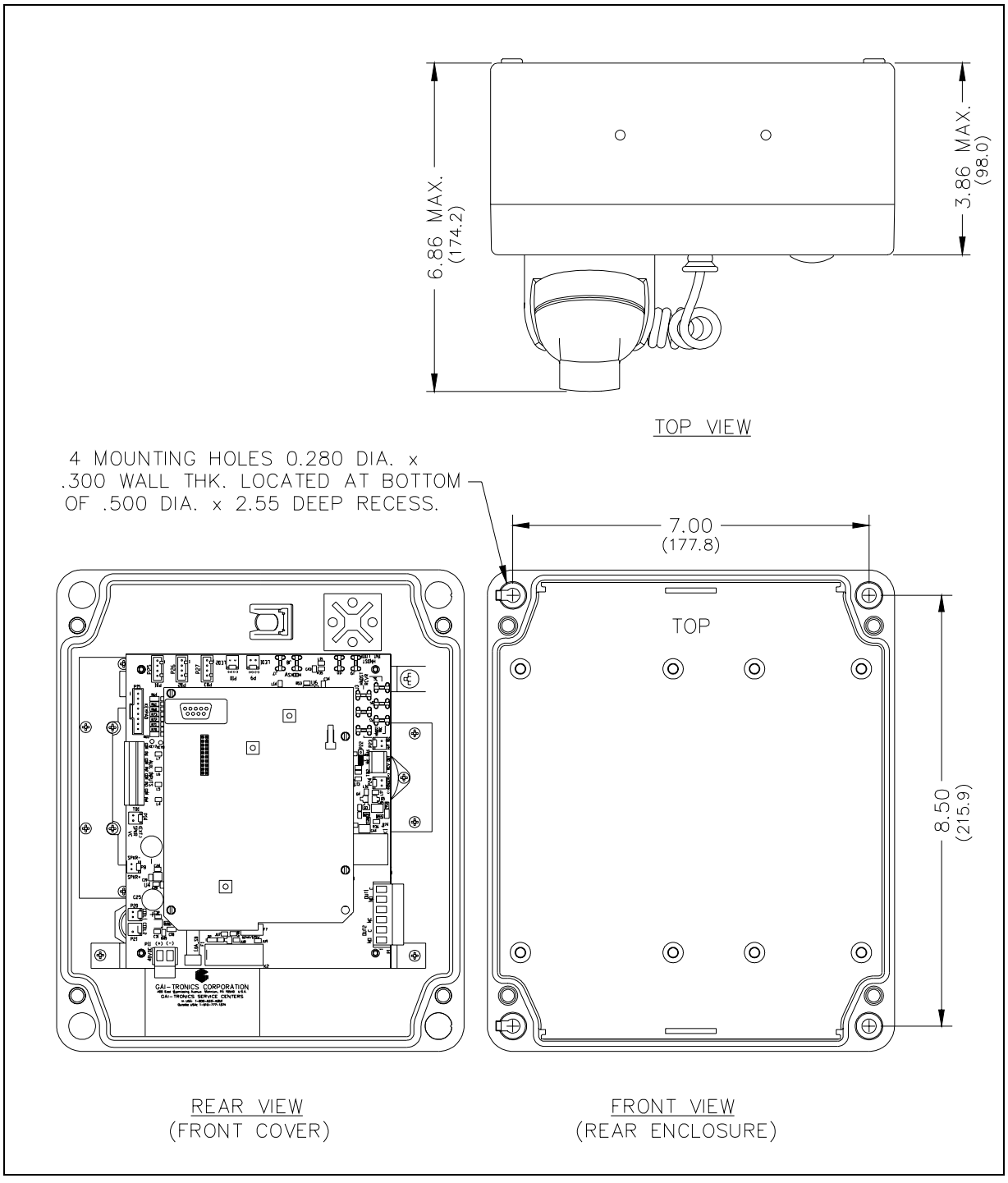

Figure 7. Model 246-700 Mounting Details

Model 256-700

1. Open the front door and remove the four outer screws from the mid-section. Carefully pull the enclosure apart until encountering a slight resistance on the left side.

2. Pull on the left side of the enclosure until the hinge plugs pull loose to separate the front and rear halves. Set the front half of the enclosure aside.

3. There are four mounting holes in the rear enclosure. Mount the enclosure on the wall using four ¼-20 machine screws with nuts and washers or #14 wood screws of appropriate length for the mounting surface.

4. Drill a 0.688-diameter hole at either drill spot on the top or bottom (bottom recommended) of the rear enclosure, and attach the gland bushing.

5. Reinsert the hinge pins to attach the front half of the enclosure. Insert the Ethernet cable through the gland busing and install the cable as shown in the "Field Wiring Installation" section on page 14. **NOTE:** Conduit may be used in place of the provided gland bushing. If used, the conduit entrance must be sealed after the cable is installed.

6. Perform necessary hardware configuration changes. Refer to page 16 for more information.

7. Verify operation by calling to and from another telephone.

8. Close the mid-section and tighten the four screws (10–12 in-lbs. of torque recommended).

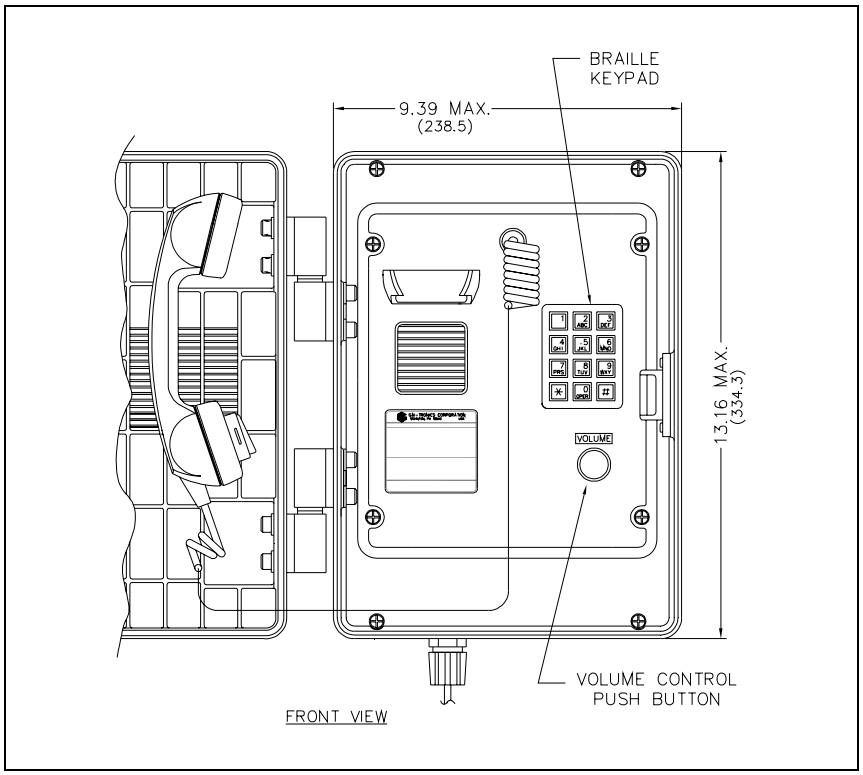

Figure 8. Model 256-700 VoIP Telephone Outline Drawing
(Front door open)

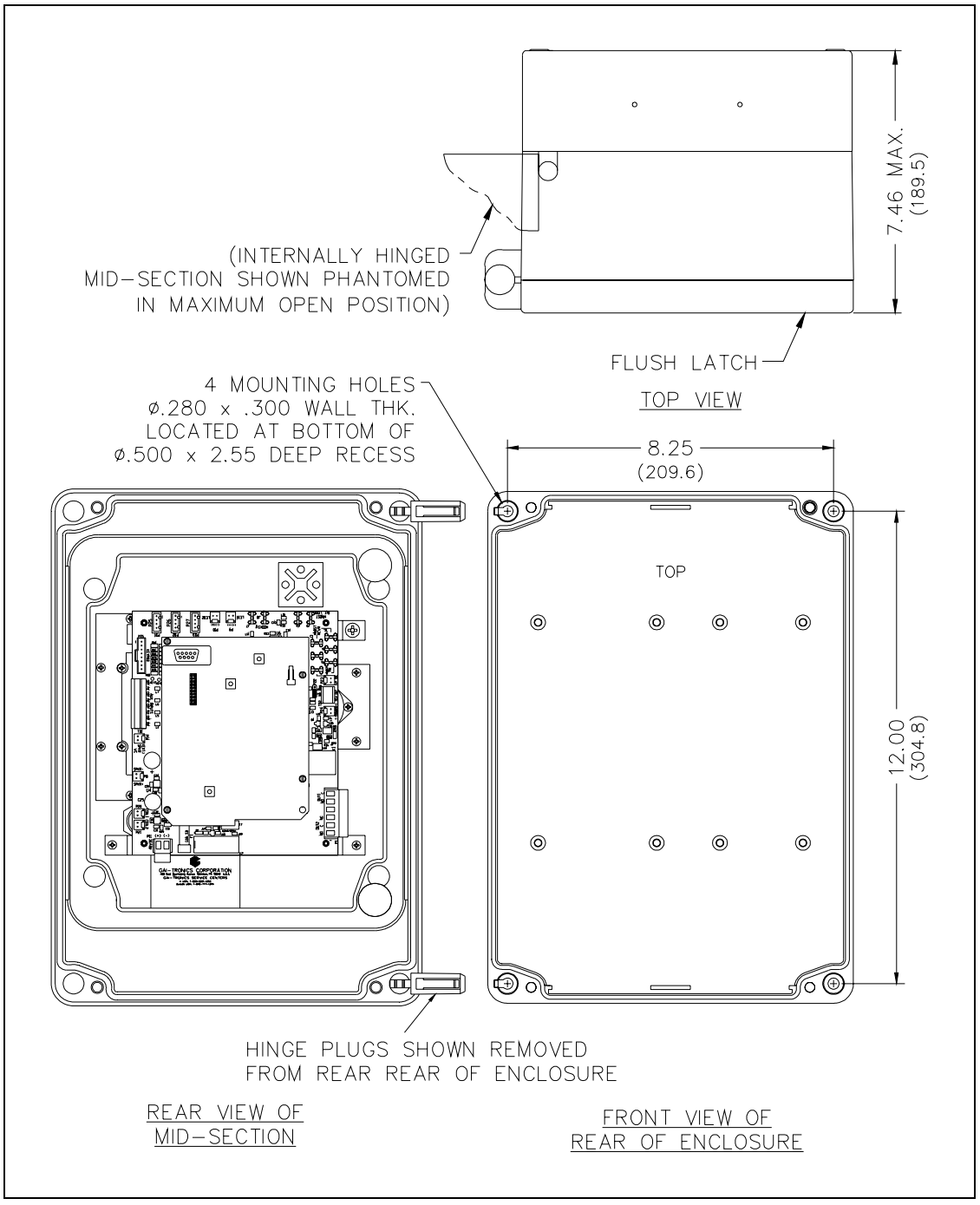

Figure 9. Model 256-700 Mounting Details

Model 276-700

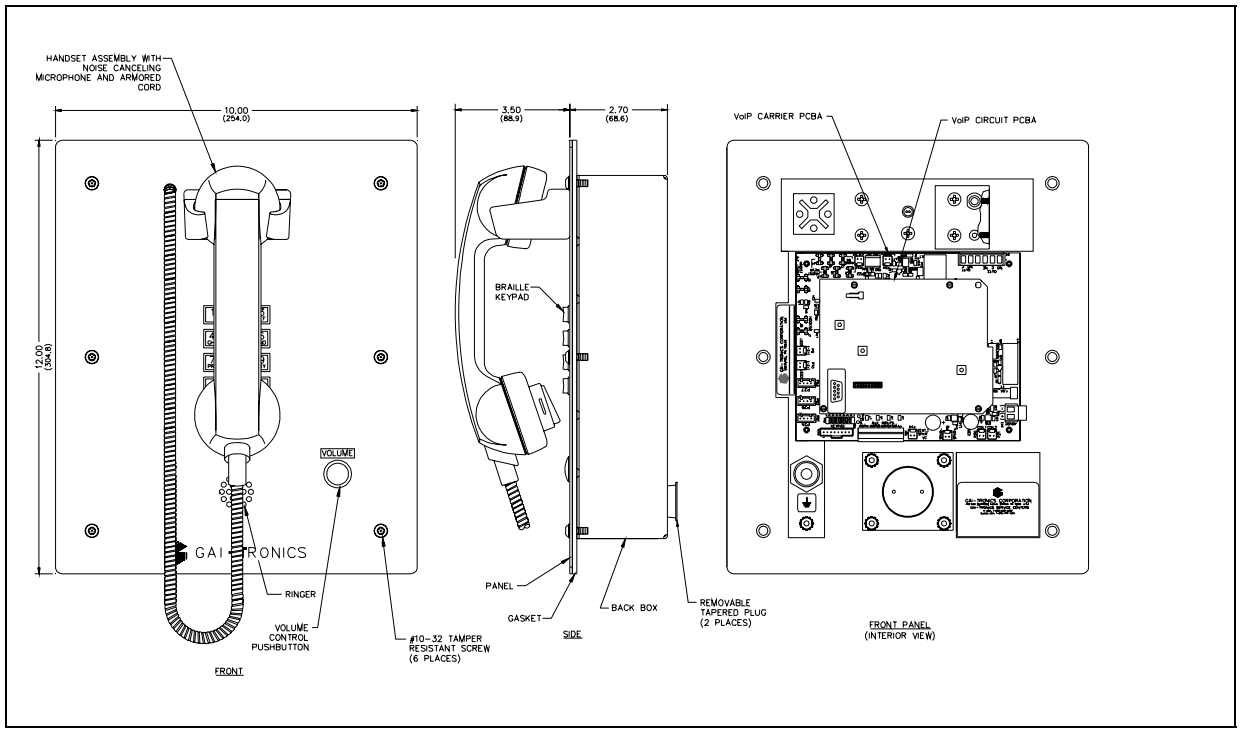

Figure 10. Model 276-700 Outline Drawing

Stanchion or Flush-mount Applications

1. When mounting in a GAI-Tronics Model 234 Series Stanchion or for flush-mount installations, the supplied back box must be used to mount the Model 276-700 Telephone. Mount the back box to the structure using the appropriate hardware. Refer to Figure 11 cutout dimensions.

2. If mounted outdoors, install the telephone line suppressor (customer-supplied) on the telephone line.

3. Remove the tapered plug from the top or bottom cable entry hole in the back box, and install the telephone line and cable fitting.

4. Use silicone sealant or equivalent around and inside all conduit entries.

5. Attach the telephone's front panel to the mounting flanges of the back box using the six supplied #10-32 tamper-resistant screws and washers.

6. Use the supplied back box to mount the Model 276-700 VoIP Telephone in flush-mount applications or in a GAI-Tronics Model 234 Series Stanchion. Mount the back box to the structure using the appropriate hardware. Refer to Figure 11 cutout dimensions.

7. Remove the tapered plug from the top or bottom cable entry hole in the back box, and install the cable and cable fitting. See the "Field Wire Installation" section on page 14.

8. Perform necessary hardware configuration changes. Refer to page 16.

9. Perform the initial programming of the telephone. Refer to the "Programming" section beginning on page 18.

10. Verify operation by calling to and from another telephone.

11. Attach the telephone's front panel to the mounting flanges of the back box using the six supplied #10-32 security screws and washers (10–12 in-lbs. of torque recommended).

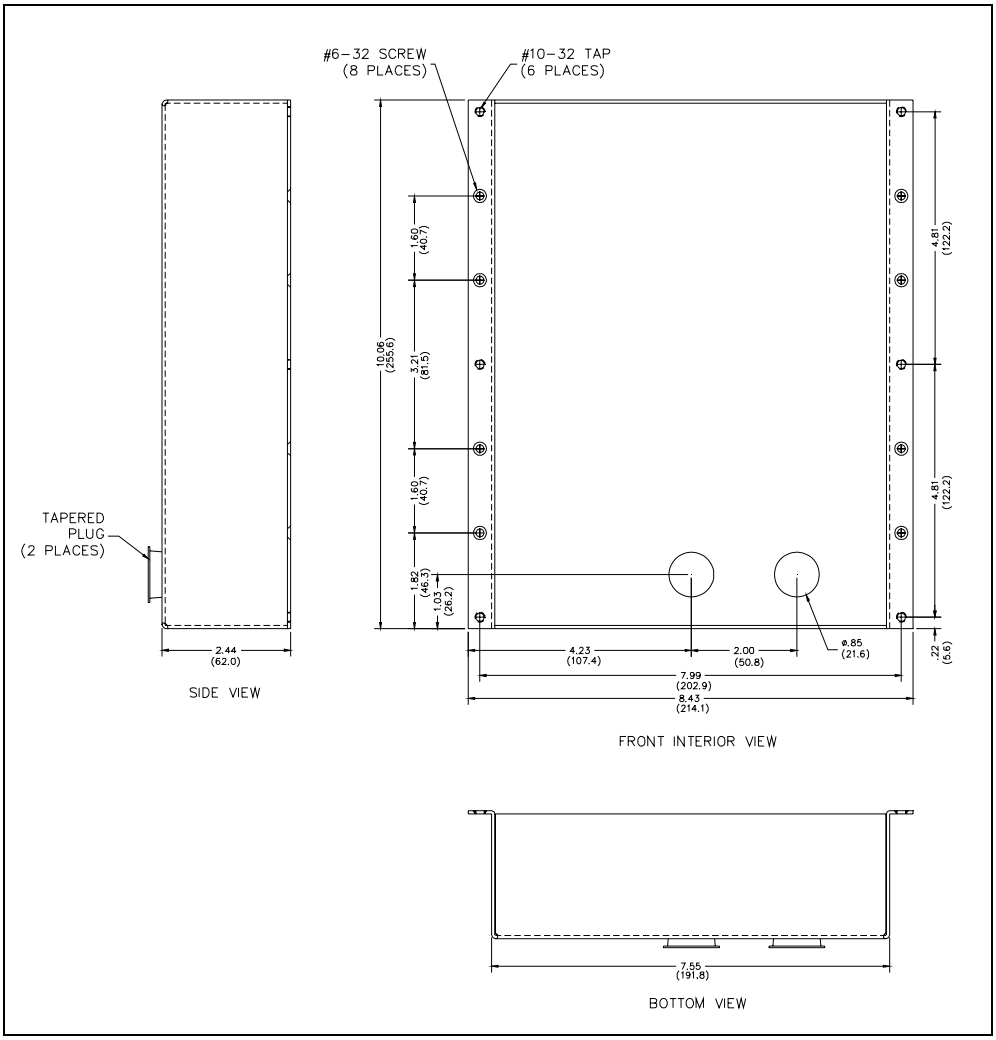

Figure 11. Model 276-700 Mounting Details

Setup

Field Wiring installation

After all the field wires are pulled through the rear enclosure, install all connections as indicated below. Refer to Figure 12 for wiring details. Refer to Table 2 on page 15 for the recommended conductor sizes.

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

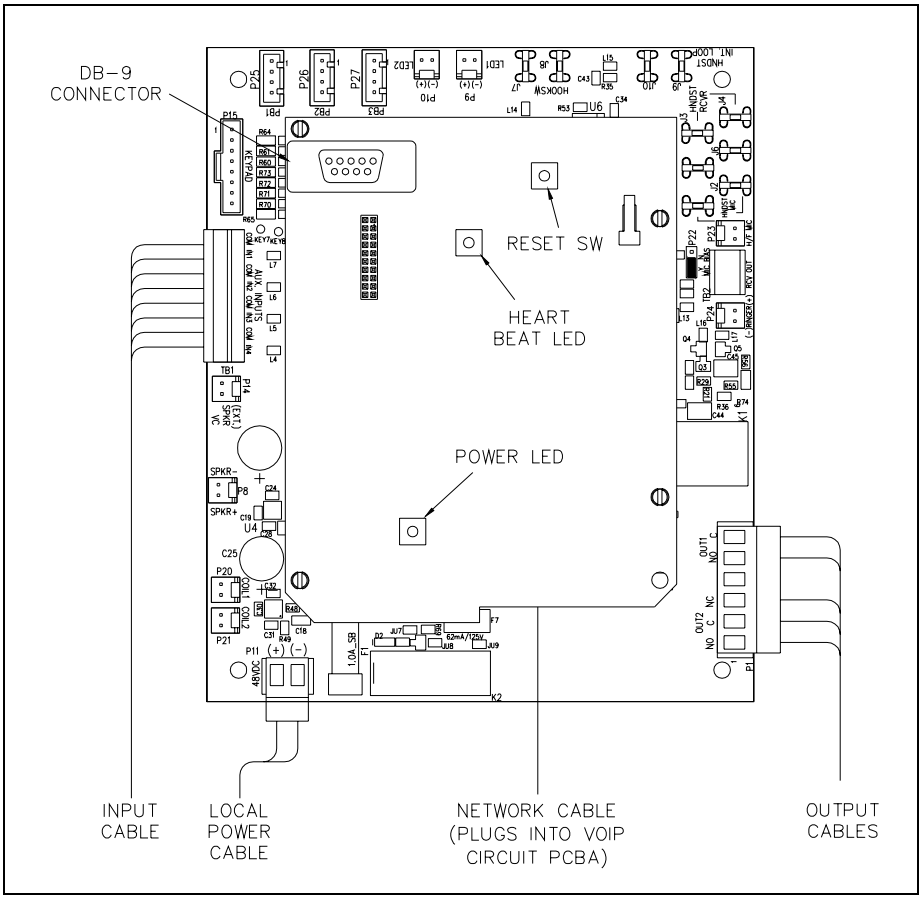

Figure 12. VoIP Telephone PCB Assembly

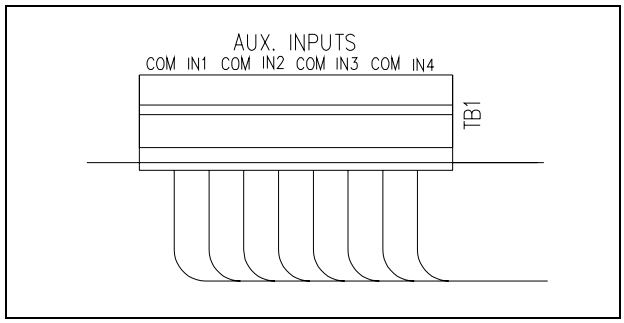

Figure 13. Input Cable Connections at TB1

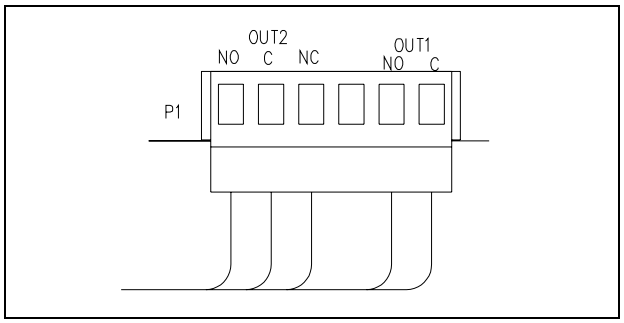

Figure 14. Output Cable Connections at P1

Power

Power-Over-Ethernet (POE)

Connect power to the system as indicated in your POE equipment manual.

Local Power

When POE is not available, this telephone can operate from a local 48 V dc power source. A removable terminal block, P11, has been provided for connection of local power to the telephone. Connect the positive conductor to the (+) terminal and the negative conductor to the (−) terminal of P11.

Network Cable

Connect a Cat5 or Cat5e UTP cable with an RJ45 connector between the Local Area Network (LAN) and the VoIP PCBA.

I/O

Inputs

Four auxiliary inputs have been provided for customer use. Terminations for these inputs are provided on terminal block TB1. Connect each input between the desired input (INPUT 1–4) and common (COM) on terminal block TB1. Refer to the "Inputs" section of Pub. 42004-396 for programming instructions of these inputs.

Outputs

Each VoIP Telephone contains two voltage-free output contacts, but their ratings differ. Refer to the "Specifications" section of this manual for the output ratings. Output 1 is a single-pole, single-throw contact. Output 2 is a single-pole, double-throw contact.

The function of each output is configurable. Outputs can be configured for one of the following modes: On, Off, Pulse, Mute, Ring, Call, Connect, Hook, In Use, Ring Cadence, Ring Out, Page, Registered, or Emergency. In some modes, the duration of the activation or on/off times can also be set. Refer to the "Logic Settings" section of GAI-Tronics Pub. 42004-396, "VoIP Telephone Configuration Guide" for more details.

Table 2. Recommended Cabling

Cable Use	Size
LAN	Cat5 or Cat5e UTP cable with an RJ45 connector
Power	2-conductor, No. 22 AWG is typical
Inputs	2-conductor, No. 22 AWG is typical
Output contacts	2 or 3-conductor, No. 18 AWG is typical

Hardware Configuration

Mic Bias

Configuration jumper P22 has been provided to enable/disable the bias to the microphone. The Mic Bias is factory set to **N** since this is a handset telephone.

Inductive Loop Source

Configuration jumper P19 has been provided to set the Inductive Loop Source. The Inductive Loop Source is factory set to **EAR** since this is a handset telephone.

Mic Selection

Configuration jumper P29 has been provided to select the handset or hands-free microphone selection. The microphone selection is factory set to **Y** since this is a handset telephone.

Status Indication

Power

The Power LED located on the VoIP PCBA illuminates when power is applied to the telephone.

Heartbeat

The Heartbeat LED located on the VoIP PCBA will flash once communication over the LAN is established.

External Controls

Handset Receiver Volume Control

A push-button switch has been provided on the faceplate of the telephone for adjustment of the handset receiver volume. The receiver volume adjustment operates as follows:

- The initial direction of the volume (increase or decrease) is determined by prior activity. The initial direction will be opposite of the previous activity.
- Changing the direction is accomplished by allowing a period of inactivity (greater than 1 second).

Example – Increasing Volume: Depress the volume switch. If the receiver volume begins to decrease, wait at least 1 second and depress the volume switch again. The volume will begin to increase. When the desired volume is achieved, do not depress the switch.

Maximum (Handset Receiver) Level Remote Control

The receiver volume level can be controlled remotely by changing the setting in the configuration file. Refer to the "Handset Volume Setting in the Audio Setting" section in Pub. 42004-396 for programming instructions.
NOTE: The handset receiver volume setting using PB1 should be set for the maximum volume (factory default) prior to adjusting the speaker volume remotely.

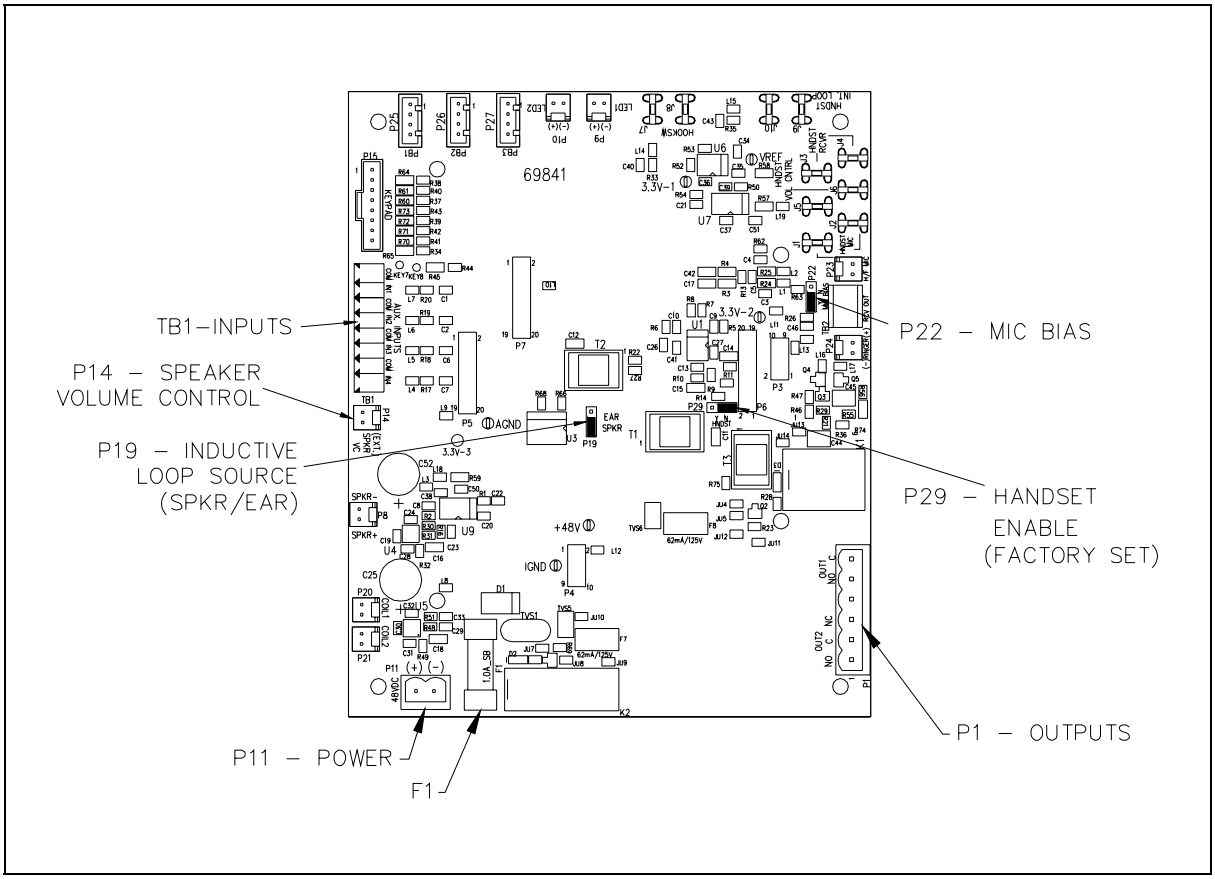

Figure 15. VoIP Carrier PCBA Component Locations

NOTE: P19 is factory set to the **EAR** position, P22 is factory set to **N** position and P14 is not used since this is a handset telephone. P29 is factory set to **Y** (handset).

Programming

Refer to Pub. 42004-396, VoIP Telephone Configuration Guide for detailed programming and configuration instructions.

Quick Start Guide

The general sequence for set up and use is as follows:

Stage of Process	Comments
Initial network configuration	**Essential**: The telephone must be set up for the network prior to installation.
Assign a host name	**Recommended**: The host name provides identification of the different VoIP telephones on the network.
Change user name and password	**Recommended**: This security measure helps to prevent unauthorized changes to the telephone's configuration.
Mounting	Physical mount the telephone at the intended location.
Installation	Provide telephone connections and cabling to the network at the intended location.
Final configuration (can also be done prior to installation)	Set the autodial numbers, etc. Configuration changes can be performed remotely, if desired.
Test	Verify that calls can be made successfully.
Maintain	Monitor alarms. Set up auto-updates.

The easiest way to get started is to make a network connection to the unit and log on via a web browser. The unit is initially set with a static IP address:

IP address 192.168.1.2

A user name and password will be requested. The initial factory settings are:

User Name **user**

Password **password**

The telephone's home page is as shown below, and allows access to all the other configuration pages. Use the Network page to change IP settings appropriate for the intended network.

⚠ **ATTENTION** ⚠ Be sure to assign a unique host name (located on the UNIT settings page) for each telephone on the network. The factory default host name in each unit is its serial number prefixed by "GT".

Full help is available from: www.gai-tronics.co.uk/voipsupport.htm

A CD containing all help files and the configuration file tool is available from GAI-Tronics on request.

Alternative Configuration Methods

There are three methods for configuring GAI-Tronics Handset VoIP telephones:

- Web pages
- Configuration file
- Command Line interface (CLI)

Web pages (held within the telephone) can be accessed over the network using a browser such as Internet Explorer™, to view and change settings within a single unit.

Configuration files are ASCII text files containing configuration options that can be read and edited by VCONF (a dedicated software configuration tool), or directly by a knowledgeable user. The telephone can automatically download a configuration file from the network, providing a controlled method of configuring multiple telephones.

The telephone can also be configured using a command line interface, either via the local serial port or remotely via a TELNET session over the network.

Maintenance

⚠**WARNING** ⚠ **This product can contain hazardous voltages. Always remove power to this station prior to servicing.**

General Information

1. Inspect and replace frayed or cracked wiring.
2. Secure/replace loose wires and terminal lugs.
3. Remove corrosion from terminals.
4. Inspect fuse F1 on the VoIP Carrier PCBA.

Preventive Maintenance for Model 276-700

Stainless steel does 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 Model 276-700 Telephone.

Cleaning

For general cleaning, wipe surface with a cleanser or 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 paste made from magnesium oxide, ammonia, and water. Wipe clean with water rinse and dry.

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 naturally re-formation of the chromium oxide layer.

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

Service

If your telephone requires depot 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 will be made without charge. 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.

Troubleshooting

Table 3. Troubleshooting Chart

Problem	Possible Solution
Low volume	Increase the volume settings using button P14 on the VoIP Carrier PCBA. If the volume setting is still low, increase the volume level in the telephone's configuration.
High volume	Decrease the volume settings using button P14 on the VoIP Carrier PCBA. If the volume setting is still high, decrease the volume level in the telephone's configuration.
Front panel push buttons are not operational	Verify the push buttons are properly configured.
Inputs not operational	Check the input connections. Verify the inputs are properly configured.
Outputs not operational	Check the output connections. Verify the outputs are properly configured.
Cannot make or receive calls	Check the connection of the LAN cable. Verify that power is applied to the unit. Verify the LAN parameters have been configured properly. Verify the telephone has been set up on the network.
No power indication	Check the power connections. If using POE, check the operation of the POE equipment.

Specifications

Power ..... Power-over-Ethernet, 802.3af compliant (via RJ45), or
External power supply: 48 V dc, 200 mA
A separate, isolated supply must be provided for each telephone.

Network ..... 10/100 BaseT Ethernet RJ45, Cat5 or Cat5e UTP
Static IP provisioning or DHCP STUN client (NAT traversal)

Call Control Signaling ..... SIP (RFC3261 compliant) Loose routing

Inputs

Keypad ..... 3 × 4 matrix

Configurable inputs 4

Outputs

Output 1 ..... 8 A @ 30 V ac/dc (resistive load)

Output 2 ..... 5 A @ 30 V ac/dc (resistive load)

Controls

External ..... Push-button volume control

Internal ..... Mic bias, reset switch, handset enable

Indicators

Internal ..... Power, Heartbeat, & EACT LEDs

Codecs and audio ..... G.711 A-Law
G.711 μ-Law
G.722
G.729
G.723.1 MP-MLQ
G.723.1 ACELP
Codec preference sequence
DTMF in-band / out-of-band (RFC2833)
Configurable comfort tones (to emulate national tones)

Configuration ..... Embedded web server
Embedded Telnet server
Configuration file download
Configuration file building tool (Vconf.exe)
Direct serial connection
(9-way D-type female connector)
Command line interface
SNTP with time zone and daylight saving
Automatic updating via TFTP
Password protection

Monitoring and reporting ..... Real-time over TCP/IP proprietary Syslog application or email
Embedded SMTP client
Automatic fault reporting

Compliance to Standards ..... FCC CRF 47 Part 15

Mechanical

Temperature range
- Operating ..... −4º F to +140º F (-20º C to +60º C)
- Storage ..... −40º C to +70º C

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

PCBA (printed circuit board assembly) ..... Conformal coated

Model 226-700

Construction
- Enclosure ..... Thick-walled cast aluminum with protective gray coating
- Panel ..... 0.125-inch brushed aluminum

Handset/cord ..... G-style with 19-inch armored cord and internal lanyard

Braille dial pad ..... Chrome-plated zinc

Dimensions ..... 13.50 H × 9.70 W × 6.15 D inches

Mounting ..... Eight 0.39-inch diameter holes

Weight ..... 14.5 lbs. (6.58 kg)

Model 246-700

Construction ..... High impact, glass-reinforced polyester

Handset/cord ..... 6-foot Hytrel cord with noise-canceling mic

Braille dial pad ..... Chrome-plated zinc

Dimensions ..... 9.50 H × 8.00 W × 6.90 D inches

Mounting ..... Four 0.28-inch diameter holes

Weight ..... 4.8 lbs. (2.18 kg)

Model 256-700

Construction ..... High impact, glass-reinforced polyester

Handset/cord ..... 6-foot Hytrel cord with noise-canceling mic

Braille dial pad ..... Chrome-plated zinc

Dimensions ..... 13.20 H × 9.40 W × 7.40 D inches

Mounting ..... Four 0.28-inch diameter holes

Weight ..... 10.0 lbs. (4.54 kg)

Model 276-700

Construction
- Front Panel ..... 14-gauge (0.075 inch) type 304 brushed stainless steel
- Back Box ..... 16-gauge (0.060) cold-rolled steel with black polyurethane finish

Handset/cord ..... G-style with 29-inch armored cord and internal lanyard

Braille dial pad ..... Chrome-plated zinc

Dimensions
- Front Panel ..... 12.00 H × 10.00 W inches
- Back Box ..... 10.06 H × 8.43 W × 2.44 D inches
- Back Box (depth from mounting surface) ..... 2.38 inches
- Panel Cutout ..... 10.06 H × 8.43 W inches

Weight ..... 7.0 lbs. (3.18 kg)

Replacement Parts

Part No.	Description	226-700	246-700	256-700	276-700
233-001	Model 233-001 Tamper-Resistant Screwdriver	■			■
69841-001	PCBA, VoIP Carrier	■	■	■	■
100-02-7013-000	PCBA, VoIP Circuit	■	■	■	■
51035-005A	PCBA, Keypad	■	■	■	■
13707-011	Ringer, Piezo	■	■	■	■
12542-002	Security Screws, Stainless, ½-inch (Pack of 15)				■
12516-002	Security Screws, Carbon, ½-inch (Pack of 10)	■			
12516-001	Phillips Head Screws, 1 1/8-inches (Pack of 10)		■	■	
10113-020	Handset Assembly with Armored Cord, 15-inch	■			
10113-021	Handset Assembly with Armored Cord, 29-inch				■
10113-022	Hytrel Cord Handset Assembly, 6-foot		■	■	
12512-001	Hookswitch/Cradle Kit		■	■	
12512-002	Hookswitch/Cradle Kit (metallic)	■			■
40411-004	Optional Plug-in Power Supply, 48 V dc	■	■	■	■

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.