GAI-TRONICS® CORPORATION
A HUBBELL COMPANY

VoIP Industrial Handset Telephones

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Confidentiality Notice

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Product Overview

GAI-Tronics' VoIP Industrial Handset 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.

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 (15-inch).
246-700	**Rugged Indoor Telephone with Keypad**, engineered plastic enclosure and handset with Hytrel® coiled cord (6-foot extended).
256-700	**Rugged Weatherproof Telephone with Keypad**, weatherproof, engineered plastic enclosure with door and handset with Hytrel® coiled cord (6-foot extended).
276-700	**Flush-panel Telephone with Keypad**, heavy-gauge brushed stainless steel front panel and handset with armored cord (29-inch).

System Requirements and Limitations

The VoIP Telephones require Power-over-Ethernet or a local 24–48 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.
- Have a clear understanding of any limitations of your 911 service.
- 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 interconnected VoIP and 911, or 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, syslog, or TMA software
- Power-over-Ethernet compatible
- Configurable via web page, serial link or download
- Four auxiliary inputs, two volt-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. The call is terminated by the following: placing handset back in the cradle, or the receiving caller hanging up, or the defined timeout of the call duration, or via the SIP Server.

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.

Monitoring and Reporting

Each telephone can recognize and generate several hardware and configuration fault condition alarms. These alarms can be signaled to a remote site using three methods:

- Syslog output over TCP
- SMTP mail message
- Telephone Management Application (TMA) software (purchased separately)

Available alarms are:

- Handset integrity loop (if applicable)
- Configuration error
- Cold reset (power cycle)
- Warm reset (internal command)
- Keypad error (if applicable)
- Key hook (off hook status, if applicable)
- Register fail
- Audio Path Test (speaker/microphone test)

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.

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Depending upon the wiring and features used on this device, additional precautions may be necessary not to cause harmful interference. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

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.
- **Electrostatic Discharge (ESD) Protection:** Your VoIP 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 has to 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. 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.

Security Hardware

Models 226-700 and 276-700 are vandal-resistant, with the front panel for each telephone 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 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 cabling 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.
- If entered from the top, the conduit must be internally sealed to prevent moisture ingress.
- 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.

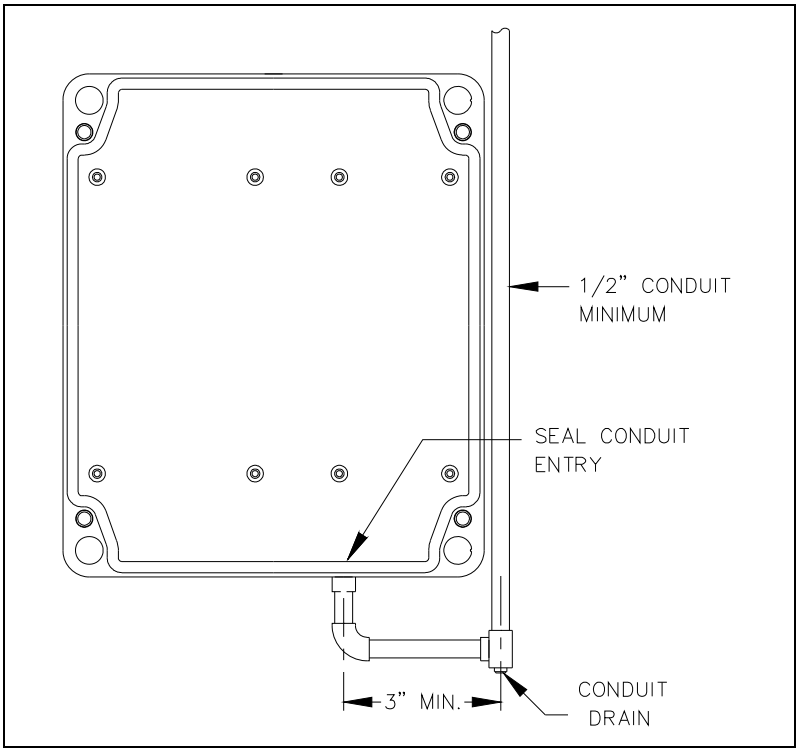

Figure 1. Model 246-700 & 256-700 - Bottom entry conduit installation details

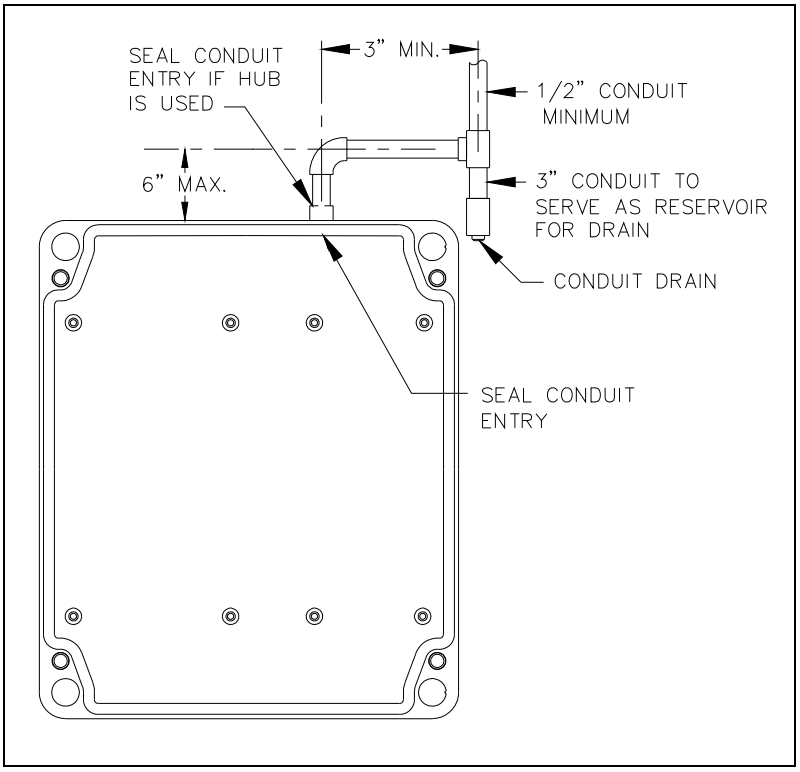

Figure 2. Model 246-700 & 256-700 - Top entry conduit installation details (NOT RECOMMENDED)

Model 226-700

The mounting and wiring instructions for the Model 226-700 Telephone are as follows:

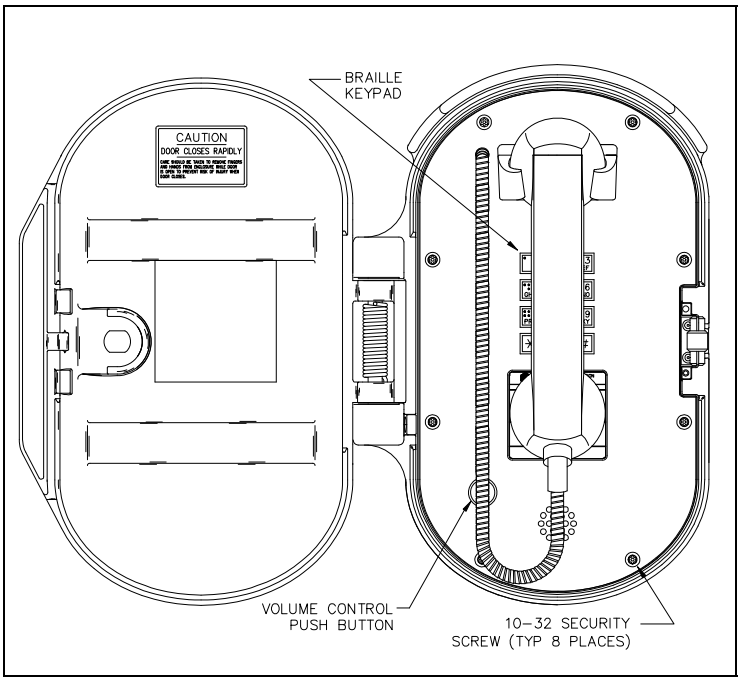

Figure 3. Model 226-700 VoIP Telephone with spring loaded door in the open position

1. Remove the eight security 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.

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

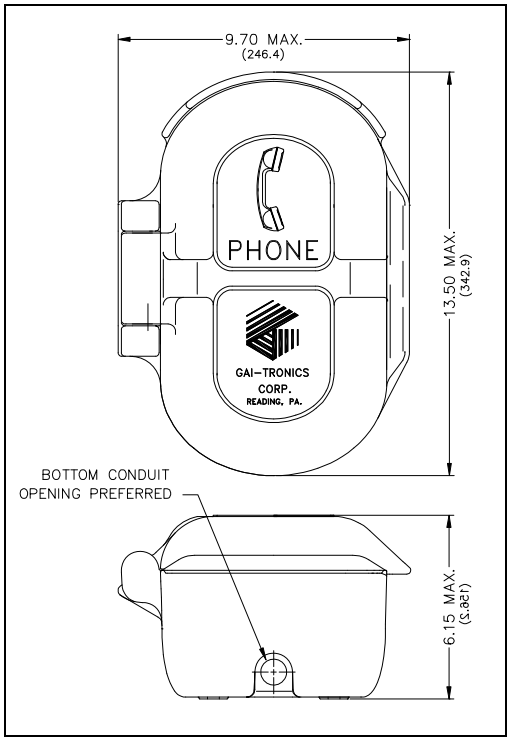

Figure 4. Model 226-700 Outline

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

7. Connect any desired peripheral devices. Refer to page 16 for connection information. Seal the conduit entry point(s).

8. Perform the initial programming of the telephone. Refer to the "Programming" section beginning on page 19.

9. Verify operation by calling to and from another telephone. Verify operation of peripheral equipment.

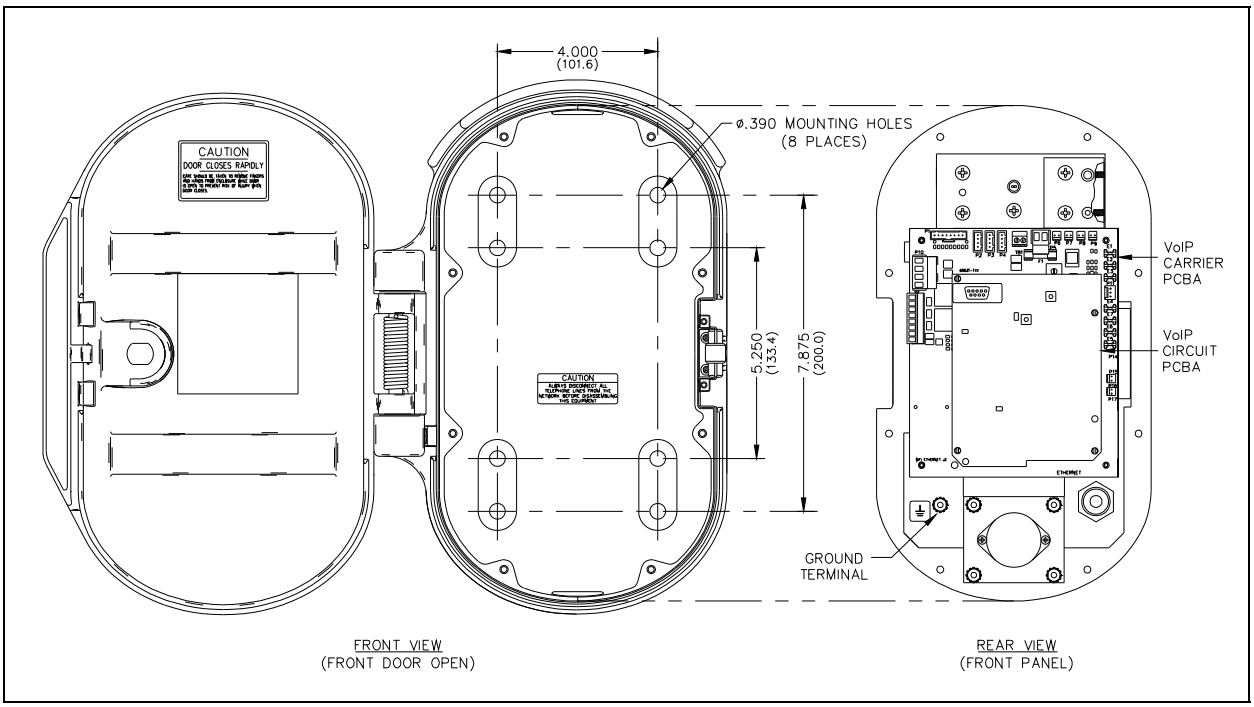

Figure 5. Model 226-700 Mounting Details

10. 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.

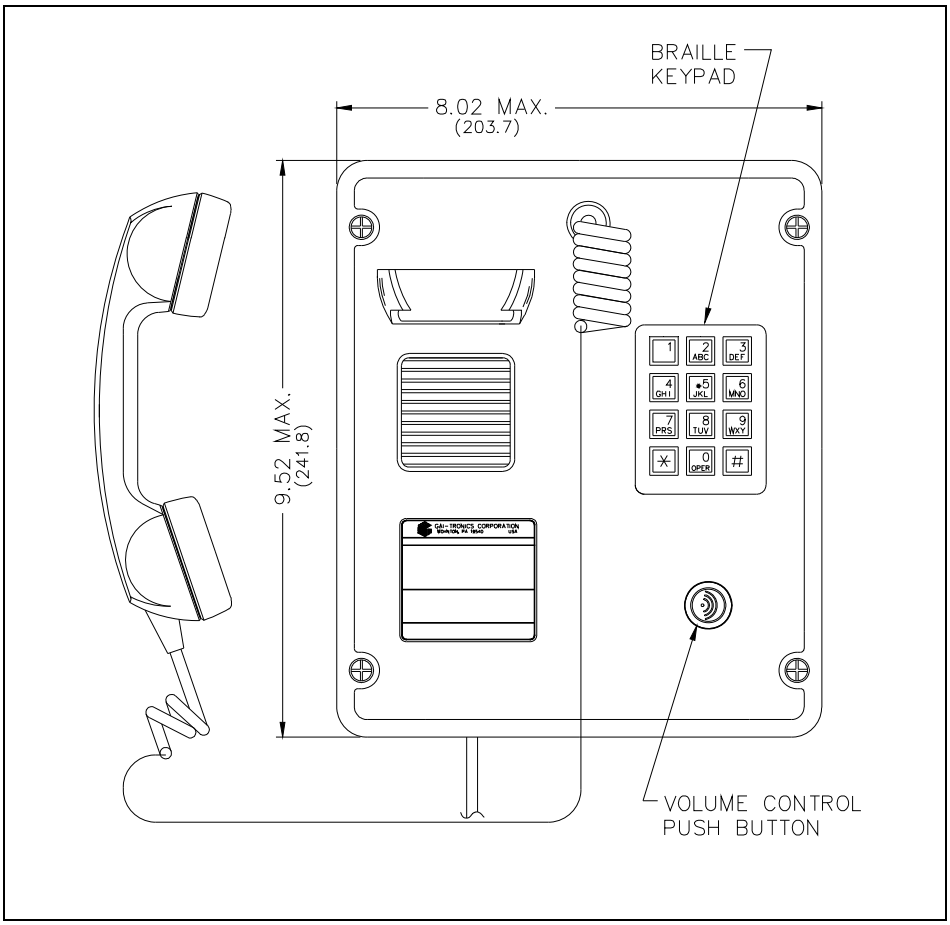

Figure 6. Model 246-700 VoIP Telephone

3. Drill a hole that is appropriate for the type of bushing that is to be used.

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. Connect any desired peripheral devices. Refer to page 16 for connection information.

6. Perform the initial programming of the telephone. Refer to the "Programming" section beginning on page 19.

7. Verify operation by calling to and from another telephone. Verify operation of peripheral equipment.

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

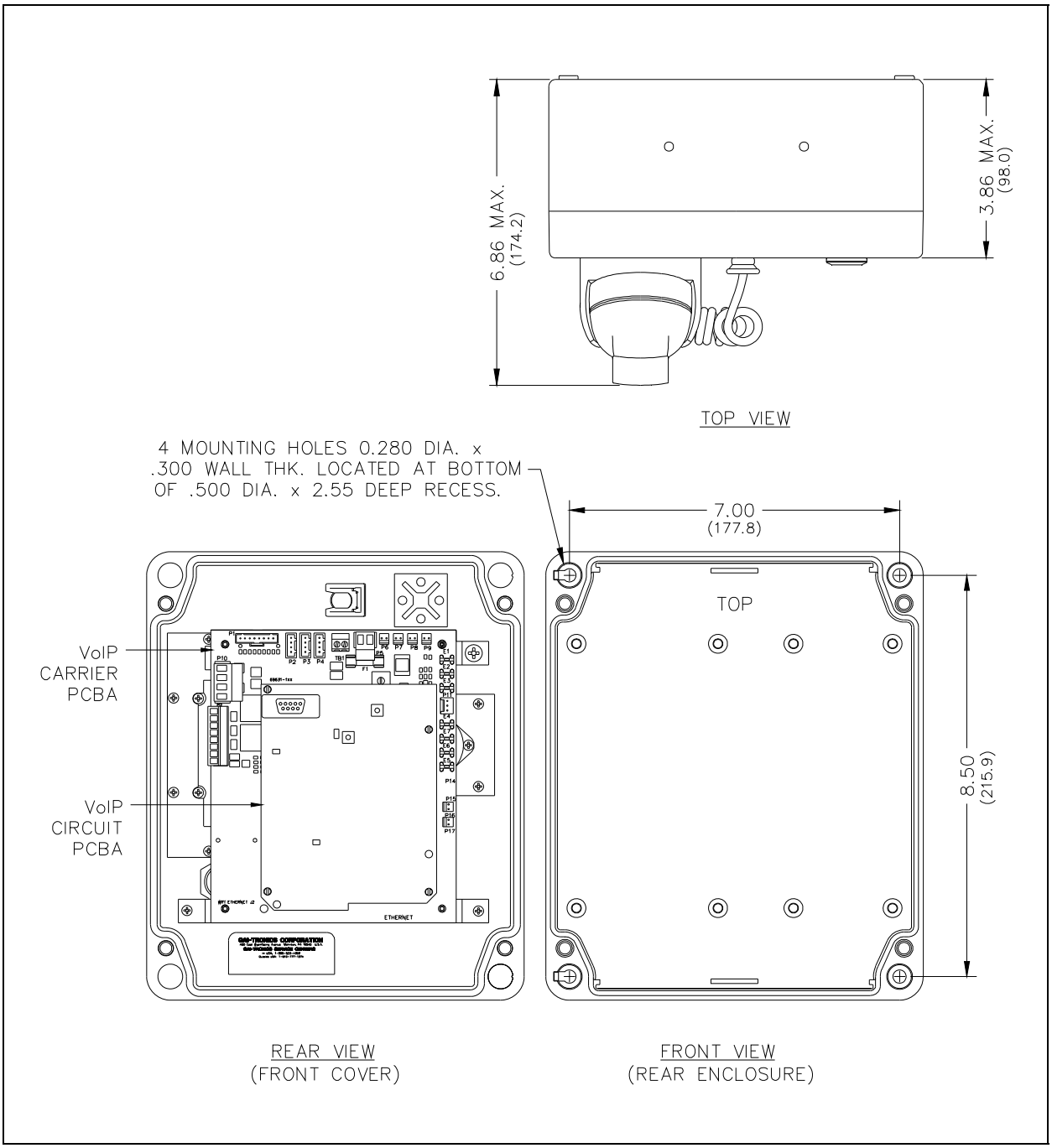

Figure 7. Model 246-700 Mounting Details

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 hole that is appropriate for the type of bushing that is to be used.

5. Reinsert the hinge pins to attach the front half of the enclosure. Insert the Ethernet cable through the gland bushing 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. Connect any desired peripheral devices. Refer to page 16 for connection information.

7. Perform the initial programming of the telephone. Refer to the "Programming" section beginning on page 19.

8. Verify operation by calling to and from another telephone. Verify operation of peripheral equipment.

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

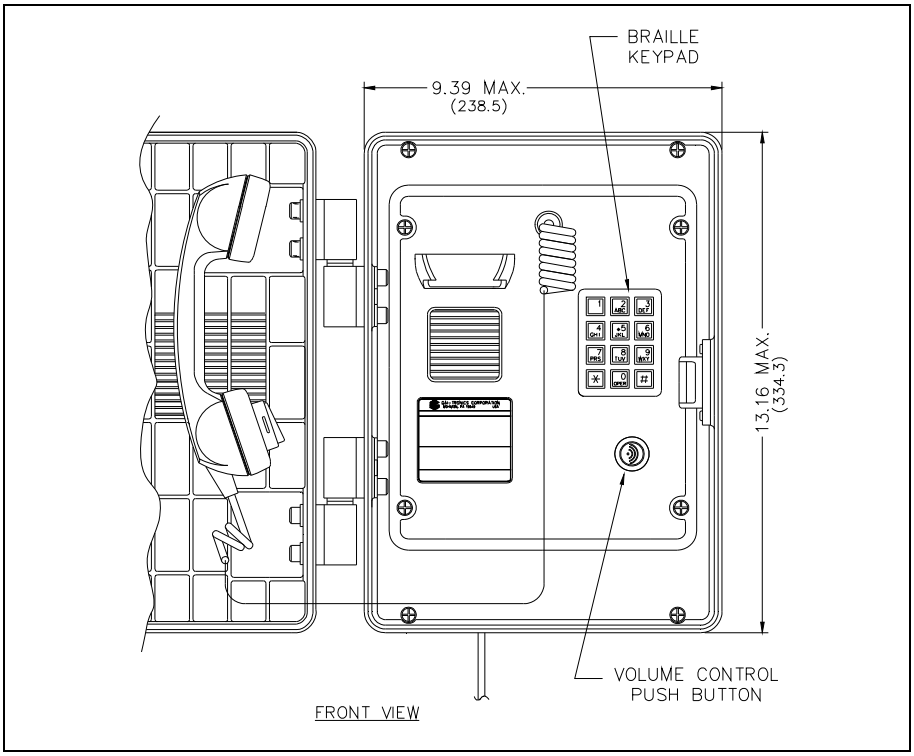

Figure 8. Model 256-700 VoIP Telephone Outline Drawing
(Front door open)

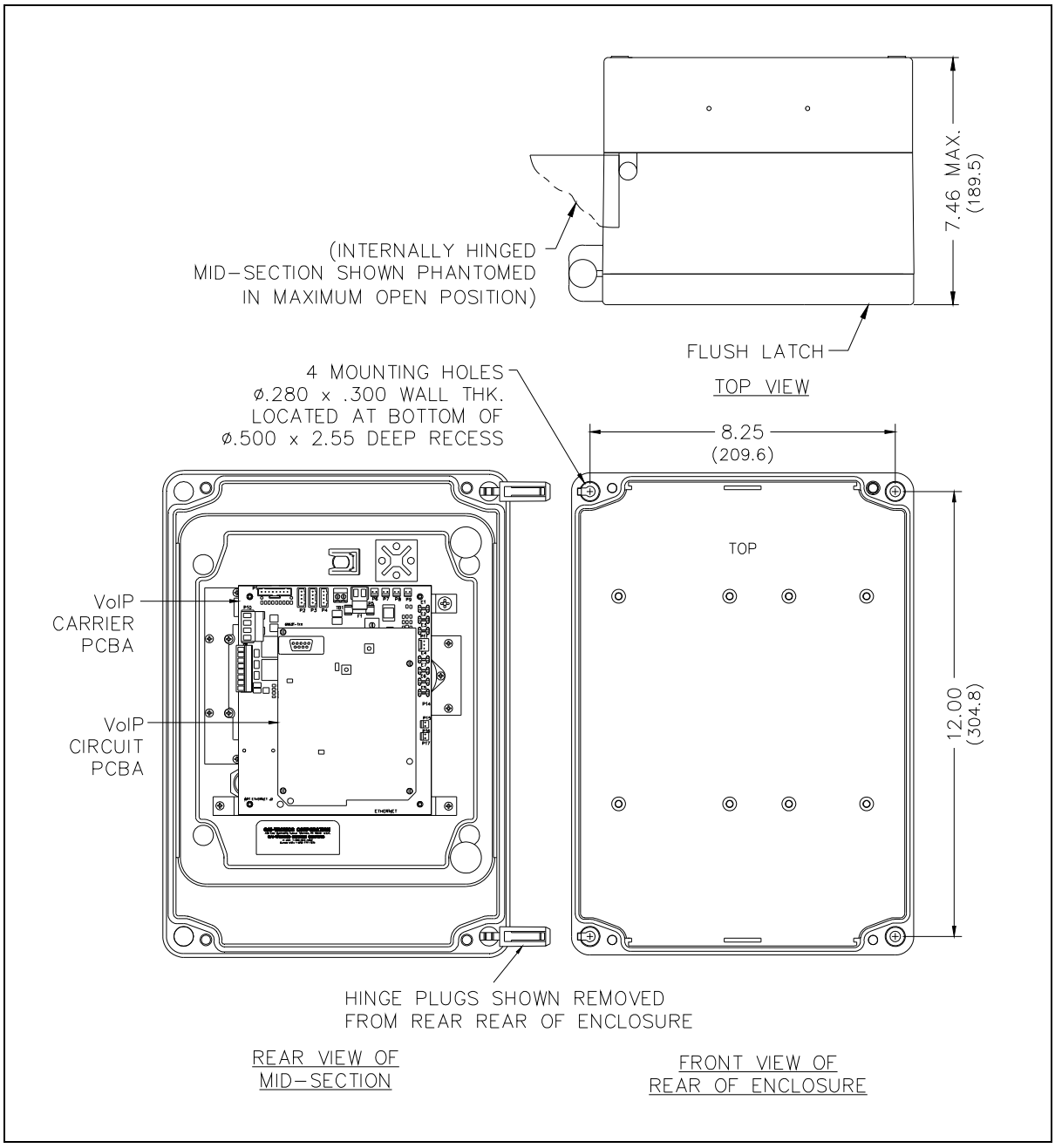

Figure 9. Model 256-700 Mounting Details

Model 276-700

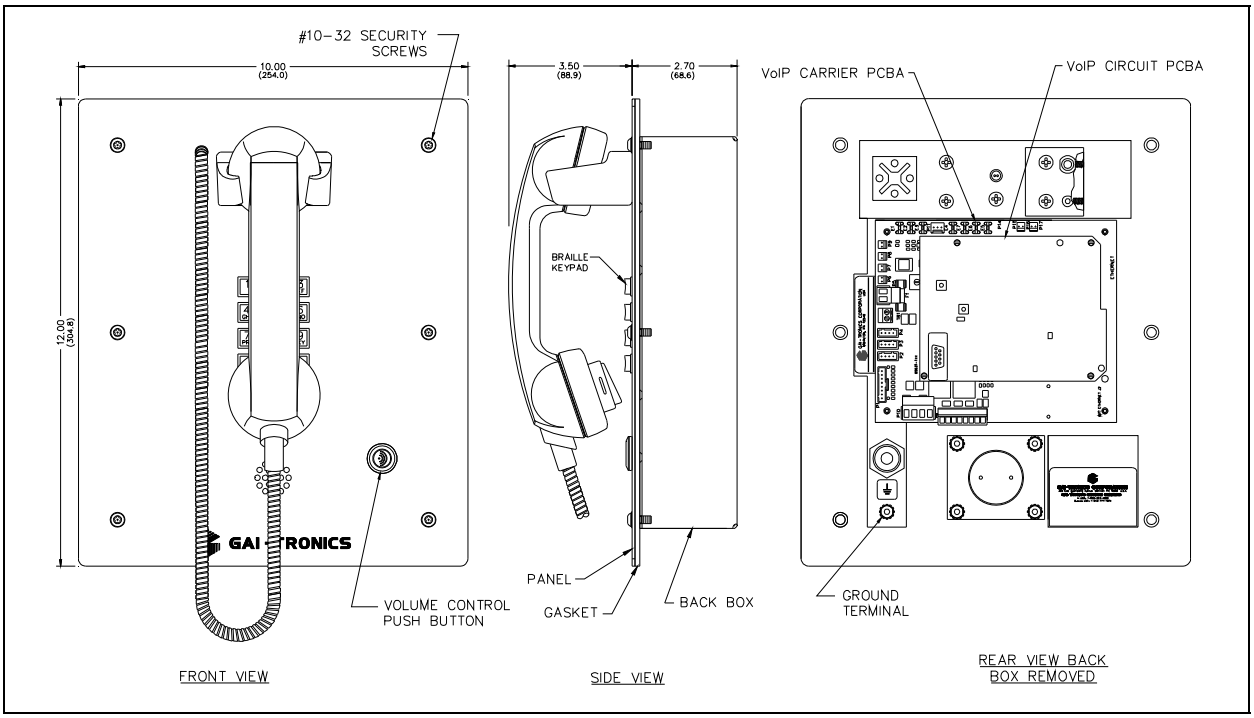

Figure 10. Model 276-700 Outline Drawing

Stanchion or Flush-Mount Applications

1. 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.

   NOTES:

   - When installing a Flush-mount VoIP Telephone in a GAI-Tronics 236-00*x* Series or 238-001 Surface-Mount Enclosure, the front panel assembly mounts directly to the enclosure (back box is not required.)
   - When mounting outdoors, the installation of a (customer-supplied) surge suppressor on the Ethernet line is recommended, and the power line, if used.

2. Remove a tapered plug from one of the cable entry holes in the back box, and install the cabling and cable fitting. See the "Field Wire Installation" section on page 14.

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

4. Connect any desired peripheral devices. Refer to page 16 for connection information.

5. Perform the initial programming of the telephone. Refer to the "Programming" section beginning on page 19.

6. Verify operation by calling to and from another telephone. Verify operation of peripheral equipment.

7. 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.

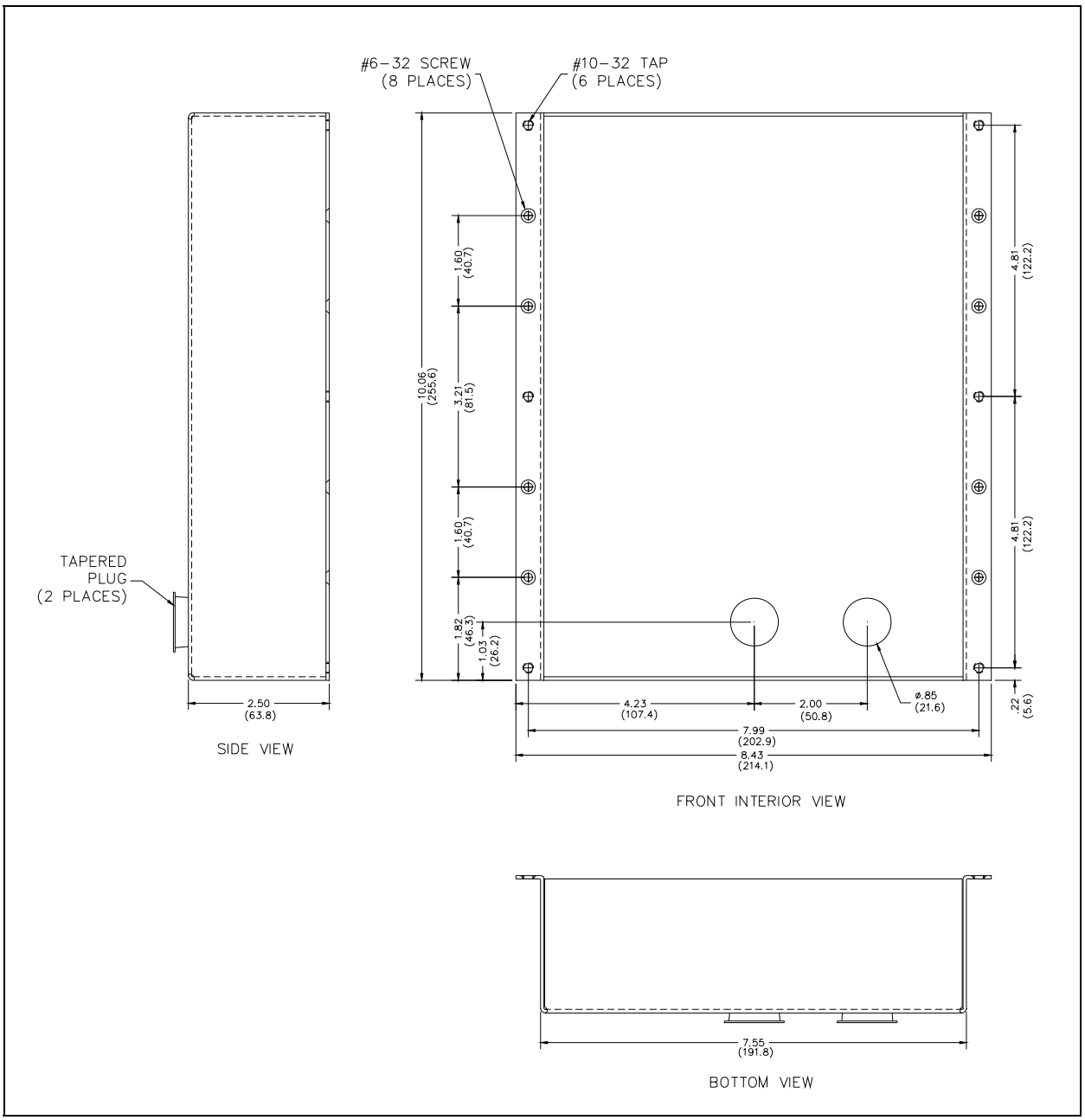

Figure 11. Model 276-700 Mounting Details

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 5 on page 17 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.

Power

Power-Over-Ethernet

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

Local Power

When PoE is not available, a separate, isolated 24–48 V dc power supply is required. A removable terminal block P5 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 P5. See Table 2 for wiring and Figure 12 for the location of P5.

Table 2. Power – P5

Pin	Label	Description
1	(+)	Positive
2	(−)	Negative

Ground (For Model 226-700 & 276-700 Only)

The enclosure must be connected to earth ground. Install a #6 ring lug on the ground conductor and secure it with the ground terminal located on the rear of the front panel.

NOTE: Not applicable to Models 246-700 and 256-700.

Network

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

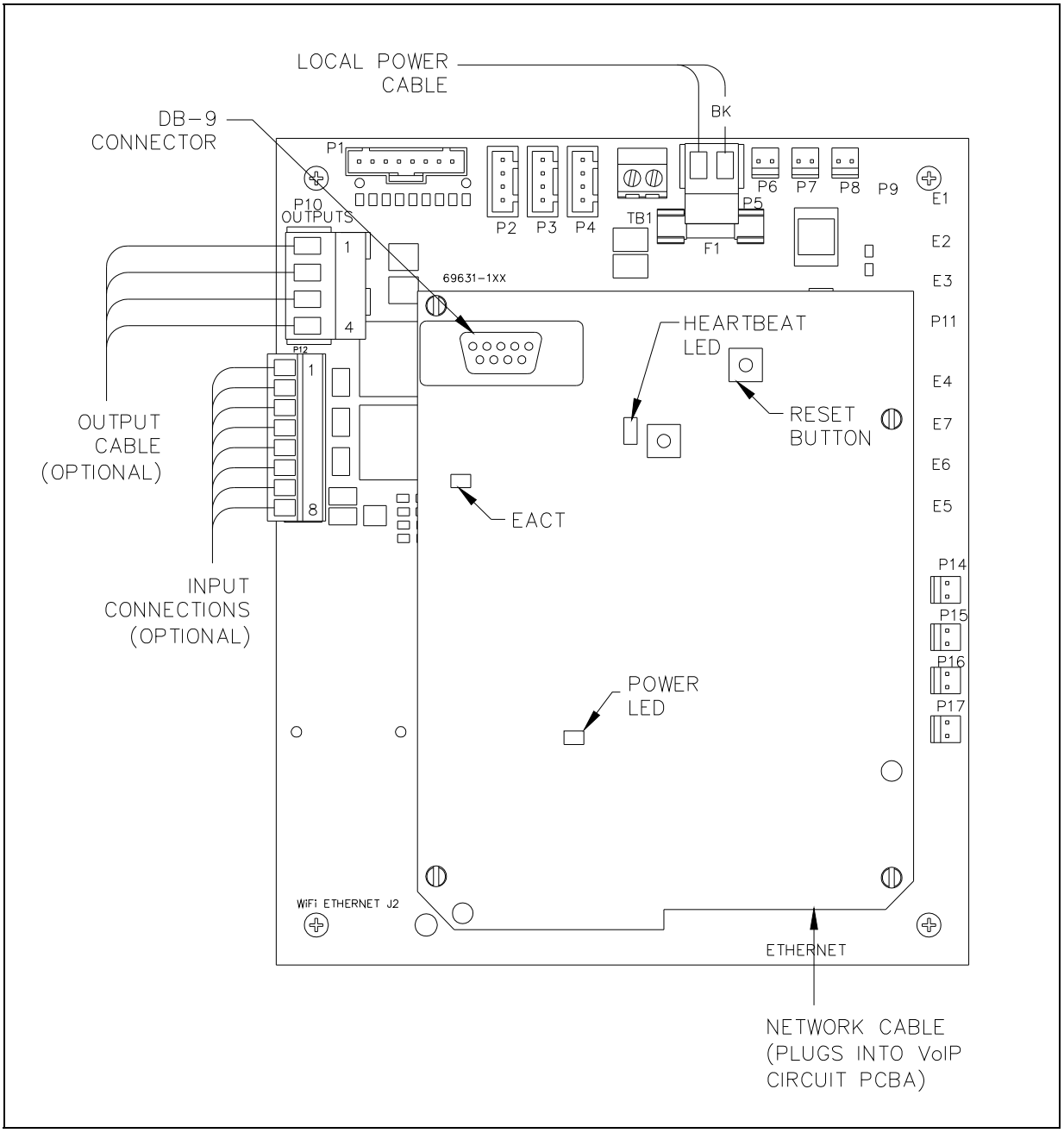

Figure 12. VoIP Telephone PCB Assembly

I/O

Inputs

Four auxiliary inputs have been provided for customer use. Terminations for these inputs are provided on terminal block P12.

Table 3. Auxiliary Inputs – P12

Pin	Label	Function
1	IN4	Input 4
2	COM	Common
3	IN3	Input 3
4	COM	Common
5	IN2	Input 2
6	COM	Common
7	IN1	Input 1
8	COM	Common

Outputs

Two outputs have been provided for customer use. Terminations for these outputs are provided on connector P10.

Table 4. Output Contacts – P10

Pin	Label	Description
1	C1	Common Output 1
2	NO1	Normally Open Output 1
3	C2	Common Output 2
4	NO2	Normally Open Output 2

Recommended Cabling

Table 5. Recommended Cabling

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

VoIP Telephone Input Contacts

Each VoIP Telephone accepts four volt-free inputs. Refer to the "Specifications" section of this manual for the input ratings.

The function of each input is configurable. Inputs can be configured for one of the following modes: On, Off, or On/Off. The signals can also be inverted between active high (INVERT) or active low (NORMAL). Activation of these inputs can be configured to update a SYSLOG or generate an email. Please refer to Figure 12 on page 15 of this manual and the "Logic Settings" section of GTC Pub. 42004-396, "VoIP Telephone Configuration Guide" for programming instructions for these inputs.

VoIP Telephone Output Contacts

Each VoIP Telephone contains two volt-free output contacts. Refer to the "Specifications" section of this manual for the output ratings. Both outputs are single-pole, single-throw contacts.

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. Please refer to Figure 12 on page 15 of this manual and the "Logic Settings" section of GTC Pub. 42004-396, "VoIP Telephone Configuration Guide" for programming instructions for these outputs.

Status Indication

Power

The Power LED located on the VoIP PCBA illuminates when power is applied to the telephone. Refer to Figure 12 on page 15 for location.

Heartbeat

The Heartbeat LED located on the VoIP PCBA will flash once communication over the LAN is established. Refer to Figure 12 on page 15 for location.

EACT

The EACT LED located on the VoIP PCBA will turn ON when VoIP PCBA is connected to an Ethernet device and flash when data is being transmitted. Refer to Figure 12 on page 15 for location.

External Controls

Handset Receiver Volume Control

A push-button switch is provided on the face plate for adjustment of the handset receiver volume. When pressed, it incrementally increases the volume from 0 dB to 12 dB, to 20 dB, and back to 0 dB of the original signal. After the end of each call the signal level is automatically set to 0 dB.

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.

Programming

The installer should ensure that the network is configured to allow VoIP communications (using the SIP protocol) between the desired locations before attempting to configure the GAI-Tronics VoIP Telephones.

The general sequence for set up of the VoIP telephone is as follows:

VoIP PCBA Setup

Verify the PC is connected to the same network as the VoIP telephone.

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

Changing the user name and password is recommended. This security measure helps to prevent unauthorized changes to the VoIP Telephone Interface's configuration.

VoIP PCBA Initial Network Configuration

Each VoIP PCBA must be set up for the network prior to installation. Assign a local ID, domain, proxy, and registrar.

Assign a host name	The host name provides identification of the different VoIP PCBAs on the network.
Test	Verify that calls can be made successfully.
Maintain	Monitor alarms. Set up auto-updates.

Refer to Pub. 42004-481 for programming instructions for these VoIP devices.

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 6. Troubleshooting Chart

Problem	Possible Solution
Low volume	If the volume is low, increase the volume level in the telephone's programming configuration.
High volume	If the volume is high, decrease the volume level in the telephone's programming configuration.
Front panel push buttons are not operational	Verify the push buttons are properly configured. Verify power is applied to the unit.
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

Network power..... Power-over-Ethernet, 802.3af compliant (via RJ45)

Local power requirements..... 24–48 V dc, 6 watts

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

Configuration .....Embedded web server
Configuration file download
Direct serial connection
Password protection

Inputs

Keypad..... 3 × 4 matrix

Push buttons.....Volume control

Configurable inputs (quantity = 4)..... Internal pull-up 3.3 V dc tolerant

Outputs (except Model 226-700)

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

Output 2 ..... 8 A @ 30 V ac/dc (resistive load)

Indicators

Internal on VoIP PCBA ..... Power, Heartbeat, & EACT LEDs

Mechanical

Temperature range

Operating..... −4º F to +131º F (−20º C to +55º C)

Storage..... −40º F to 158º F (−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 (342.9 × 246.4 × 156.2 mm)

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

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

Model 246-700

Construction ..... Engineered plastic enclosure
Handset/cord ..... Hytrel® cord (6-foot) with noise-canceling mic
Braille dial pad ..... Chrome-plated zinc
Dimensions ..... 9.50 H × 8.00 W × 6.90 D inches (241.3 × 203.2 × 175.3 mm)
Mounting ..... Four 0.28-inch diameter holes
Weight ..... 4.8 lbs. (2.18 kg)

Model 256-700

Construction ..... Engineered plastic enclosure
Handset/cord ..... Hytrel® cord (6-foot) with noise-canceling mic
Braille dial pad ..... Chrome-plated zinc
Dimensions ..... 13.20 H × 9.40 W × 7.40 D inches (335.4 × 238.8 × 188.0 mm)
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 (304.8 × 254.0 mm)
- Back box (overall) ..... 10.06 H × 8.43 W × 2.50 D inches (255.5 × 214.1 × 63.5 mm)
- Cutout for mounting back box ..... 10.13 H × 7.63 W inches (257.3 × 193.8 mm)

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

Approval Standards

Compliance to Standard ..... FCC CRF 47 Part 15
Safety of Information Technology Equipment ..... UL/CSA 60950
Models 226, 256, and 276 only:
Enclosure for Electrical Equipment ..... Type 3R

Replacement Parts

Part No.	Description	226-700	246-700	256-700	276-700
233-001	Model 233-001 Security Screwdriver	■			■
12565-701	VoIP Carrier PCBA Replacement Kit	■	■	■	■
51035-005A	PCBA, Keypad	■	■	■	■
13707-008	Ringer, Panel-Mount	■	■	■	■
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/Assembly Kit (plastic)		■	■	
12512-002	Hookswitch/Assembly Kit (metallic)	■			■
40419-011	Optional Plug-in Power Supply, 120/240 V ac input, 24 V dc output	■	■	■	■

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.