



**GAI-TRONICS®**  
A HUBBELL COMPANY

# Division 1 VoIP Telephones

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## 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.

## General Information

GAI-Tronics' Class I, Division 1 VoIP (Voice over Internet Protocol) telephones are constructed of cast aluminum and are weatherproof and corrosion resistant. User operation is identical to that of a standard analog telephone—simply lift the handset and dial the desired telephone number.

GAI-Tronics' VoIP telephones connect to a 10/100 BaseT Ethernet LAN (Local Area Network) and operate from PoE (Power-over-Ethernet) or an external power source. VoIP telephones provide point-to-point communication between personnel over an existing LAN.

This manual applies to the following models:

- Model 352-701 Division 1 VoIP Telephone
- Model 352-703 Division 1 VoIP Telephone with Headset

These VoIP telephones feature real-time alarm reporting. System supervisors monitor each telephone's activity to address caller needs or maintenance issues immediately. The telephones have four user-configurable inputs and two outputs for customer use.

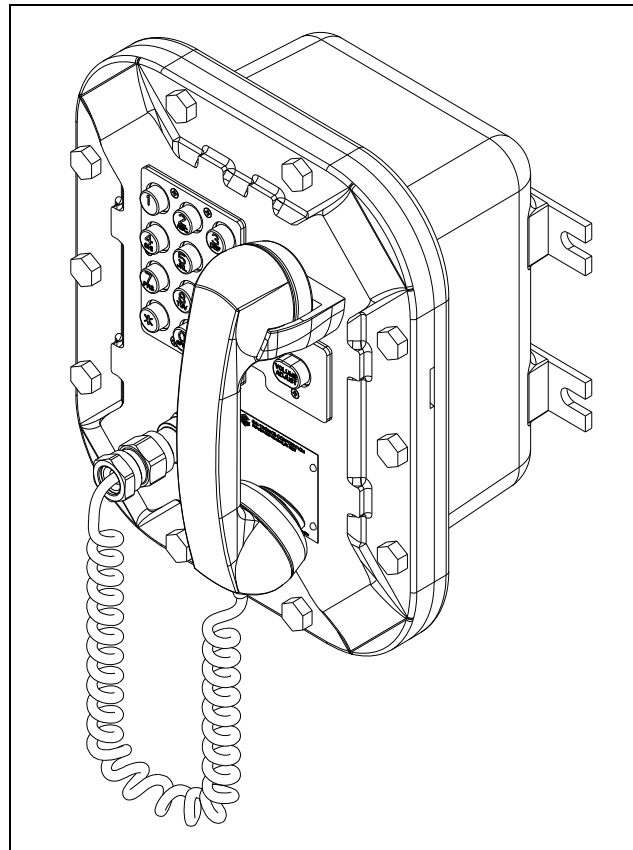


Figure 1. Model 352-701 Division 1 VoIP Telephone

## Features and Functions

GAI-Tronics VoIP telephones include the following features:

- SIP compatible (RFC3261)
- real-time alarm reporting via SNMP or syslog
- PoE (Power-over-Ethernet) compatible; Power Mode A, Class 0
- configurable via web page, serial link, or download
- four configurable auxiliary inputs
- two configurable dry-contact outputs

## System Requirements and Limitations

These VoIP telephones require PoE (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. A 10/100 BaseT Ethernet network with a SIP (Session Initiation Protocol) 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.

## VoIP Subscriber Tips

New and existing subscriptions to an interconnected VoIP service provider should address the following points:

- Provide accurate physical address information to the VoIP service provider to ensure that emergency services can quickly be dispatched to the location.
- Be familiar with the VoIP service provider's procedures for updating the address and promptly update address information in the event of a change.
- Have a clear understanding of any limitations of the local 911 service.
- Be aware that VoIP telephone services may not work if the power is out or the Internet connection is down. Consider installing a backup power supply, maintaining a traditional telephone line, or having a wireless telephone as a backup.
- For questions about interconnected VoIP and 911, or VoIP in general, see <http://www.fcc.gov/cgb/consumerfacts/voip.html>.

## Hardware Description

### External

The Model 352-701 telephone contains a handset with an approved cable gland, standard keypad, volume control button, and applicable approval labeling. The handset rests on a cradle with a magnetic reed switch to signal the off-hook condition. Ten cover mounting bolts, located around the perimeter of the enclosure's flange, seal the enclosure (see Figure 2).

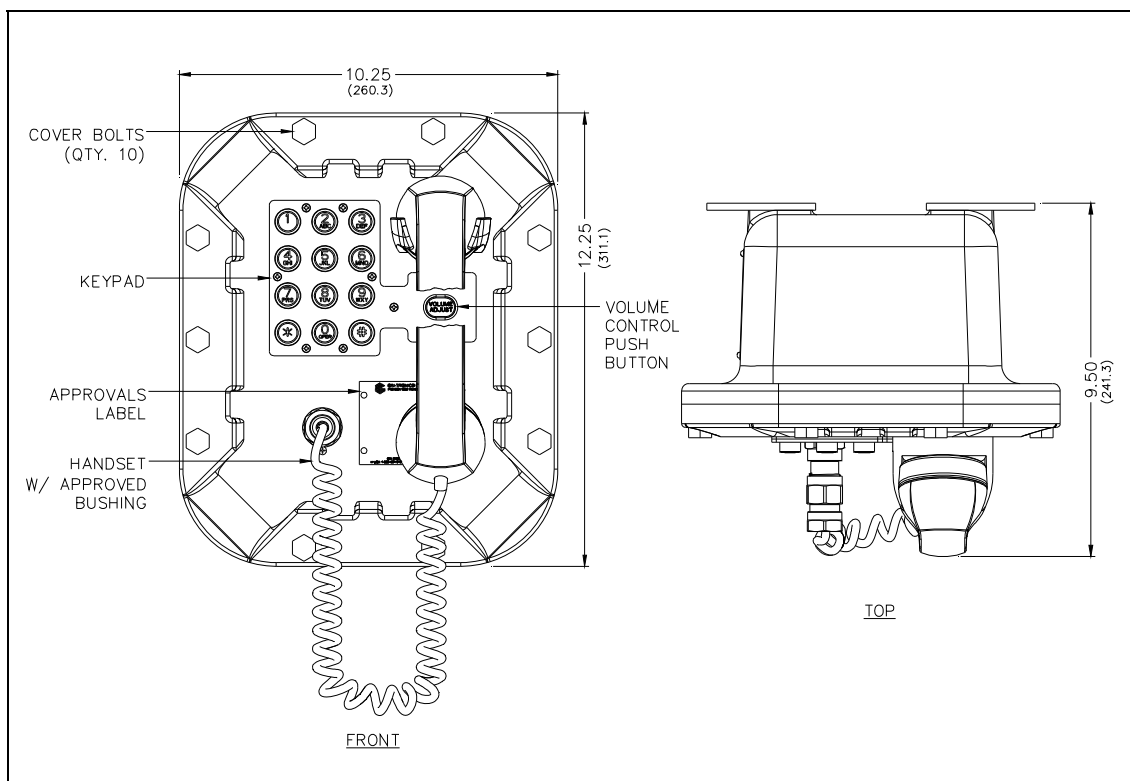


Figure 2. Model 352-701 Division 1 VoIP Telephone Outline

The Model 352-703 telephone includes a removable headset with headset activation bracket (see Figure 3) instead of the handset and cradle.

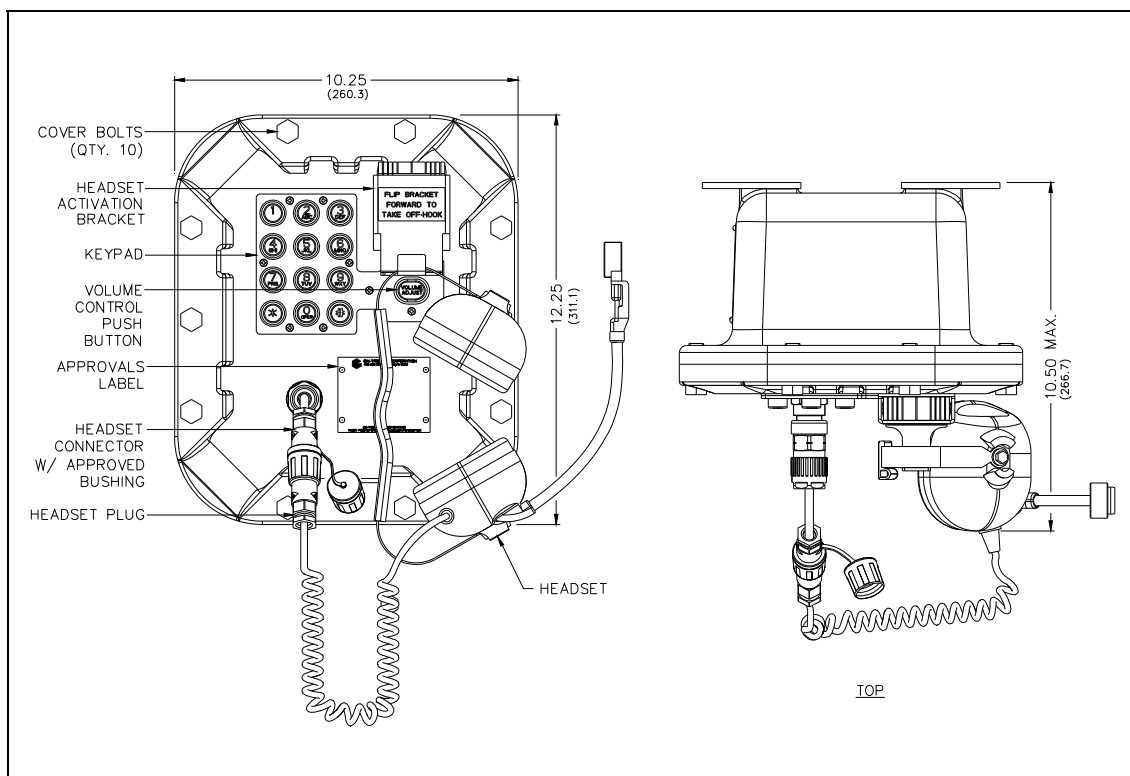


Figure 3. Model 352-703 Division 1 VoIP Telephone with Headset

## Internal

All standard components are mounted to the rear of the front cover (see Figure 4).

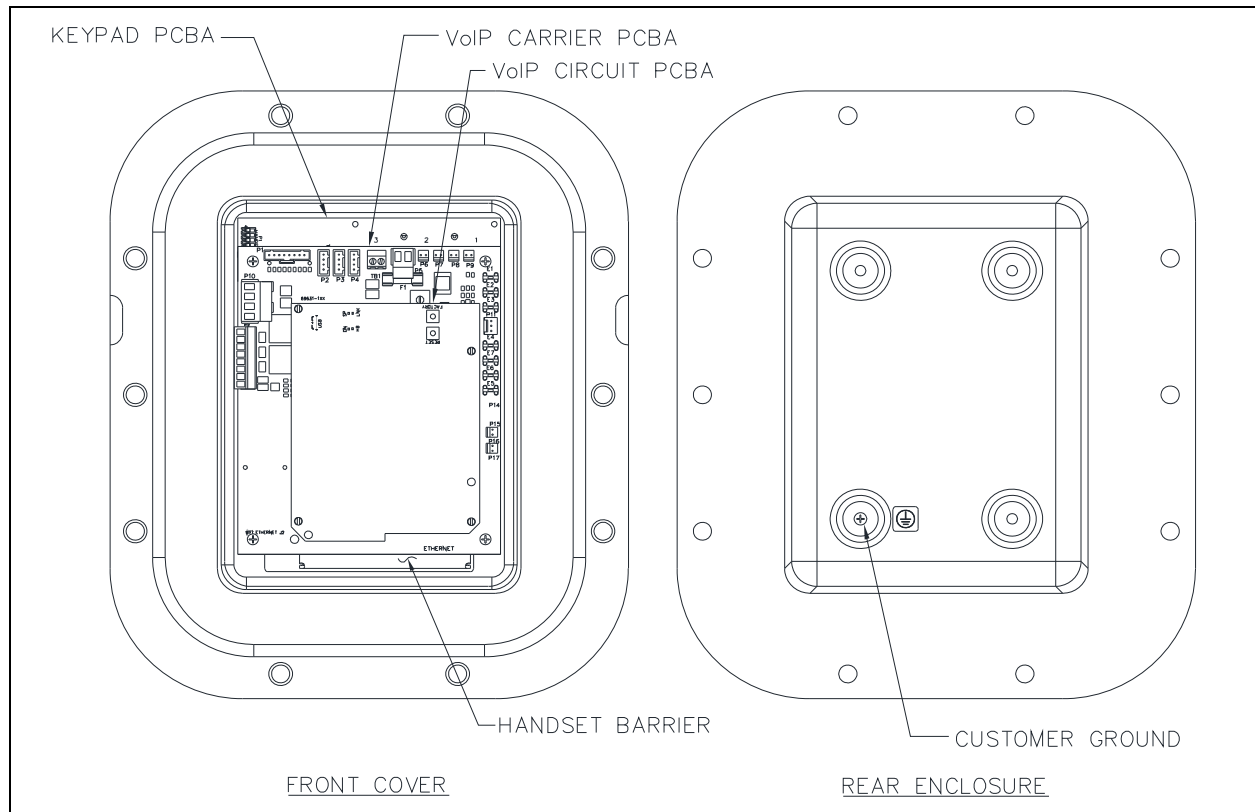


Figure 4. Model 352-70x Division 1 VoIP Telephone—Internal View

## Operation

### Handset/Headset Receiver Volume Control

A push-button switch on the front faceplate adjusts the handset or headset receiver volume (see Figure 2 and Figure 3). Press it incrementally to decrease the volume from 20 dB, to 12 dB, to 0 dB, and back up to 20 dB, of the original signal. The signal gain is automatically reset to 20 dB after the end of each call.

### Model 352-701 Handset Operation

1. Lift the handset to place a call.
2. Adjust the volume to the desired level using the volume control push button, located on the front cover.
3. Dial the desired number.
4. After completion of the call, place the handset on-hook.

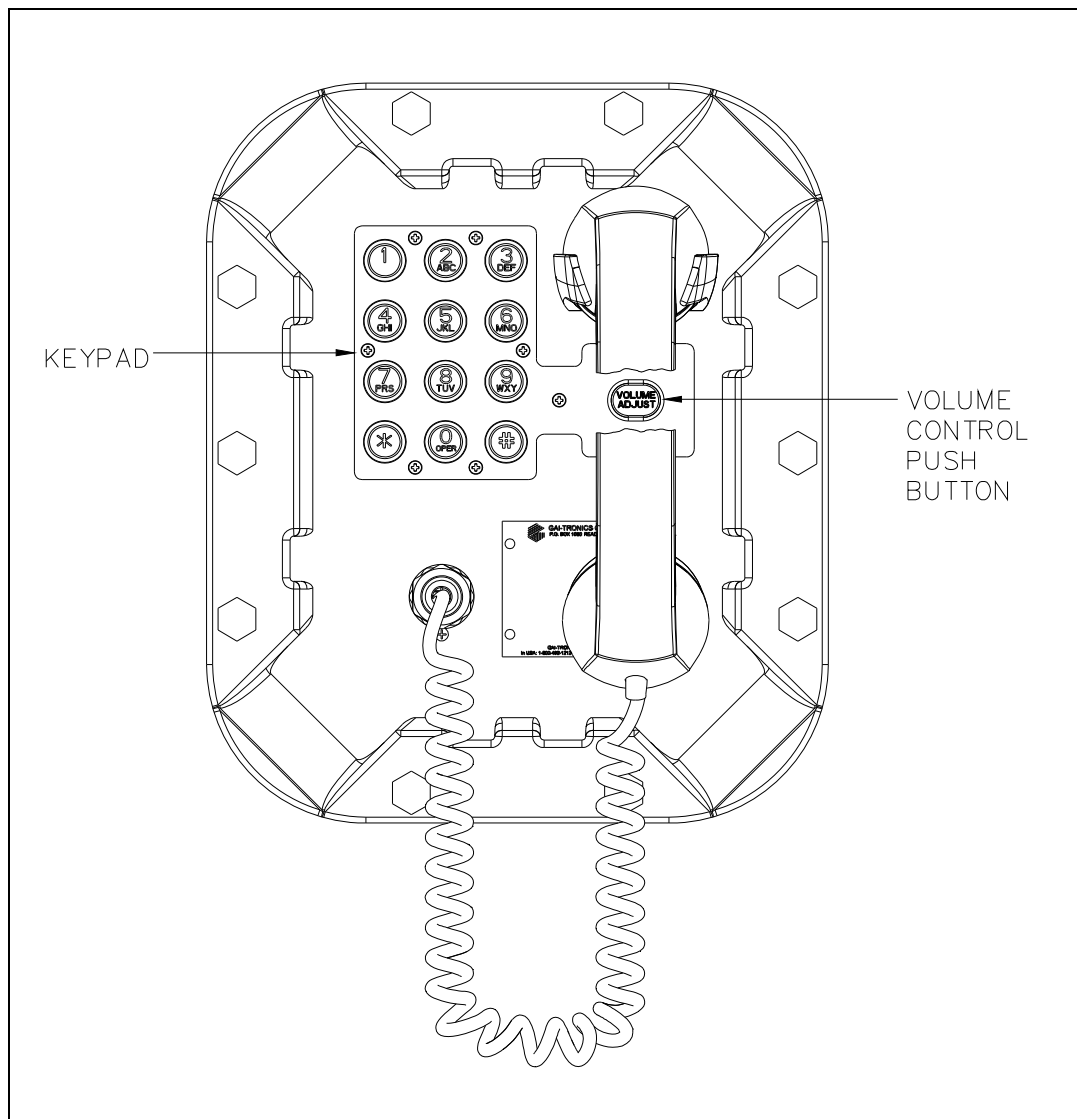


Figure 5. Model 352-701

## Model 352-703 Headset Operation

### Headset Connection

1. Remove the sealing cap from the headset receptacle.
2. Plug the headset into the flexible plug on the front of the telephone by aligning the connector pins and pressing the two parts together.
3. Screw the two ends together (see Figure 6).

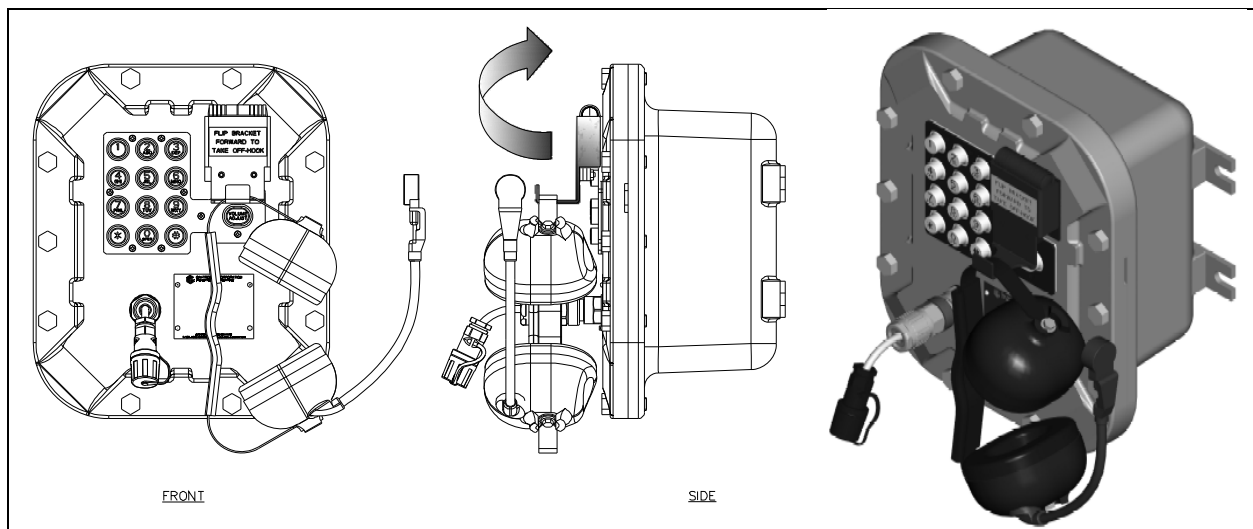


Figure 6. Model 352-703 (On-hook)

Place a call:

1. Remove the headset from the headset activation bracket.
2. Flip the headset bracket forward to the off-hook position.
3. Adjust the volume to the desired level using the volume control push button, located on the front cover.
4. Dial the desired number.
5. Flip the headset activation bracket to the vertical position (on-hook) to hang up. If applicable, place the headset on the bracket after the completion of the call. Otherwise, disconnect the flexible receptacle and plug by unscrewing the two ends, and pulling them apart. When disconnected, reattach the sealing cap to the end of the receptacle.

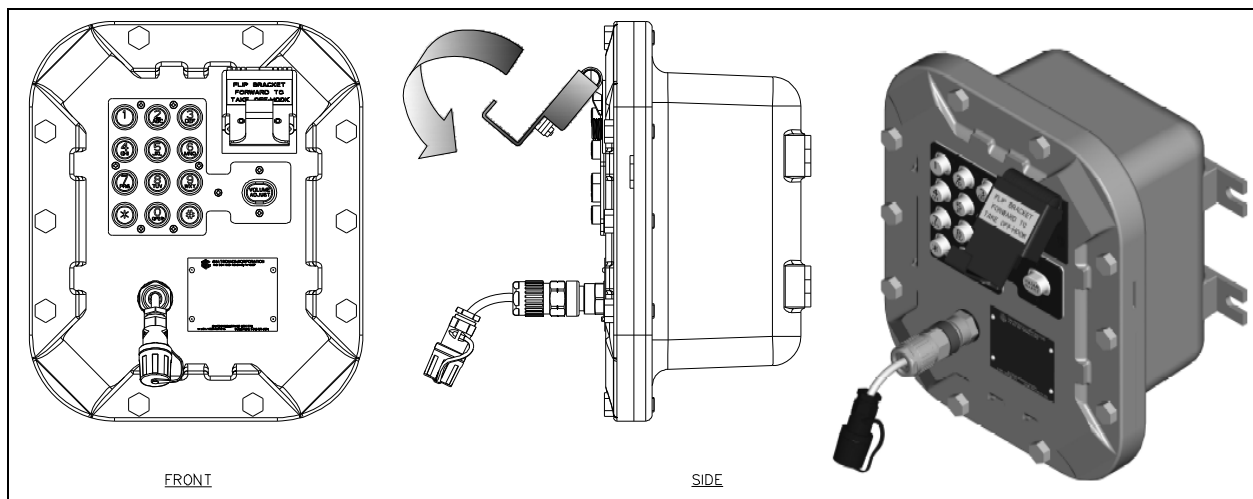




Figure 7. Model 352-703 (Off-hook)





# Installation

## Installation Guidelines



These enclosures must be installed by trained, qualified, and competent personnel. Installation must comply with state and national regulations, as well as safety practices for this type of equipment.



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

The mounting location must be flat and provide proper clearance, rigidity, and strength to support the enclosure and all contained devices.

 **WARNING**  —Securely fasten the enclosure to the mounting location using 3/8-inch diameter steel mounting bolts and washers, or washer head bolts.

 **WARNING**  —**Do not disconnect equipment while energized.**  
**Insure proper grounding to protective earthing.**

 **WARNING**  —The front cover is not hinged to the rear enclosure. Adequately support the cover when removing the cover bolts.

 **ATTENTION**  —Installation must be performed by qualified personnel and only in accordance with the National Electrical Code or applicable local codes.

Inspect and clean the machined flange flame joint surfaces of both the cover and box. Surfaces must be smooth, free of nicks, scratches, dirt, or any foreign particle build-up that will prevent a proper seal. Surfaces must seat fully against each other to provide a proper explosion-proof joint. Clean surfaces by wiping with a clean lint-free cloth.

Apply a light coat of Killark LUBG lubricant to flange surfaces and close the cover. Install and tighten all cover bolts to 30 ft-lb. Do not omit any cover bolts. Use only the bolts supplied with the enclosure.

Please adhere to the following guidelines when installing GAI-Tronics' telephone equipment to ensure the safety of all personnel:

- **Electrostatic Discharge (ESD) Protection:** The telephone has an earth ground terminal provision. 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 communication. Do not use long and coiled ground wires. Trim ground wires to the required length. Please note proper grounding does not eliminate the need for lightning protection for the telephone or the telephone system.
- NEVER install a telephone during a lightning storm.
- **Install a Cat5 data line lightning surge protector** on all telephones installed where the phone or phone cable is at risk of exposure to lightning strikes. The lightning arrestor must be installed as close to the phone as possible in a non-hazardous environment. Do not install the lightning arrestor inside the telephone enclosure.
- USE CAUTION when installing or modifying Category 5 data lines.

## Mount the Telephone

**NOTE:** The mounting surface must be able to support the 28-pound weight of the telephone.

Securely fasten the telephone enclosure to the mounting surface with 3/8-inch diameter steel mounting bolts located on all four mounting feet. (see Figure 8)

- Stainless steel hardware is recommended in outdoor applications.
- The suggested mounting height is 48 inches to the bottom of the enclosure.

**NOTE:** Refer to the Killark Installation, Operation, and Maintenance Data Sheet enclosed with the unit for additional enclosure information.

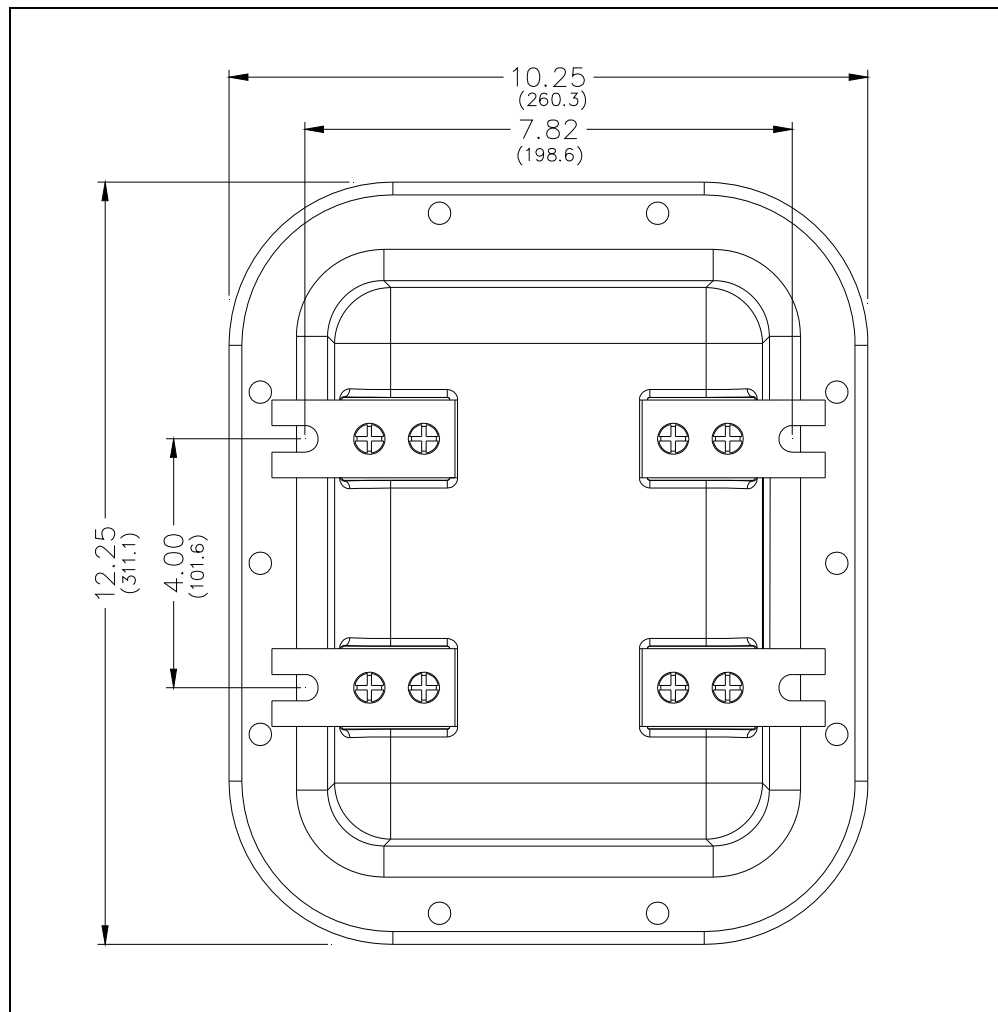


Figure 8. Model 352 Series Division 1 VoIP Telephone Enclosure Mounting Details

## Cable Entries

- Seal all unused openings with proper fittings per local standards.
- Use field wiring suitable for the ambient temperature.
- All conduit NPT plugs (blanking elements) must be explosion-proof with a Type 4X rating (see Figure 9).

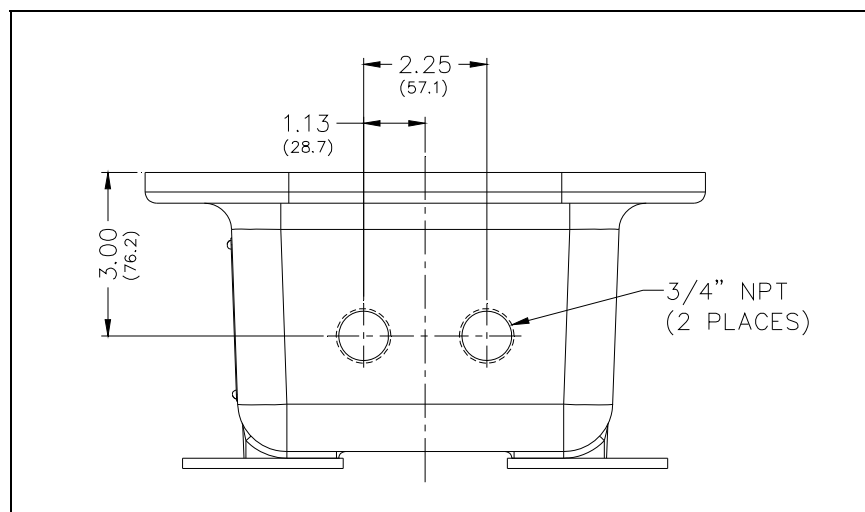


Figure 9. Model 352 Series Conduit Entries

## Front Cover Removal

**⚠ WARNING ⚠** —The front cover is not hinged to the rear enclosure. Adequately support the cover when removing the cover bolts.

1. Support the front cover and remove the ten cover bolts from the enclosure flange.
2. Pull the front cover far enough away to expose the internal connections.
3. Place the front cover aside.

## Field Wiring

Pull the required field cables into the rear enclosure and install the connections as indicated in the following subsections (see [Table 1](#) and [Figure 10](#)):

Table 1. Recommended Cable

| Cable Use       | Size  |
|-----------------|---|
| LAN             | Category 5 or better UTP cable with an RJ45 connector |
| Power           | two-conductor, No. 22 AWG is typical                  |
| Inputs          | two-conductor, No. 22 AWG is typical                  |
| Output contacts | two or three-conductor, No. 18 AWG is typical         |
| Speaker         | two or three-conductor, No. 18 AWG is typical         |

### Power

#### Ground

Connect the enclosure to earth ground:

1. Install a #6 ring lug on the ground conductor.
2. Secure the ground conductor to the ground terminal, located in the upper right corner in the rear of the enclosure (see [Figure 4](#) on [Page 4](#)).

## PoE (Power-over-Ethernet)

Connect power to the system as indicated in the POE equipment manual. (Power Mode A, Class 0)

## Local Power

A separate, isolated, 24 to 48-volt dc power supply is required when PoE is not available. Connect the local 24–48 V dc power source to removable terminal block, **P5** (see Figure 10), on the VoIP Carrier PCBA.

1. Install ferrules or tin the wire ends.
2. Connect the positive conductor to the (+) terminal of **P5**.
3. Connect the negative conductor to the (–) terminal of **P5**.
4. Install the removable terminal block onto pin header **P5**, on the VoIP carrier PCBA.

Table 2. Power—P5

| Pin | Label | Description |
|-----|-------|-------------|
| 1   | (+)   | Positive    |
| 2   | (–)   | Negative    |

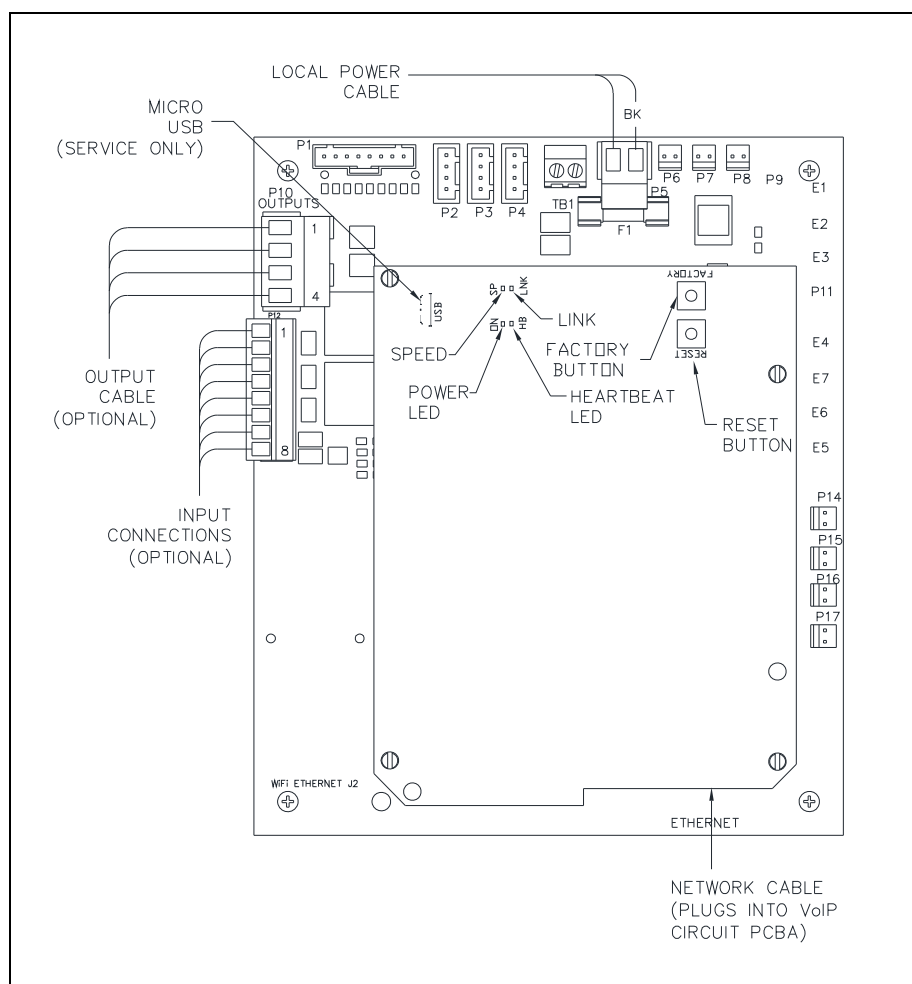


Figure 10. VoIP Telephone PCB Assembly

## Network Cable

Connect the Category 5 or better UTP Ethernet cable with an RJ45 connector from the LAN to the Ethernet jack on the VoIP PCBA. The Ethernet jack is located on the underside of the VoIP PCBA (see [Figure 10](#)).

## Auxiliary I/O

### Inputs

The telephones have four auxiliary inputs for customer use. Terminate the inputs to terminal block P12, on the VoIP carrier PCBA (see [Figure 10](#) and [Figure 11](#)). Connect each input between the desired input (INPUT 1–4) and common (COM) on terminal block P12. The inputs are configurable (see the [Programming](#) section).

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

The telephones have two dry-contact outputs for customer use. Terminate the outputs to connector P10, on the VoIP Carrier PCBA (see [Figure 11](#) and [Figure 12](#)). The outputs are configurable (see the [Programming](#) section).

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 |

An external beacon or sounder can be activated with output one on the VoIP PCBA (see [Figure 12](#)). The output must be configured to **Ring** mode to activate the external device (see the [Programming](#) section).

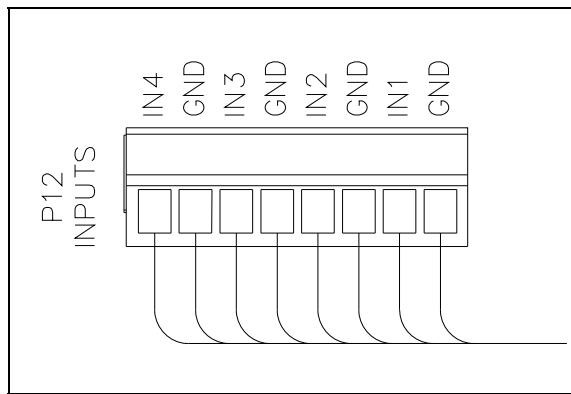


Figure 11. Input Cable Connections at P12

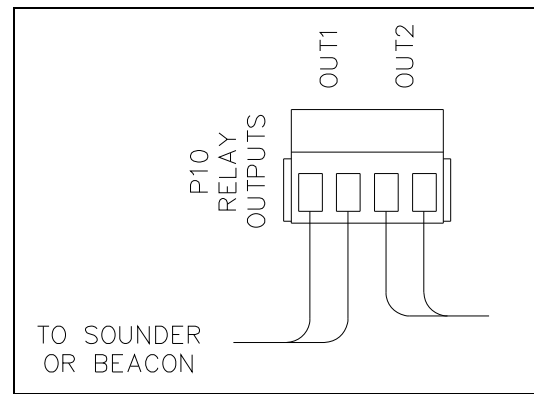


Figure 12. Output Cable Connections at P10

## Front Cover Installation

After all adjustments are complete:

1. Inspect and clean the machined flange joint surfaces of both the cover and the box.  
Surfaces must be smooth, free of nicks, scratches dirt or any foreign particle build-up that would prevent a proper seal.  
Surfaces must seat fully against each other to provide a proper explosion-proof joint.
2. Clean surfaces by wiping with a clean lint-free cloth.
3. Apply a light coat of Killark LUBG lubricant to flange surfaces.
4. Close the cover.
5. Install and tighten all cover bolts to 30 ft·lb.
  - Do not omit any cover bolts.
  - Use only the bolts supplied with the enclosure.

**NOTE:** Refer to the Killark Installation, Operation, and Maintenance Data Sheet, Killark Part. No. EXB-684 N34 base enclosure (enclosed with the unit) for additional information.

## Programming

Refer to Pub. 502-20-0172-001, for detailed programming and configuration instructions (see the Reference Documentation section).

### VoIP Telephone Setup

1. Connect a PC to the same network as the VoIP telephone.

2. Log into the unit's web interface.

The unit is factory configured with a static IP address: **192.168.1.2**.

3. Enter the username and password when prompted.

The initial factory settings are:

- USER NAME: *user*
- PASSWORD: *password*

4. Change the username and password upon first login.

This security measure helps prevent unauthorized changes to the VoIP telephone's interface configuration.

The telephone's configuration home page is displayed. The homepage provides access to all the other configuration pages. See Pub. 42004-548 for instructions on configuring the telephone for basic operation (see the Reference Documentation section).

### Alternate Configuration Methods

There are two methods to configure a GAI-Tronics Handset VoIP telephone:

- web pages
- configuration file

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 a knowledgeable user. The telephone can automatically download a configuration file from the network, providing a controlled method of configuring multiple telephones.

### Input Contacts

Each VoIP telephone includes four dry-contact inputs (see the Specifications section for the input ratings). Each input's mode is configurable. Configure inputs for one of the following modes:

- |            |           |               |
|------------|-----------|---------------|
| • None     | • Digit   | • Memory Dial |
| • PTT/Mute | • Redial  | • Volume      |
| • Hook     | • Hook HF | • Memory Hook |

The inputs will generate a SYSLOG or an SNMP trap when active. Refer to Pub. 42004-548 for instructions (see the Reference Documentation section).

## Output Contacts

Each VoIP telephone contains two voltage-free output contacts (see the [Specifications](#) section for the contact ratings). Both outputs are SPST (single-pole, single-throw) contacts. The mode of each output is configurable. Configure outputs for one of the following modes:

- On
- Off
- Ring
- Connect
- Hook
- In Use
- Ring Out
- Registered
- Emergency

The activation duration, or on/off times, can be set in some modes. Refer to GTC Pub. 42004-548, for programming instructions for the outputs (see the [Reference Documentation](#) section).

## 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 Pub. 502-20-0172-001 for programming instructions (see the [Reference Documentation](#) section).

**NOTE:** Set the handset receiver volume setting to maximum volume (factory default) using the volume control pushbutton PB1 prior to adjusting the volume remotely.

## Maintenance

### Status Indication

#### Power

The ON LED, located on the VoIP PCBA (see [Figure 13](#)), illuminates when power is applied to the telephone.

#### Heartbeat

The HB LED, located on the VoIP PCBA (see [Figure 13](#)), flashes when communication over the LAN is established.

#### Link

The LNK LED, located on the VoIP PCBA (see [Figure 13](#)), indicates an active network connection when illuminated.

#### Speed

The SP LED, located on the VoIP PCBA (see [Figure 13](#)), indicates a 100 Mbps network connection when illuminated or a 10 Mbps connection when off.

## VoIP Circuit PCBA Pushbuttons

#### Reset

Press the RESET button (see [Figure 13](#)) momentarily to warm reboot the telephone. The telephone maintains the current configuration.



## Factory

Use the **FACTORY** button (see Figure 13) to erase the current configuration and restore the factory default settings as follows:

1. Press and release the **RESET** button.
2. Press and hold the **FACTORY** button for 10 seconds while the telephone is rebooting.

The telephone will reboot again with the factory default settings configured.

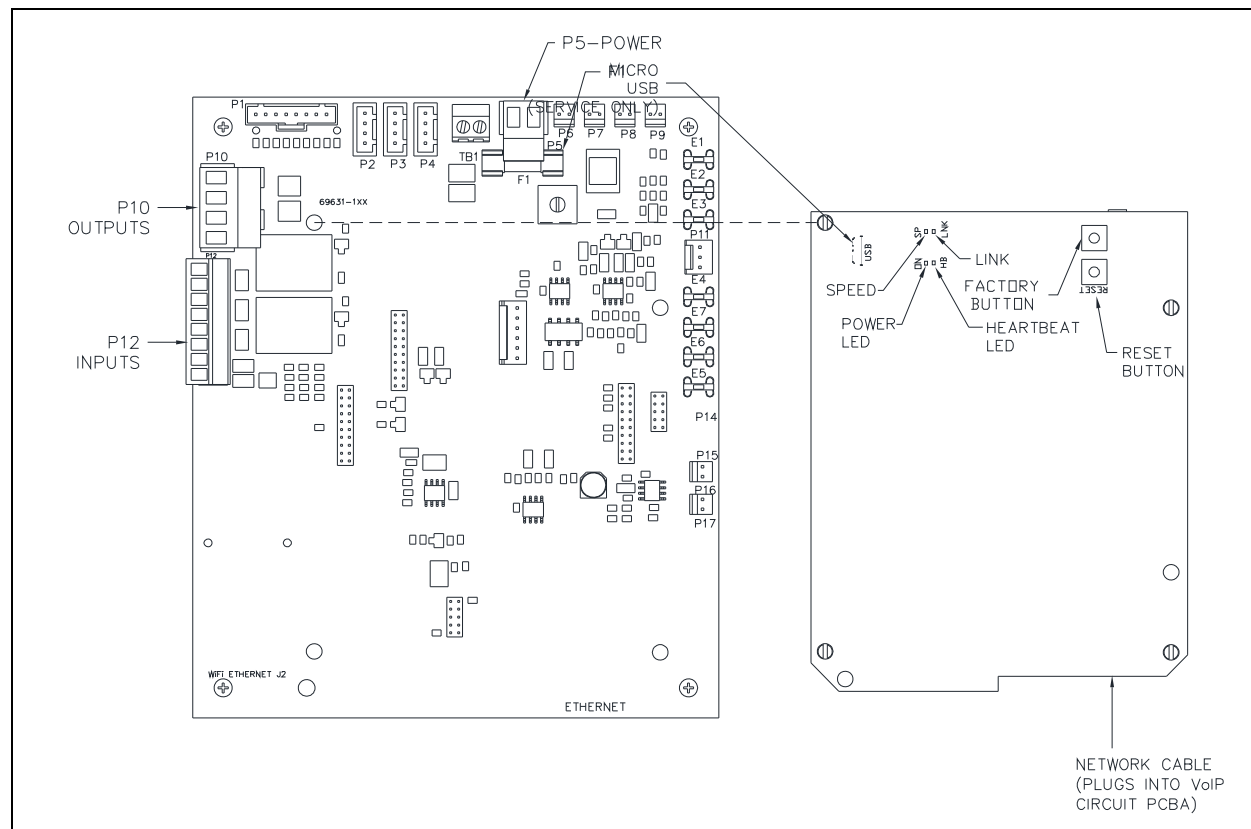


Figure 13. VoIP Telephone PCB Assembly

## Service and Spare Parts

Contact a regional service center for assistance if the telephone requires service or spare parts. An RA# (return authorization number) will be issued if service is required. Equipment must be shipped prepaid to GAI-Tronics with an RA# and a purchase order number. Repairs or a replacement will be made in accordance with GAI-Tronics' warranty policy 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 with identifying nearest regional service center.

## Troubleshooting

Table 5. Troubleshooting Chart

| Problem                                 | Possible Solution   |
|---|---|
| Low volume in handset or headset        | Increase the volume setting using the volume adjust button on the front panel.<br><b>NOTE:</b> There is no external speaker adjustment.   |
| High volume in handset or headset       | Decrease the volume setting using the volume adjust button on the front panel.<br><b>NOTE:</b> There is no external speaker adjustment.   |
| Front panel push button not operational | Verify push buttons are properly configured.  |
| Inputs not operational                  | <ul style="list-style-type: none"> <li>• Check the input connections.</li> <li>• Verify the inputs are properly configured.</li> </ul>  |
| Outputs not operational                 | <ul style="list-style-type: none"> <li>• Check the output connections.</li> <li>• Verify the outputs are properly configured.</li> </ul>  |
| Cannot make or receive calls            | <ul style="list-style-type: none"> <li>• Check the connection of the LAN cable.</li> <li>• Verify that power is applied to the unit.</li> <li>• Verify the LAN parameters have been configured properly.</li> <li>• Verify the telephone has been set up on the network.</li> </ul> |
| No power indication                     | <ul style="list-style-type: none"> <li>• Check the power connections.</li> <li>• If using POE, check the operation of the POE equipment.</li> </ul>   |

## Reference Documentation

The following referenced documents are available on the GAI-Tronics website on the product documentation page at [https://www.gai-tronics.com/products/manuals\\_specs.htm](https://www.gai-tronics.com/products/manuals_specs.htm).

VoIP Telephone Basic Configuration Guide ..... 42004-548

VoIP Telephone Programming Manual ..... 502-20-0172-001

## Specifications

### Electrical

Power ..... Power-over-Ethernet, 802.3af compliant (via RJ45) Power Mode A, Class 0, or external power supply: 24–48 V dc, 200 mA

A separate, isolated supply must be provided for each telephone.

Network ..... 10/100 BaseT Ethernet RJ45, Category 5 or better UTP static IP provisioning or DHCP STUN client (NAT traversal)

Call control signaling ..... SIP (RFC3261 compliant) loose routing

**Inputs**

Keypad .....  $3 \times 4$  matrix  
Configurable inputs ..... four

**Outputs**

Output 1 ..... 5 A @ 250 V ac/30 V dc (resistive load)  
Output 2 ..... 5 A @ 250 V ac/30 V dc (resistive load)

**Controls**

External ..... push-button volume control  
Internal ..... microphone bias, reset switch, handset enable

**Indicators**

Internal ..... heartbeat, link, power, and speed LEDs  
Codecs and audio ..... G.711 A-Law  
G.711  $\mu$ -Law  
G.722  
G.729  
G.723.1 MP-MLQ  
G.723.1 ACELP  
codec preference sequence  
DTMF in-band/out-of-band (RFC2833)  
comfort tones (to emulate national tones)  
Configuration ..... embedded web server  
configuration file download  
SNTP with time zone and daylight saving  
automatic updating via TFTP  
password protection  
Monitoring and reporting ..... real-time over TCP/IP proprietary Syslog application, SNMP, or TMA  
automatic fault reporting

**Mechanical**

Enclosure ..... cast aluminum with aluminized lacquer paint  
Handset Cord ..... G-style handset with 6-foot PVC extended length cord (standard)  
Connection ..... RJ45 receptacle  
Dimensions, outside ..... 10.25 W  $\times$  12.25 H  $\times$  9.50 D in (260.3  $\times$  311.1  $\times$  241.3 mm)  
Mounting ..... wall or column, four 3/8-inch (10 mm) mounting feet with slots  
Shipping weight ..... 30.0 lb (13.6 kg)  
Net weight ..... 28.0 lb (12.7 kg)

**Environmental**

Operating temperature .....  $-4^{\circ}\text{F}$  to  $+131^{\circ}\text{F}$  ( $-20^{\circ}\text{C}$  to  $+55^{\circ}\text{C}$ )  
Humidity ..... 95% non-condensing

## Approvals

Compliance to Standard.....FCC CFR 47 Part 15  
NRTL listed .....Hazardous locations Class I, Division 1, Groups B, C, & D  
(USA and Canada)..... Class II, Division 1, Groups F & G  
Class III, Division 1  
Type 4X  
T6—Gas  
T4A—Dust

## User Instructions (USA)

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. 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.

# Warranty

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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

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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.