GAI-TRONICS®
A HUBBELL COMPANY

Division 2 VoIP Telephones
Wired and WiFi

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Confidentiality Notice

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General Information

GAI-Tronics' Class I, Division 2 VoIP telephones are constructed of durable glass-reinforced engineered plastic and are weatherproof rated NEMA 4X. User operation is identical to that of a standard analog telephone; simply lift the handset and dial the desired telephone number. Autodial telephone models dial a preprogrammed number when the handset is lifted from the cradle.

GAI-Tronics' Class I, Division 2 VoIP telephones are available in wired and wireless versions with two model types: handset and handset with auxiliary headset jack (see Table 1).

Wired Div. 2 VoIP telephones connect to a 10/100 BaseT Ethernet network. The telephones are powered by PoE (Power-over-Ethernet) or an external ac or dc power source. VoIP telephones provide point-to-point communication between personnel throughout a facility over an existing LAN.

WiFi models connect to a WLAN (wireless local area network) meeting the IEEE 802.11 a/b/g/n standard. An external ac or dc power source is required for operation.

Figure 1. Model 351-8*xx* Div. 2 VoIP WiFi Telephone

In addition to providing SIP telephone operation, Div. 2 VoIP telephones provide real-time alarm reporting. This enables system supervisors to monitor the telephones' activity to address caller needs or maintenance issues immediately. All models also have configurable inputs and outputs.

Table 1. Model Chart

Handset Models	
Model	**Description**
351-717	Div. 2 VoIP AC Phone
351-727	Div. 2 VoIP DC Phone
351-737	Div. 2 VoIP PoE Phone
351-718	Div. 2 VoIP AC Phone with Relay
351-728	Div. 2 VoIP DC Phone with Relay
351-738	Div. 2 VoIP PoE Phone with Relay
351-817	Div. 2 VoIP WiFi AC Phone
351-827	Div. 2 VoIP WiFi DC Phone
351-818	Div. 2 VoIP WiFi AC Phone with Relay
351-828	Div. 2 VoIP WiFi DC Phone with Relay
Handset with Auxiliary Jack Models	
Model	**Description**
351-719	Div. 2 VoIP AC Phone
351-729	Div. 2 VoIP DC Phone
351-739	Div. 2 VoIP PoE Phone
351-71A	Div. 2 VoIP AC Phone with Relay
351-72A	Div. 2 VoIP DC Phone with Relay
351-73A	Div. 2 VoIP PoE Phone with Relay
351-819	Div. 2 VoIP WiFi AC Phone
351-829	Div. 2 VoIP WiFi DC Phone
351-81A	Div. 2 VoIP WiFi AC Phone with Relay
351-82A	Div. 2 VoIP WiFi DC Phone with Relay

Table 2. VoIP Telephones—Model Number Breakdown

351-	Transmission	Power	Operation	Finish	Handset	Options
Wired	7					
WiFi*	8					
AC		1				
DC		2				
POE*		3				
Phone			7			
Phone with Relay			8			
Phone with Auxiliary Jack			9			
Phone with Auxiliary Jack and Relay			A			
Orange				1		
Gray				2		
Yellow				3		
Red				4		
None					0	
6-foot					1	
15-foot					2	
6-foot Hytrel					4	
15-foot Hytrel					5	
15-inch Armored Cord					7	
None						0
Door Spring (SK)						1
Keylock Door						2
Autodial with Door Spring						3
Autodial						4
Autodial with Keylock Door						5
Autodial with Door Spring & Keylock Door						6

*NOTE: PoE is not available on WiFi models.

Features and Functions

GAI-Tronics VoIP telephones include the following features:

- SIP compatible (RFC3261)

- real-time alarm reporting via SNMP, syslog, or TMA

- POE (Power-over-Ethernet) compatible (Power Mode A, Class 0)

- configurable via web page, download, or Telnet

- four configurable auxiliary inputs

- two configurable dry-contact outputs (relay units only)

Hardware Description

External

Division 2 VoIP telephones may contain:

- handset
- ringer
- standard keypad
- auxiliary jack with cap.
- volume control push button
- weatherproof WiFi antenna

The handset rests on a cradle with a magnetic reed switch to signal an off-hook condition. VoIP WiFi models have a weatherproof antenna mounted to the top of the enclosure (see Figure 2).
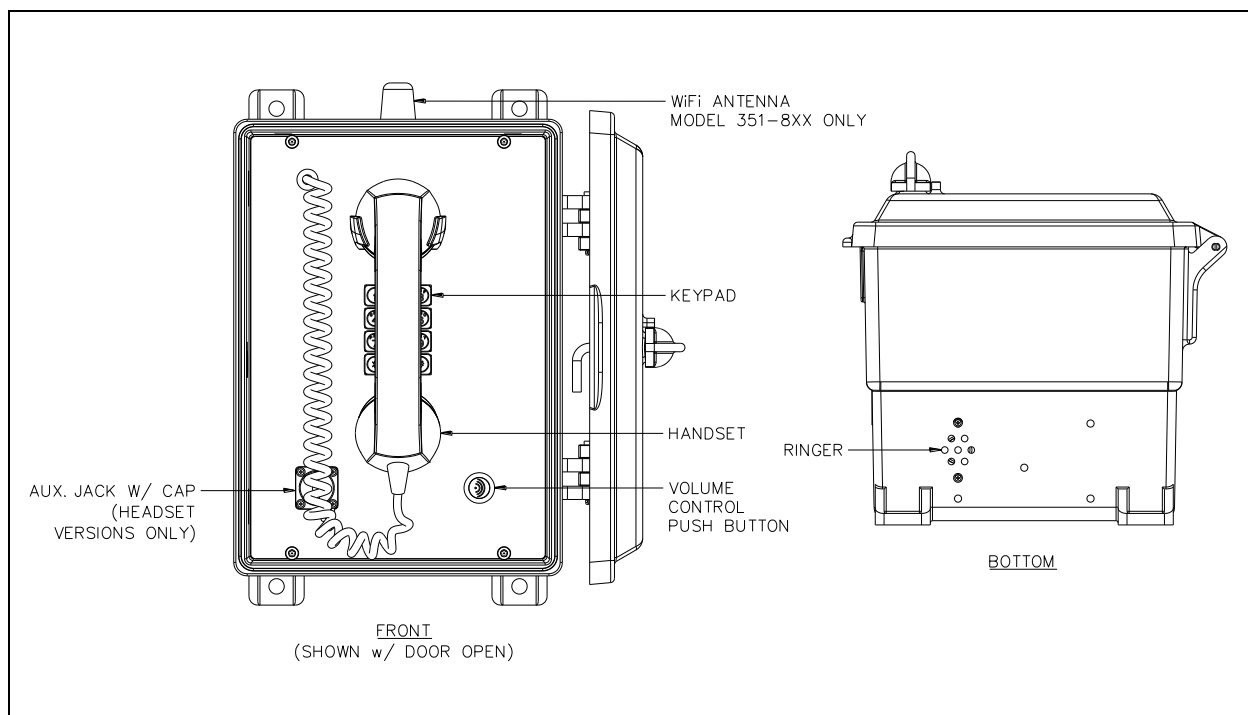
Figure 2. Division 2 VoIP WiFi Telephone

Internal

Model 351-7*xx* VoIP Telephones

The power supply, input power terminal block, relay PCBA, ringer and shield are mounted in the rear enclosure. The VoIP carrier PCBA, VoIP circuit PCBA, amplifier PCBA, handset/headset adapter PCBA, and keypad PCBA are mounted to the front cover. Amplifier-only versions do not include a keypad PCBA (see Figure 3).

Model 351-8*xx* VoIP Telephones

The power supply, input power terminal block, relay PCBA, ringer, shield, and Div. 2 external antenna are mounted in the rear enclosure. The VoIP/WiFi carrier PCBA, VoIP circuit PCBA, WiFi module, amplifier PCBA, handset/headset adapter PCBA, and keypad PCBA are mounted to the front cover. Amplifier-only versions do not include a keypad (see Figure 4).
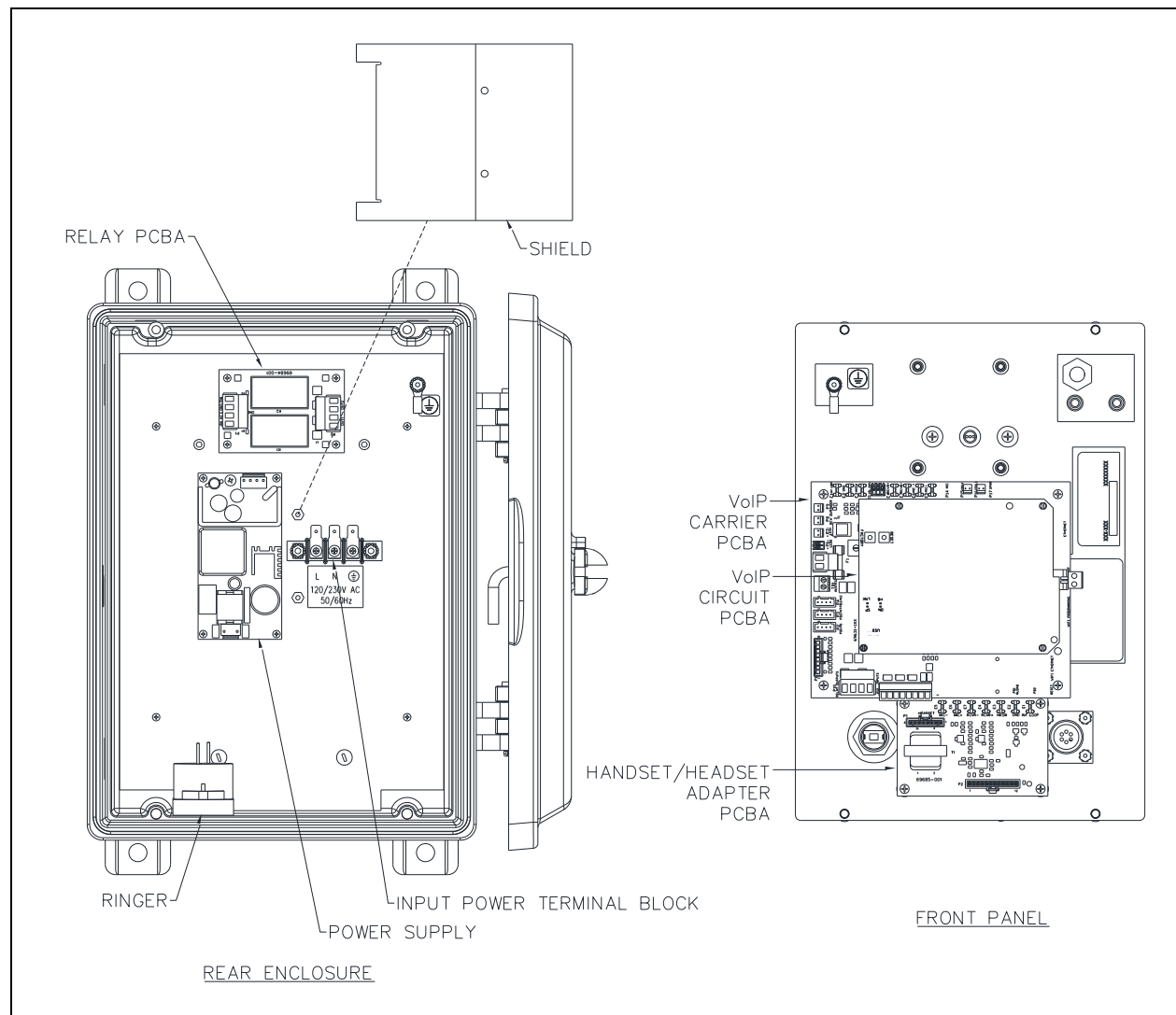
Figure 3. Model 351-7*xx* Div. 2 VoIP Telephone
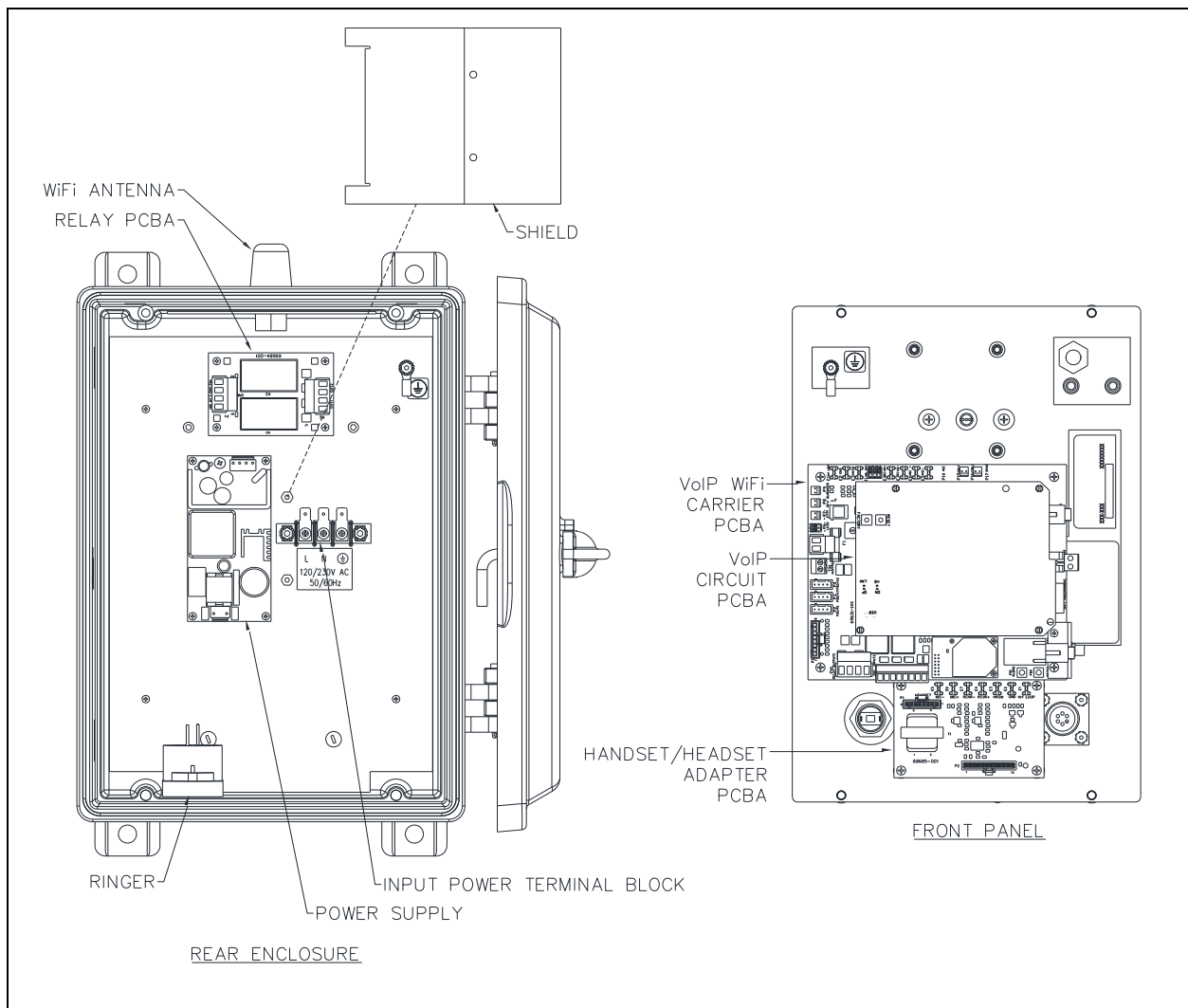
Figure 4. Model 351-8*xx* Div. 2 VoIP WiFi Telephone

System Requirements and Limitations

VoIP

Two VoIP telephones can be connected in a peer-to-peer configuration without the need for a LAN. Systems containing three or more VoIP telephones require a 10/100 BaseT Ethernet network with SIP (Session Initiation Protocol) server. Call capacity is limited by the customer's LAN media capabilities and the services available at each end point.

VoIP WiFi

Two telephones can communicate wirelessly in a peer-to-peer configuration without the need for a LAN connection. Systems containing three or more WiFi telephones (or a combination of WiFi and hardwired-VoIP telephones) require a wireless access point connected to a 10/100 BaseT Ethernet network with SIP server. Call capacity is limited by the customer's LAN media capabilities and the services available at each end point.

VoIP Subscriber Tips

For existing and new subscriptions to an interconnected VoIP service provider, the following points should be addressed:

- 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.

Operation

Handset Receiver Volume Control

Use the push-button switch, located on the front panel, to adjust the handset receiver volume. The volume decreases from 20 dB, to 12 dB, to 0 dB, and back up to 20 dB of the original signal, with each button press. The signal level is reset to 20 dB after the end of each call.

Model 351-7x7, 351-7x8, 351-8x7, and 351-8x8 Handset Operation

1. Lift the handset to place a call.

2. Adjust the handset receiver volume control to the desired level by pressing the volume control push button located on the front panel.

3. Dial the desired number. Autodial models will call a preprogrammed number (garage, dorm, etc.).

4. Place the handset on hook after completing the call.

Model 351-7x9, 351-7xA, 351-8x9, 351-8xA Headset Operation

1. Plug the headset into the auxiliary jack on the front panel by removing the sealing cap from the receptacle, aligning the connector pins, and screwing the two ends together.

   NOTE: The headset can be connected while the unit is powered.

2. Press the headset page switch on the extension cord to place a call.

3. Slide the page switch to maintain it in a pressed state.

4. Adjust the headset receiver volume to the desired level by pressing the volume control push button located on the front panel.

5. Dial the desired number. Autodial models will call a preprogrammed number (garage, dorm, etc.).

6. Release the page switch from the pressed state to end the call.

Installation

Important Safety Information

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

- NEVER install telephone wiring during a lightning storm.

- NEVER install telephone jacks in wet locations unless the jack is specifically designed for wet locations.

- NEVER touch uninsulated telephone wires or terminals unless the telephone line has been disconnected at the network interface.

- USE CAUTION when installing or modifying telephone lines.

- Install a UL Listed telephone line suppressor (customer-supplied) on the telephone line.

- Use silicone sealant or equivalent around and inside of all conduit entries

- **Install a Cat5 data line lightning surge protector** on any phone installed where the phone or phone cable is at risk of being exposed to lightning strikes. The lightning arrestor must be installed as close to the phone as possible in a non-hazardous environment. The lightning arrestor must not be installed within the telephone enclosure.

- USE CAUTION when installing or modifying Cat5 data lines.

GAI-Tronics recommends the following precautionary steps to protect the unit during installation:

- Install this unit using appropriate Division 2 wiring methods.

- Run the subscriber line inside conduit to ensure that the unit is vandal resistant.

- Use the conduit entries located on the bottom of the enclosure to prevent any condensation forming inside the conduit from dripping into the unit. Additionally, using bottom conduit entries makes water less likely to enter the unit at the conduit connection points.

- Use Teflon™ pipe joint tape or a thread sealing compound around the conduit threads to seal threaded connections and prevent water from entering into the unit at the conduit location.

- Apply a small amount of silicone sealant inside and around the end of the conduit pipe that is inside the unit. The sealant helps to prevent any condensation formed inside the conduit from dripping into the unit. This is especially important when using the conduit entry located on the top of the enclosure. (Manufacturers of silicon sealant include Dow Corning, Duron, General Electric, and DuPont.)

- Sealed fittings should be installed at all cable entry points to prevent liquids from entering the unit.

Front Panel Removal

1. Remove the four screws from the front panel.

2. Turn the front panel to the right to expose the interior of the telephone enclosure.

   Keep all wiring connected (see Figure 6).

3. Hang the front panel on the front door with a small piece of wire through a mounting hole on the panel.

Enclosure Mounting and Cable Entries

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

1. Mount the enclosure using the four 0.437-inch (11 mm) diameter holes located on the mounting flanges with 3/8-inch (M8) hardware (see Figure 5).

   • The suggested mounting height for all station enclosures is 48 inches (1219 mm) to the center of the bottom mounting holes of the enclosure.

   • telephone are not supplied with conduit or cable openings.

2. Remove the front panel.

3. Drill or punch entry openings in the rear section of the enclosure (see Figure 5).

   • The station is suitable for bottom entry.

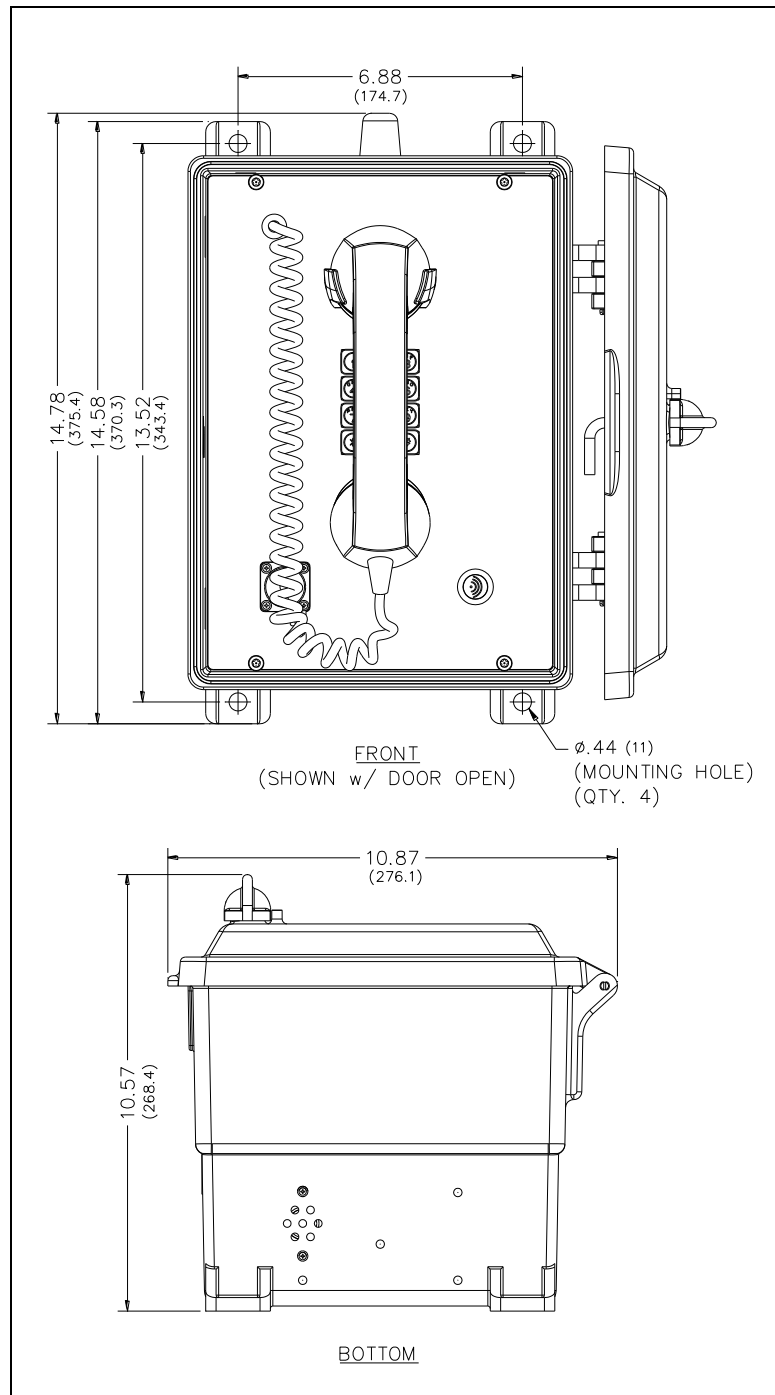   • There must be a minimum of ½ inch (13 mm) of material between entry holes.

Figure 5. Mounting Details

Front Cover Removal

1. Remove the four screws from the front panel.

2. Turn the front panel to the right to expose the interior of the telephone enclosure.

   Keep all wiring connected (see Figure 6).

3. Hang the front panel on the front door with a small piece of wire through a mounting hole on the panel.
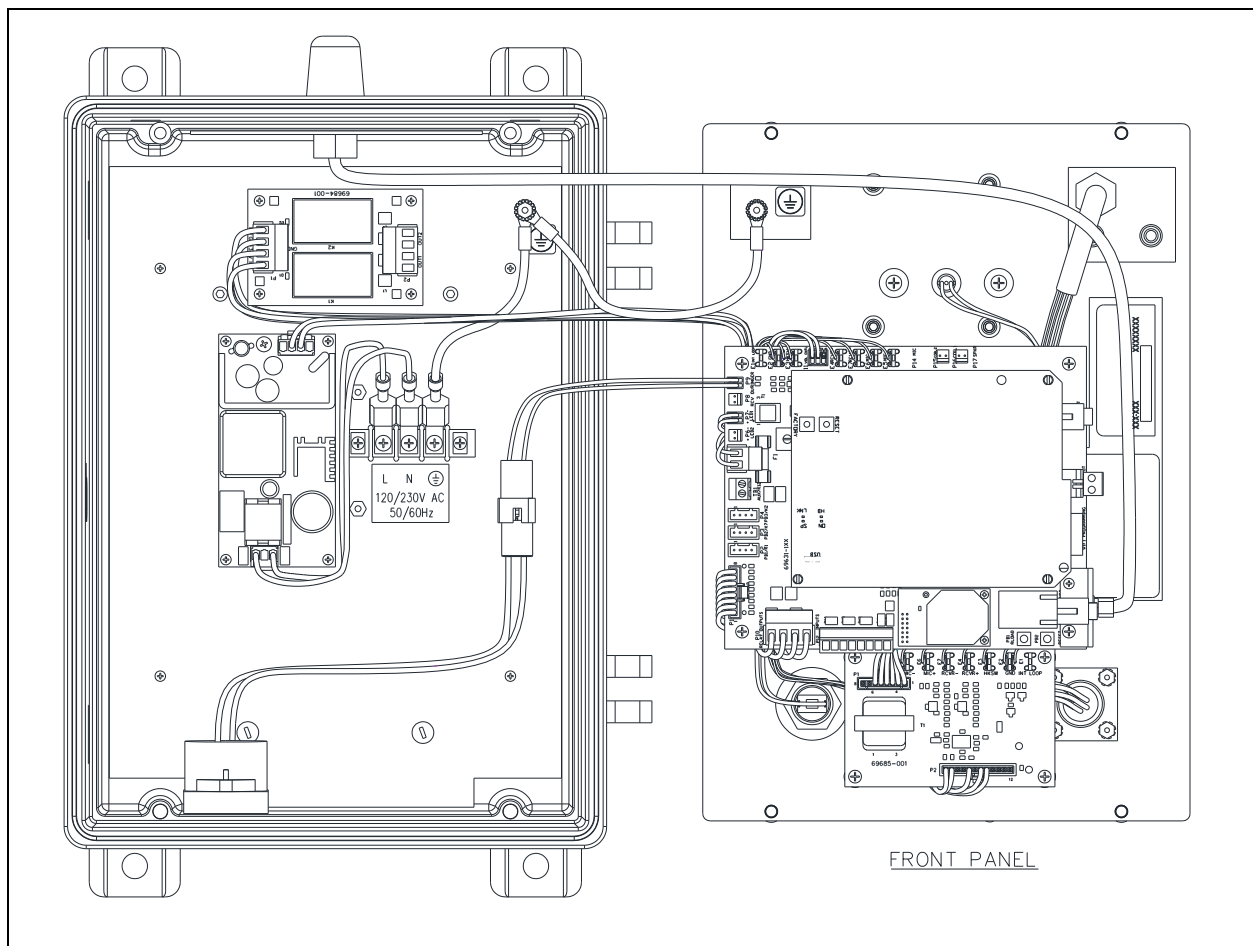
Figure 6. Installation and Maintenance Configuration

Field Wiring

1. *For wired versions:* plug the incoming Category 5 data line into the RJ45 jack, located on the underside of the VoIP circuit PCBA (see Figure 6 and Figure 7).

2. *ac and dc powered models:*

    1. Remove the two screws from the power supply cover located in the rear enclosure and remove the power supply cover.
    2. Connect the incoming power conductors to the 3-point terminal block in the rear enclosure (see the Local Power section).
    3. Reattach the power supply cover using the two screws previously removed from the cover.

3. Route the speaker connection wire on the left side of the power supply to the P4 speaker plug on the amplifier PCBA located on the front cover.

4. Terminate the wires per the PCBA silk screen text.

5. Install all additional connections as indicated in the following subsections (see Table 3, Figure 6, and Figure 7).

Table 3. Recommended Cable

Cable Use	Size
LAN	Cat5 or better UTP cable with an RJ-45 connector
Power	two-conductor, No. 18 AWG is typical
Inputs	two-conductor, No. 22 AWG is typical
Output contacts	two-conductor, No. 18 AWG is typical

Figure 7. Internal PCBA Connections

Network Cable

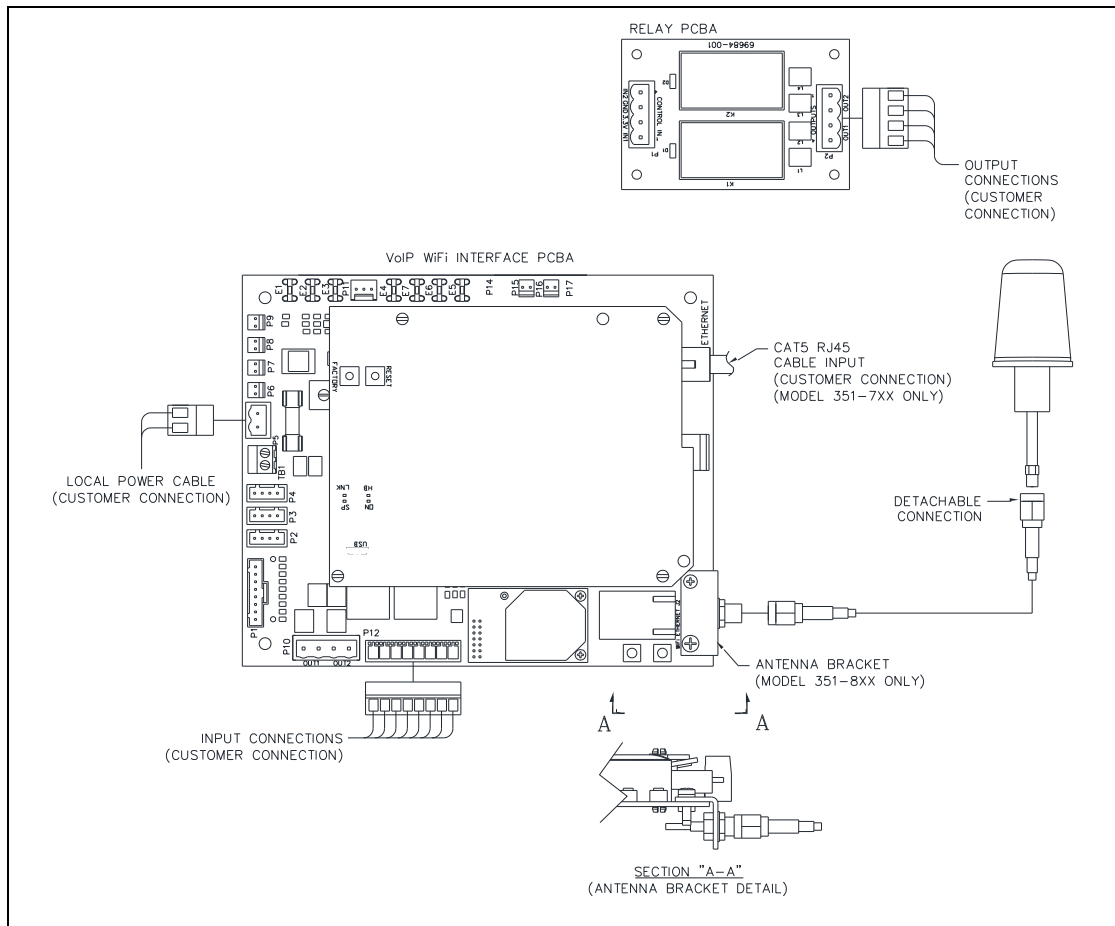Connect a Cat5 or better UTP cable with an RJ45 connector between the LAN and the VoIP PCBA (see Figure 7). The RJ45 jack is located on the underside of the VoIP PCBA.

Power

Power-Over-Ethernet (POE)

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

Local Power

Connect the ac or dc (as labelled) power source conductors to the unit's power termination block, located in the rear enclosure (see Figure 8).
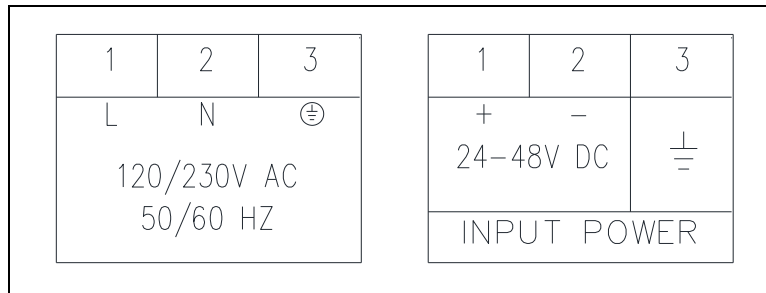
Figure 8. AC and DC Input Power Terminal Block Labels

Auxiliary I/O

Inputs

The page-phones have four auxiliary inputs for customer use

1. Terminate the inputs to terminal block P12 (see Figure 7).

2. Connect each input between the desired input (INPUT 1–4) and common (COM) on terminal block P12 (see Table 4).

The inputs are configurable. Refer to GAI-Tronics Pub. 42004-548 for configuration instructions (see the Reference Documentation section).

Table 4. Auxiliary Inputs—P12

Pin	Label	Description
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

Inputs have an internal pull-up resistor and need to be 3.3 V dc tolerant.

Outputs (Relay Units Only)

Two outputs have been provided for customer use:

1. Terminate the outputs to connector P2 on the Relay PCBA (see Figure 7).

2. Configure the outputs.

The outputs are configurable. Refer to GAI-Tronics Pub. 42004-548 for configuration instructions (see the Reference Documentation section).

Table 5. Output Contacts—P2

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

Relay capacity is 5 A at 30 V dc or 120 V ac.

USB port

The USB port is for GAI-Tronics service personnel only. Make no connection to this port.

Front Cover Installation

After all wiring and cable connections are complete:

1. Place the front panel on the rear enclosure.

2. Do not pinch any cables

3. Secure the front panel using the four screws and washers provided

4. Torque the screws to 10–12 lb·in (1.13–1.36 N·m).

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.

First Time WiFi Interface Setup (wireless telephones only)

Setup the WiFi interface to configure the telephone's WLAN connection security:

1. Power on the Class I, Division 2 by connecting 24 to 48 V dc to terminal block P5.

    The factory default configuration of the VoIP WiFi Class I, Division 2 interface is an access point on a network named (SSID) **HF-A11_AP**.

2. Connect to the HF-A11_AP network using a PC/laptop with a wireless adapter.

    The yellow LED on the telephone's WiFi interface should be ON when the PC is connected to the HFA11_AP network.

3. Open a web browser on the PC and enter *10.10.100.254* into the address field and press **ENTER**.

    NOTE: Verify that the PC's wireless network adapter is set to DCHP (Obtain an IP address automatically) to connect to the HF-A11_AP access point.

    The HF-A11_AP WiFi log in window opens.

4. Enter *admin* for both the user and password, and log in.

    The WORKING MODE CONFIGURATION web page opens:
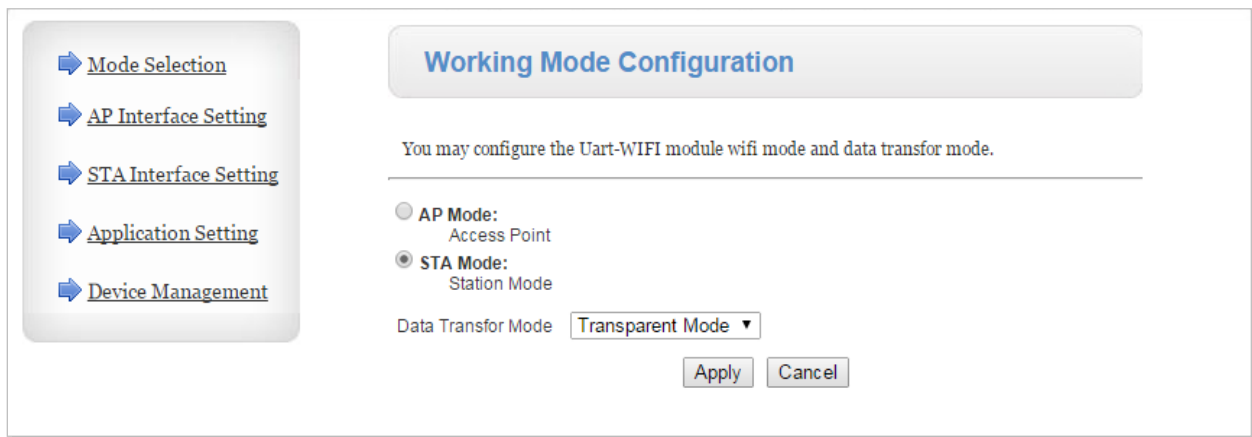
Figure 9. WiFi Interface Working Mode Configuration Web page

5.   Select STA MODE then click the APPLY button.

the web page will show **Set Successfully, Restart to use new setting**.

6.   Restart to use the new setting, and then click on the STA INTERFACE SETTING selection.

The STA INTERFACE SETTING web page opens:
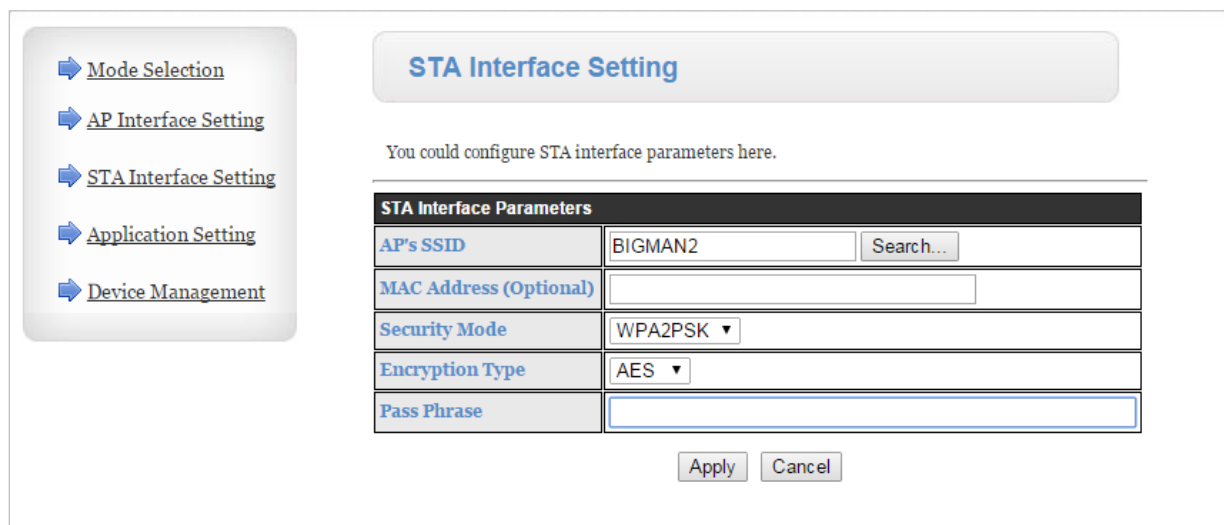
Figure 10. WiFi Interface STA Interface Setting Web page

7.   Click the SEARCH button, to the right of in the AP's SSID field, to find the WiFi network that the VoIP telephone will operate in.

The **Site Survey** webpage opens, showing all available networks.

Figure 11. WiFi Interface Site Survey Web page

8. Select the desired network and click the APPLY button.

A reminder window to enter the WEP key or pass phrase pops up.

9. Click the OK button.

10. Enter the **WEP Key** or **Pass Phrase** for the selected network and click the APPLY button.

The AP's SSID, security mode, and encryption type fields will be filled in when the STA interface setting webpage opens again.

NOTE: Manually enter the AP's SSID, security mode, encryption type, and WEP key or pass phrase if the VoIP telephone is not within the range of the wireless network that it is being configured to operate in.

The web page will show **Set Successfully, Restart to use new setting** after the configuration has updated.

11. Click on the **DEVICE MANAGEMENT** selection.

The DEVICE MANAGEMENT webpage opens.

Figure 12. WiFi Interface Device Management Web page

12. Click the RESTART button, located in the RESTART MODULE section.

  • The web page will show REBOOTING… while the WiFi module is restarting.

  • Both LEDs on the RJ-45 jack J2 will turn OFF for several seconds while the WiFi interface restarts.

  • The green LED turns ON first; after the WiFi interface restarts.

  • The yellow LED turns ON when the WiFi interface connects to the newly configured network.

13. Continue with the configuration of the VoIP telephone PCBA (see the VoIP Telephone Setup section).

14. *If an incorrect WEP Key or Pass Phrase is entered:* Follow the instructions in the next section (see the Reset WiFi Interface section).

NOTE: The WiFi module is no longer an access point on its own network (HF-A11_AP). The WiFi module should now be connected to or trying to connect to the newly configured wireless network. The browser web page will not change from showing REBOOTING… because the PC is no longer connected to the HF-A11_AP network.

Reset WiFi Interface

Use this procedure to erase the current WiFi configuration in the telephone and configure the WiFi adapter with the factory default settings.

1. Press the RLOAD button for 10 seconds to reset the WiFi interface back to factory default settings.

  • The RLOAD button is on the WiFi interface PCBA.

  • Both LEDs on the RJ-45 jack (J2) turn OFF for several seconds while the WiFi interface resets.

  • Wait for the green LED to turn ON before trying to connect to the HF-A11_AP network.

2. Follow the instructions in the First Time WiFi Interface Setup section to connect to the HF-A11x_AP network and change the configuration settings.

NOTE: The telephone's power must be cycled before it will connect to the wireless network after changing the WiFi interface configuration if the VoIP telephone was configured for DHCP.

VoIP Telephone Setup

1. Connect a PC to the same network as the VoIP Class I, Division 2.

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.

VoIP Telephone Initial Network Configuration

Configure each VoIP PCBA for operation on the network prior to installation. Assign a local ID, domain, proxy, and registrar.

1. Assign a host name.

   Host names provide identification of different VoIP PCBAs on the network.

2. Test that calls can be made successfully.

3. Maintain the telephone by monitoring alarms.

4. Set up auto-updates.

Refer to Pub. 42004-548 for basic programming instructions for these VoIP telephones (see the Reference Documentation section).

Alternate Configuration Methods

There are two methods to configure GAI-Tronics VoIP telephones:

- 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.

Maximum (Handset Receiver) Level Remote Control

Remotely control the receiver volume level by changing the setting in the configuration file. Refer to the Pub. 42004-548, for programming instructions (see the Reference Documentation section).

Input Contacts

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

- None
- PTT/Mute
- Hook

- Digit
- Redial
- Hook HF

- Memory Dial
- Volume
- Memory Hook

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

Output Contacts

Each RED ALERT WiFi VoIP telephone contains two dry-contact outputs (see the Specifications section for the output 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 duration of activation, or on/off times, is configurable in some modes. Refer to Pub. 42004-548, for programming instructions for the outputs (see the Reference Documentation section).

Maintenance

Status Indication

Power

The ON LED, located on the VoIP PCBA (see), 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.

WiFi Activity (WiFi Units Only)

The WiFi Activity LED located on the WiFi module will turn ON when the VoIP telephone is powered and flash when data is being transmitted (see Figure 13).

WiFi Ready (WiFi Units Only)

The WiFi Ready LED is a green LED on the RJ-45 connecter; J2, located on the VoIP carrier PCBA that illuminates when the WiFi interface is ready to connect to a wireless network (see Figure 13).

WiFi Connected (WiFi Units Only)

The WiFi Connected LED is a yellow LED on the RJ-45 connecter; J2, located on the VoIP carrier PCBA that illuminates when the WiFi interface is connected to a wireless network or device (see Figure 13).
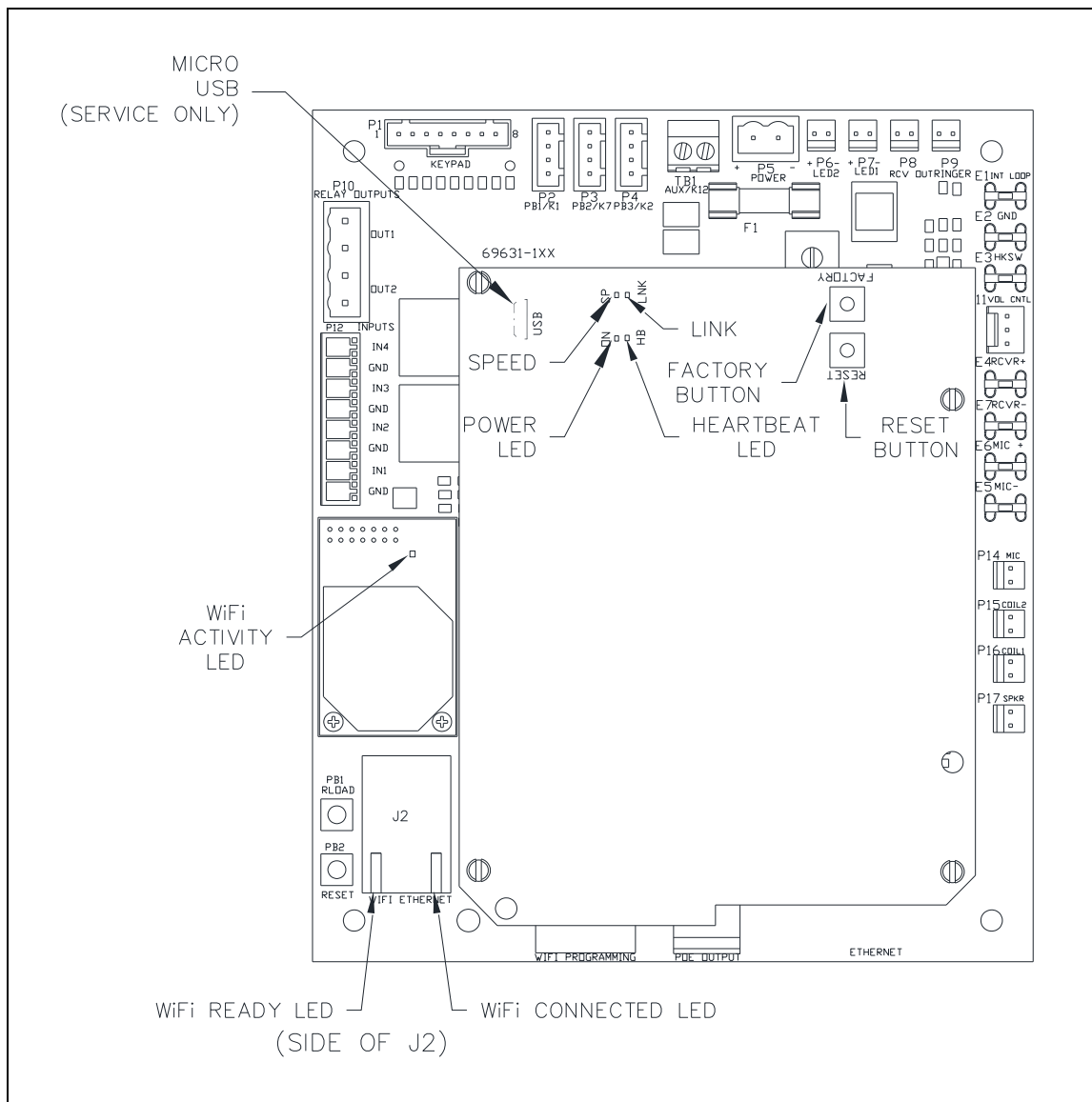
Figure 13. VoIP Carrier PCBA Component Locations

Service and Spare Parts

Contact a regional service center for assistance if the equipment 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 the Regional Service Center closest to you.

Troubleshooting

Table 6. Troubleshooting Chart

Problem	Possible Solution
low volume in handset or headset	Increase the volume setting using the Volume Adjust button on the front panel.
high volume in handset or headset	Decrease the volume setting using the Volume Adjust button on the front panel.
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. Check fuses. Replace fuses with identical type/ratings. If using POE, check the operation of the POE equipment.

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

- SNMP (Simple Network Management Protocol)

- TMA (Telephone Management Application) software (purchased separately)

Available alarms are:

- handset integrity loop (if applicable)

- configuration error

- cold reset (power cycle)

- warm reset (internal command)

- keypad error, such as a stuck button (if applicable)

- key hook (off-hook status, if applicable)

- register fail

- audio path test (speaker/microphone test)

Reference Documentation

Specifications

Power

AC Power

Input voltage .... 120 V ac or 230 V ac, 50/60 Hz, +/−10%

DC Power

Input voltage ....24 V dc to 48 V dc

Power-over-Ethernet.. 12.95 W

....802.11af compliant (via RJ45) Power Mode A, Class 0

Network

VoIP Network

Network .... 10/100 BaseT Ethernet RJ45, Cat5/6 UTP

....static IP or DHCP STUN client (NAT traversal) address provisioning

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

WiFi Network

Standards... IEEE 802.11b/g/n

Frequency...2.412 GHz to 2.484 GHz

Configuration ....embedded web server, configuration file download

.... password protection

Handset Audio

Analog microphone gain..30 dB

Analog earpiece gain.. Default: +20 dB

.... Setting 2: +12 dB

....Setting 3: 0 dB

Frequency response..250 Hz to 6500 Hz

Frequency response flatness .... 3 dB minimum

THD @ 1 kHz.. 1% minimum

I/O

Inputs

Keypad* ....3 × 4 matrix

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

*Not available on all models.

Outputs

Output 1 .... 5 A @ 30 V dc or 120 V ac maximum (resistive load)

Output 2 .... 5 A @ 30 V dc or 120 V ac maximum (resistive load)

Indicators

Internal on VoIP Circuit Board... heartbeat, link, power, and speed LEDs

Internal on WiFi Interface PCBA (WiFi Unit only) WiFi Activity, WiFi Ready, & WiFi Connected LEDs

Monitoring and reporting...........................real-time over TCP/IP proprietary syslog application or SNMP

.... automatic fault reporting

Environmental

Operating temperature .... −4 ºF to +140 ºF (−20 ºC to +60 ºC)

Weather resistance .... NEMA Type 4X with door closed

Humidity .... 90% non-condensing

Mechanical

Enclosure (gray, yellow, orange, or red) .... engineered plastic

Handset Cord .... G- style handset/Hytrel® or PVC 6-foot extended length (standard)

Connection .... RJ45 receptacle

Dimensions, outside (VoIP) .... 14.6 H × 10.9 W × 10.5 D in (371 × 276 × 267 mm)

Dimensions, outside (WiFi) .... 14.8 H × 10.9 W × 10.5 D in (375 × 276 × 267 mm)

Mounting .... wall or column, four 0.44 in (11mm) diameter mounting holes

Shipping weight .... 13.5 lb (6.1 kg)

Net weight .... 12.5 lb (5.7 kg)

Approvals

With antenna

NRTL listed for USA and Canada .... Class I, Groups A, B, C, and D, Division 2

        Class II, Groups F & G, Division 2
        Class III, Division 2 Hazardous Locations
        Temperature code T4

Outdoor environmental rating .... Type 3R, Type 4X with door closed

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.